



MTCON NECT IVITY

ISSUE 2021-02



MTCONNECTIVITY

PRODUCT CATALOG

POWER UP AND CONNECT YOUR PCB WITH MTCONECTIVITY:

- Power elements from 10 A to 1000 A (and more)
- Fuse holders and relay sockets
- PCB connectors (wire2board)



**PARTS IN
PRESS-FIT &
SOLDERABLE
VERSIONS**

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MAKE THE CHANGE

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MTCONNECTIVITY MAKE THE CHANGE

COMBINED POWER IN ALL AREAS

»Great things start small.« This is especially true for press-fit products. We pay close attention to even the smallest detail, when it comes to generating ultimate results for your application, especially in terms of reliability and durability.

Whatever you need: MTCO will support you in making your application work: We provide professional, customized and flexible services, even beyond pure press-fit technology issues. See what we can do for you:

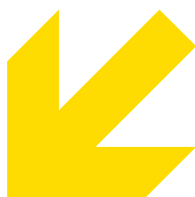
**C IS FOR CONTACT
(TECHNICAL,
CIRCUIT BOARD/PIN)**

**C IS FOR CONTACT
(PERSON TO PERSON)**

**C IS FOR CORRECT
DEFINITION**

**C IS FOR COMMUNICATION
(PERSON TO PERSON)**

**DISCOVER
OUR
PRODUCTS**





**C IS FOR
CONNECTOR**

**RIGID OR FLEXIBLE
PRESS-FIT ZONE**

PRESS-FIT OR SOLDERING PIN

CONDUCTIVE TRACK TO PAD

**PRESS-FIT
CIRCUIT BOARD PAD
OR SOLDERING PAD**

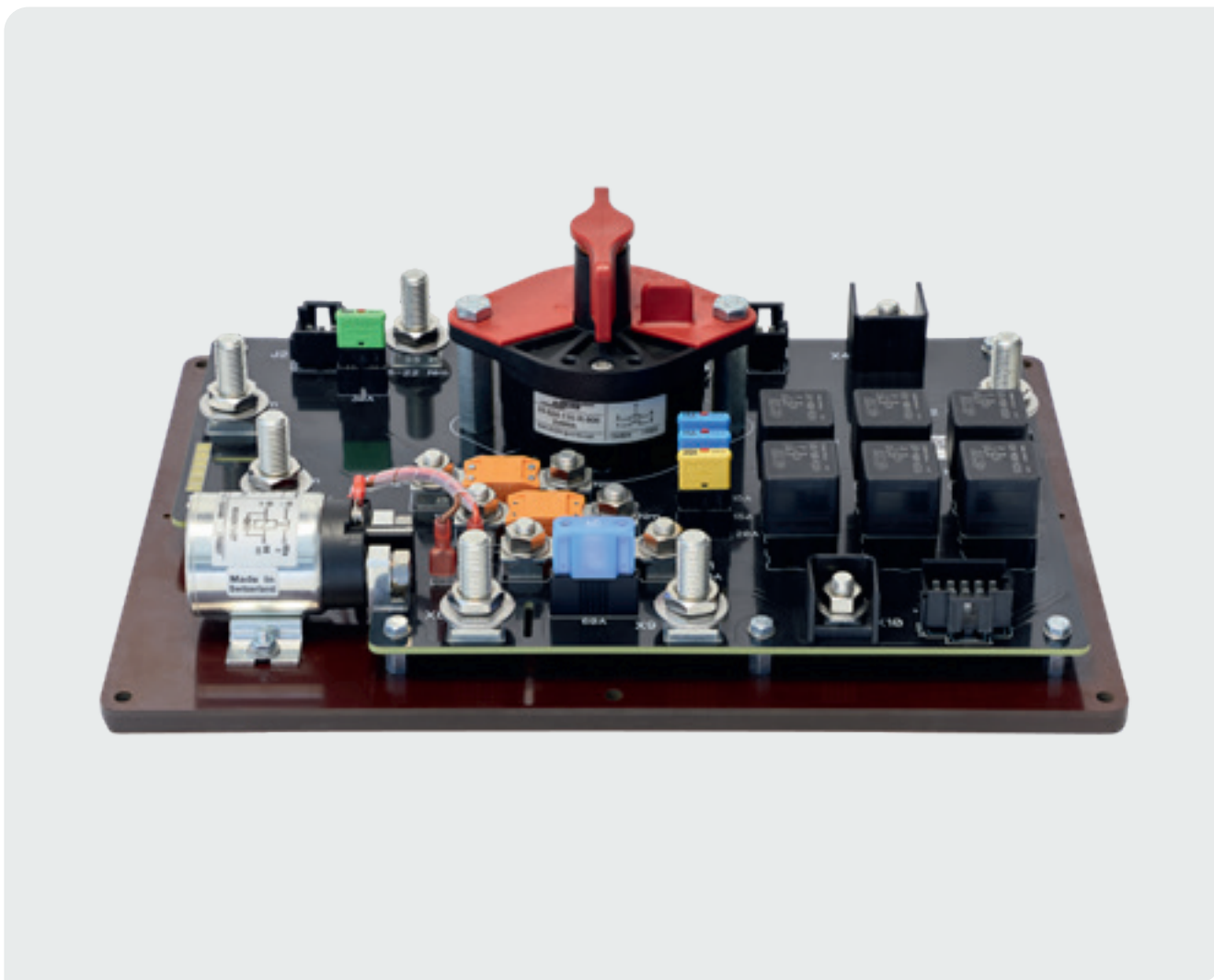
C IS FOR CLEAR THINKING

**C IS FOR COOL
TECHNICAL SOLUTIONS**

C IS FOR CONSULTING

**C IS FOR CURRENT
CARRYING CAPACITY**

APPLICATION EXAMPLES CONSTRUCTION MACHINES (COLD MILLING MACHINE)



EVEN IN EXTREMELY DEMANDING APPLICATIONS

Here we present our product lines in different applications.

This assembly is a circuit board based central electric system equipped with MTCO elements.





POWER TOWER

Large selection of power connector elements in various constructions (external and internal thread M3 - M12, mates with Radsok®).

Picture: Power Tower M10

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POWER PROTECTOR

Power element contact protection to prevent short-circuits caused by touching cable lugs connected to juxtaposed power elements.

Picture: Power Protector for Power Tower M6 & M8

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POWER EDGE

Two angled power elements at defined distance for mechanical and electric connection of high current relays to the circuit board.

Picture: Power Edge M8

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FUSE HOLDERS

We offer matching fuse holders for all standard fuses (mini, ATO, maxi).

Picture: Maxi fuse holder

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PCB CONNECTORS

Large selection of press-fit connectors (wire2board) for combination with all leading standard connectors.

Picture: JPT 3-rowed, 15-pin

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APPLICATION EXAMPLES

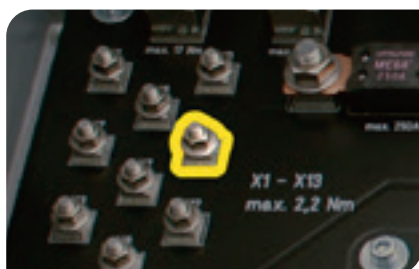
ELECTRIC VEHICLES (HYDROGEN FUEL CELL GARBAGE TRUCK)



SILENT, EMISSION-FREE, INNOVATIVE

The new Faun hydrogen fuel cell garbage truck prototypes (Blue Power) for even cleaner, more silent and more environmentally friendly garbage collection. The central electric assembly with current sensing is equipped with our MTCO high performance components.





POWER TOWER

For high current circuit board connections in various constructions. Power elements from 10 to 1000 A.

Picture: Power Tower M5

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FUSE HOLDERS

Highest reliability even for extremely demanding conditions, frequent temperature changes, and strong vibrations. For 12 V, 24 V, and 48 V.

Picture: ATO fuse holder

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RELAY SOCKETS

MTCON relays sockets create a secure interface between standard relays and circuit board. We offer a large variety of different constructions and variations.

Picture: Relay socket 9-pin

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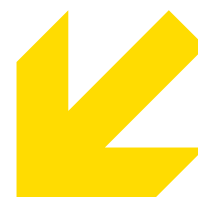
STECKVERBINDER

The MTCON JPT connector equipped with 2.8 mm blade contacts features maximum current constancy of approx. 15 A. Our MTCON 3-rowed JPT connectors can be mated with all standard connector systems.

Picture: JPT 3-rowed

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**QUESTIONS?
WE ARE ALWAYS
HAPPY TO HELP!**



PACKAGING SYSTEMS FOR THE TRANSPORT

MTCON STANDARD-KLT

The practical small load carriers (KLT) made of polypropylene are particularly suitable for manual handling at the production line, automatic part removal from the containers and conversion to empty piles.

- ✚ Non-tilting stand, easy stacking
- ✚ Standardized sizes, optimized for Euro palets
- ✚ According to VDA standard
- ✚ Return or buy



MTCON SET-BOX

The set box will transport power elements with just one hand and protect the components, especially the pins, from damage due to impact and vibration.

- ✚ Can be combined with MTCON standard-KLT
- ✚ Re-usable
- ✚ Item specific with safety adhesive and quality seal
- ✚ Especially suitable for product processing directly at the press-fit machine



MTCON SAFE-PIN

The safe pins are a proprietary development and perfectly tailored to work with our power elements. They prevent the fine pins from being damaged during storage or transport.

- ✚ Different sizes
- ✚ Can be combined with all MTCON power elements
- ✚ Best possible protection when combined with our reusable packaging





VACUUM PACKAGING

Vacuum packaging features essential benefits, e.g. improved protection, storage, transport of packaged products, including maximum scratch and oxidation protection of the SMD coating. Vacuumization enables space-saving packaging of bulk goods. Packaging is ESD protected.

- Over 6 months durability
- Electrostatic protection, maximum transport protection
- On demand also available for small and large batches



BLISTER TAPES

Blister tapes are precise feeding systems. Keep sensitive components like electronic and SMD components clean, dry and perfectly protected in customized packages. A packaging system consists of a blister tape, a matching reel, and a cover sheet. All individual components are customized and combined to customer requirements by our experts.

- Integration into automated production
- Precise positioning in the production process
- Clean, easy storage, automated assembly and processing



REELS

Reels are perfect for reusable transport systems. They are available in various widths and diameters for different feeder systems. The reels are usually made from antistatic polystyrol, depending on the applications. Reels are packaged in sturdy cardboard boxes.

- Matched to standard reel sizes
- Transport-proof
- Dirt repellent
- Stackable
- 100% recyclable



OUR HIGHLIGHTS

FAST SERVICE PRODUCTION \ LASERBRAND

FAST SERVICE PRODUCTION

For all customized press-fit components, THT and now also SMD products. Fast sample delivery to customer requirement. After technical remainder clarification and final component design, we deliver your order to you from the third day on.

- ✚ From the 3rd day your individual, customized power element is with you
- ✚ Saves time and costs
- ✚ Ideal for design processes, troubleshooting, product optimization
- ✚ Durable, reliable, compact
- ✚ Supported by MTCO experts and MTCO technology know-how



BRAND YOUR OWN COMPONENTS

Brand your MTCO power elements with your own designs, e.g. your logo or other pictures, with a wide selection of possible shapes and sizes.

- ✚ Increased brand recognition on your products
- ✚ Clear differentiation towards the end customer
- ✚ Easy traceability
- ✚ Individuality





OUR HIGHLIGHTS

BLUEBRASS \ MTCON SAMPLE BOX

REACH COMPLIANT MATERIAL

The 2018 REACH regulation requires additional information on lead. We offer a lead alternative featuring optimum produceability & conductivity for lead-free products.

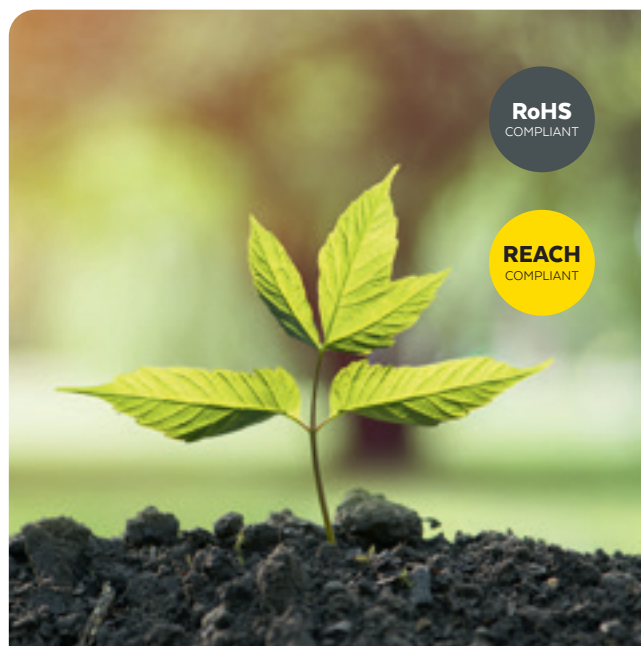
Use these alloys for long-term production and planning security. All brass alloys of the BlueBrass family meet the EU directive requirements for lead-free products.

Please contact us for additional information.

BlueBrass[®]

lead-free. machinable. conductive.

www.BlueBrass.com



MTCON SAMPLE BOX

For new customers: Experience our POWER2PCB versatility. Our Sample Box features 13 products from our portfolio for testing and getting a feel of our quality. Contains standard elements, press-fit and soldering products and our power elements.

- Faster, efficient design with existing samples
- Saves time and cost
- Ideal for design processes, troubleshooting, product optimization





POWER2PCB
WE BRING POWER TO YOUR PCB


POWER TOWER 
POWER SOCKET 
POWER EDGE 
BROX BREAK SERIES 
POWER PROTECTOR 






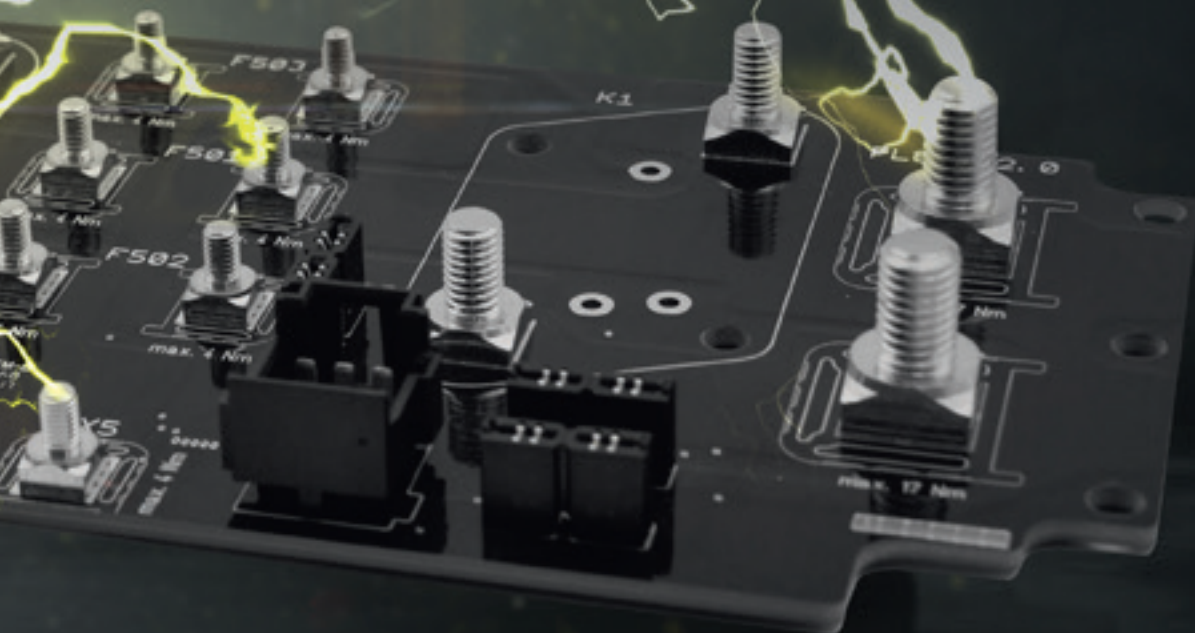
POWER 2 

POWER CROWN 

POWER BIZON 

POWER SPACER 

POWER SMD 



APPLICATION EXAMPLES

TECHNICAL DATA



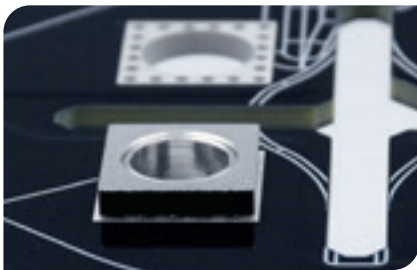
Contact protection around the power element, to prevent short circuits caused by touching cable lugs connected to juxtaposed power elements.



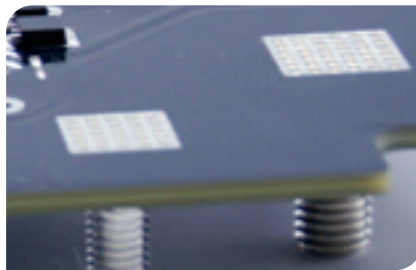
Two power elements with M8 pins at a defined distance for mechanical and electrical connection of mega fuses to the circuit board.



Two angled power elements at a defined distance for mechanical and electrical connection of high-current relays to the circuit board.



Two-part power element, with socket/through hole as an attachment point to prevent mechanical forces from being transmitted to the circuit board.



Pressed-in M10 power element, showing the pressed-in pins.

TECHNICAL DATA

Material

| | |
|------------------|---|
| Base: | CuZn39Pb3 |
| Surface: | tinned |
| Adhesive force: | meets IEC 352-5 |
| Press-fit force: | max. 250 N per pin min. 40 N per pin |
| Press-out force: | min. 30 N per pin |
| PCB thickness: | min. 1.6 mm |



APPLICATION EXAMPLES

PERMISSIBLE TORQUE

PERMISSIBLE TORQUE

Mechanical properties depend on the square or round material used.

Mechanical properties of CuZn39Pb3

| | |
|-------------------------------|---------------------------------|
| Tensile strength: | min. 340 to max. 600 N/mm (MPa) |
| Yield limit: | min. 180 to max. 480 N/mm (MPa) |
| Elongation at rupture A_5 : | 40 (soft) to 10 (hard) |
| Young's modulus: | 96 GPa |
| HB: | 90 – 175 |

Resulting maximum torque for each thread in brass (MS 63), according to DIN 267 part 25 (fracture torque):

| Thread | M3 | M4 | M5 | M6 | M8 | M10 | M12 |
|-------------|-----|-----|-----|-----|----|-----|-----|
| max. torque | 0.5 | 1.2 | 2.2 | 3.9 | 9 | 17 | 35 |

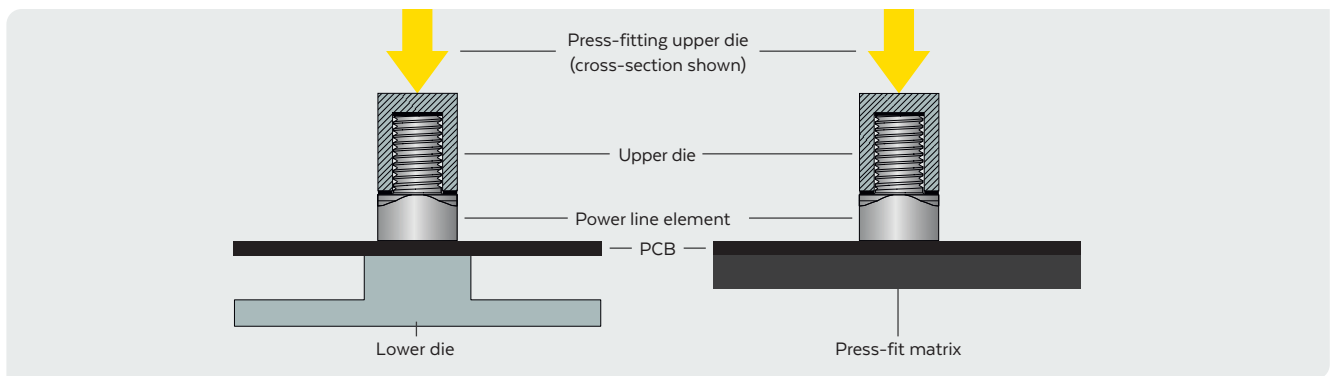
Measurements M3 – M12 in Nm



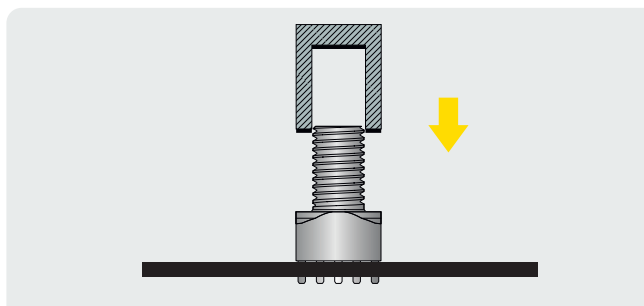
GENERAL GUIDELINES

PRESS-FITTING

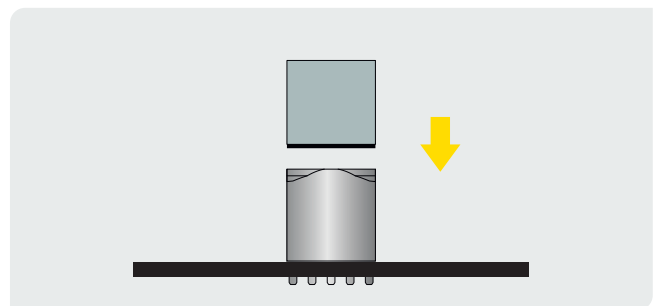
LOWER DIE OR PRESS-FIT MATRIX



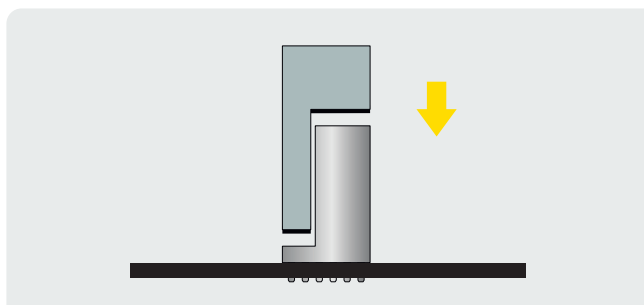
UPPER DIE



Tower power element with hollow upper die



Socket power element with flat upper die



Angled power element with L-composite upper die



HOLE SPECIFICATION FOR POWER ELEMENTS WITH MASSIVE PRESS-FIT ZONE

Please note that both the drilling diameter and the final diameter must be strictly observed.



Drilling diameter
 1.600 ± 0.025 mm



Final diameter, tin
 1.475 ± 0.05 mm



Final diameter, HAL surface

1.450 ± 0.05 mm

Copper - in hole: min. 25 μ m
max. 80 μ m

Annular ring: min. 125 μ m

Final diameter, metal with min. Cu 25 μ m (must not be smaller, even in parts). For HAL (covered edge) Ni/Au or tin; for circuit board thickness > 1.50 mm

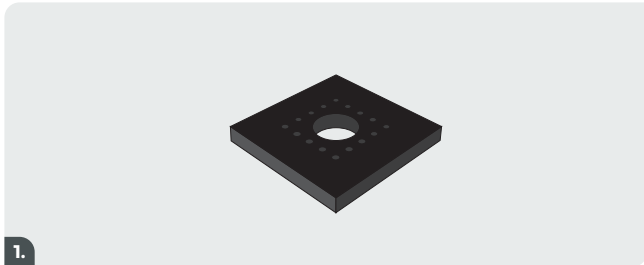


GENERAL GUIDELINES

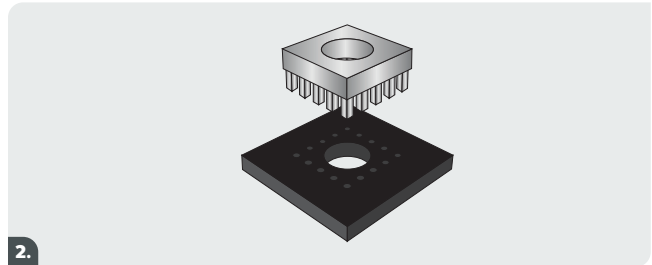
TWO-PIECE COMPONENTS

Why use two-part power line elements?

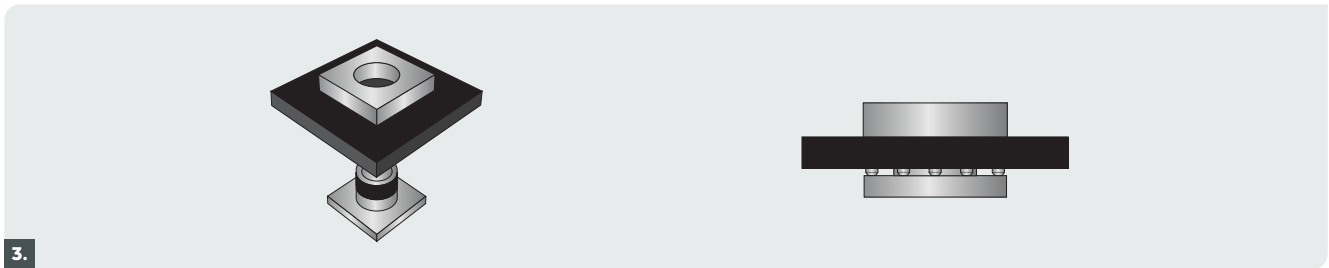
- ↳ Stronger mounting holes
- ↳ Ideal solution where clearance above PCB is limited
- ↳ Reduced mechanical stresses on the circuit board



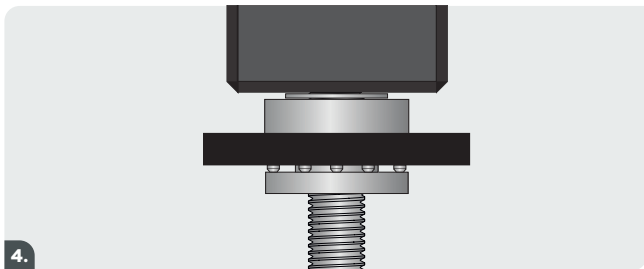
Choose a circuit board with suitable specifications from our catalog.



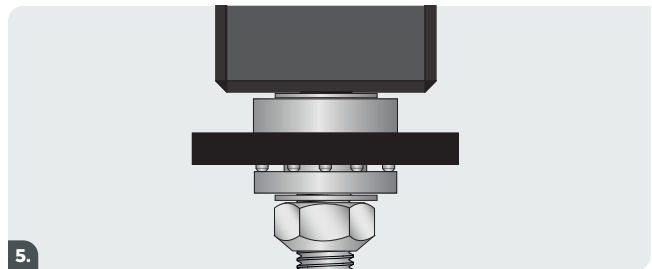
Press the base into the board from above.



Press-fit your chosen subcomponent (e.g. with through hole) into the base from below.



Insert your circuit component (e.g. battery switch) into the two-part power element from above.

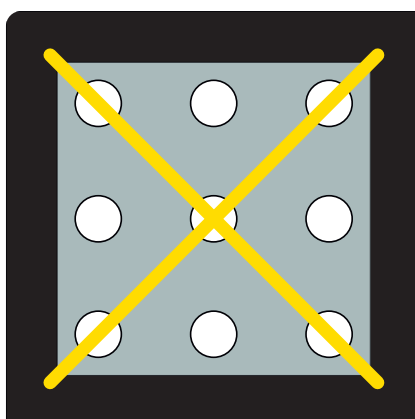
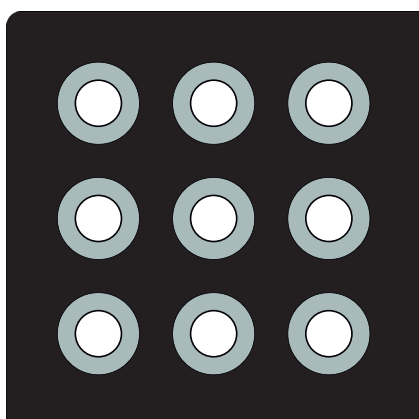


Secure the component underneath with a nut and a washer.



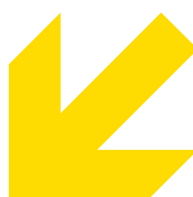
GENERAL GUIDELINES SOLDERING (THT)

- **In general:** standard press-fit components can be fitted by THT soldering, if needed.
- **Ideally:** surfaces are matt-tinned on custom THT components to ensure optimum results.
- Only the final diameter is relevant here (1.75 ± 0.05 mm).
- The layout should allow for an annular ring of max. 200 μ m. Pads across the entire area must be avoided.



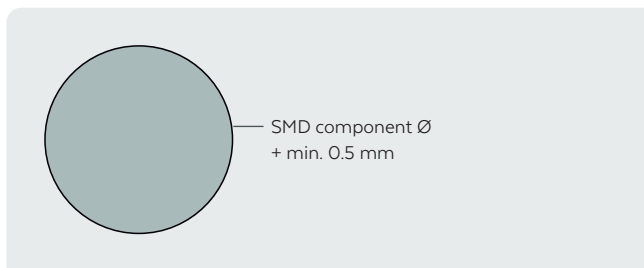
Please inform us with your enquiry if you intend to solder our standard components. We aim to guarantee solderability of our standard press-fit components for at least one year.

QUESTIONS?
WE ARE ALWAYS
HAPPY TO HELP!

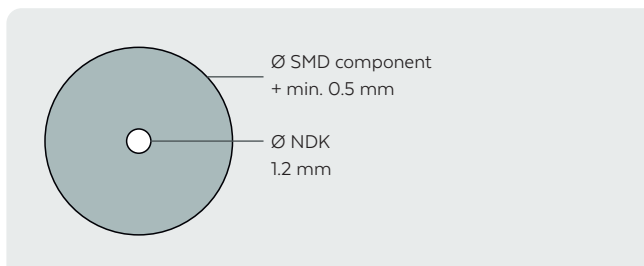


GENERAL GUIDELINES SOLDERING (SMT)

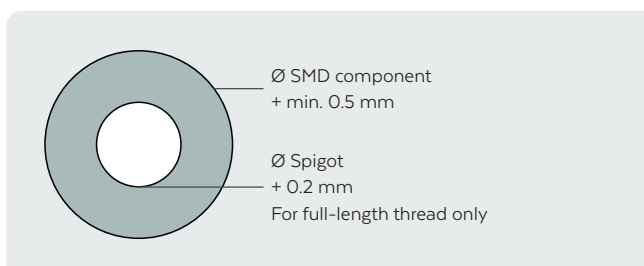
- ✚ Pad diameter min. 0.5 mm larger than component
- ✚ Vias all around the pad for greater current carrying capacity
- ✚ Solder paste thickness: 150 μm to 200 μm
- ✚ Please enquire about suitable solder pastes for you application



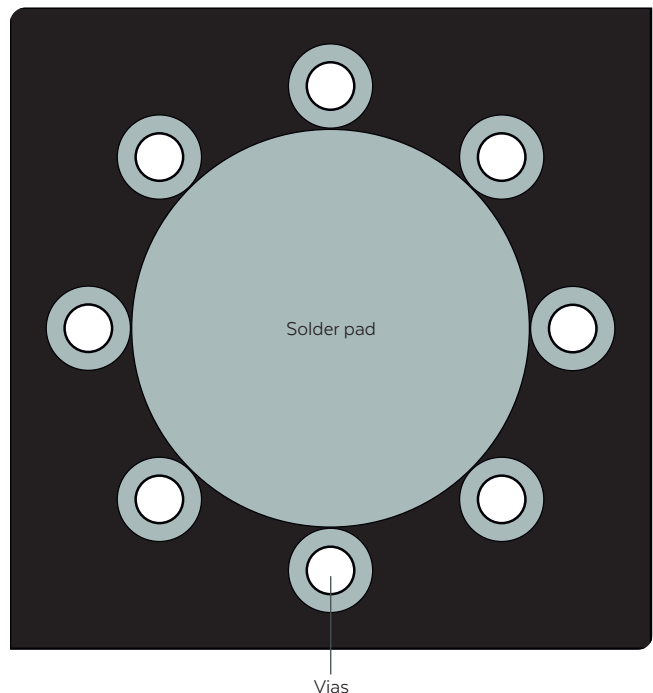
Solder pad



Solder pad with spigot



Solder pad for full-length internal thread





DERATING CURVES NOTES

1. Cable

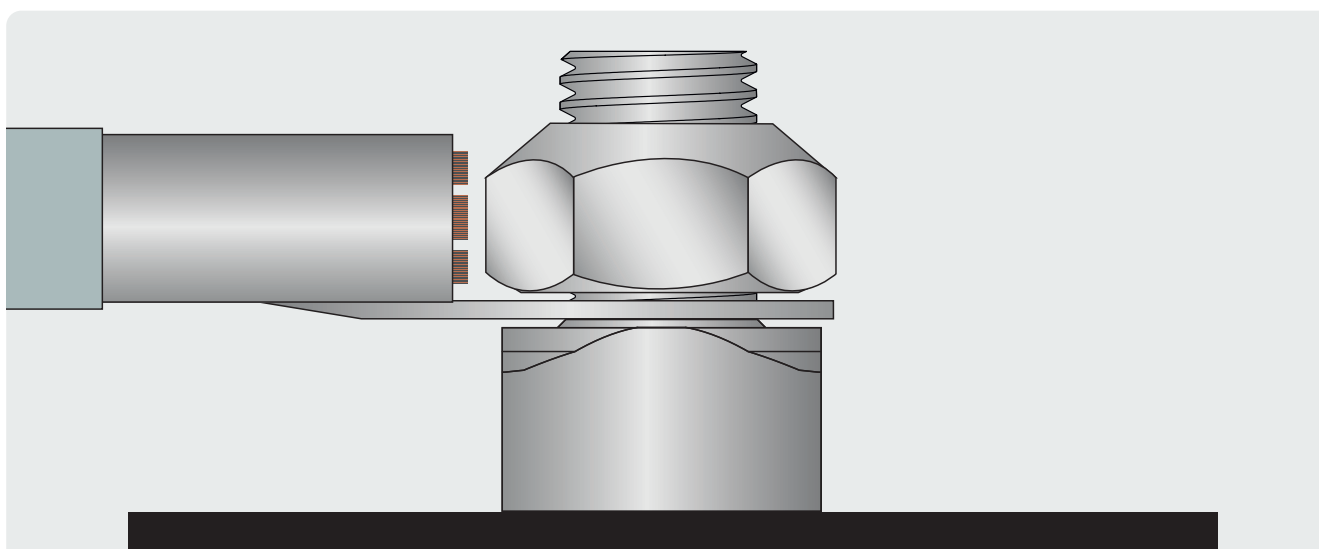
- Conductor cross-section
- Cable lug size
- Cable lug design

2. Power element

- Size (e.g. thread size)
- Type (e.g. number of pins/number of press-fit zones/body mass)
- Connection method (SMT/THT or press-fit versions)

3. Circuit board

- Conductive track width
- Number of layers
- Thickness of copper in the layer(s)
- Etc.



The derating curves shown are snapshots, and are subject to extreme variation (positive or negative) if, for example, cable cross-section and/or circuit board design is changed.

In all cases, we recommend that you review the system as a whole and its current carrying capacity with the cables, power elements, and PCB designs selected, to prove the current carrying capacity of your entire system. If your system fails this test (e.g. if components, PCB or cables overheat), you must strengthen the weakest link in the chain.

The weakest link will NOT normally be the power element, as these are only very rarely pushed to their limits. Therefore, you do not necessarily need to select a larger power element if, for example, a cable cross-section proves too small.

We are always happy to advise you and help you with the design and execution of these tests.

DERATING CURVE

PINS ACROSS ENTIRE SURFACE / PINS IN TWO ROWS

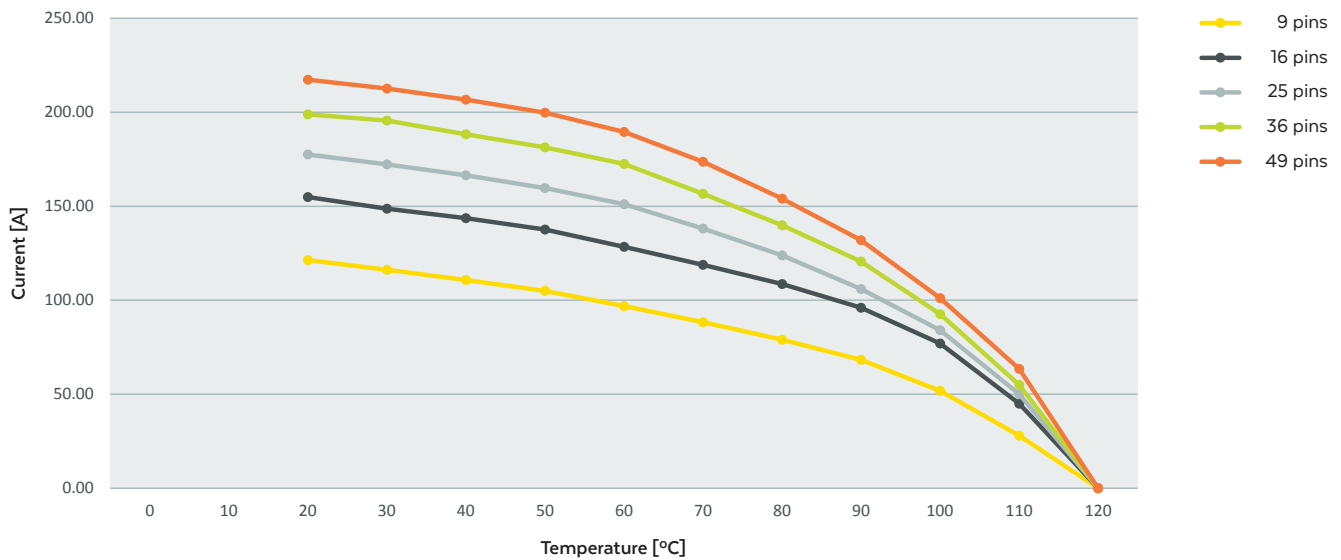
Derating curves are snapshots under test conditions!

Testing was undertaken using a two-layer circuit board, with 70 µm copper.

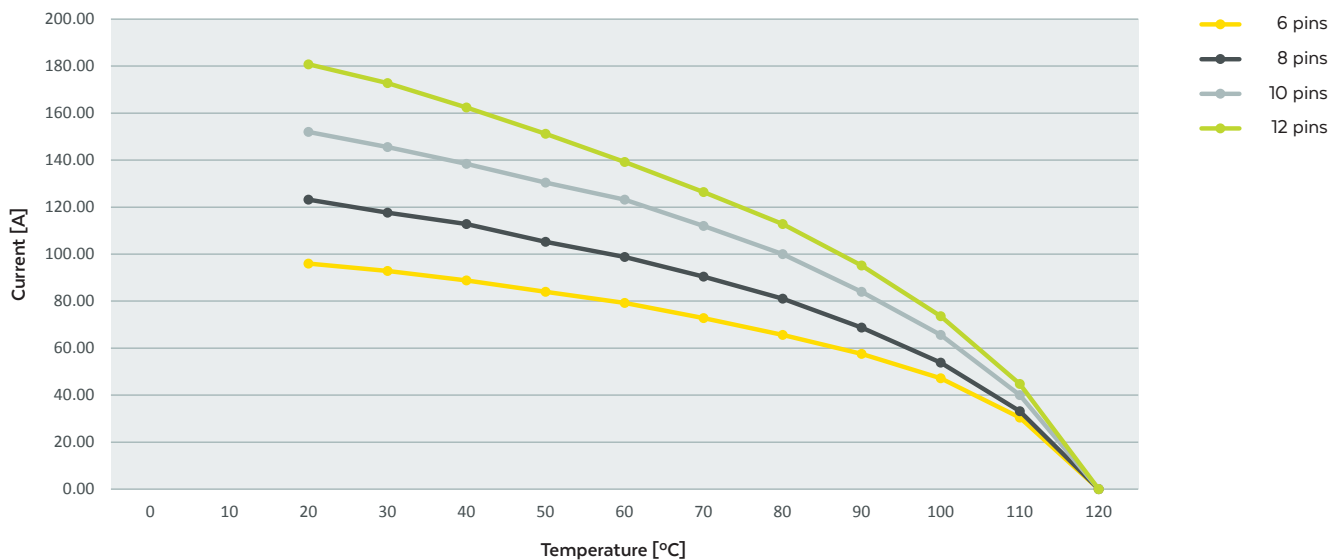
Current carrying capacity

The derating curves show the current carrying capacity – which is not constant – for each component, by arrangement and by numbers of pins.

Derating measurements for Power Line components with pins across entire surface



Derating measurements for Power Line components with pins in two rows

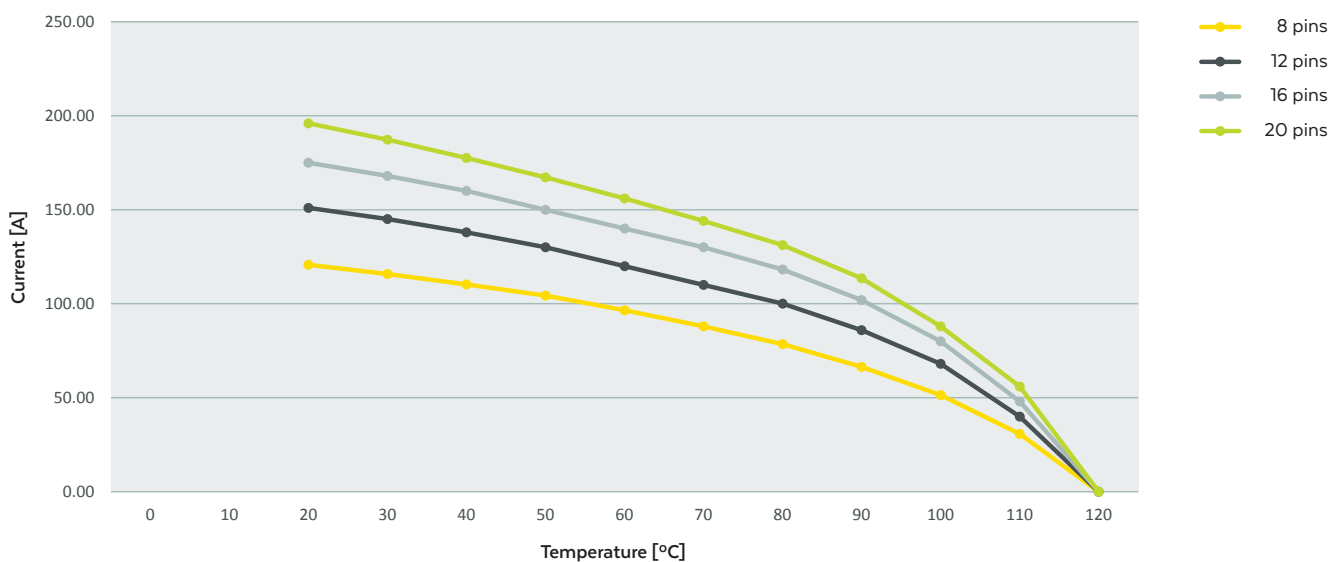




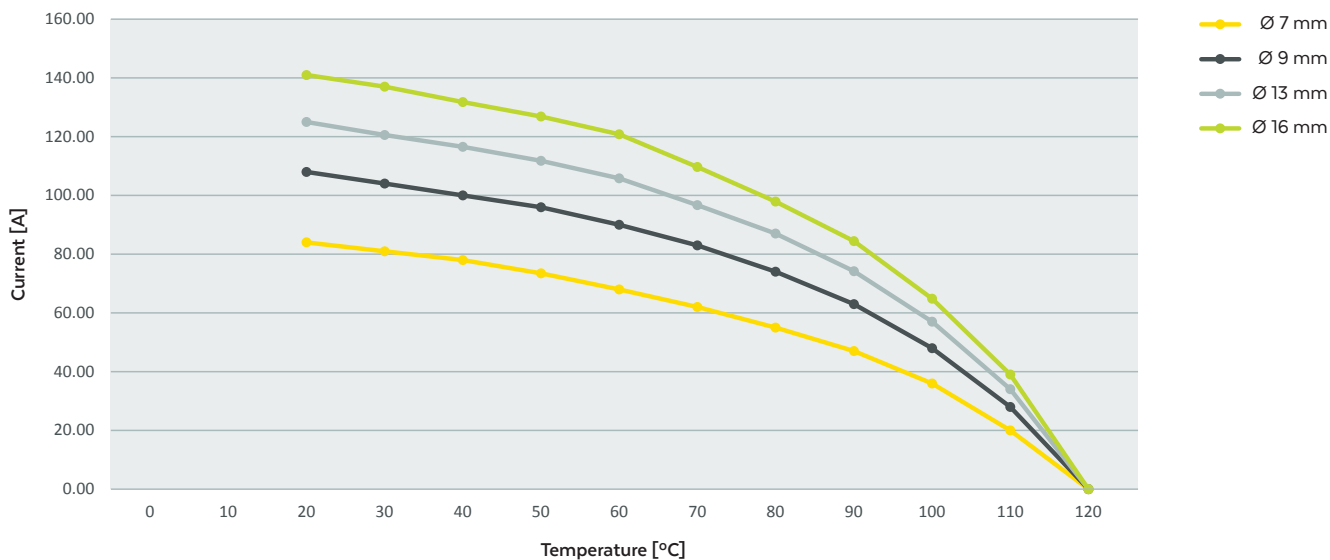
DERATING CURVE

PINS AROUND EDGE / SMD

Derating measurements for Power Line components with pins around the edge



Derating measurements for Power Line SMD components


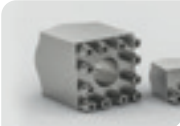




PRODUCT OVERVIEW



PRESS-FIT




| | Number of pins | 4 | 6 | 8 | 9 | 10 | 12 | 16 | 20 | 25 | 36 | 49 |
|---|---|-------------|----------------------------|----------------|----------------|----------------------------|---------------|----------------------------|-----|----------------------------|-----------------|-----|
|  | POWER TOWER pins across entire surface | | | | M3 M4 M5 | | | M4 M5 | | M6 M8 | M10 | M12 |
|  | POWER TOWER RS mates with Radsok® pins across entire surface | | | | | | | Ø 3.2 | | Ø 6 | Ø 8 | |
|  | POWER SOCKET pins across entire surface | M3 | | | M3 | | | M4 M5 M6 | | M8 | M10 | |
|  | POWER SOCKET pins in two rows | | M3 | M4 M5 M6 | | M8 | M10 | | | | | |
|  | POWER SOCKET pins around edge | | | M2.5 | | | M4 M5 | M6 M8 | M10 | | | |
|  | POWER EDGE pins across entire surface | | | | M3 Ø 3.2 | | | M4 M5 Ø 4.2 Ø 5.2 | | M6 M8 Ø 6.2 Ø 8.2 | M10 Ø 10.2 | |
|  | POWER EDGE pins in two rows | M3 Ø 3.2 | M4 M5 Ø 4.2 Ø 5.2 | | | M6 M8 Ø 6.2 Ø 8.2 | M10 Ø 10.2 | | | | | |
|  | POWER EDGE U-Shape pins across entire surface | | | | | | | | | Ø 5.2 | Ø 8.2 Ø 10.2 | |



| | Number of pins | 2 | 3 | 4 | 8 | 12 |
|--|---|------------------------|----|------------------------|------------------------|--------------------------|
|  | BROX BREAK POWER TOWER pins around edge | M4, M5 | | M5, M6 | M6, M8 | M8, M10, M12 |
|  | BROX BREAK POWER SOCKET pins around edge | M5, M6 | M5 | M5, M6 | M6, M8 | M8, M10, M12 |
|  | BROX BREAK POWER EDGE pins around edge | M4, M5 Ø 4.3, Ø 5.3 | | M5, M6 Ø 5.3, Ø 6.4 | M6, M8 Ø 6.4, Ø 8.4 | M8, M10 Ø 8.4, Ø 10.5 |




| | | | | | | |
|---|------------------------|---|--|--|--|--|
|  | POWER PROTECTOR | Suitable for Power Tower and Power Socket 7, 9, 13 and 16 basic size | | | | |
|---|------------------------|---|--|--|--|--|

| | Number of pins | 8 | 10 | 12 | 16 | 20 |
|---|--|------------------------|-----------------------------------|----------------------------|-----------------------------------|-------------------------|
|  | POWER 2 GROUND pins in two rows | M3, M4 Ø 3.2, Ø 4.2 | M4, M5, M6 Ø 4.2, Ø 5.2, Ø 6.2 | M8 Ø 8.2 | | |
|  | POWER 2 GROUND pins around edge | | | M3, M4, M5 Ø 4.2, Ø 5.2 | M4, M5, M6 Ø 4.2, Ø 5.2, Ø 6.2 | M8, M10 Ø 6.2, Ø 8.2 |

| | | | | | | |
|---|---|-----------------------------|--|--|--|--|
|  | POWER 2 TOWER external thread | Suitable for POWER 2 GROUND | | | | |
|  | POWER 2 SOCKET internal thread | Suitable for POWER 2 GROUND | | | | |
|  | POWER 2 SOCKET through hole | Suitable for POWER 2 GROUND | | | | |

PRODUCT OVERVIEW

PRESS-FIT

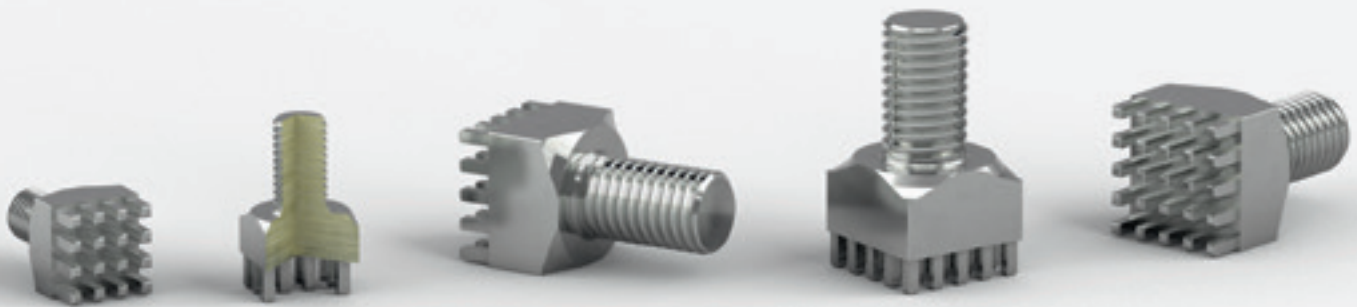
| | | | | |
|---|---|------------|---------------------|---------------|
|  | Number of springs | 1 | 2 | 3 |
| | POWER CROWN spring in tin or silver | 3.3 | 7.4 | 11.5 |
|  | Number of bizon contacts | 3 two rows | 3 two rows with tab | 4 two rows |
| | BIZON BLOCK POWER TOWER | M5 | | M6 |
|  | BIZON BLOCK POWER SOCKET | M5, M6 | M5, M6 | 3 around edge |



| | | | | | | |
|---|--|----------|--------------|--|-------|-------|
| | Wrench sizes | 4 | 5 | 5.5 | 7 | Ø |
|  | POWER SPACER Internal-Internal full-length | M2, M2.5 | M2.5, M3 | M3, M3 (Steel, white galvanized) | M4 | |
|  | POWER SPACER Internal-Internal thread both sides | M2, M2.5 | M2.5, M3 | M2.5, M3 | M4 | |
|  | POWER SPACER Internal-External | M2.5 | M2, M2.5, M3 | M3, M3 (Steel: white galvanized, blue passivated, yellow chromated) | M4 | M6 |
| | Length | 5 | 10 | 10.2 | 15 | 20 |
|  | POWER SPACER spacer rollers | Ø 5.4 | Ø 5.4 | Ø 9 (Stainless steel) | Ø 5.4 | Ø 5.4 |
| | Pol number | 2 | | 4 | | 16 |
|  | POWER SPACER board2board both sides pins across entire surface | 10 | | 3 | | 3 |
|  | POWER SPACER FLEX PRESS-FIT Power Socket, round | | | M2.5 | | |

POWER TOWER

EXTERNAL THREAD, MASSIVE PRESS-FIT, PINS ACROSS ENTIRE SURFACE



PRODUCT SPECIFICATION

- ✎ High-current circuit board connection
- ✎ UNC thread, or custom alterations on demand
- ✎ For attaching lugs, midi fuses, mega fuses and more to PCBs
- ✎ RoHS compliant, REACH compliant



MATERIAL INFORMATION

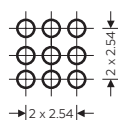
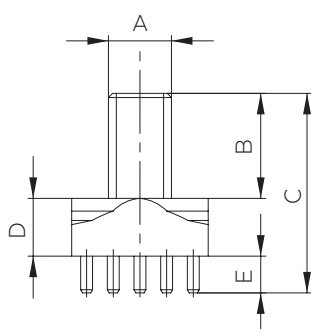
| Option | Part number |
|-----------|--------------|
| BlueBrass | 01.1.00XX.BB |



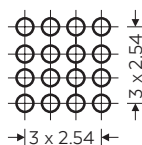
Our product series 01.1.00XX.BB meet all requirements of the which will come into force in the future REACH, RoHS and ELV regulations, just like the future tightened regulation the required lead-free.



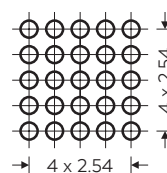
SCALE DRAWINGS



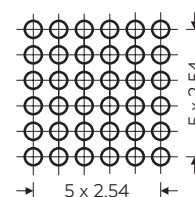
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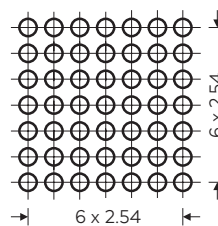
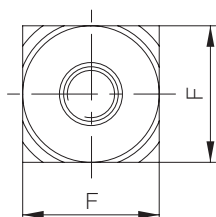
B2



B3



B4



B5

TECHNICAL DATA

| A | B | C | D | E | F | No. of pins/ drilling pattern | Mass [g] | Part number |
|-----|----|------|-----|-----|----|----------------------------------|----------|-------------|
| M3 | 5 | 11 | 3 | 3.5 | 7 | 9/B1 | 1.62 | 01.1.0001 |
| M4 | 6 | 12.5 | 3 | 3.5 | 7 | 9/B1 | 2.21 | 01.1.0018 |
| M4 | 6 | 13 | 3.5 | 3.5 | 9 | 16/B2 | 3.5 | 01.1.0002 |
| M5 | 8 | 15.5 | 4 | 3.5 | 7 | 9/B1 | 3.26 | 01.1.0012 |
| M5 | 8 | 16 | 4.5 | 3.5 | 9 | 16/B2 | 4.88 | 01.1.0003 |
| M6 | 10 | 19 | 5.5 | 3.5 | 13 | 25/B3 | 10.76 | 01.1.0004 |
| M6 | 17 | 22.5 | 5.5 | 3.5 | 13 | 25/B3 | 12.44 | 01.1.0011 |
| M8 | 13 | 24 | 7.5 | 3.5 | 13 | 25/B3 | 16.75 | 01.1.0005 |
| M8 | 18 | 33.5 | 12 | 3.5 | 13 | 25/B3 | 25.34 | 01.1.0019 |
| M10 | 16 | 27.5 | 8 | 3.5 | 16 | 36/B4 | 28.5 | 01.1.0006 |
| M12 | 30 | 41.5 | 8 | 3.5 | 18 | 49/B5 | 51.14 | 01.1.0028 |

Measurements B - F in mm
Masses are subject to slight variations in production

POWER TOWER RS

MATES WITH RADSOK®, MASSIVE PRESS-FIT, PINS ACROSS ENTIRE SURFACE



PRODUCT SPECIFICATION

- ✚ High-current circuit board connection
- ✚ Pluggable high current contacting
- ✚ Easy to install because nothing has to be screwed
- ✚ Silver surface for optimum flow and maximum mating cycles
- ✚ Compatible with popular Radsok® bushes from Amphenol
- ✚ Customized solution on demand (e.g. sealed, other sizes, etc.)
- ✚ RoHS compliant, REACH compliant



MATERIAL INFORMATION

| Option | Part number |
|-----------|--------------|
| BlueBrass | 01.7.000X.BB |

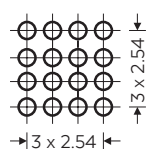
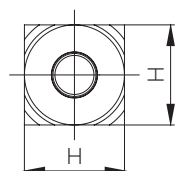
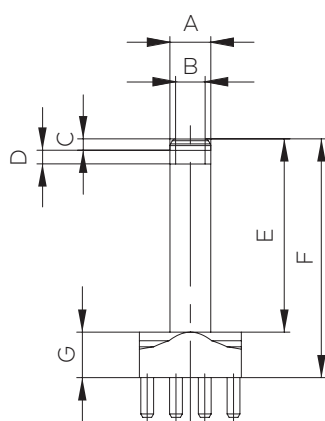


Our product series 01.7.000X.BB meet all requirements of the which will come into force in the future REACH, RoHS and ELV regulations, just like the future tightened regulation the required lead-free.

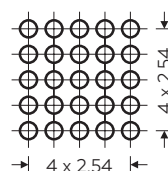
CO-ENGINEERED WITH **Amphenol**



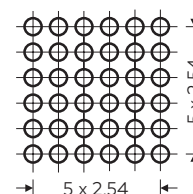
SCALE DRAWINGS



B2



B3



B4

TECHNICAL DATA

| A | B | C | D | E | F | G | H | No. of pins/ drilling pattern | Mass [g] | Part number |
|-------|-------|-----|-----|------|------|---|----|----------------------------------|----------|-------------|
| Ø 3.6 | Ø 2.6 | 1 | 1.2 | 17 | 21 | 4 | 9 | 16/B2 | 4.63 | 01.7.0004 |
| Ø 6 | Ø 5 | 1.6 | 1.4 | 34.5 | 42 | 4 | 13 | 25/B3 | 14.39 | 01.7.0005 |
| Ø 8 | Ø 7 | 1.6 | 1.4 | 35 | 42.5 | 4 | 16 | 36/B4 | 24.22 | 01.7.0006 |

Measurements A - H in mm
Masses are subject to slight variations in production

POWER SOCKET

SOCKET WITH INTERNAL THREAD, PRESS-FIT, PINS ACROSS ENTIRE SURFACE



PRODUCT SPECIFICATION

- ✚ High-current PCB connection
- ✚ UNC thread or custom alterations on demand
- ✚ For attaching cable lugs, midi fuses, mega fuses and more to PCBs
- ✚ RoHS compliant
- ✚ REACH compliant in BlueBrass option



MATERIAL INFORMATION

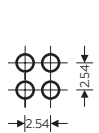
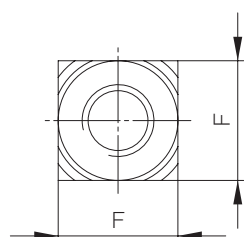
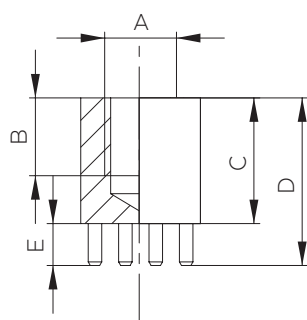
| Option | Part number |
|-----------|--------------|
| BlueBrass | 02.1.00XX.BB |



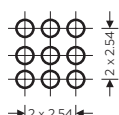
Our product series 02.1.00XX.BB meet all requirements of the which will come into force in the future REACH, RoHS and ELV regulations, just like the future tightened regulation the required lead-free.



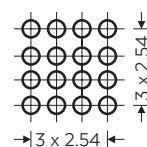
SCALE DRAWINGS



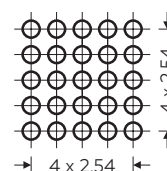
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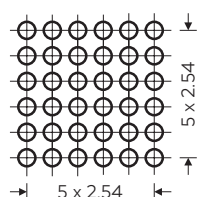
B1



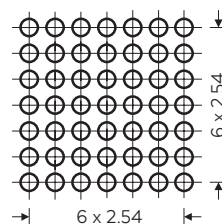
B2



B3



B4



B5

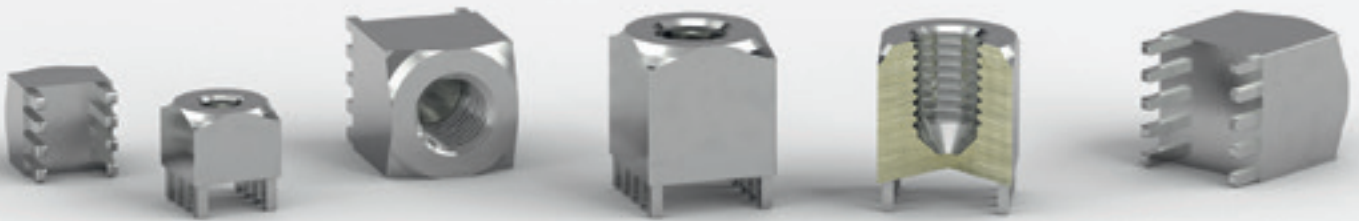
TECHNICAL DATA

| A | B | C | D | E | F | No. of pins/ drilling pattern | Mass [g] | Part number |
|-----|-----|------|------|-----|----|----------------------------------|----------|-------------|
| M3 | 4 | 7 | 10.5 | 3.5 | 5 | 4/B0 | 1.41 | 02.1.0050 |
| M3 | 3.5 | 6 | 9.5 | 3.5 | 7 | 9/B1 | 2.58 | 02.1.0001 |
| M4 | 4 | 7 | 10.5 | 3.5 | 9 | 16/B2 | 4.89 | 02.1.0002 |
| M5 | 4 | 7 | 10.5 | 3.5 | 9 | 16/B2 | 4.64 | 02.1.0003 |
| M6 | 7 | 10.5 | 14 | 3.5 | 10 | 16/B2 | 7.89 | 02.1.0004 |
| M8 | 8 | 13.5 | 17 | 3.5 | 13 | 25/B3 | 16.23 | 02.1.0005 |
| M10 | 11 | 17.5 | 21 | 3.5 | 16 | 36/B4 | 31.3 | 02.1.0006 |

Measurements B - F in mm
Masses are subject to slight variations in production

POWER SOCKET

SOCKET WITH INTERNAL THREAD, MASSIVE PRESS-FIT, PINS IN TWO ROWS



PRODUCT SPECIFICATION

- ✎ High-current PCB connection
- ✎ UNC thread or custom alterations on demand
- ✎ For attaching cable lugs, midi fuses, mega fuses and more to PCBs
- ✎ For use with smaller press-fit forces
- ✎ For use in layouts which do not allow pins all across the surface
- ✎ RoHS compliant, REACH compliant



MATERIAL INFORMATION

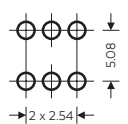
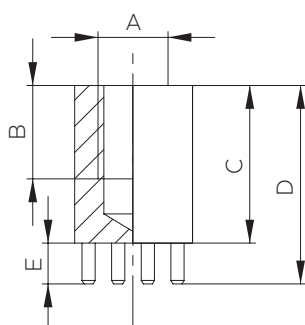
| Option | Part number |
|-----------|--------------|
| BlueBrass | 02.2.000X.BB |



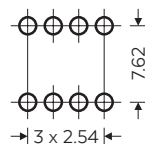
Our product series 02.2.000X.BB meet all requirements of the which will come into force in the future REACH, RoHS and ELV regulations, just like the future tightened regulation the required lead-free.



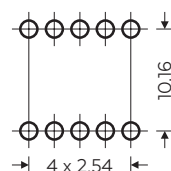
SCALE DRAWINGS



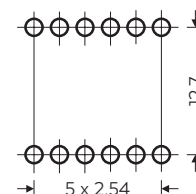
B1



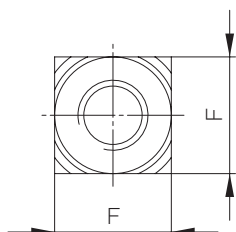
B2



B3



B4



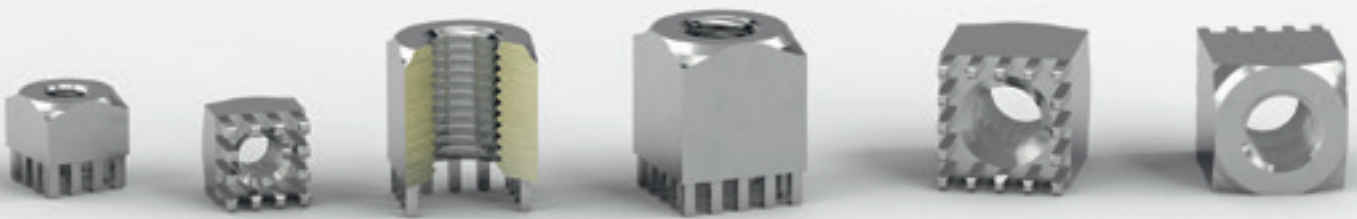
TECHNICAL DATA

| A | B | C | D | E | F | No. of pins/ drilling pattern | Mass [g] | Part number |
|-----|----|------|------|-----|----|----------------------------------|----------|-------------|
| M3 | 5 | 6 | 9.5 | 3.5 | 7 | 6/B1 | 2.41 | 02.2.0001 |
| M4 | 6 | 7 | 10.5 | 3.5 | 9 | 8/B2 | 4.47 | 02.2.0002 |
| M5 | 6 | 7 | 10.5 | 3.5 | 9 | 8/B2 | 4.16 | 02.2.0003 |
| M6 | 9 | 13.5 | 17 | 3.5 | 10 | 8/B2 | 9.64 | 02.2.0004 |
| M8 | 10 | 13.5 | 17 | 3.5 | 13 | 10/B3 | 15.12 | 02.2.0005 |
| M10 | 11 | 17.5 | 21 | 3.5 | 16 | 12/B4 | 30.42 | 02.2.0006 |

Measurements B - F in mm
Masses are subject to slight variations in production

POWER SOCKET

SOCKET WITH INTERNAL THREAD, MASSIVE PRESS-FIT, PINS AROUND EDGE



PRODUCT SPECIFICATION

- ✚ High-current PCB connection
- ✚ UNC thread or custom alterations on demand
- ✚ For attaching cable lugs, midi fuses, mega fuses and more to PCBs
- ✚ For use with smaller press-fit forces
- ✚ For use in layouts which do not allow pins all across the surface
- ✚ RoHS compliant, REACH compliant



MATERIAL INFORMATION

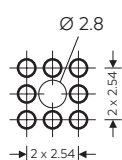
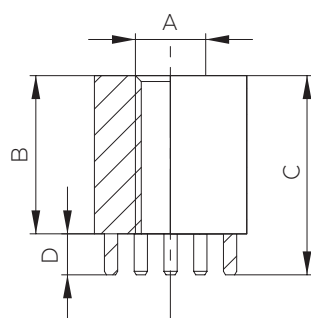
| Option | Part number |
|-----------|--------------|
| BlueBrass | 02.3.000X.BB |



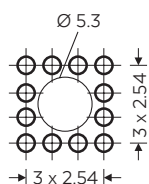
Our product series 02.3.000X.BB meet all requirements of the which will come into force in the future REACH, RoHS and ELV regulations, just like the future tightened regulation the required lead-free.



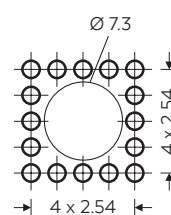
SCALE DRAWINGS



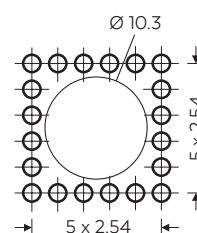
B1



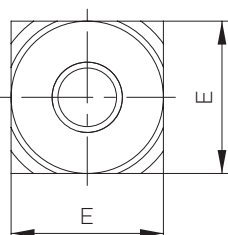
B2



B3



B4



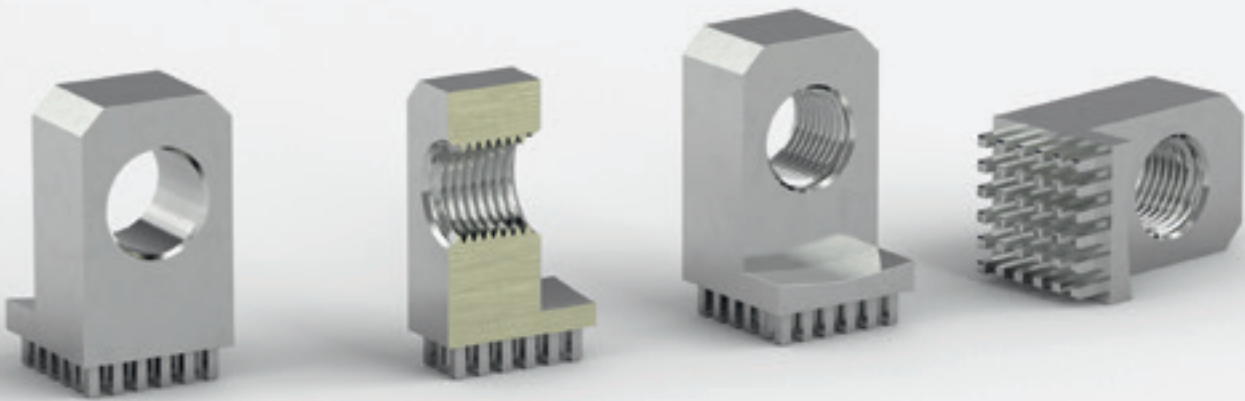
TECHNICAL DATA

| A | B | C | D | E | No. of pins/ drilling pattern | Mass [g] | Part number |
|------|------|-----|-----|----|----------------------------------|----------|------------------|
| M2.5 | 6 | 9.5 | 3.5 | 7 | 8/B1 | 2.57 | 02.3.0001 |
| M4 | 6 | 9.5 | 3.5 | 9 | 12/B2 | 3.94 | 02.3.0002 |
| M5 | 6 | 9.5 | 3.5 | 9 | 12/B2 | 3.71 | 02.3.0003 |
| M6 | 13.5 | 17 | 3.5 | 13 | 16/B3 | 17.05 | 02.3.0004 |
| M8 | 13.5 | 17 | 3.5 | 13 | 16/B3 | 15.32 | 02.3.0005 |
| M10 | 17.5 | 21 | 3.5 | 16 | 20/B4 | 29.41 | 02.3.0006 |

Measurements B - E in mm
Masses are subject to slight variations in production

POWER EDGE

ANGLED, MASSIVE PRESS-FIT, PINS ACROSS ENTIRE SURFACE



PRODUCT SPECIFICATION

- ✚ High-current PCB connection
- ✚ Connection at 90°
- ✚ Available with thread or clearance hole
- ✚ UNC thread or custom alterations on demand
- ✚ Can be used for mounting on housings etc.
- ✚ For connecting components such as high-current relays, cable lugs and more
- ✚ RoHS compliant, REACH compliant



MATERIAL INFORMATION

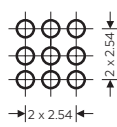
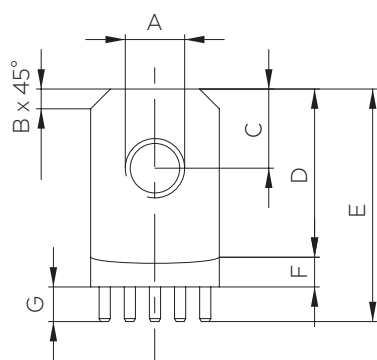
| Option | Part number |
|-----------|-------------|
| BlueBrass | 031.00XX.BB |



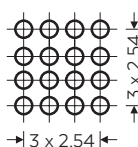
Our product series 031.00XX.BB meet all requirements of the which will come into force in the future REACH, RoHS and ELV regulations, just like the future tightened regulation the required lead-free.



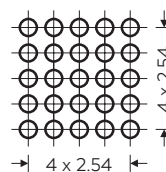
SCALE DRAWINGS



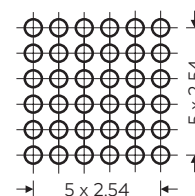
B1



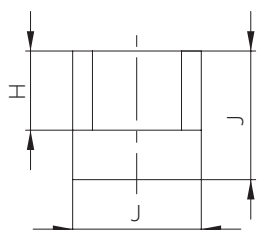
B2



B3



B4



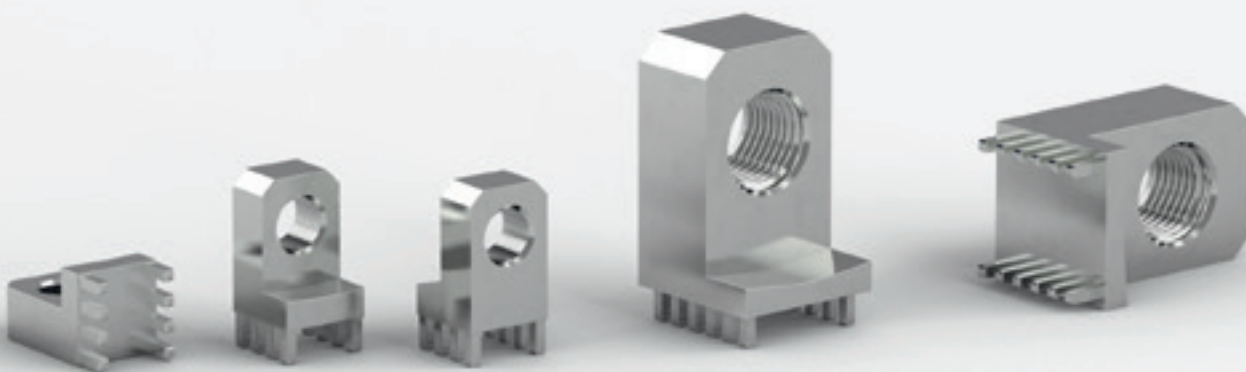
TECHNICAL DATA

| A | B | C | D | E | F | G | H | J | No. of pins/ drilling pattern | Mass [g] | Part number |
|--------|-----|----|------|------|---|-----|----|----|----------------------------------|----------|-------------|
| M3 | 1 | 5 | 11 | 17.5 | 3 | 3.5 | 4 | 7 | 9/B1 | 3.98 | 031.0001 |
| M4 | 1.5 | 5 | 11 | 17.5 | 3 | 3.5 | 5 | 9 | 16/B2 | 6.38 | 031.0002 |
| M5 | 1.5 | 5 | 11 | 17.5 | 3 | 3.5 | 5 | 9 | 16/B2 | 6.15 | 031.0003 |
| M6 | 2 | 8 | 17 | 23.5 | 3 | 3.5 | 8 | 13 | 25/B3 | 18.57 | 031.0004 |
| M8 | 2 | 8 | 22 | 23.5 | 3 | 3.5 | 8 | 13 | 25/B3 | 17.44 | 031.0005 |
| M10 | 2.5 | 10 | 28.5 | 28.5 | 3 | 3.5 | 10 | 16 | 36/B4 | 32.28 | 031.0006 |
| Ø 3.2 | 1 | 5 | 11 | 17.5 | 3 | 3.5 | 4 | 7 | 9/B1 | 3.88 | 031.0007 |
| Ø 4.2 | 1.5 | 5 | 11 | 17.5 | 3 | 3.5 | 5 | 9 | 16/B2 | 6.15 | 031.0008 |
| Ø 5.2 | 1.5 | 5 | 11 | 17.5 | 3 | 3.5 | 5 | 9 | 16/B2 | 5.84 | 031.0009 |
| Ø 6.2 | 2 | 8 | 17 | 23.5 | 3 | 3.5 | 8 | 13 | 25/B3 | 17.86 | 031.0010 |
| Ø 8.2 | 2 | 8 | 22 | 23.5 | 3 | 3.5 | 8 | 13 | 25/B3 | 16.32 | 031.0011 |
| Ø 10.2 | 2.5 | 10 | 28.5 | 28.5 | 3 | 3.5 | 10 | 16 | 36/B4 | 30.16 | 031.0012 |

Measurements B-J in mm
Masses are subject to slight variations in production

POWER EDGE

ANGLED, MASSIVE PRESS-FIT, PINS IN TWO ROWS



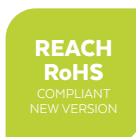
PRODUCT SPECIFICATION

- ✚ High-current PCB connection
- ✚ Connection at 90°
- ✚ Available with thread or clearance hole
- ✚ UNC thread or custom alterations on demand
- ✚ For use with smaller press-fit forces
- ✚ For connecting components such as high-current relays, cable lugs and more
- ✚ RoHS compliant, REACH compliant



MATERIAL INFORMATION

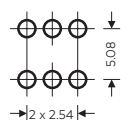
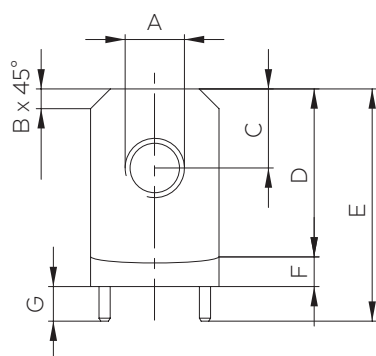
| Option | Part number |
|-----------|--------------|
| BlueBrass | 03.2.00XX.BB |



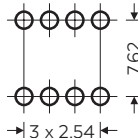
Our product series 03.2.00XX.BB meet all requirements of the which will come into force in the future REACH, RoHS and ELV regulations, just like the future tightened regulation the required lead-free.



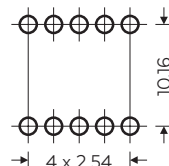
SCALE DRAWINGS



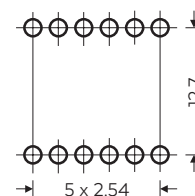
B1



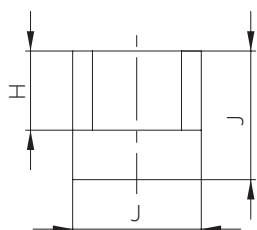
B2



B3



B4



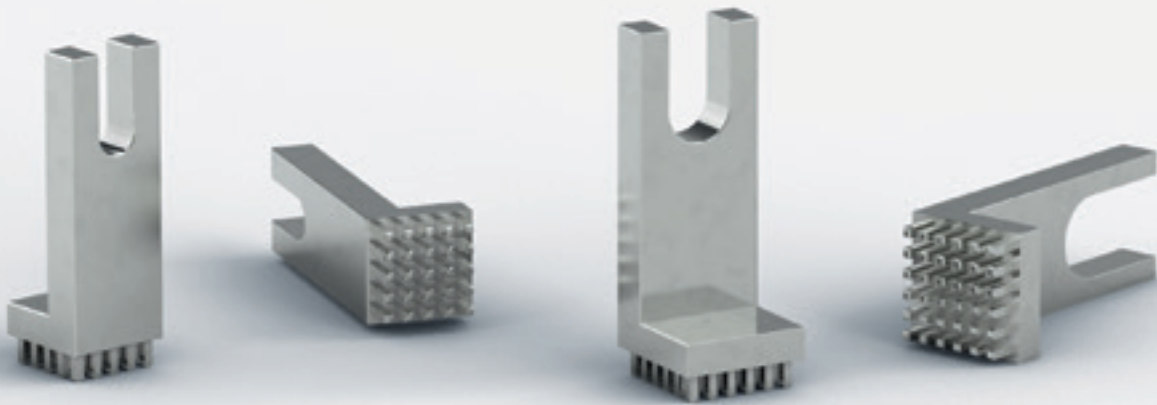
TECHNICAL DATA

| A | B | C | D | E | F | G | H | J | No. of pins/ drilling pattern | Mass [g] | Part number |
|--------|-----|----|------|------|---|-----|----|----|----------------------------------|----------|-------------|
| M3 | 1 | 5 | 11 | 17.5 | 3 | 3.5 | 4 | 7 | 6/B1 | 3.87 | 03.2.0001 |
| M4 | 1.5 | 5 | 11 | 17.5 | 3 | 3.5 | 5 | 9 | 8/B2 | 6.08 | 03.2.0002 |
| M5 | 1.5 | 5 | 11 | 17.5 | 3 | 3.5 | 5 | 9 | 8/B2 | 5.86 | 03.2.0003 |
| M6 | 2 | 8 | 17 | 23.5 | 3 | 3.5 | 8 | 13 | 10/B3 | 18.02 | 03.2.0004 |
| M8 | 2 | 8 | 17 | 23.5 | 3 | 3.5 | 8 | 13 | 10/B3 | 16.89 | 03.2.0005 |
| M10 | 2.5 | 10 | 22 | 28.5 | 3 | 3.5 | 10 | 16 | 12/B4 | 31.39 | 03.2.0006 |
| Ø 3.2 | 1 | 5 | 11 | 17.5 | 3 | 3.5 | 4 | 7 | 6/B1 | 3.76 | 03.2.0007 |
| Ø 4.2 | 1.5 | 5 | 11 | 17.5 | 3 | 3.5 | 5 | 9 | 8/B2 | 5.86 | 03.2.0008 |
| Ø 5.2 | 1.5 | 5 | 11 | 17.5 | 3 | 3.5 | 5 | 9 | 8/B2 | 5.55 | 03.2.0009 |
| Ø 6.2 | 2 | 8 | 17 | 23.5 | 3 | 3.5 | 8 | 13 | 10/B3 | 17.3 | 03.2.0010 |
| Ø 8.2 | 2 | 8 | 22 | 23.5 | 3 | 3.5 | 8 | 13 | 10/B3 | 15.77 | 03.2.0011 |
| Ø 10.2 | 2.5 | 10 | 28.5 | 28.5 | 3 | 3.5 | 10 | 16 | 12/B4 | 29.28 | 03.2.0012 |

Measurements B - J in mm
Masses are subject to slight variations in production

POWER EDGE

U- SHAPE, ANGLED, MASSIVE PRESS-FIT, PINS ACROSS ENTIRE SURFACE



PRODUCT SPECIFICATION

- ✚ High-current PCB connection
- ✚ Connection at 90°
- ✚ U- profile makes mounting bolt easy to manipulate
- ✚ Larger height tolerances can be compensated for
- ✚ Custom alterations on demand
- ✚ Can be used for mounting on housings etc.
- ✚ For connecting components such as high-current relays, cable lugs and more
- ✚ RoHS compliant, REACH compliant



MATERIAL INFORMATION

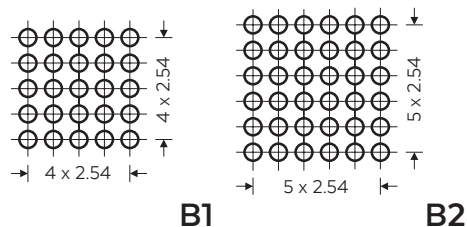
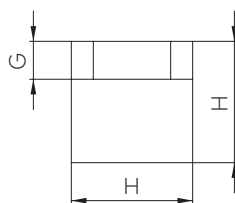
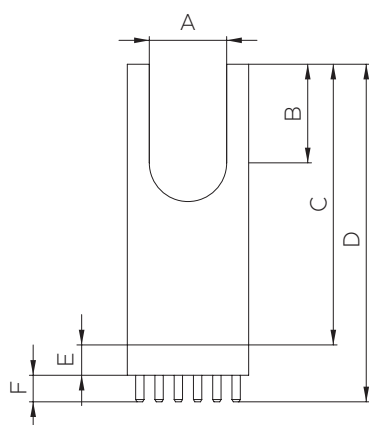
| Option | Part number |
|-----------|-------------|
| BlueBrass | 031.00XX.BB |



Our product series 031.00XX.BB meet all requirements of the which will come into force in the future REACH, RoHS and ELV regulations, just like the future tightened regulation the required lead-free.



SCALE DRAWINGS



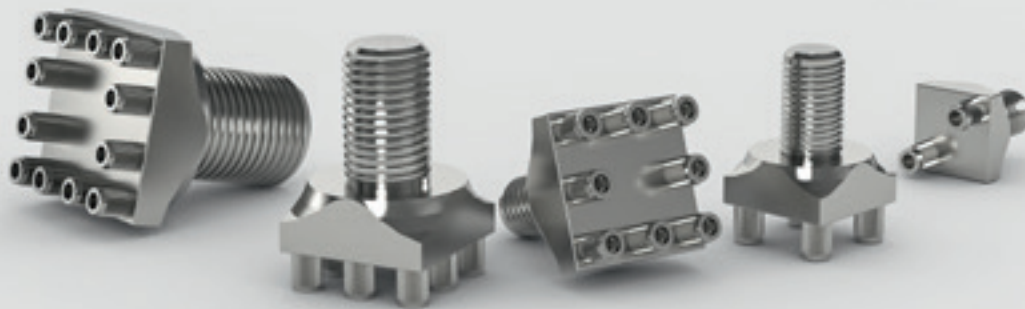
TECHNICAL DATA

| A | B | C | D | E | F | G | H | No. of pins/ drilling pattern | Mass [g] | Part number |
|--------|----|----|------|---|-----|---|----|----------------------------------|----------|-------------|
| Ø 5.2 | 10 | 32 | 39.5 | 4 | 3.5 | 5 | 13 | 25/B1 | 21.62 | 03.1.0021 |
| Ø 8.2 | 10 | 35 | 42.5 | 4 | 3.5 | 5 | 16 | 36/B2 | 29.13 | 03.1.0018 |
| Ø 10.2 | 13 | 37 | 44.5 | 4 | 3.5 | 5 | 16 | 36/B2 | 27.73 | 03.1.0017 |

Measurements A - H in mm
Masses are subject to slight variations in production

BROX BREAK TOWER

EXTERNAL THREAD, SEMI MASSIVE PRESS-FIT, PINS AROUND EDGE



PRODUCT SPECIFICATION

- ✚ Pins yield slightly after press-fitting, reducing excess force transmission and circuit-board stress
- ✚ Comparable performance and resilience as known market solutions
- ✚ Performance and robustness identical with established solutions
- ✚ Ideally suited for use in e-vehicles, robotics, industrial automation, etc.
- ✚ With the proven fast, reliable MTCOON service
- ✚ Cost attractive alternative surge
- ✚ Up to 40% cost savings
- ✚ RoHS compliant, REACH compliant



MATERIAL INFORMATION

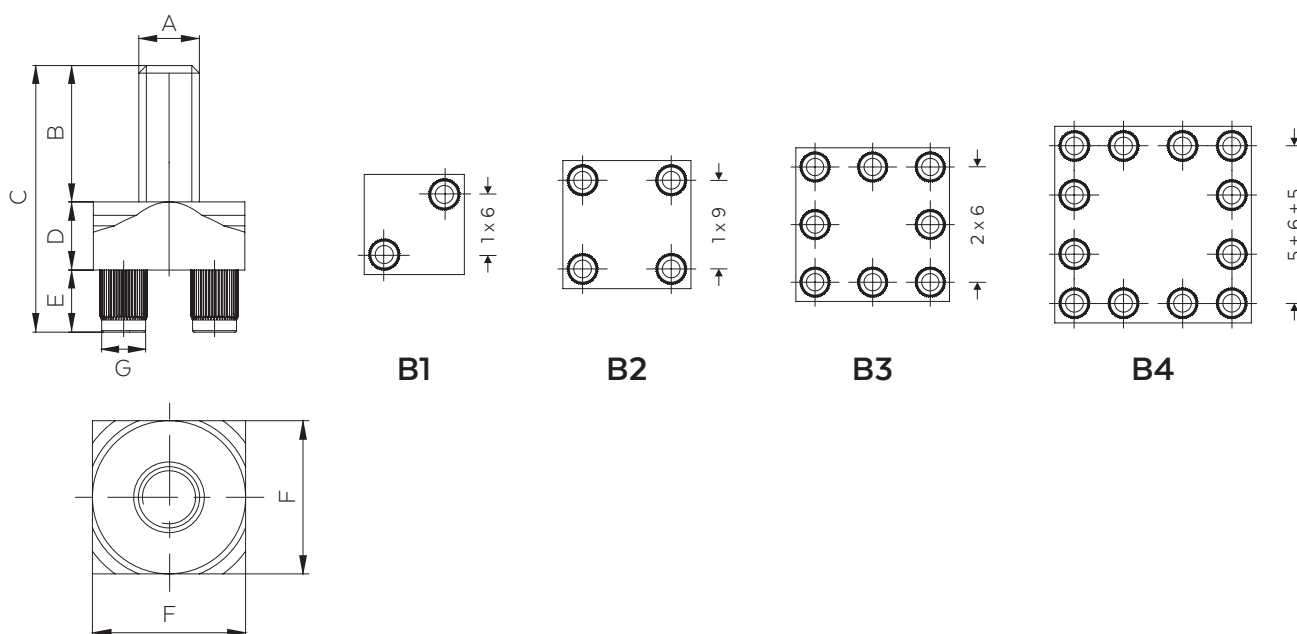
| Option | Part number |
|-----------|--------------|
| BlueBrass | 01.4.000X.BB |



Our product series 01.4.000X.BB meet all requirements of the which will come into force in the future REACH, RoHS and ELV regulations, just like the future tightened regulation the required lead-free.



SCALE DRAWINGS



TECHNICAL DATA

| A | B | C | D | E | F | G | No. of pins/ drilling pattern | Mass [g] | Part number |
|-----|----|------|-----|-----|----|-------|----------------------------------|----------|-------------|
| M4 | 9 | 17.6 | 4.5 | 4.1 | 10 | Ø 2.9 | 2/B1 | 4.95 g | 01.4.0001.D |
| M5 | 9 | 17.6 | 4.5 | 4.1 | 10 | Ø 2.9 | 2/B1 | 5.49 g | 01.4.0002.D |
| M5 | 11 | 20.6 | 5.5 | 4.1 | 13 | Ø 2.9 | 4/B2 | 10.00 g | 01.4.0003.D |
| M6 | 11 | 20.6 | 5.5 | 4.1 | 13 | Ø 2.9 | 4/B2 | 10.81 g | 01.4.0004.C |
| M6 | 14 | 24.6 | 6.5 | 4.1 | 16 | Ø 2.9 | 8/B3 | 18.07 g | 01.4.0005.C |
| M8 | 14 | 24.6 | 6.5 | 4.1 | 16 | Ø 2.9 | 8/B3 | 20.67 g | 01.4.0006.C |
| M8 | 17 | 28.6 | 7.5 | 4.1 | 20 | Ø 2.9 | 12/B4 | 33.30 g | 01.4.0007.C |
| M10 | 17 | 28.6 | 7.5 | 4.1 | 20 | Ø 2.9 | 12/B4 | 37.37 g | 01.4.0008.C |
| M12 | 17 | 28.6 | 7.5 | 4.1 | 20 | Ø 2.9 | 12/B4 | 42.34 g | 01.4.0009.C |

Measurements B - G in mm
Das Gewicht kann produktionsbedingt leicht variieren

BROX BREAK SOCKET

SOCKET WITH INTERNAL THREAD, SEMI MASSIVE PRESS-FIT, PINS AROUND EDGE



PRODUCT SPECIFICATION

- ✎ The pin yields slightly after pressing in, this reduces excess force transmission and stress on the printed circuit board
- ✎ Comparable performance and resilience as known market solutions
- ✎ High performance and robustness proven in customer and field tests
- ✎ Ideally suited for use in e-vehicles, robotics, industrial automation, etc.
- ✎ With the proven fast, reliable MTCON service
- ✎ Cost-attractive source alternative for known market solutions
- ✎ Up to 40% cost savings
- ✎ RoHS compliant, REACH compliant



MATERIAL INFORMATION

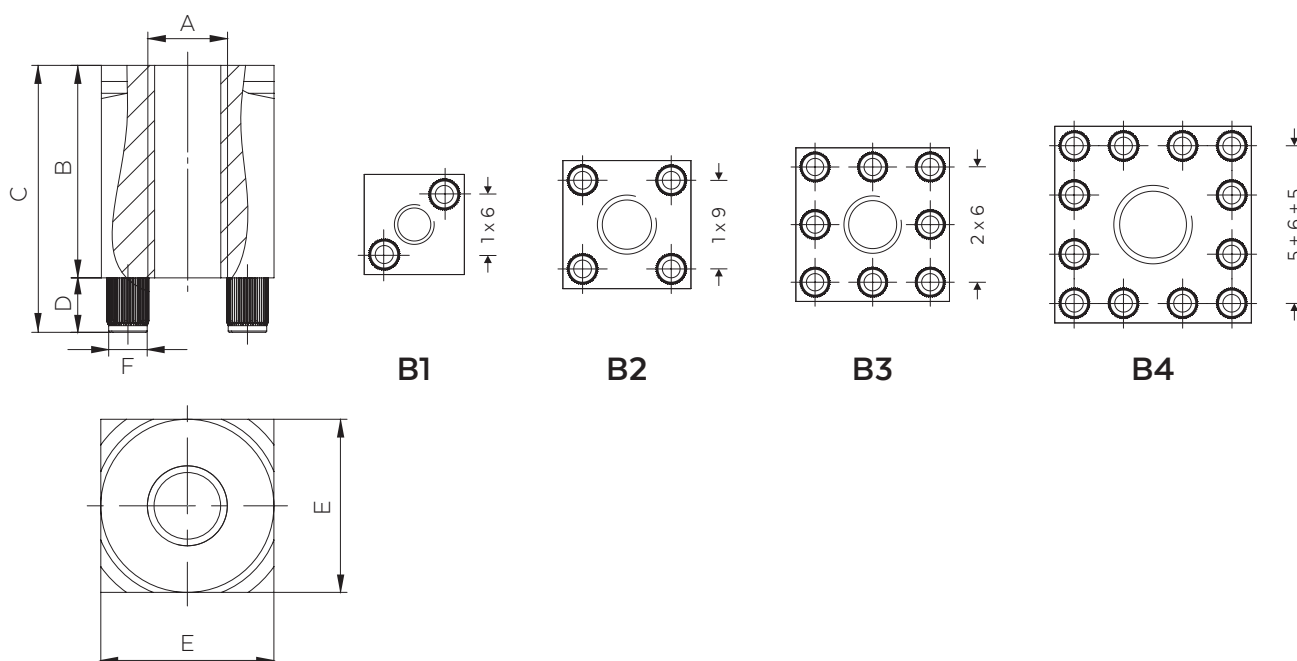
| Option | Part number |
|-----------|--------------|
| BlueBrass | 02.4.00XX.BB |



Our product series 02.4.00XX.BB meet all requirements of the which will come into force in the future REACH, RoHS and ELV regulations, just like the future tightened regulation the required lead-free.



SCALE DRAWINGS

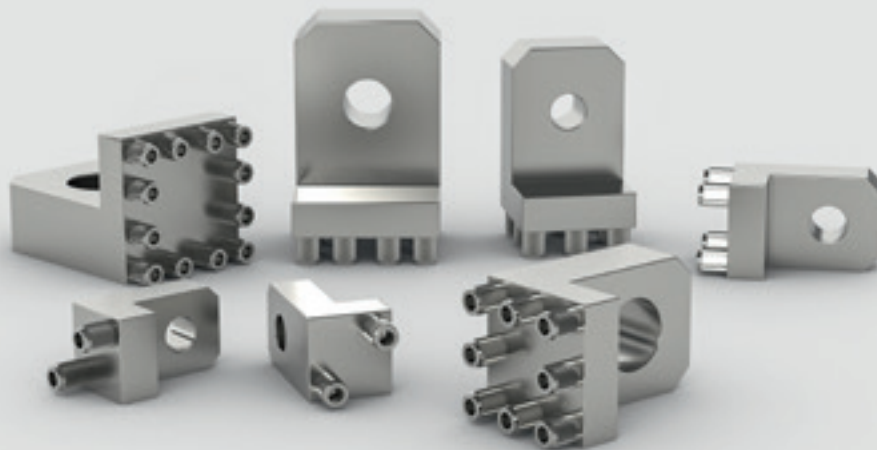


TECHNICAL DATA

| A | B | C | D | E | F | No. of pins/ drilling pattern | Mass [g] | Part number |
|-----|----|------|-----|----|-------|----------------------------------|----------|-------------|
| M6 | 13 | 17.1 | 4.1 | 10 | Ø 2.9 | 2/B1 | 10.26 g | 02.4.0001.C |
| M5 | 13 | 17.1 | 4.1 | 10 | Ø 2.9 | 2/B1 | 9.68 g | 02.4.0002.C |
| M5 | 16 | 20.1 | 4.1 | 13 | Ø 2.9 | 4/B2 | 21.34 g | 02.4.0003.C |
| M6 | 16 | 20.1 | 4.1 | 13 | Ø 2.9 | 4/B2 | 20.56 g | 02.4.0004.C |
| M6 | 20 | 24.1 | 4.1 | 16 | Ø 2.9 | 8/B3 | 40.64 g | 02.4.0005.D |
| M8 | 20 | 24.1 | 4.1 | 16 | Ø 2.9 | 8/B3 | 37.85 g | 02.4.0006.C |
| M8 | 24 | 28.1 | 4.1 | 20 | Ø 2.9 | 12/B4 | 74.61 g | 02.4.0007.C |
| M10 | 24 | 28.1 | 4.1 | 20 | Ø 2.9 | 12/B4 | 70.46 g | 02.4.0008.C |
| M12 | 24 | 28.1 | 4.1 | 20 | Ø 2.9 | 12/B4 | 65.38 g | 02.4.0009.C |
| M5 | 7 | 11.1 | 4.1 | 10 | Ø 2.9 | 4/B2 | 5.66 g | 02.4.0010.C |

Measurements B - F in mm
Masses are subject to slight variations in production

BROX BREAK EDGE ANGLED, SEMI MASSIVE PRESS-FIT, PINS AROUND EDGE



PRODUCT SPECIFICATION

- ✚ The pin yields slightly after pressing in, this reduces excess force transmission and stress on the printed circuit board
- ✚ Comparable performance and resilience as known market solutions
- ✚ High performance and robustness proven in customer and field tests
- ✚ Ideally suited for use in e-vehicles, robotics, industrial automation, etc.
- ✚ With the proven fast, reliable MTCON service
- ✚ Cost-attractive source alternative for known market solutions
- ✚ Up to 40% cost savings
- ✚ RoHS compliant, REACH compliant



MATERIAL INFORMATION

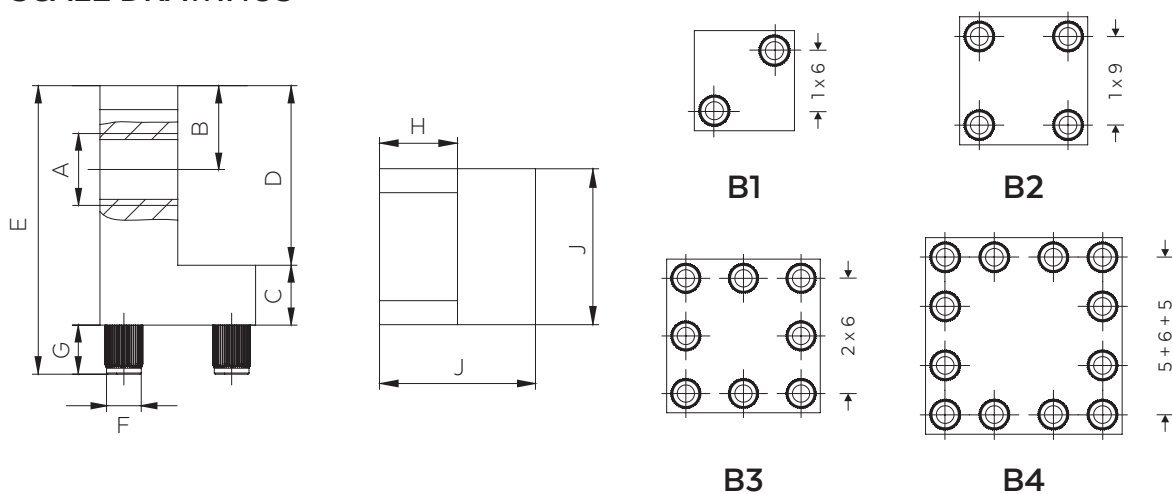
| Option | Part number |
|-----------|--------------|
| BlueBrass | 03.4.X0XX.BB |



Our product series 03.4.X0XX.BB meet all requirements of the which will come into force in the future REACH, RoHS and ELV regulations, just like the future tightened regulation the required lead-free.



SCALE DRAWINGS



TECHNICAL DATA

| A | B | C | D | E | F | G | H | J | No. of pins/ drilling pattern | Mass [g] | Part number |
|--------|------|----|----|------|-------|-----|-----|----|----------------------------------|----------|-------------|
| M4 | 5.5 | 5 | 12 | 21.1 | Ø 2.9 | 4.1 | 5 | 10 | 2/B1 | 9.22 | 03.4.0001.C |
| M5 | 5.5 | 5 | 12 | 21.1 | Ø 2.9 | 4.1 | 5 | 10 | 2/B1 | 8.99 | 03.4.0002.C |
| M5 | 7 | 5 | 15 | 24.1 | Ø 2.9 | 4.1 | 6.5 | 13 | 4/B2 | 17.63 | 03.4.0003.C |
| M6 | 7 | 8 | 15 | 24.1 | Ø 2.9 | 4.1 | 6.5 | 13 | 4/B2 | 17.31 | 03.4.0004.C |
| M6 | 9 | 8 | 19 | 28.1 | Ø 2.9 | 4.1 | 8 | 16 | 8/B3 | 31.13 | 03.4.0005.C |
| M8 | 9 | 10 | 19 | 28.1 | Ø 2.9 | 4.1 | 8 | 16 | 8/B3 | 30.00 | 03.4.0006.C |
| M8 | 11.5 | 5 | 23 | 32.1 | Ø 2.9 | 4.1 | 10 | 20 | 12/B4 | 54.22 | 03.4.0007.C |
| M10 | 11.5 | 5 | 23 | 32.1 | Ø 2.9 | 4.1 | 10 | 20 | 12/B4 | 52.49 | 03.4.0008.C |
| Ø 4.3 | 5.5 | 5 | 12 | 21.1 | Ø 2.9 | 4.1 | 5 | 10 | 2/B1 | 8.97 | 03.4.0009.C |
| Ø 5.3 | 5.5 | 5 | 12 | 21.1 | Ø 2.9 | 4.1 | 5 | 10 | 2/B1 | 8.65 | 03.4.0010.C |
| Ø 5.3 | 7 | 8 | 15 | 24.1 | Ø 2.9 | 4.1 | 6.5 | 13 | 4/B2 | 17.17 | 03.4.0011.C |
| Ø 6.4 | 7 | 8 | 15 | 24.1 | Ø 2.9 | 4.1 | 6.5 | 13 | 4/B2 | 16.92 | 03.4.0012.C |
| Ø 6.4 | 9 | 5 | 19 | 28.1 | Ø 2.9 | 4.1 | 8 | 16 | 8/B3 | 30.28 | 03.4.0013.C |
| Ø 8.4 | 9 | 5 | 19 | 28.1 | Ø 2.9 | 4.1 | 8 | 16 | 8/B3 | 28.70 | 03.4.0014.C |
| Ø 8.4 | 11.5 | 5 | 23 | 32.1 | Ø 2.9 | 4.1 | 10 | 20 | 12/B4 | 52.61 | 03.4.0015.C |
| Ø 10.5 | 11.5 | 5 | 23 | 31.1 | Ø 2.9 | 4.1 | 10 | 20 | 12/B4 | 49.96 | 03.4.0016.C |

Measurements B - J in mm
Masses are subject to slight variations in production

POWER PROTECTOR FOR PROTECTING POWER TOWERS AND POWER SOCKETS



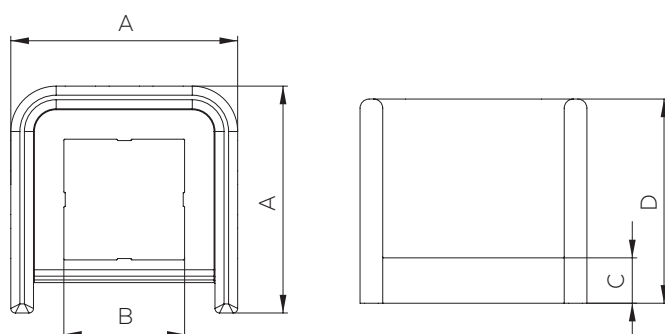
PRODUCT SPECIFICATION

- ↳ Designed to fit on all Power Tower and Power Socket elements
- ↳ Prevents short circuits with nearby components
- ↳ Protects against contact and twisting
- ↳ Enables shorter distancing of power elements
- ↳ RoHS compliant, REACH compliant





SCALE DRAWINGS



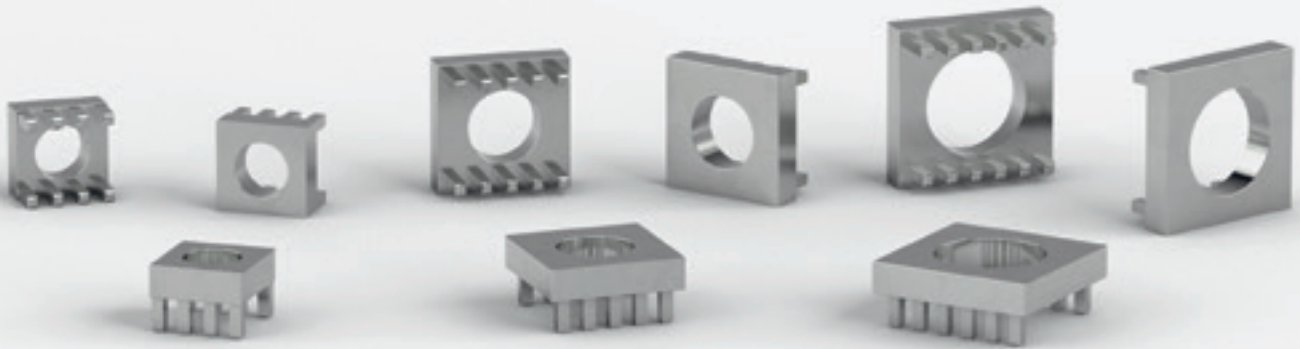
TECHNICAL DATA

| A | B | C | D | For use with (Power Tower, Power Socket) | Part number |
|----|----|-----|------|--|-------------|
| 16 | 7 | 2 | 9.5 | 7, basic size | 01.0.0001 |
| 18 | 9 | 2.5 | 14.5 | 9, basic size | 01.0.0002 |
| 25 | 13 | 5 | 22.5 | 13, basic size | 01.0.0003 |
| 30 | 16 | 7 | 26 | 16, basic size | 01.0.0004 |

Measurements A - D in mm

POWER 2 GROUND

TWO-PIECE, BASE BODY, PINS IN TWO ROWS



PRODUCT SPECIFICATION

- ✎ High-current PCB connection
- ✎ Protection of PCB against mechanical stresses
- ✎ For fastening cable lugs and large, heavy components such as battery isolating switches
- ✎ Contact spacing 2.54 mm
- ✎ RoHS compliant, REACH compliant



MATERIAL INFORMATION

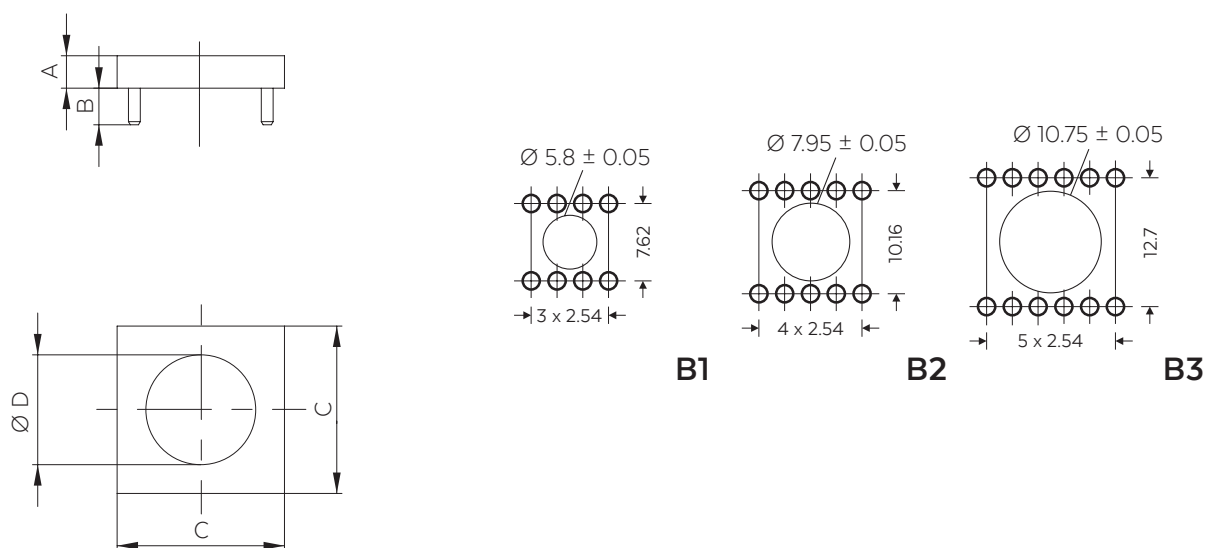
| Option | Part number |
|-----------|--------------|
| BlueBrass | 09.1.00XX.BB |



Our product series 09.1.00XX.BB meet all requirements of which will come into force in the future REACH, RoHS and ELV regulations, just like the future tightened regulation the required lead-free.



SCALE DRAWINGS



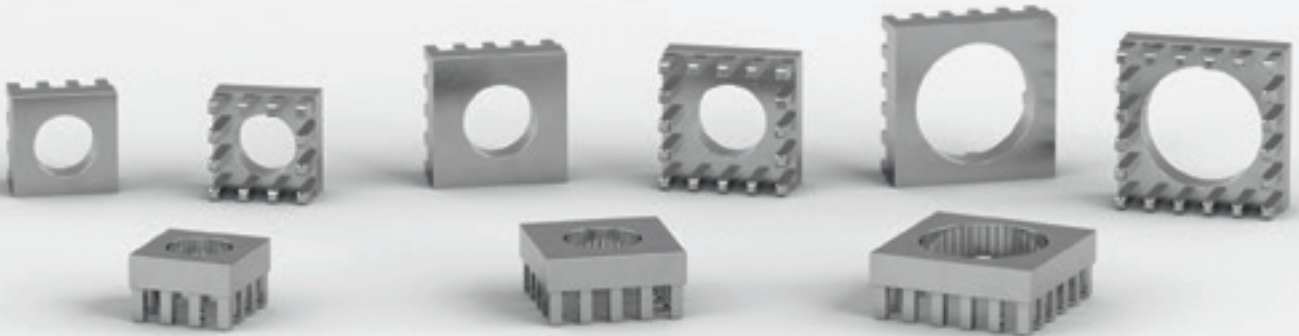
TECHNICAL DATA

| A | B | C | D | No. of pins/ drilling pattern | Mass [g] | Part number |
|-----|-----|----|------|----------------------------------|----------|-------------|
| 3.1 | 3.5 | 9 | 5.5 | 8/B1 | 1.8 | 09.1.0001 |
| 3.1 | 3.5 | 13 | 7.3 | 10/B2 | 3.7 | 09.1.0002 |
| 3.1 | 3.5 | 16 | 10.5 | 12/B3 | 4.89 | 09.1.0003 |
| 3.1 | 3.5 | 16 | 9.8 | 12/B3 | 5.18 | 09.1.0004 |

Measurements A - D in mm
Masses are subject to slight variations in production

POWER 2 GROUND

TWO-PIECE, BASE BODY, PINS AROUND EDGE



PRODUCT SPECIFICATION

- ✚ High-current PCB connection
- ✚ Protection of PCB against mechanical stresses
- ✚ For fastening cable lugs and large, heavy components such as battery isolating switches
- ✚ Contact spacing 2.85 mm
- ✚ RoHS compliant, REACH compliant



MATERIAL INFORMATION

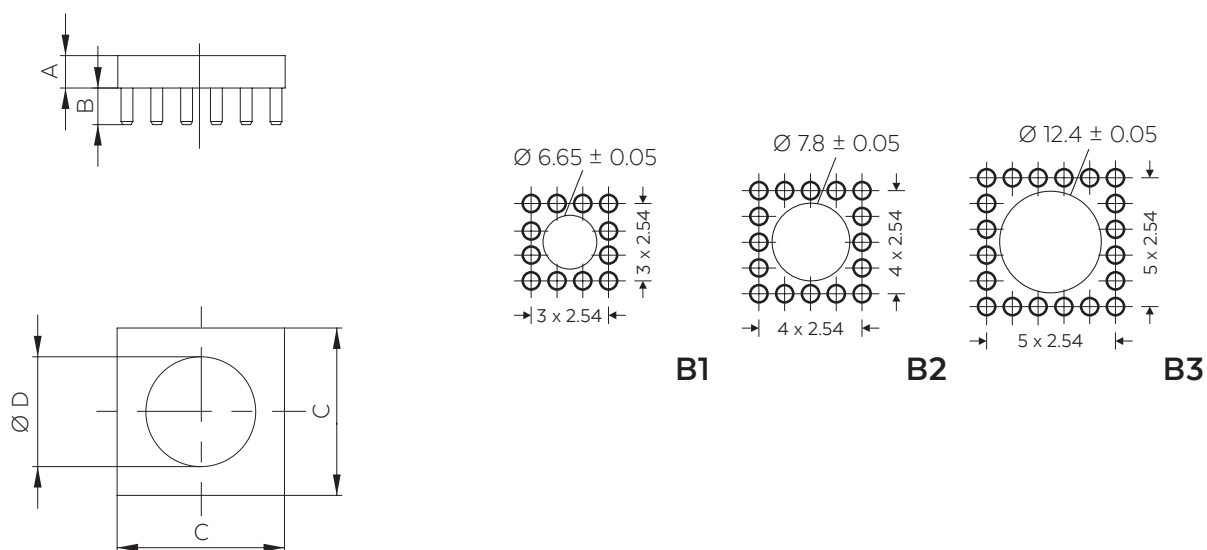
| Option | Part number |
|-----------|--------------|
| BlueBrass | 09.2.00XX.BB |



Our product series 09.2.00XX.BB meet all requirements of the which will come into force in the future REACH, RoHS and ELV regulations, just like the future tightened regulation the required lead-free.



SCALE DRAWINGS

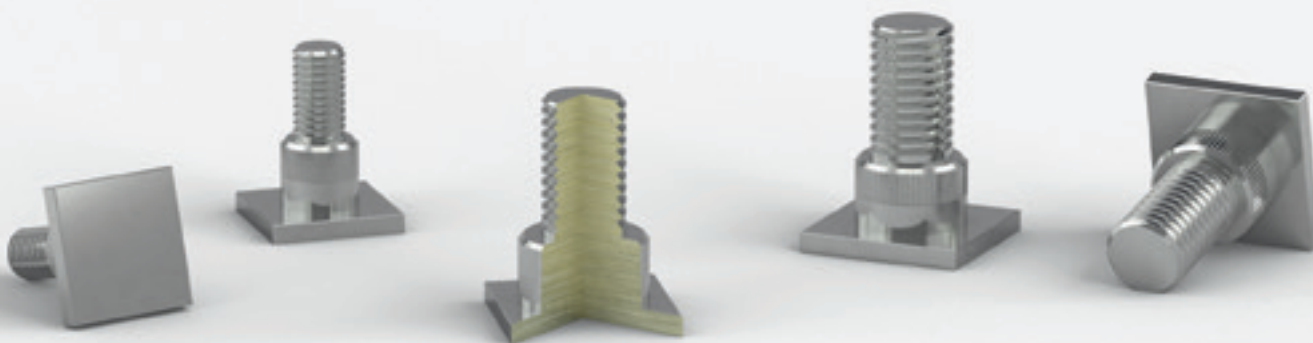


TECHNICAL DATA

| A | B | C | D | No. of pins/ drilling pattern | Mass [g] | Part number |
|-----|-----|----|-----|----------------------------------|----------|-------------|
| 3.1 | 3.5 | 10 | 6.2 | 12/B1 | 2.27 | 09.2.0001 |
| 3.1 | 3.5 | 13 | 7.3 | 16/B2 | 3.93 | 09.2.0002 |
| 3.1 | 3.5 | 16 | 12 | 20/B3 | 4.49 | 09.2.0003 |

Measurements A - D in mm
Masses are subject to slight variations in production

POWER 2 TOWER TWO-PIECE, EXTERNAL THREAD



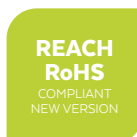
PRODUCT SPECIFICATION

- ✚ For press-fitting into base
- ✚ UNC thread or customized changes on demand
- ✚ For attaching cable lugs, midi fuses, mega fuses and more to PCBs
- ✚ RoHS compliant, REACH compliant



MATERIAL INFORMATION

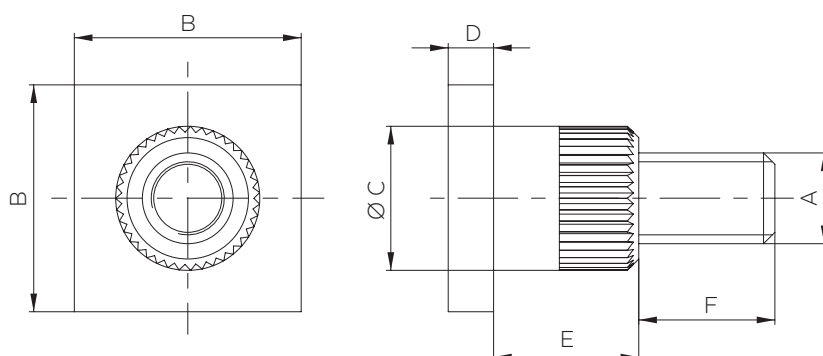
| Option | Part number |
|-----------|--------------|
| BlueBrass | 09.3.00XX.BB |



Our product series 09.3.00XX.BB meet all requirements of which will come into force in the future REACH, RoHS and ELV regulations, just like the future tightened regulation the required lead-free.



SCALE DRAWINGS

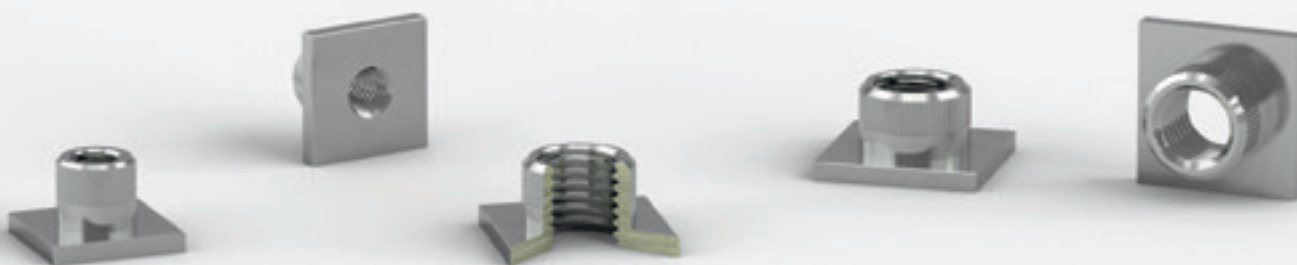


TECHNICAL DATA

| A | B | C | D | E | F | Mass [g] | Matching base body | Part number |
|-----|----|-------|---|-----|----|----------|----------------------|------------------|
| M3 | 9 | 5.6 | 2 | 6.4 | 5 | 2.91 | 09.1.0001 | 09.3.0001 |
| M3 | 10 | 6.35 | 2 | 6.4 | 6 | 3.67 | 09.2.0001 | 09.3.0002 |
| M3 | 9 | 5.6 | 2 | 6.4 | 6 | 3.25 | 09.1.0001 | 09.3.0003 |
| M4 | 10 | 6.35 | 2 | 6.4 | 6 | 3.95 | 09.2.0001 | 09.3.0004 |
| M5 | 13 | 7.45 | 2 | 6.4 | 8 | 6.43 | 09.1.0002. 09.2.0002 | 09.3.0005 |
| M5 | 10 | 6.35 | 2 | 6.4 | 9 | 4.8 | 09.2.0001 | 09.3.0006 |
| M6 | 13 | 7.45 | 2 | 6.4 | 10 | 7.49 | 09.1.0002. 09.2.0002 | 09.3.0007 |
| M8 | 16 | 12.15 | 2 | 6.4 | 13 | 15.95 | 09.2.0003 | 09.3.0008 |
| M8 | 16 | 10.65 | 2 | 6.4 | 13 | 14.51 | 09.1.0003 | 09.3.0009 |
| M4 | 13 | 7.45 | 2 | 6.4 | 8 | 5.96 | 09.1.0002. 09.2.0002 | 09.3.0010 |
| M10 | 16 | 12.15 | 2 | 6.4 | 13 | 19.05 | 09.2.0003 | 09.3.0011 |
| M8 | 16 | 10 | 2 | 6.4 | 13 | 13.95 | 09.1.0004 | 09.3.0012 |

Measurements B - F in mm
Masses are subject to slight variations in production

POWER 2 SOCKET TWO-PIECE, INTERNAL THREAD



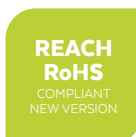
PRODUCT SPECIFICATION

- ✚ For press-fitting into base
- ✚ UNC thread or customized changes on demand
- ✚ For attaching cable lugs, midi fuses, mega fuses and more to PCBs
- ✚ RoHS compliant, REACH compliant



MATERIAL INFORMATION

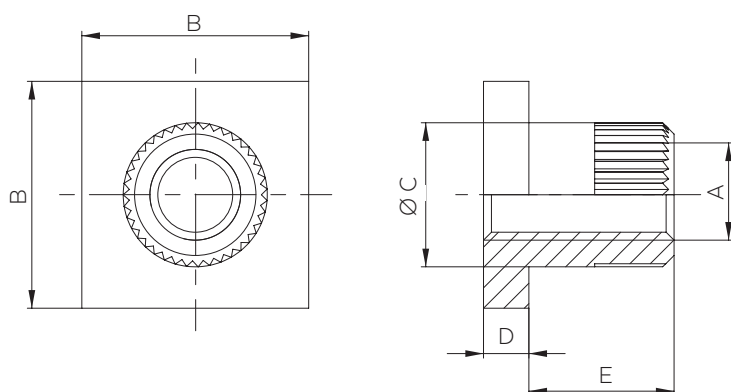
| Option | Part number |
|-----------|--------------|
| BlueBrass | 09.4.00XX.BB |



Our product series 09.4.00XX.BB meet all requirements of the which will come into force in the future REACH, RoHS and ELV regulations, just like the future tightened regulation the required lead-free.



SCALE DRAWINGS

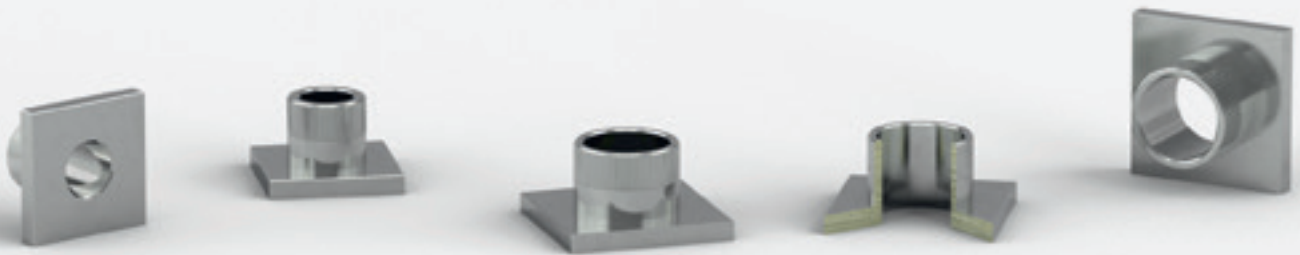


TECHNICAL DATA

| A | B | C | D | E | Mass [g] | Matching base body | Part number |
|-----|----|-------|---|-----|----------|----------------------|------------------|
| M3 | 9 | 5.65 | 2 | 6.4 | 2.31 | 09.1.0001 | 09.4.0001 |
| M3 | 10 | 6.35 | 2 | 6.4 | 2.98 | 09.2.0001 | 09.4.0002 |
| M4 | 9 | 5.65 | 2 | 6.4 | 2.03 | 09.1.0001 | 09.4.0003 |
| M4 | 10 | 6.35 | 2 | 6.4 | 2.7 | 09.2.0001 | 09.4.0004 |
| M4 | 13 | 7.45 | 2 | 6.4 | 4.5 | 09.1.0002, 09.2.0002 | 09.4.0005 |
| M5 | 10 | 6.35 | 2 | 6.4 | 2.32 | 09.2.0001 | 09.4.0006 |
| M5 | 13 | 7.45 | 2 | 6.4 | 4.11 | 09.1.0002, 09.2.0002 | 09.4.0007 |
| M6 | 13 | 7.45 | 2 | 6.4 | 3.66 | 09.1.0002, 09.2.0002 | 09.4.0008 |
| M8 | 16 | 10.65 | 2 | 6.4 | 6.36 | 09.1.0003 | 09.4.0009 |
| M8 | 16 | 12.15 | 2 | 6.4 | 7.79 | 09.2.0003 | 09.4.0010 |
| M10 | 16 | 12.15 | 2 | 6.4 | 6.28 | 09.2.0003 | 09.4.0011 |
| M8 | 16 | 10 | 2 | 6.4 | 6.28 | 09.1.0004 | 09.4.0012 |

Measurements B - E in mm
Masses are subject to slight variations in production

POWER 2 SOCKET TWO-PIECE, THROUGH HOLE



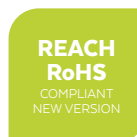
PRODUCT SPECIFICATION

- ✚ For press-fitting into base
- ✚ Customized changes on demand
- ✚ For attaching cable lugs, midi fuses, mega fuses and more to PCBs
- ✚ RoHS compliant, REACH compliant



MATERIAL INFORMATION

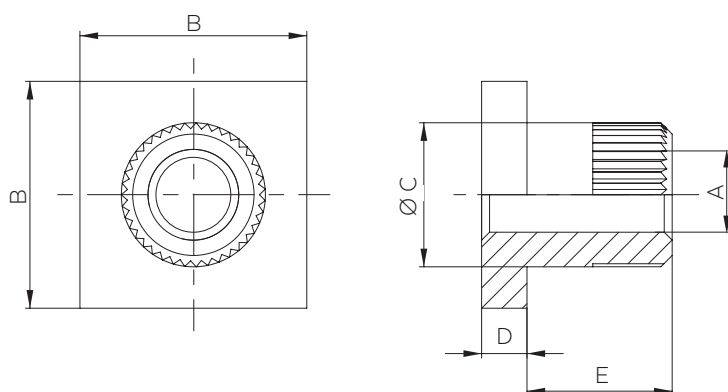
| Option | Part number |
|-----------|--------------|
| BlueBrass | 09.5.00XX.BB |



Our product series 09.5.00XX.BB meet all requirements of which will come into force in the future REACH, RoHS and ELV regulations, just like the future tightened regulation the required lead-free.



SCALE DRAWINGS



TECHNICAL DATA

| A | B | C | D | E | Mass [g] | Matching base body | Part number |
|--------|----|-------|---|-----|----------|----------------------|------------------|
| Ø 3.2 | 9 | 5.65 | 2 | 6.4 | 2.07 | 09.1.0001 | 09.5.0001 |
| Ø 4.2 | 10 | 6.35 | 2 | 6.4 | 2.32 | 09.2.0001 | 09.5.0002 |
| Ø 4.2 | 13 | 7.45 | 2 | 6.4 | 4.12 | 09.1.0002. 09.2.0002 | 09.5.0003 |
| Ø 4.2 | 9 | 5.65 | 2 | 6.4 | 2.07 | 09.1.0001 | 09.5.0004 |
| Ø 5.2 | 10 | 6.35 | 2 | 6.4 | 1.79 | 09.2.0001 | 09.5.0005 |
| Ø 5.2 | 13 | 7.45 | 2 | 6.4 | 3.59 | 09.1.0002. 09.2.0002 | 09.5.0006 |
| Ø 6.2 | 13 | 7.45 | 2 | 6.4 | 2.95 | 09.1.0002. 09.2.0002 | 09.5.0007 |
| Ø 8.2 | 16 | 10.65 | 2 | 6.4 | 5.23 | 09.1.0003 | 09.5.0008 |
| Ø 8.2 | 16 | 10 | 2 | 6.4 | 4.67 | 09.1.0004 | 09.5.0009 |
| Ø 10.2 | 16 | 12.15 | 2 | 6.4 | 4.6 | 09.2.0003 | 09.5.0010 |
| Ø 8.2 | 16 | 12.15 | 2 | 6.4 | 6.66 | 09.2.0003 | 09.5.0011 |
| Ø 6.2 | 16 | 10.65 | 2 | 6.4 | 6.84 | 09.1.0003 | 09.5.0012 |
| Ø 3.2 | 10 | 6.35 | 2 | 6.4 | 2.74 | 09.2.0001 | 09.5.0013 |

Measurements A - E in mm
Masses are subject to slight variations in production

POWER CROWN PRESS-FIT IN MASSIVE PRESS-FIT ZONE



PRODUCT SPECIFICATION

- ↳ Highly robust PCB connection for high current, high temperature and continuous load applications
- ↳ Small component size, robust press-fit connection, spring supported vibration compensation
- ↳ In modern press-fit technology
- ↳ With one or two spiral springs
- ↳ RoHS compliant, REACH compliant



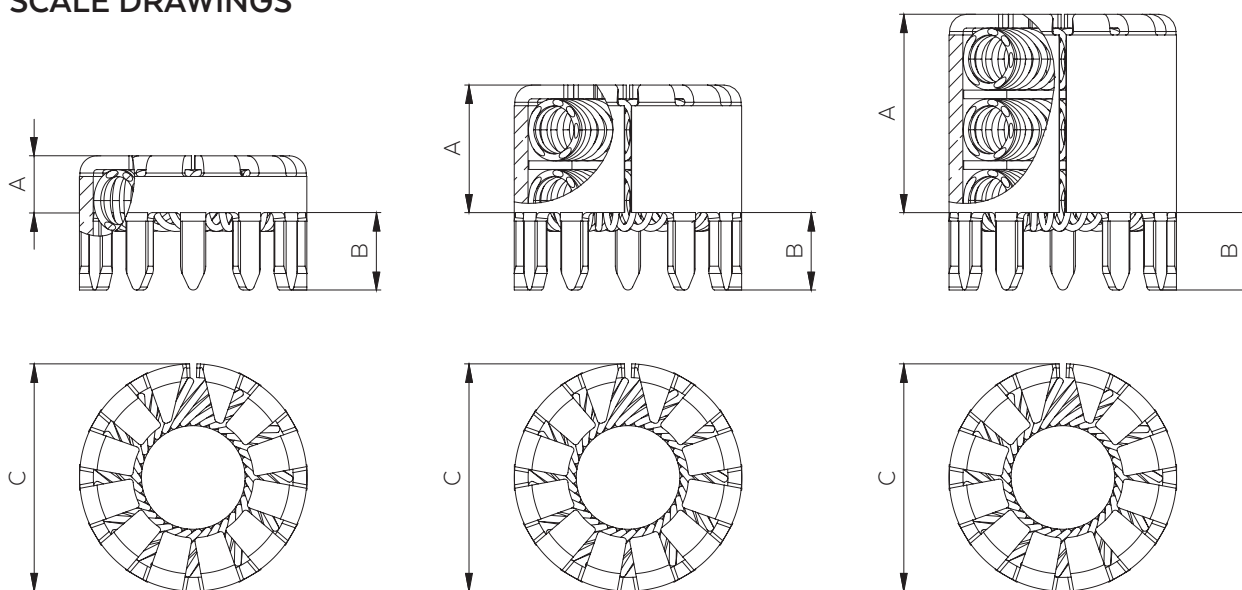
MATERIAL INFORMATION

| Option | Part number |
|---------|-------------|
| Tin* | 409X00AA |
| Silver* | 409X00AB |

*Spiral spring/washer material



SCALE DRAWINGS



409100AX

409200AX

409300AX

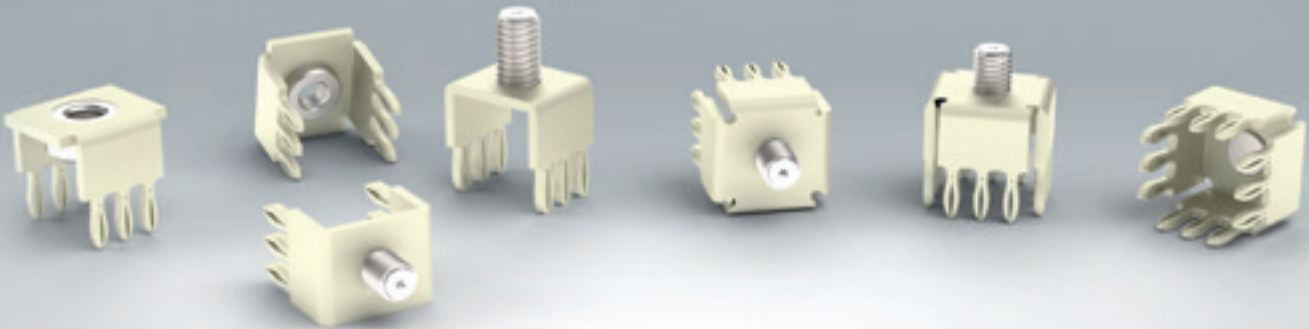
TECHNICAL DATA

| A | B | C | Number of springs | Part number |
|------|-----|--------|-------------------|-------------|
| 3.3 | 4.5 | Ø 13.2 | 1 | 409100AX |
| 7.4 | 4.5 | Ø 13.2 | 2 | 409200AX |
| 11.5 | 4.5 | Ø 13.2 | 3 | 409300AX |

Measurements A - C in mm

BIZON BLOCK

POWER TOWER IN FLEXIBLE PRESS-FIT ZONE



PRODUCT SPECIFICATION

- ✚ Mechanical stability, high retaining force, and high contact reliability, even with high loads.
- ✚ Transmission of high currents (up to 70 A per contact) at high temperatures with large contacts in standard circuit boards
- ✚ Efficient miniaturization with smallest contacts and small bores in thin circuit boards
- ✚ High plasticity and elasticity for maximum flexibility in the choice of circuit board materials
- ✚ Can be customized to meet individual material, size, and force requirements
- ✚ IEC 60352-5 tested press-fit zone, standardized, tested, certified
- ✚ RoHS compliant, REACH compliant



MATERIAL INFORMATION

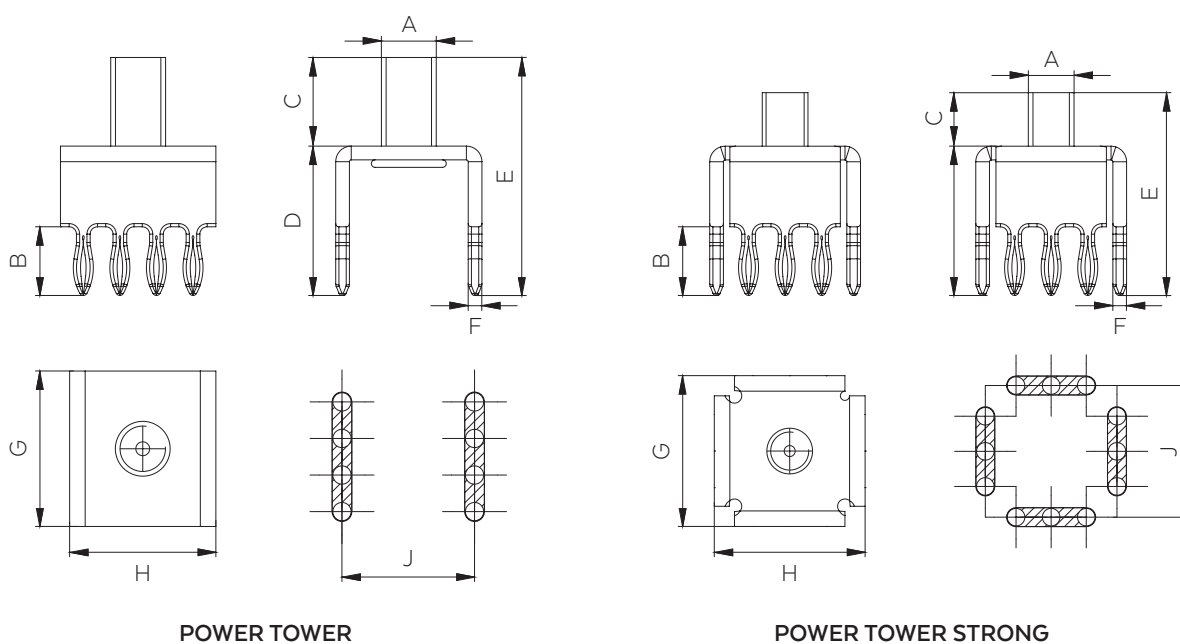
| Option | Part number |
|-----------|--------------|
| BlueBrass | 16.1.00XX.BB |



Our product series 16.1.00XX.BB meet all requirements of the which will come into force in the future REACH, RoHS and ELV regulations, just like the future tightened regulation the required lead-free.



SCALE DRAWINGS



POWER TOWER

POWER TOWER STRONG

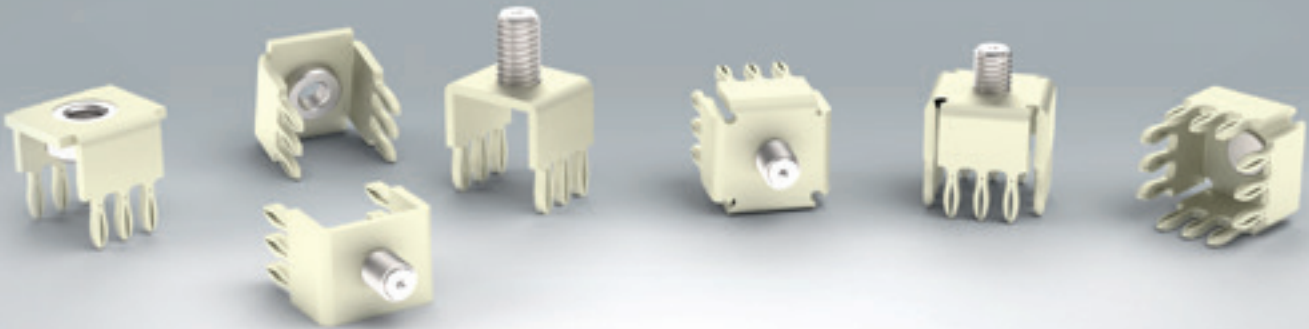
TECHNICAL DATA

| A | B | C | D | E | F | G | H | J | Model | Part number |
|----|-----|------|-------|-------|-----|------|------|------|--------------------|------------------|
| M5 | 7.5 | 5.85 | 16.31 | 22.16 | 1.5 | 12.6 | 16 | 14.5 | Power Tower | 16.1.0003 |
| M6 | 7.5 | 9.68 | 16.31 | 25.99 | 1.5 | 17 | 16 | 14.5 | Power Tower | 16.1.0004 |
| M5 | 7.5 | 5.85 | 16.31 | 22.16 | 1.5 | 16.5 | 12.1 | 15 | Power Tower Strong | 16.1.0013 |

Measurements B - J in mm

BIZON BLOCK

POWER SOCKET IN FLEXIBLE PRESS-FIT ZONE



PRODUCT SPECIFICATION

- ✚ Mechanical stability, high retaining force, and high contact reliability, even with high loads.
- ✚ Transmission of high currents (up to 70 A per contact) at high temperatures with large contacts in standard circuit boards
- ✚ Efficient miniaturization with smallest contacts and small bores in thin circuit boards
- ✚ High plasticity and elasticity for maximum flexibility in the choice of circuit board materials
- ✚ Can be customized to meet individual material, size, and force requirements
- ✚ IEC 60352-5 tested press-fit zone, standardized, tested, certified
- ✚ RoHS compliant, REACH compliant



MATERIAL INFORMATION

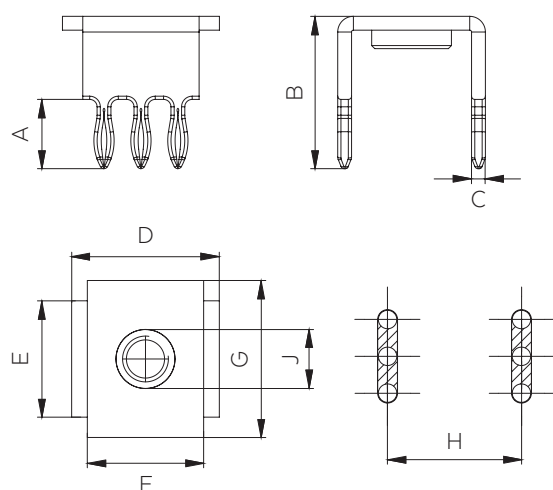
| Option | Part number |
|-----------|--------------|
| BlueBrass | 16.2.00XX.BB |



Our product series 16.2.00XX.BB meet all requirements of the which will come into force in the future REACH, RoHS and ELV regulations, just like the future tightened regulation the required lead-free.



SCALE DRAWINGS



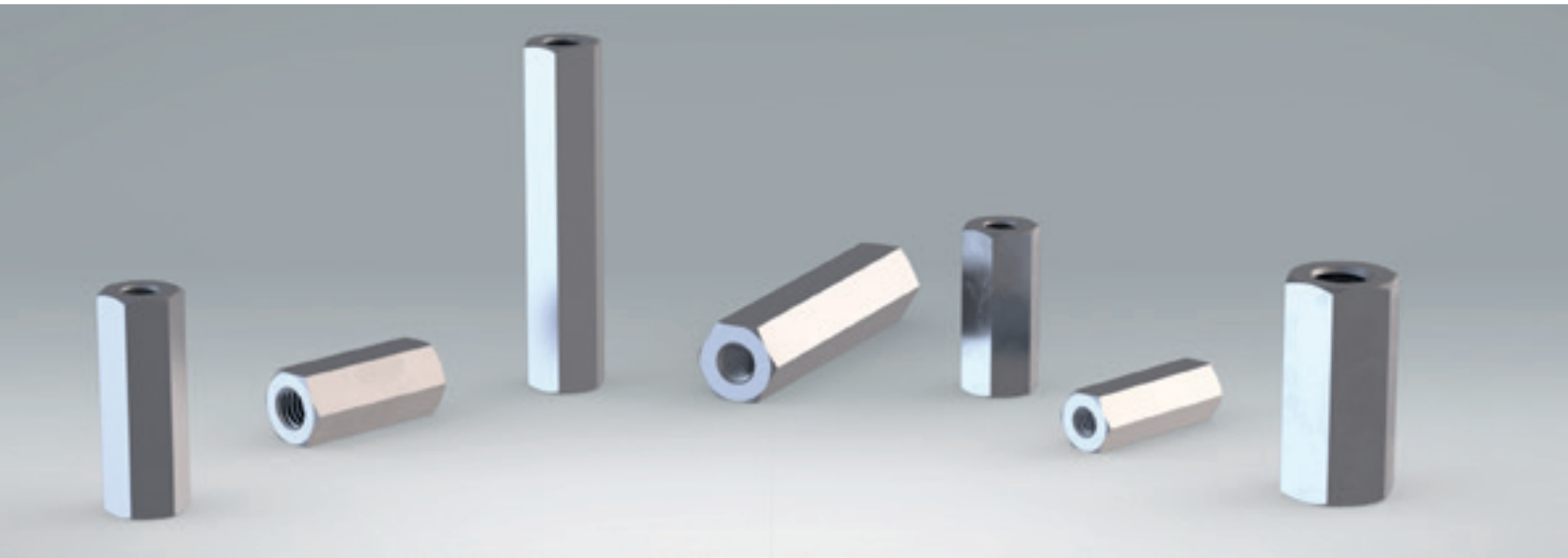
TECHNICAL DATA

| A | B | C | D | E | F | G | H | J | Model | Part number |
|-----|------|-----|----|------|------|----|------|----|--------------|-------------|
| 7.5 | 16.5 | 1.5 | 16 | 12.6 | 12.6 | 17 | 14.5 | M5 | Power Socket | 16.2.0003 |
| 7.5 | 16.5 | 1.5 | 16 | 12.6 | 12.6 | 17 | 14.5 | M6 | Power Socket | 16.2.0004 |

Measurements A-H in mm

POWER SPACER

INTERNAL-INTERNAL, M2, FULL-LENGTH



PRODUCT SPECIFICATION

- ✚ Hexagonal spacer bolts with full-length internal thread
- ✚ For exact distancing of different components
- ✚ Prevent mechanical contact between components
- ✚ For precise, durable and efficient circuit-board construction
- ✚ Easy to use and highly versatile
- ✚ RoHS compliant

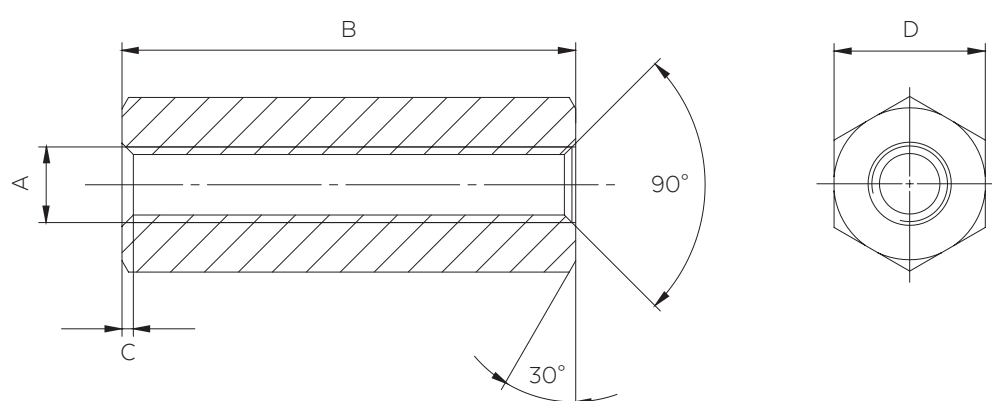


MATERIAL INFORMATION

| Material | Surface | Part number |
|-----------------|-------------------------------------|-------------|
| Brass CuZn39Pb3 | nickel-plated (DIN EN ISO 4042 E1E) | 06.1.000X |



SCALE DRAWINGS



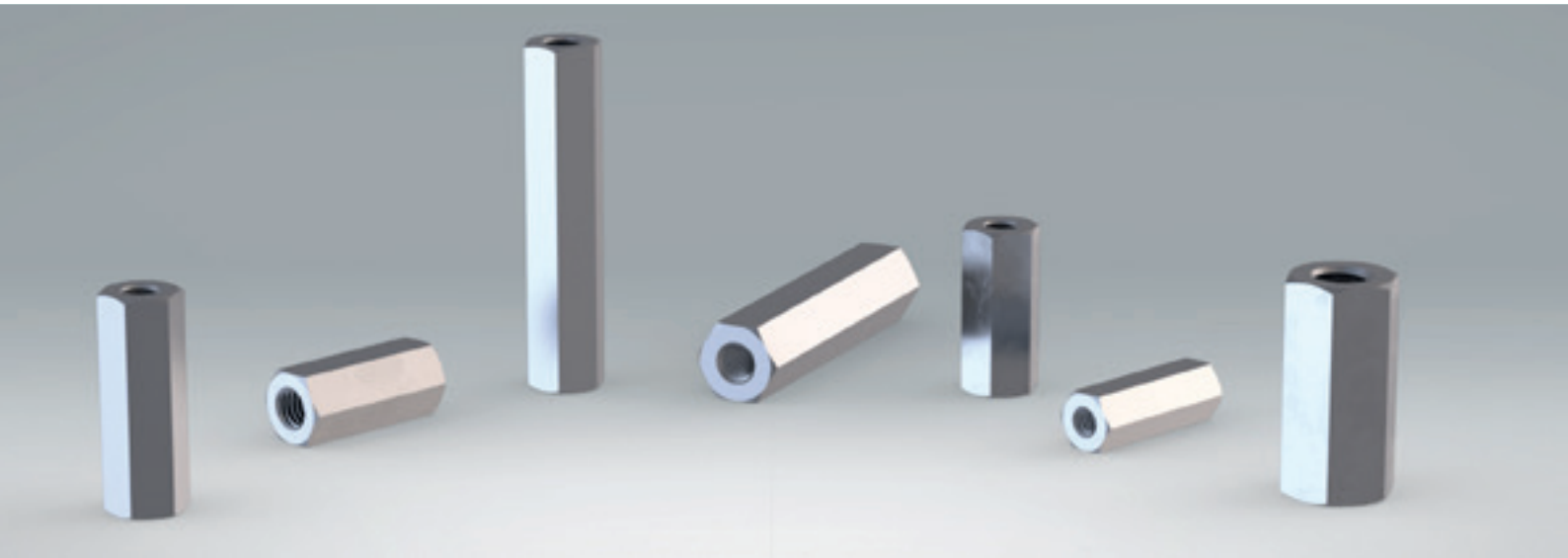
TECHNICAL DATA

| A | B | C | D | Part number |
|----|------|-----|-----|------------------|
| M2 | 3.5 | 0.3 | SW4 | 06.1.0001 |
| M2 | 4 | 0.3 | SW4 | 06.1.0002 |
| M2 | 5 | 0.3 | SW4 | 06.1.0003 |
| M2 | 6 | 0.3 | SW4 | 06.1.0004 |
| M2 | 7 | 0.3 | SW4 | 06.1.0005 |
| M2 | 8 | 0.3 | SW4 | 06.1.0006 |
| M2 | 9 | 0.3 | SW4 | 06.1.0007 |
| M2 | 10 | 0.3 | SW4 | 06.1.0008 |
| M2 | 14.5 | 0.3 | SW4 | 06.1.0009 |

Measurements B - C in mm

POWER SPACER

INTERNAL-INTERNAL, M2.5, FULL-LENGTH



PRODUCT SPECIFICATION

- ✚ Hexagonal spacer bolts with full-length internal thread
- ✚ For exact distancing of different components
- ✚ Prevent mechanical contact between components
- ✚ For precise, durable and efficient circuit-board construction
- ✚ Easy to use and highly versatile
- ✚ RoHS compliant

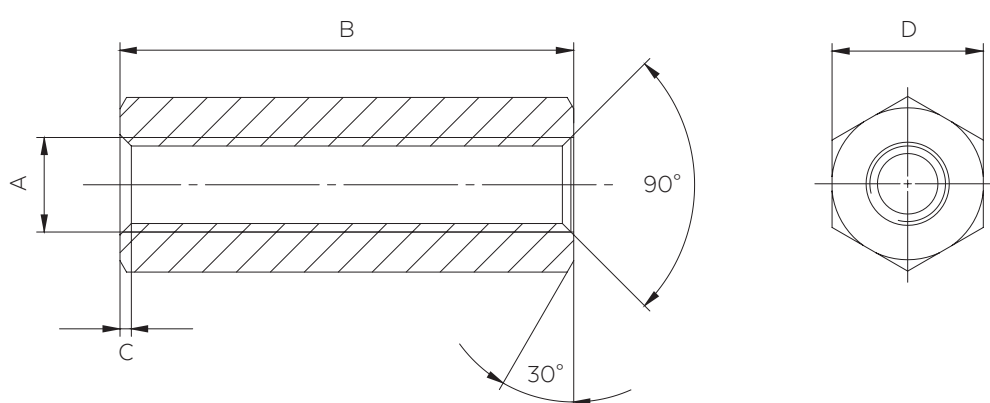


MATERIAL INFORMATION

| Material | Surface | Part number |
|-------------------|----------------------------------|-------------|
| Brass CuZn39Pb3zh | nickel-plated (DIN 267 E1E 3 µm) | 06.1.02XX |



SCALE DRAWINGS



TECHNICAL DATA

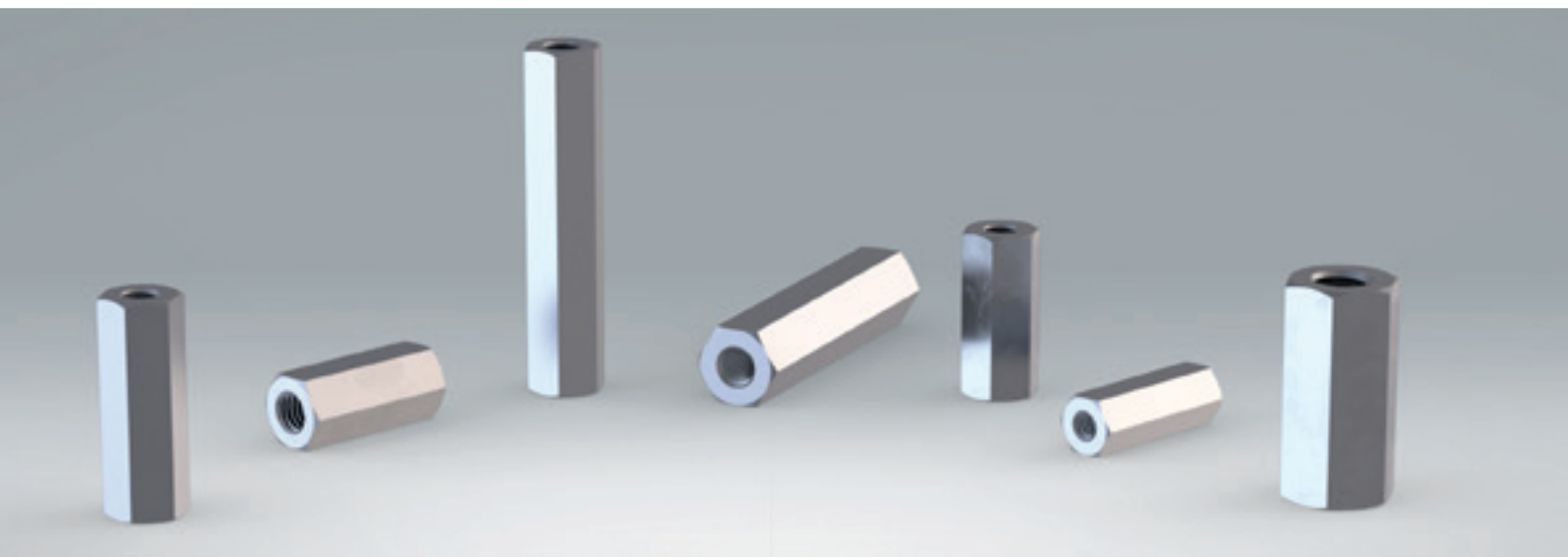
| A | B | C | D | Part number |
|------|-----|-----|-----|------------------|
| M2.5 | 3 | 0.3 | SW4 | 06.1.0201 |
| M2.5 | 4 | 0.3 | SW4 | 06.1.0202 |
| M2.5 | 4.7 | 0.3 | SW4 | 06.1.0203 |
| M2.5 | 5 | 0.3 | SW4 | 06.1.0204 |
| M2.5 | 5.3 | 0.3 | SW4 | 06.1.0205 |
| M2.5 | 6 | 0.3 | SW4 | 06.1.0206 |
| M2.5 | 6.3 | 0.3 | SW4 | 06.1.0207 |
| M2.5 | 6.5 | 0.3 | SW4 | 06.1.0208 |
| M2.5 | 7 | 0.3 | SW4 | 06.1.0209 |
| M2.5 | 7.7 | 0.3 | SW4 | 06.1.0210 |
| M2.5 | 8 | 0.3 | SW4 | 06.1.0211 |

| A | B | C | D | Part number |
|------|------|-----|-----|------------------|
| M2.5 | 8.5 | 0.3 | SW4 | 06.1.0212 |
| M2.5 | 9 | 0.3 | SW4 | 06.1.0213 |
| M2.5 | 10 | 0.3 | SW4 | 06.1.0214 |
| M2.5 | 11 | 0.3 | SW4 | 06.1.0215 |
| M2.5 | 11.5 | 0.3 | SW4 | 06.1.0216 |
| M2.5 | 12 | 0.3 | SW4 | 06.1.0217 |
| M2.5 | 12.5 | 0.3 | SW4 | 06.1.0218 |
| M2.5 | 13 | 0.3 | SW4 | 06.1.0219 |
| M2.5 | 13.5 | 0.3 | SW4 | 06.1.0220 |
| M2.5 | 14 | 0.3 | SW4 | 06.1.0221 |
| M2.5 | 15 | 0.3 | SW4 | 06.1.0222 |

Measurements B - C in mm

POWER SPACER

INTERNAL-INTERNAL, M2.5, FULL-LENGTH



PRODUCT SPECIFICATION

- ✎ Hexagonal spacer bolts with full-length internal thread
- ✎ For exact distancing of different components
- ✎ Prevent mechanical contact between components
- ✎ For precise, durable and efficient circuit-board construction
- ✎ Easy to use and highly versatile
- ✎ RoHS compliant

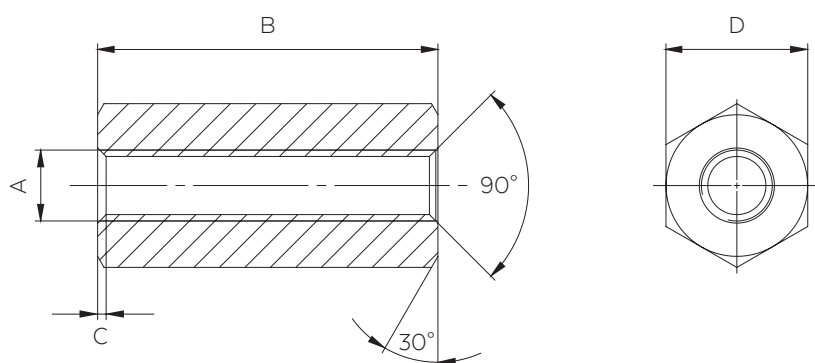


MATERIAL INFORMATION

| Material | Surface | Part number |
|-------------------|---------------------------------------|-------------|
| Brass CuZn39Pb3zh | nickel-plated (DIN 267 E1E gal. Ni 3) | 06.1.030X |



SCALE DRAWINGS



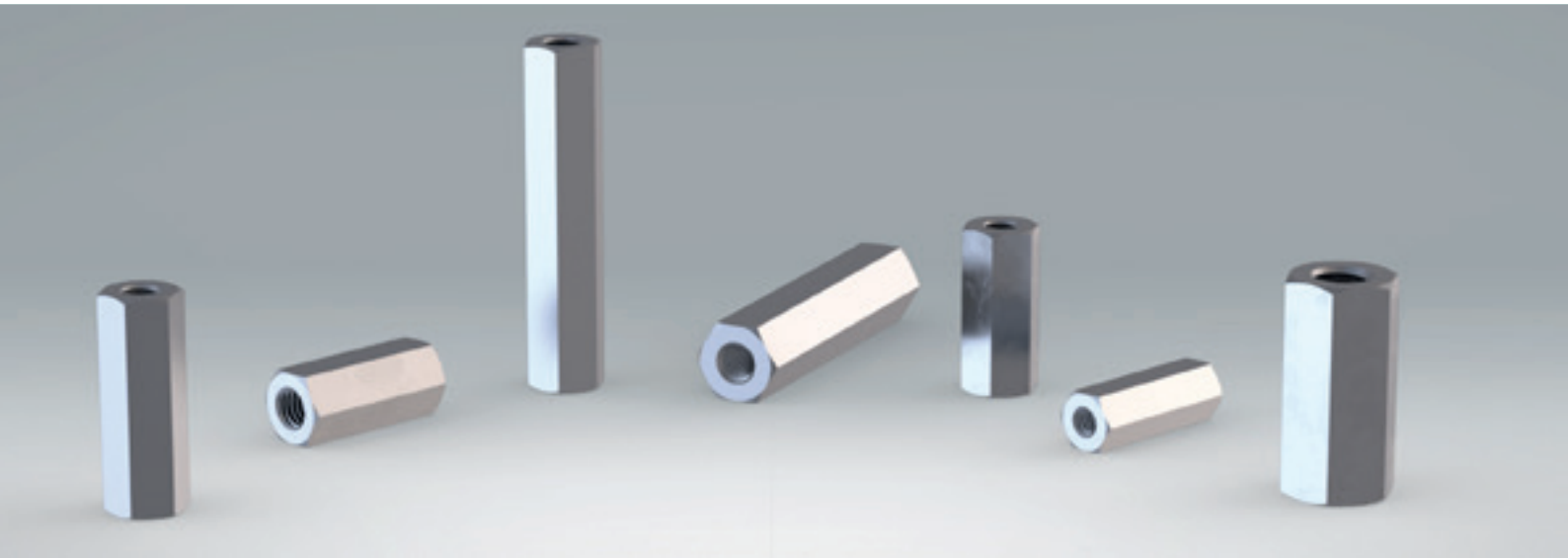
TECHNICAL DATA

| A | B | C | D | Part number |
|------|------|-----|-----|------------------|
| M2.5 | 3 | 0.3 | SW5 | 06.1.0301 |
| M2.5 | 4 | 0.3 | SW5 | 06.1.0302 |
| M2.5 | 5 | 0.3 | SW5 | 06.1.0303 |
| M2.5 | 7.5 | 0.3 | SW5 | 06.1.0304 |
| M2.5 | 9 | 0.3 | SW5 | 06.1.0305 |
| M2.5 | 9.5 | 0.3 | SW5 | 06.1.0306 |
| M2.5 | 10 | 0.3 | SW5 | 06.1.0307 |
| M2.5 | 12.7 | 0.3 | SW5 | 06.1.0308 |
| M2.5 | 13.5 | 0.3 | SW5 | 06.1.0309 |

Measurements B - C in mm

POWER SPACER

INTERNAL-INTERNAL, M2.5, FULL-LENGTH



PRODUCT SPECIFICATION

- ✚ Hexagonal spacer bolts with full-length internal thread
- ✚ For exact distancing of different components
- ✚ Prevent mechanical contact between components
- ✚ For precise, durable and efficient circuit-board construction
- ✚ Easy to use and highly versatile
- ✚ RoHS compliant

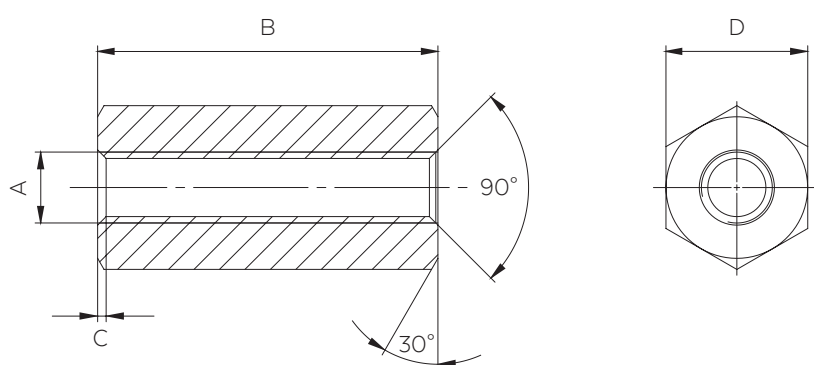


MATERIAL INFORMATION

| Material | Surface | Part number |
|-----------------|---|-------------|
| Steel 95MnPb28K | galvanized, yellow chromated (DIN 267 A3G, Fe/Zn 8 cC) | 06.1.400X |



SCALE DRAWINGS

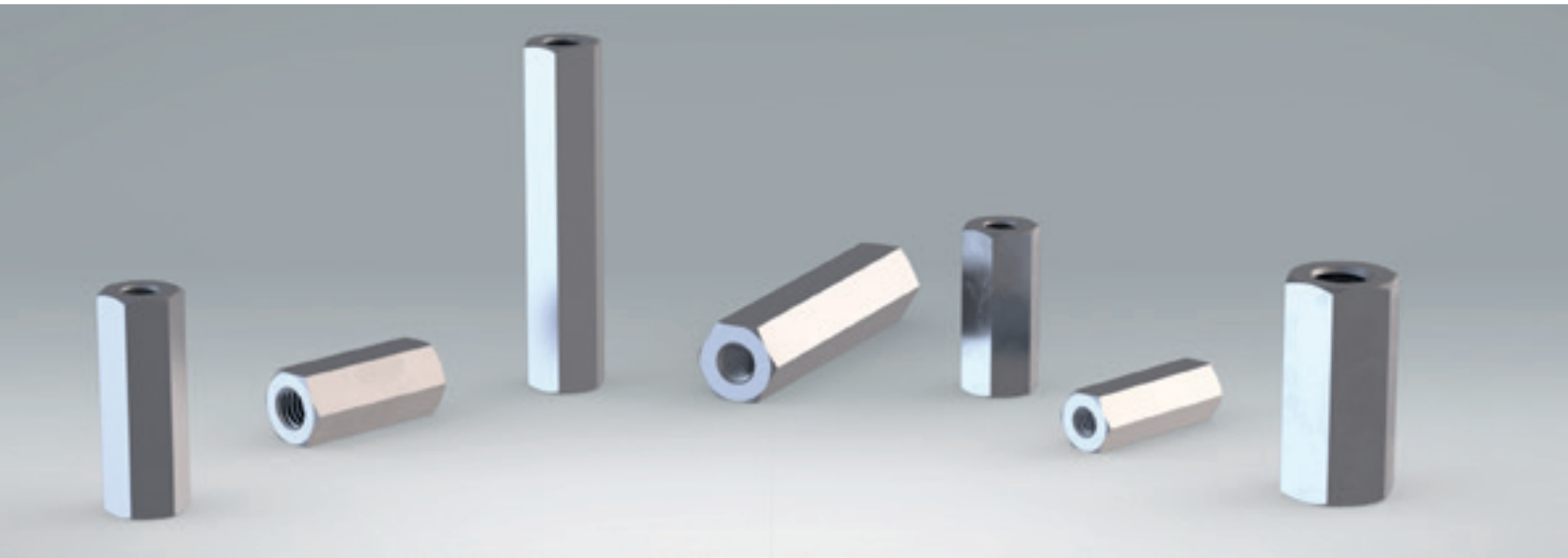


TECHNICAL DATA

| A | B | C | D | Part number |
|------|----|-----|-----|------------------|
| M2.5 | 13 | 0.3 | SW5 | 06.1.4001 |
| M2.5 | 15 | 0.3 | SW5 | 06.1.4002 |

Measurements B - C in mm

POWER SPACER INTERNAL-INTERNAL, M3, FULL-LENGTH



PRODUCT SPECIFICATION

- ✎ Hexagonal spacer bolts with full-length internal thread
- ✎ For exact distancing of different components
- ✎ Prevent mechanical contact between components
- ✎ For precise, durable and efficient circuit-board construction
- ✎ Easy to use and highly versatile
- ✎ RoHS compliant

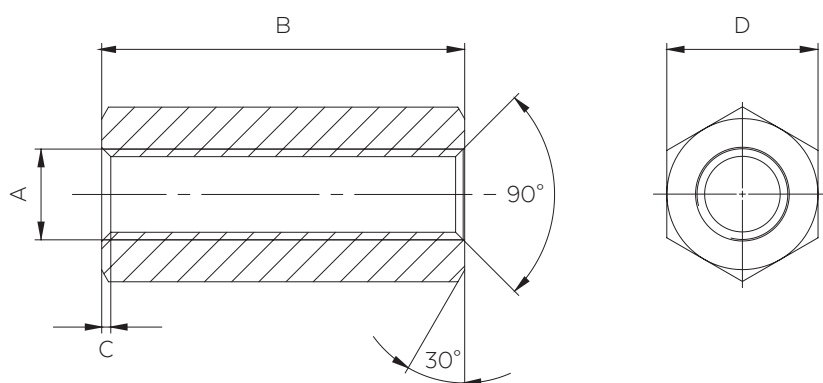


MATERIAL INFORMATION

| Material | Surface | Part number |
|-------------------|---------------------------------------|-------------|
| Brass CuZn39Pb3zh | nickel-plated (DIN 267 E1E gal. Ni 3) | 06.1.07XX |



SCALE DRAWINGS



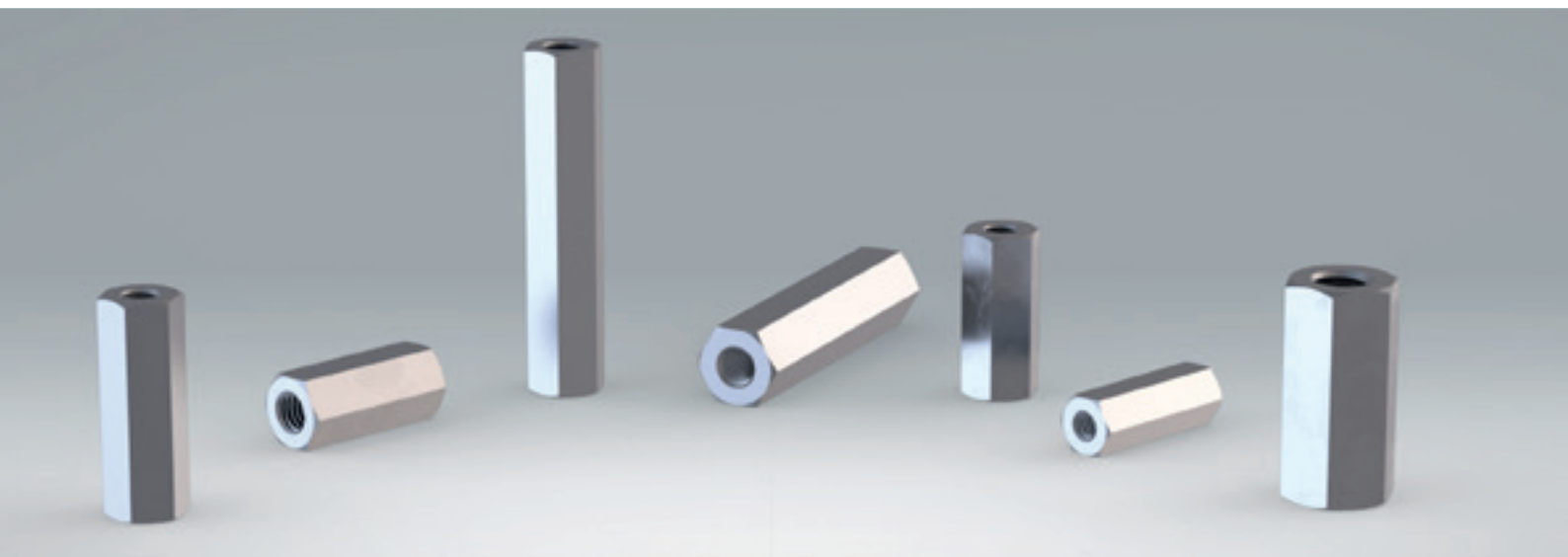
TECHNICAL DATA

| A | B | C | D | Part number |
|----|------|-----|-----|------------------|
| M3 | 3.5 | 0.3 | SW5 | 06.1.0701 |
| M3 | 5 | 0.3 | SW5 | 06.1.0702 |
| M3 | 7.3 | 0.3 | SW5 | 06.1.0703 |
| M3 | 7.5 | 0.3 | SW5 | 06.1.0704 |
| M3 | 8 | 0.3 | SW5 | 06.1.0705 |
| M3 | 9.5 | 0.3 | SW5 | 06.1.0706 |
| M3 | 10 | 0.3 | SW5 | 06.1.0707 |
| M3 | 11.5 | 0.3 | SW5 | 06.1.0708 |
| M3 | 12 | 0.3 | SW5 | 06.1.0709 |
| M3 | 12.7 | 0.3 | SW5 | 06.1.0710 |
| M3 | 14 | 0.3 | SW5 | 06.1.0711 |
| M3 | 15 | 0.3 | SW5 | 06.1.0712 |

Measurements B - C in mm

POWER SPACER

INTERNAL-INTERNAL, M3, FULL-LENGTH



PRODUCT SPECIFICATION

- ✚ Hexagonal spacer bolts with full-length internal thread
- ✚ For exact distancing of different components
- ✚ Prevent mechanical contact between components
- ✚ For precise, durable and efficient circuit-board construction
- ✚ Easy to use and highly versatile
- ✚ RoHS compliant

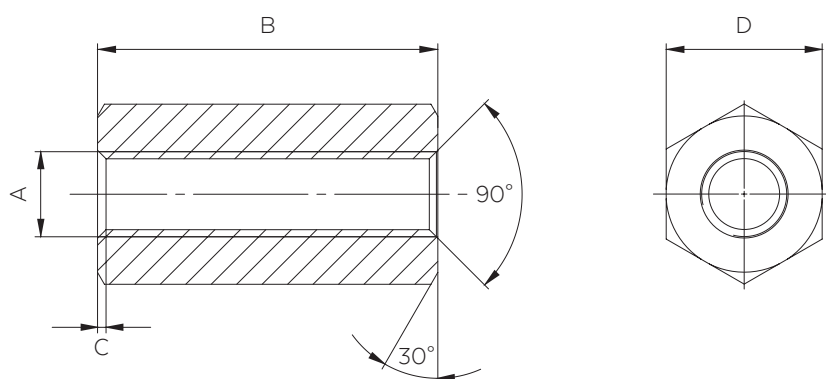


MATERIAL INFORMATION

| Material | Surface | Part number |
|-----------------|---|-------------|
| Brass CuZn39Pb3 | nickel-plated (DIN 267 E1E nickel-plated 3 µm) | 06.1.08XX |



SCALE DRAWINGS



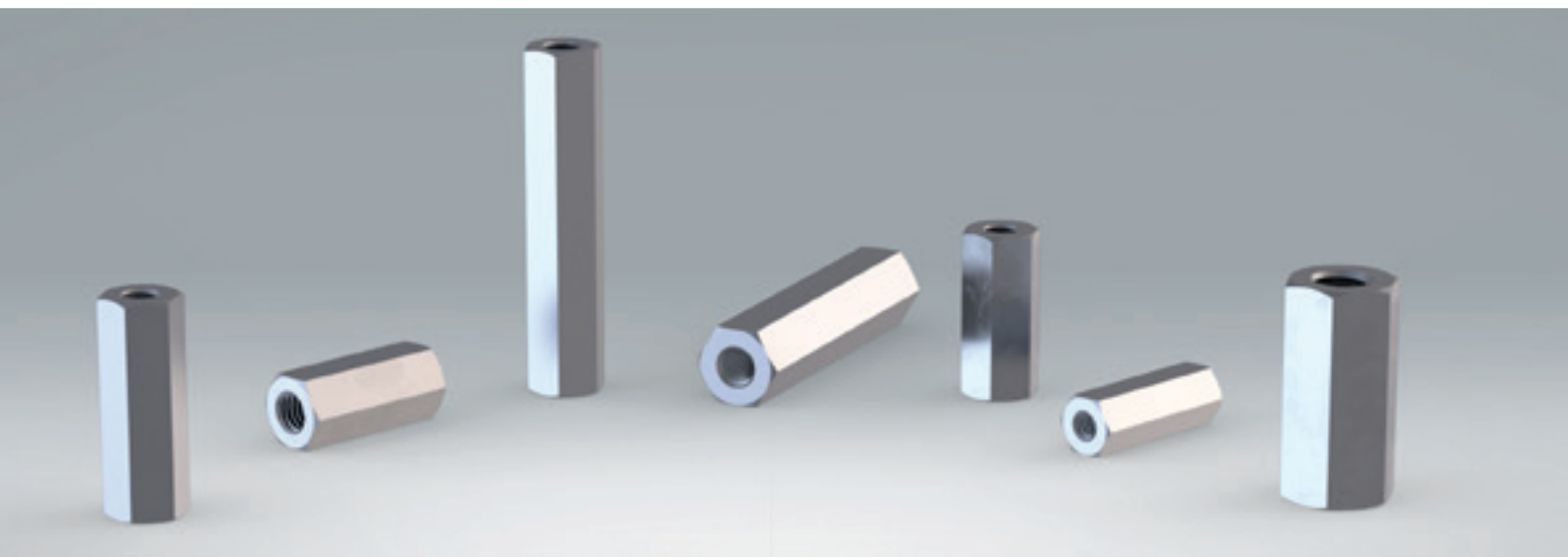
TECHNICAL DATA

| A | B | C | D | Part number |
|----|------|-----|-------|------------------|
| M3 | 5 | 0.3 | SW5.5 | 06.1.0801 |
| M3 | 6 | 0.3 | SW5.5 | 06.1.0802 |
| M3 | 7 | 0.3 | SW5.5 | 06.1.0803 |
| M3 | 8 | 0.3 | SW5.5 | 06.1.0804 |
| M3 | 9 | 0.3 | SW5.5 | 06.1.0805 |
| M3 | 10 | 0.3 | SW5.5 | 06.1.0806 |
| M3 | 11 | 0.3 | SW5.5 | 06.1.0807 |
| M3 | 12 | 0.3 | SW5.5 | 06.1.0808 |
| M3 | 12.5 | 0.3 | SW5.5 | 06.1.0809 |
| M3 | 13 | 0.3 | SW5.5 | 06.1.0810 |
| M3 | 13.5 | 0.3 | SW5.5 | 06.1.0811 |
| M3 | 14 | 0.3 | SW5.5 | 06.1.0812 |
| M3 | 15 | 0.3 | SW5.5 | 06.1.0813 |
| M3 | 17 | 0.3 | SW5.5 | 06.1.0814 |
| M3 | 18.5 | 0.3 | SW5.5 | 06.1.0815 |
| M3 | 19 | 0.3 | SW5.5 | 06.1.0816 |

Measurements B - C in mm

POWER SPACER

INTERNAL-INTERNAL, M3, FULL-LENGTH



PRODUCT SPECIFICATION

- ✚ Hexagonal spacer bolts with full-length internal thread
- ✚ For exact distancing of different components
- ✚ Prevent mechanical contact between components
- ✚ For precise, durable and efficient circuit-board construction
- ✚ Easy to use and highly versatile
- ✚ RoHS compliant

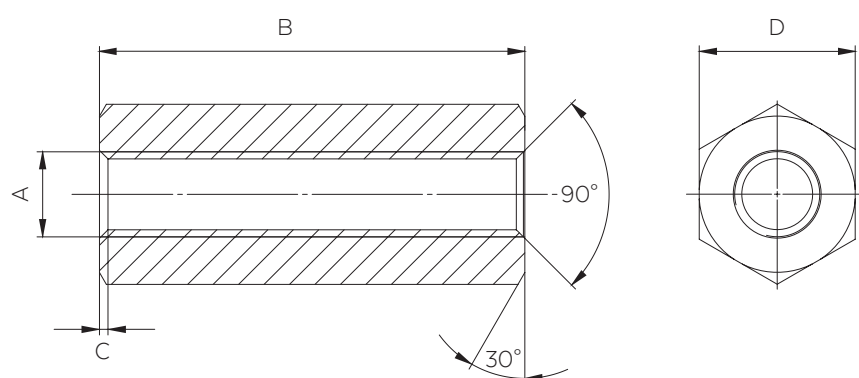


MATERIAL INFORMATION

| Material | Surface | Part number |
|-----------------|--|-------------|
| Steel 95MnPb28K | galvanized, white (DIN 267 A2E galvanized 5 µm) | 06.1.300X |



SCALE DRAWINGS



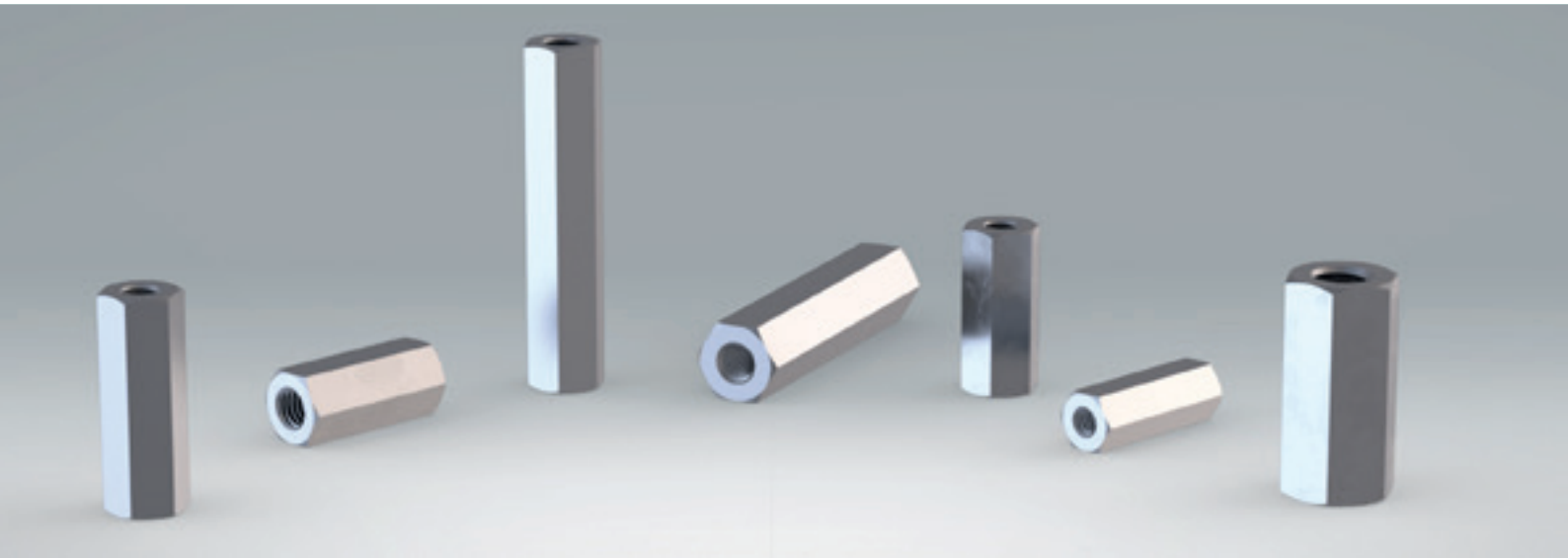
TECHNICAL DATA

| A | B | C | D | Part number |
|----|------|-----|-------|------------------|
| M3 | 5 | 0.3 | SW5.5 | 06.1.3001 |
| M3 | 6 | 0.3 | SW5.5 | 06.1.3002 |
| M3 | 10 | 0.3 | SW5.5 | 06.1.3003 |
| M3 | 13 | 0.3 | SW5.5 | 06.1.3004 |
| M3 | 13.5 | 0.3 | SW5.5 | 06.1.3005 |
| M3 | 15 | 0.3 | SW5.5 | 06.1.3006 |

Measurements B-C in mm

POWER SPACER

INTERNAL-INTERNAL, M4, FULL-LENGTH



PRODUCT SPECIFICATION

- ✚ Hexagonal spacer bolts with full-length internal thread
- ✚ For exact distancing of different components
- ✚ Prevent mechanical contact between components
- ✚ For precise, durable and efficient circuit-board construction
- ✚ Easy to use and highly versatile
- ✚ RoHS compliant

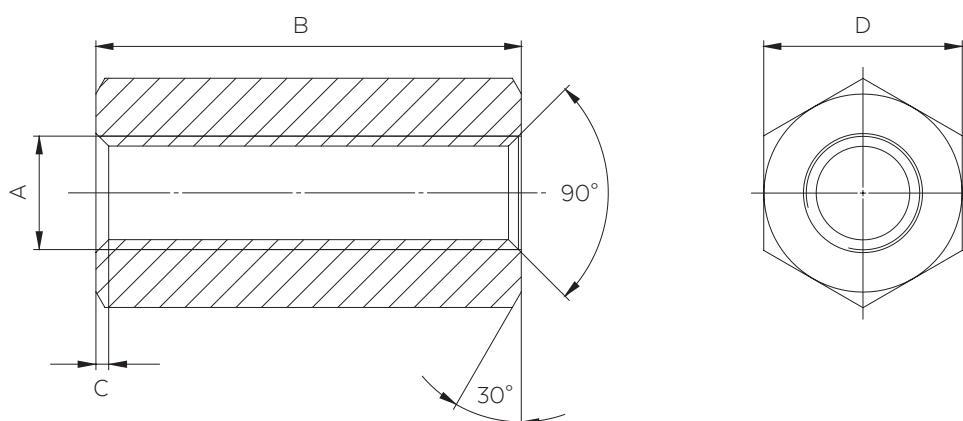


MATERIAL INFORMATION

| Material | Surface | Part number |
|-------------------|---------------------------------------|-------------|
| Brass CuZn39Pb3zh | nickel-plated (DIN 267 E1E gal. Ni 3) | 06.1.0D0X |



SCALE DRAWINGS



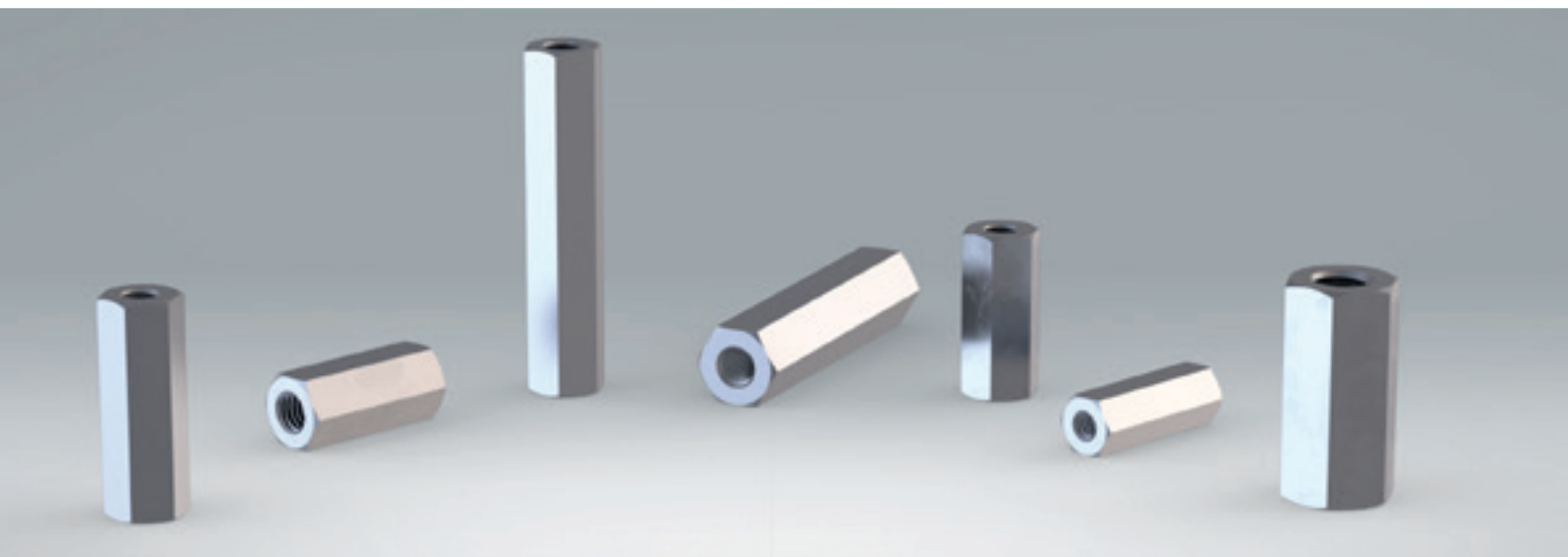
TECHNICAL DATA

| A | B | C | D | Part number |
|----|-----|------|-----|------------------|
| M4 | 4.5 | 0.45 | SW7 | 06.1.0D01 |
| M4 | 5 | 0.45 | SW7 | 06.1.0D02 |
| M4 | 8 | 0.45 | SW7 | 06.1.0D03 |
| M4 | 10 | 0.45 | SW7 | 06.1.0D04 |
| M4 | 12 | 0.45 | SW7 | 06.1.0D05 |
| M4 | 13 | 0.45 | SW7 | 06.1.0D06 |
| M4 | 15 | 0.45 | SW7 | 06.1.0D07 |
| M4 | 17 | 0.45 | SW7 | 06.1.0D08 |
| M4 | 20 | 0.45 | SW7 | 06.1.0D09 |

Measurements B - C in mm

POWER SPACER

INTERNAL-INTERNAL, M2, THREAD BOTH SIDES



PRODUCT SPECIFICATION

- ✎ Hexagonal spacer bolts with thread both sides internal thread
- ✎ For exact distancing of different components
- ✎ Prevent mechanical contact between components
- ✎ For precise, durable and efficient circuit-board construction
- ✎ Easy to use and highly versatile
- ✎ RoHS compliant

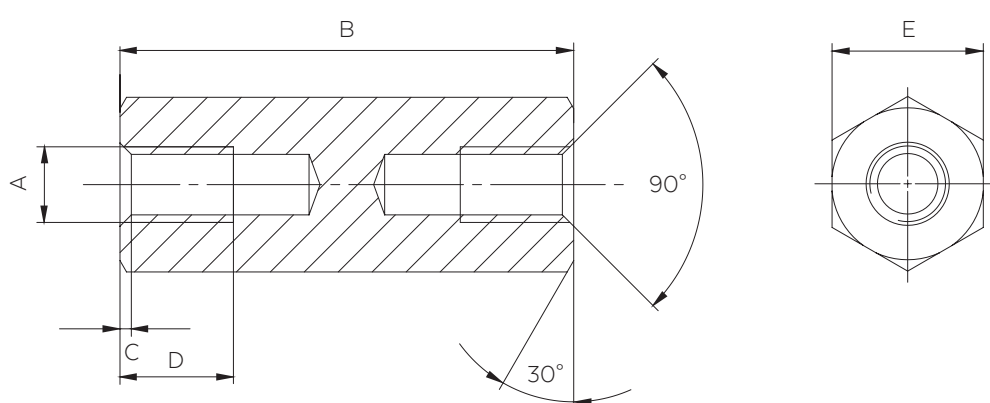


MATERIAL INFORMATION

| Material | Surface | Part number |
|-------------------|---------------------------------------|-------------|
| Brass CuZn39Pb3zh | nickel-plated (DIN 267 E1E gal. Ni 3) | 06.1.010X |



SCALE DRAWINGS



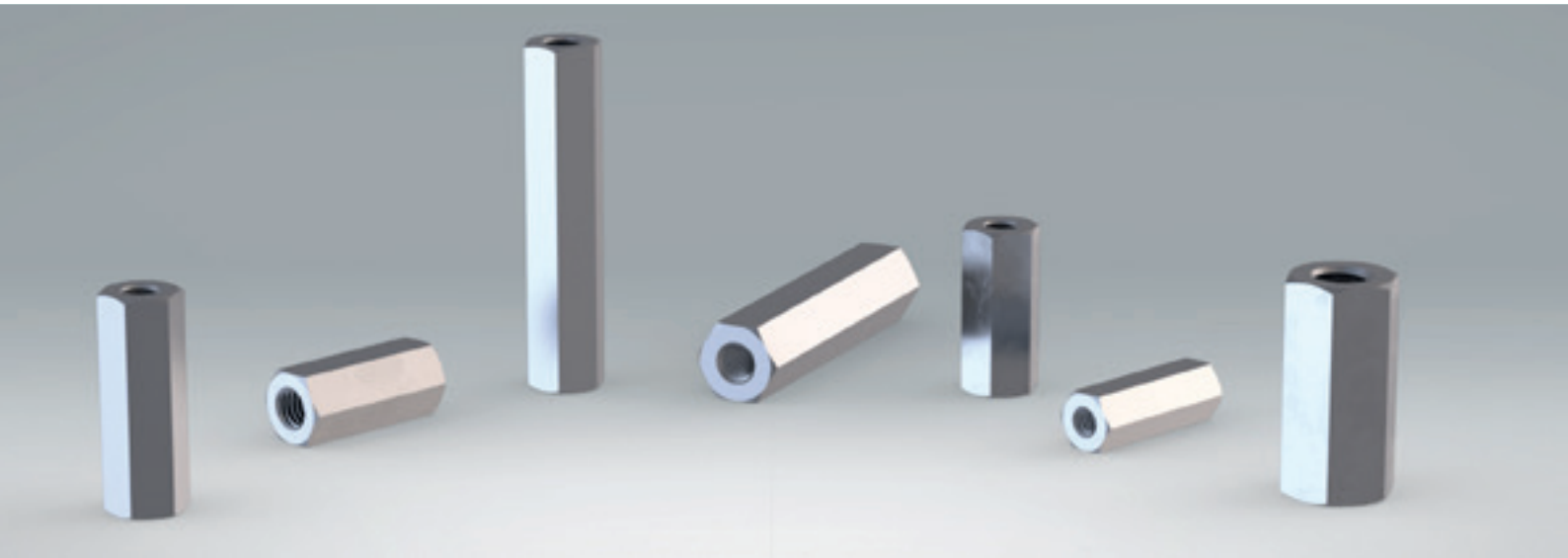
TECHNICAL DATA

| A | B | C | D | E | Part number |
|----|------|-----|-----|-----|-------------|
| M2 | 12 | 0.3 | 6 | SW4 | 06.1.0101 |
| M2 | 13 | 0.3 | 6.5 | SW4 | 06.1.0102 |
| M2 | 14 | 0.3 | 5 | SW4 | 06.1.0103 |
| M2 | 14 | 0.3 | 6 | SW4 | 06.1.0104 |
| M2 | 14.5 | 0.3 | 5 | SW4 | 06.1.0105 |
| M2 | 15 | 0.3 | 5 | SW4 | 06.1.0106 |
| M2 | 20 | 0.3 | 7 | SW4 | 06.1.0107 |
| M2 | 25 | 0.3 | 7 | SW4 | 06.1.0108 |
| M2 | 30 | 0.3 | 7 | SW4 | 06.1.0109 |

Measurements B - D in mm

POWER SPACER

INTERNAL-INTERNAL, M2.5, THREAD BOTH SIDES



PRODUCT SPECIFICATION

- ✚ Hexagonal spacer bolts with thread both sides internal thread
- ✚ For exact distancing of different components
- ✚ Prevent mechanical contact between components
- ✚ For precise, durable and efficient circuit-board construction
- ✚ Easy to use and highly versatile
- ✚ RoHS compliant

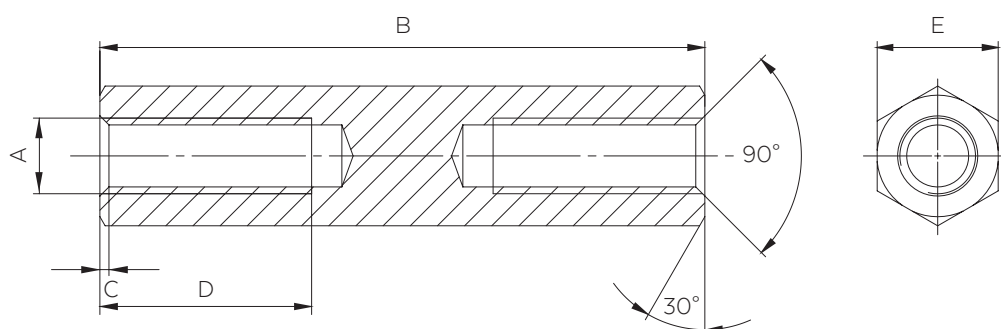


MATERIAL INFORMATION

| Material | Surface | Part number |
|-------------------|---|-------------|
| Brass CuZn39Pb3zh | nickel-plated (gal. Ni3 (nickel-plated 4 µm; E1E)) | 06.1.06XX |



SCALE DRAWINGS



TECHNICAL DATA

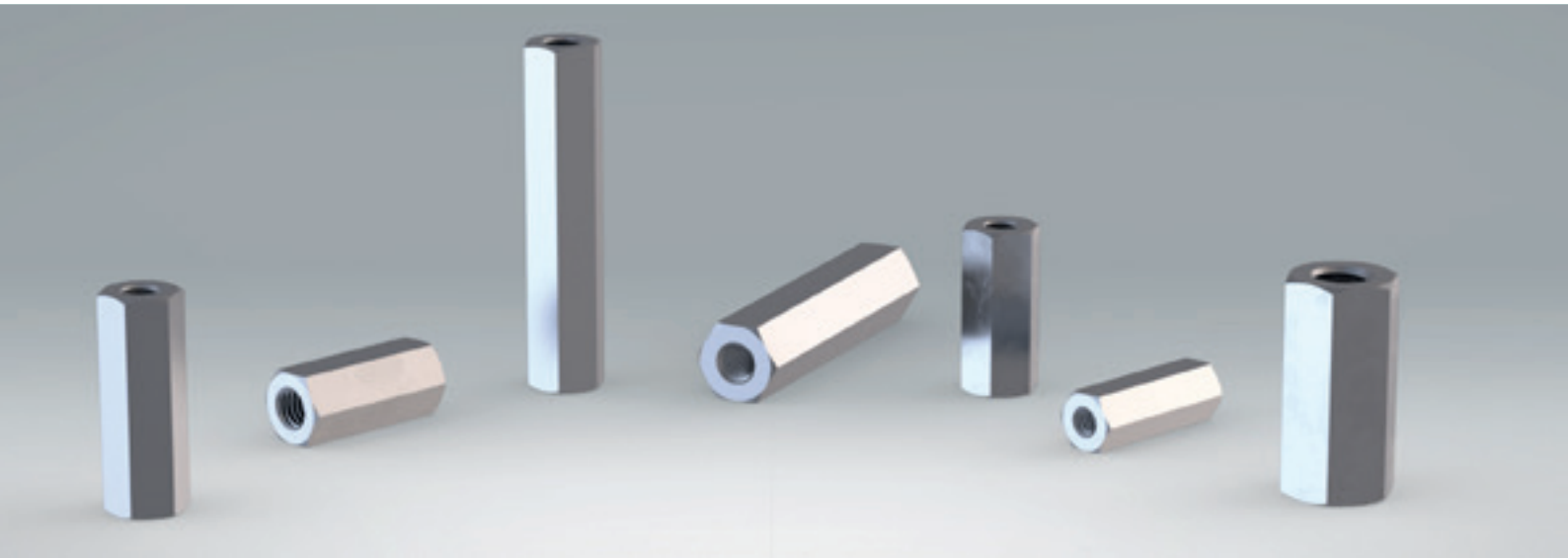
| A | B | C | D | E | Part number |
|------|------|-----|---|-----|------------------|
| M2.5 | 16 | 0.3 | 7 | SW4 | 06.1.0601 |
| M2.5 | 17 | 0.3 | 7 | SW4 | 06.1.0602 |
| M2.5 | 17.5 | 0.3 | 7 | SW4 | 06.1.0603 |
| M2.5 | 18 | 0.3 | 7 | SW4 | 06.1.0604 |
| M2.5 | 18.5 | 0.3 | 7 | SW4 | 06.1.0605 |
| M2.5 | 18,6 | 0.3 | 7 | SW4 | 06.1.0606 |
| M2.5 | 20 | 0.3 | 7 | SW4 | 06.1.0607 |
| M2.5 | 21 | 0.3 | 7 | SW4 | 06.1.0608 |
| M2.5 | 22 | 0.3 | 7 | SW4 | 06.1.0609 |
| M2.5 | 22.5 | 0.3 | 7 | SW4 | 06.1.0610 |
| M2.5 | 23 | 0.3 | 7 | SW4 | 06.1.0611 |
| M2.5 | 23.5 | 0.3 | 7 | SW4 | 06.1.0612 |
| M2.5 | 24 | 0.3 | 7 | SW4 | 06.1.0613 |
| M2.5 | 25 | 0.3 | 7 | SW4 | 06.1.0614 |
| M2.5 | 25.4 | 0.3 | 7 | SW4 | 06.1.0615 |

| A | B | C | D | E | Part number |
|------|------|-----|---|-----|------------------|
| M2.5 | 27 | 0.3 | 7 | SW4 | 06.1.0616 |
| M2.5 | 27,1 | 0.3 | 7 | SW4 | 06.1.0617 |
| M2.5 | 27,7 | 0.3 | 7 | SW4 | 06.1.0618 |
| M2.5 | 28 | 0.3 | 7 | SW4 | 06.1.0619 |
| M2.5 | 30 | 0.3 | 7 | SW4 | 06.1.0620 |
| M2.5 | 32 | 0.3 | 7 | SW4 | 06.1.0621 |
| M2.5 | 33 | 0.3 | 7 | SW4 | 06.1.0622 |
| M2.5 | 34 | 0.3 | 7 | SW4 | 06.1.0623 |
| M2.5 | 35 | 0.3 | 7 | SW4 | 06.1.0624 |
| M2.5 | 38,1 | 0.3 | 7 | SW4 | 06.1.0625 |
| M2.5 | 40 | 0.3 | 7 | SW4 | 06.1.0626 |
| M2.5 | 47 | 0.3 | 7 | SW4 | 06.1.0627 |
| M2.5 | 52.5 | 0.3 | 7 | SW4 | 06.1.0628 |
| M2.5 | 59 | 0.3 | 7 | SW4 | 06.1.0629 |

Measurements B - D in mm

POWER SPACER

INTERNAL-INTERNAL, M2.5, THREAD BOTH SIDES



PRODUCT SPECIFICATION

- ✚ Hexagonal spacer bolts with thread both sides internal thread
- ✚ For exact distancing of different components
- ✚ Prevent mechanical contact between components
- ✚ For precise, durable and efficient circuit-board construction
- ✚ Easy to use and highly versatile
- ✚ RoHS compliant

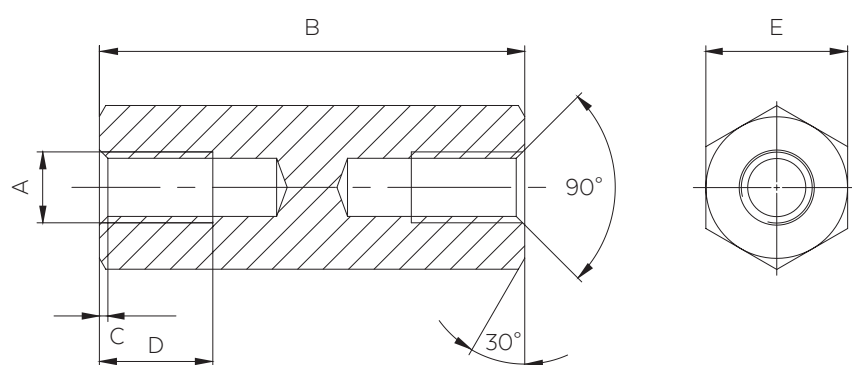


MATERIAL INFORMATION

| Material | Surface | Part number |
|-----------------|---------------------------------|-------------|
| Brass CuZn39Pb3 | nickel-plated (EN ISO 4042 E1E) | 06.1.050X |



SCALE DRAWINGS



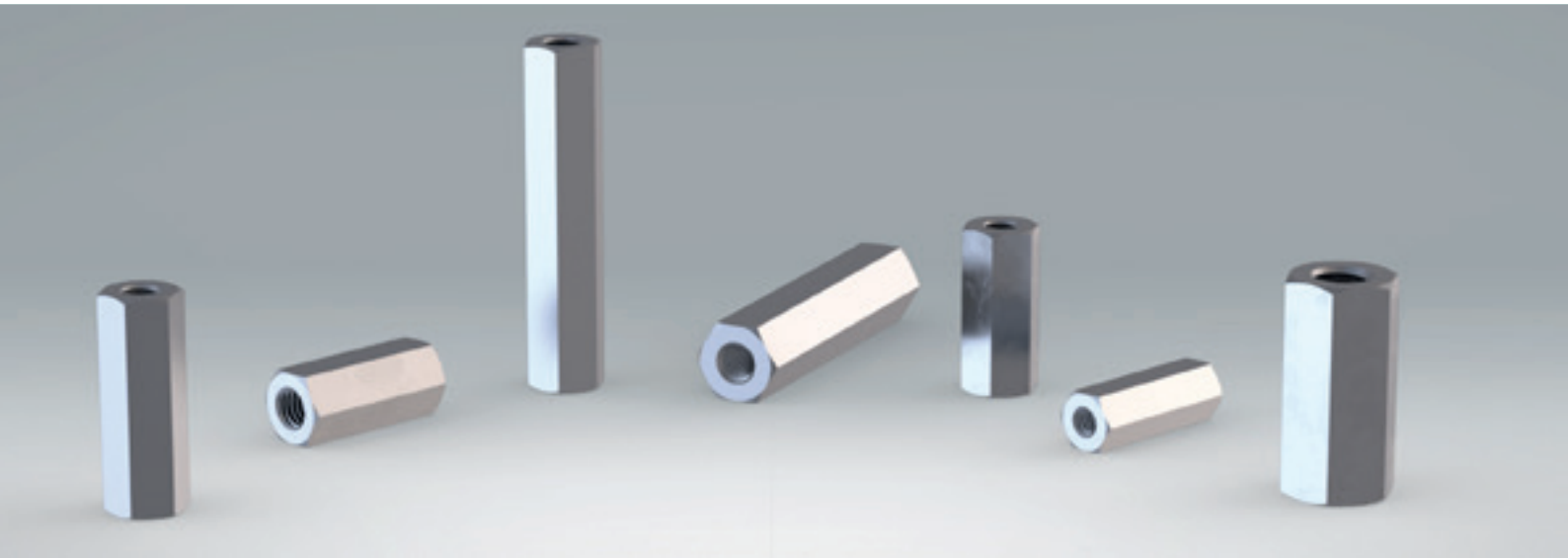
TECHNICAL DATA

| A | B | C | D | E | Part number |
|------|------|-----|---|-----|------------------|
| M2.5 | 18,8 | 0.3 | 6 | SW5 | 06.1.0501 |
| M2.5 | 19,1 | 0.3 | 6 | SW5 | 06.1.0502 |
| M2.5 | 21 | 0.3 | 6 | SW5 | 06.1.0503 |
| M2.5 | 22,2 | 0.3 | 6 | SW5 | 06.1.0504 |

Measurements B - D in mm

POWER SPACER

INTERNAL-INTERNAL, M2.5, THREAD BOTH SIDES



PRODUCT SPECIFICATION

- ✚ Hexagonal spacer bolts with thread both sides internal thread
- ✚ For exact distancing of different components
- ✚ Prevent mechanical contact between components
- ✚ For precise, durable and efficient circuit-board construction
- ✚ Easy to use and highly versatile
- ✚ RoHS compliant

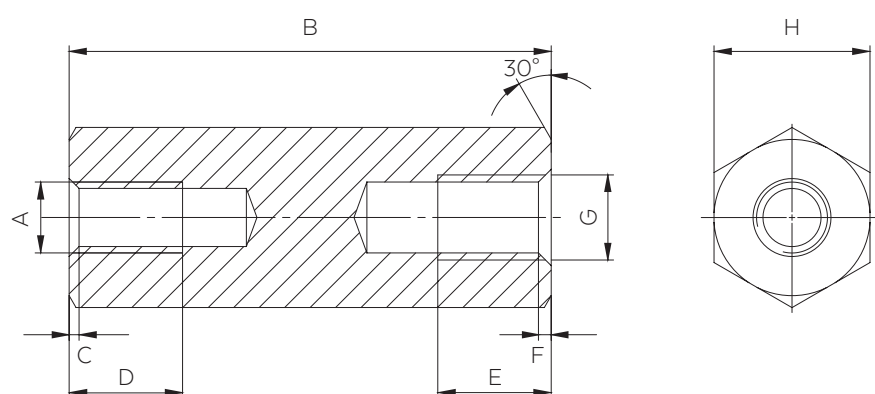


MATERIAL INFORMATION

| Material | Surface | Part number |
|-----------------|---------------------------------------|-------------|
| Brass CuZn39Pb3 | nickel-plated (DIN 267 E1E gal. Ni 3) | 06.1.0401 |



SCALE DRAWINGS



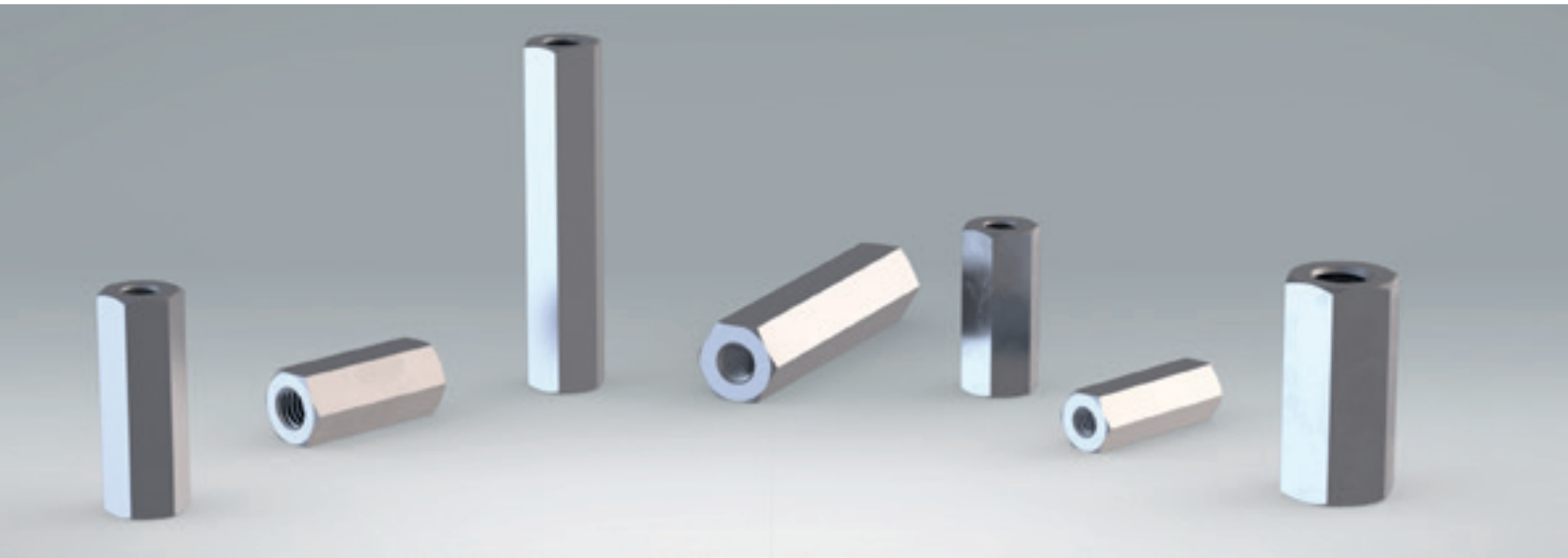
TECHNICAL DATA

| A | B | C | D | E | F | G | H | Part number |
|------|----|------|---|---|------|----|-------|-------------|
| M2.5 | 12 | 0.35 | 6 | 6 | 0.45 | M3 | SW5.5 | 06.1.0401 |

Measurements B - H in mm

POWER SPACER

INTERNAL-INTERNAL, M3, THREAD BOTH SIDES



PRODUCT SPECIFICATION

- ✚ Hexagonal spacer bolts with thread both sides internal thread
- ✚ For exact distancing of different components
- ✚ Prevent mechanical contact between components
- ✚ For precise, durable and efficient circuit-board construction
- ✚ Easy to use and highly versatile
- ✚ RoHS compliant

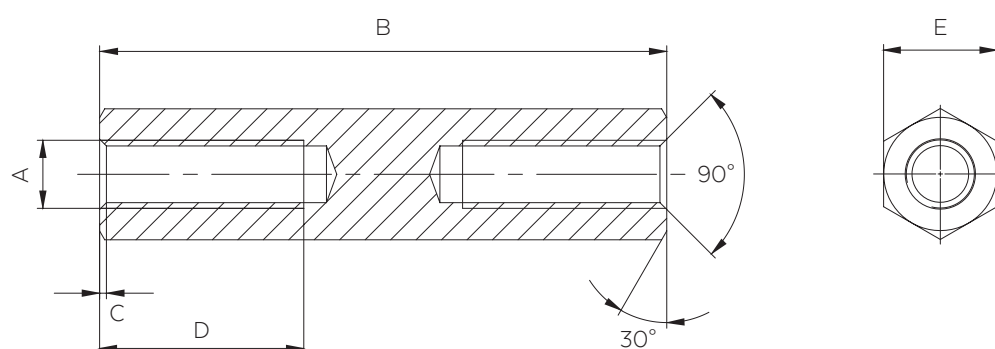


MATERIAL INFORMATION

| Material | Surface | Part number |
|-------------------|--|-------------|
| Brass CuZn39Pb3zh | nickel-plated (ISO 4042 E1E gal. Ni 3) | 06.1.0AXX |



SCALE DRAWINGS



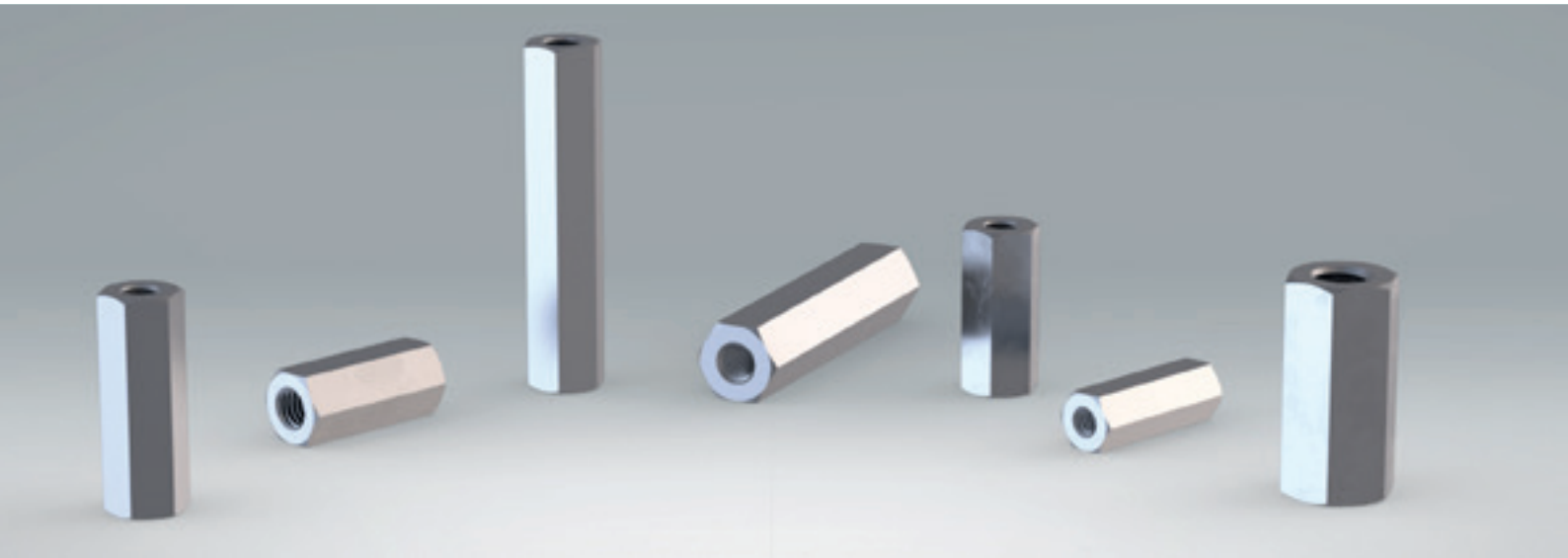
TECHNICAL DATA

| A | B | C | D | E | Part number |
|----|------|-----|----|-----|------------------|
| M3 | 18 | 0.3 | 8 | SW5 | 06.1.OA01 |
| M3 | 19,1 | 0.3 | 8 | SW5 | 06.1.OA02 |
| M3 | 20 | 0.3 | 8 | SW5 | 06.1.OA03 |
| M3 | 22 | 0.3 | 10 | SW5 | 06.1.OA04 |
| M3 | 22,2 | 0.3 | 7 | SW5 | 06.1.OA05 |
| M3 | 25 | 0.3 | 8 | SW5 | 06.1.OA06 |
| M3 | 28 | 0.3 | 8 | SW5 | 06.1.OA07 |
| M3 | 30 | 0.3 | 8 | SW5 | 06.1.OA08 |
| M3 | 31,8 | 0.3 | 8 | SW5 | 06.1.OA09 |
| M3 | 38,1 | 0.3 | 8 | SW5 | 06.1.OA10 |

Measurements B - D in mm

POWER SPACER

INTERNAL-INTERNAL, M3, THREAD BOTH SIDES



PRODUCT SPECIFICATION

- ✚ Hexagonal spacer bolts with thread both sides internal thread
- ✚ For exact distancing of different components
- ✚ Prevent mechanical contact between components
- ✚ For precise, durable and efficient circuit-board construction
- ✚ Easy to use and highly versatile
- ✚ RoHS compliant

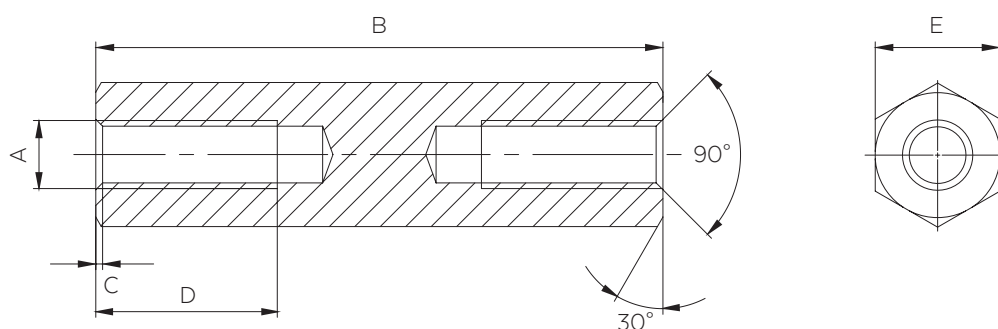


MATERIAL INFORMATION

| Material | Surface | Part number |
|-----------------|---------------------------------------|-------------|
| Brass CuZn39Pb3 | nickel-plated (DIN 267 E1E gal. Ni 3) | 06.1.0BXX |



SCALE DRAWINGS



TECHNICAL DATA

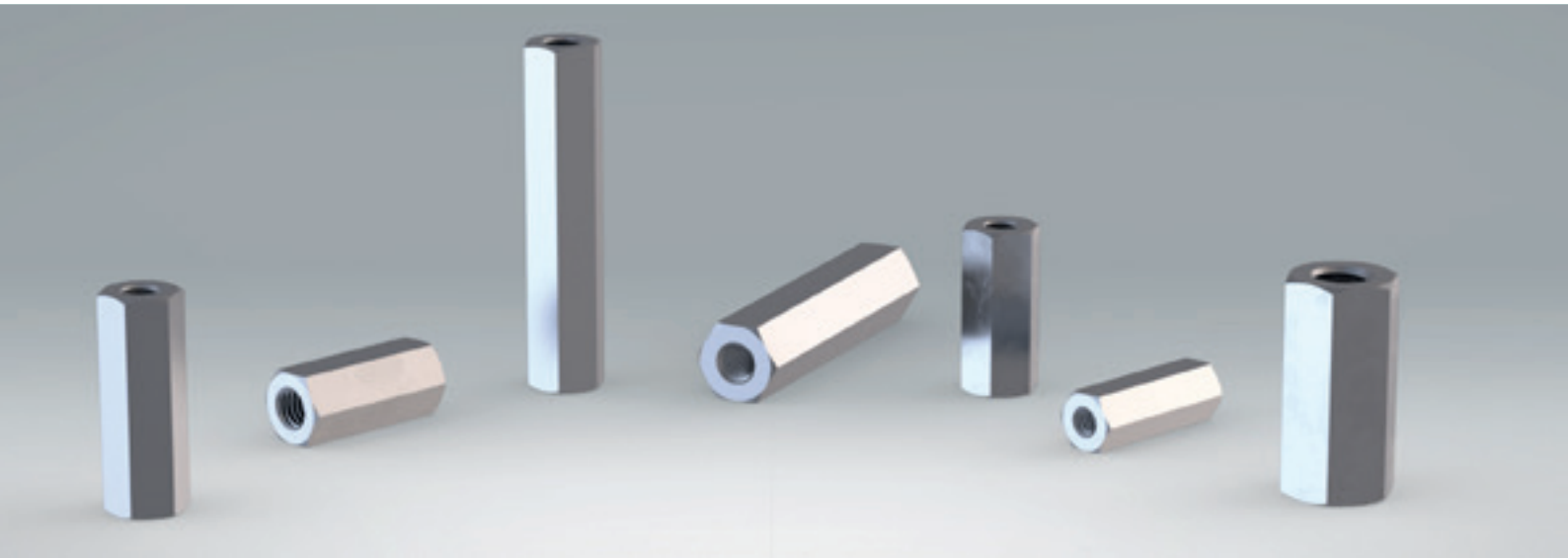
| A | B | C | D | E | Part number |
|----|------|-----|---|-------|------------------|
| M3 | 17.5 | 0.3 | 8 | SW5.5 | 06.1.0B01 |
| M3 | 18 | 0.3 | 8 | SW5.5 | 06.1.0B02 |
| M3 | 18.5 | 0.3 | 8 | SW5.5 | 06.1.0B03 |
| M3 | 18,7 | 0.3 | 8 | SW5.5 | 06.1.0B04 |
| M3 | 19.5 | 0.3 | 8 | SW5.5 | 06.1.0B05 |
| M3 | 20 | 0.3 | 8 | SW5.5 | 06.1.0B06 |
| M3 | 21 | 0.3 | 8 | SW5.5 | 06.1.0B07 |
| M3 | 23 | 0.3 | 8 | SW5.5 | 06.1.0B08 |
| M3 | 24 | 0.3 | 8 | SW5.5 | 06.1.0B09 |
| M3 | 26 | 0.3 | 8 | SW5.5 | 06.1.0B10 |
| M3 | 27 | 0.3 | 8 | SW5.5 | 06.1.0B11 |
| M3 | 29 | 0.3 | 8 | SW5.5 | 06.1.0B12 |
| M3 | 31 | 0.3 | 8 | SW5.5 | 06.1.0B13 |
| M3 | 32 | 0.3 | 8 | SW5.5 | 06.1.0B14 |
| M3 | 33 | 0.3 | 8 | SW5.5 | 06.1.0B15 |

| A | B | C | D | E | Part number |
|----|------|-----|---|-------|------------------|
| M3 | 35 | 0.3 | 8 | SW5.5 | 06.1.0B16 |
| M3 | 36 | 0.3 | 8 | SW5.5 | 06.1.0B17 |
| M3 | 37 | 0.3 | 8 | SW5.5 | 06.1.0B18 |
| M3 | 38 | 0.3 | 8 | SW5.5 | 06.1.0B19 |
| M3 | 39 | 0.3 | 8 | SW5.5 | 06.1.0B20 |
| M3 | 40 | 0.3 | 8 | SW5.5 | 06.1.0B21 |
| M3 | 41 | 0.3 | 8 | SW5.5 | 06.1.0B22 |
| M3 | 42 | 0.3 | 8 | SW5.5 | 06.1.0B23 |
| M3 | 43 | 0.3 | 8 | SW5.5 | 06.1.0B24 |
| M3 | 44 | 0.3 | 8 | SW5.5 | 06.1.0B25 |
| M3 | 46 | 0.3 | 8 | SW5.5 | 06.1.0B26 |
| M3 | 47 | 0.3 | 8 | SW5.5 | 06.1.0B27 |
| M3 | 50 | 0.3 | 8 | SW5.5 | 06.1.0B28 |
| M3 | 52.3 | 0.3 | 8 | SW5.5 | 06.1.0B29 |
| M3 | 60 | 0.3 | 8 | SW5.5 | 06.1.0B30 |

Measurements B - D in mm

POWER SPACER

INTERNAL-INTERNAL, M3, THREAD BOTH SIDES



PRODUCT SPECIFICATION

- ✎ Hexagonal spacer bolts with thread both sides internal thread
- ✎ For exact distancing of different components
- ✎ Prevent mechanical contact between components
- ✎ For precise, durable and efficient circuit-board construction
- ✎ Easy to use and highly versatile
- ✎ RoHS compliant

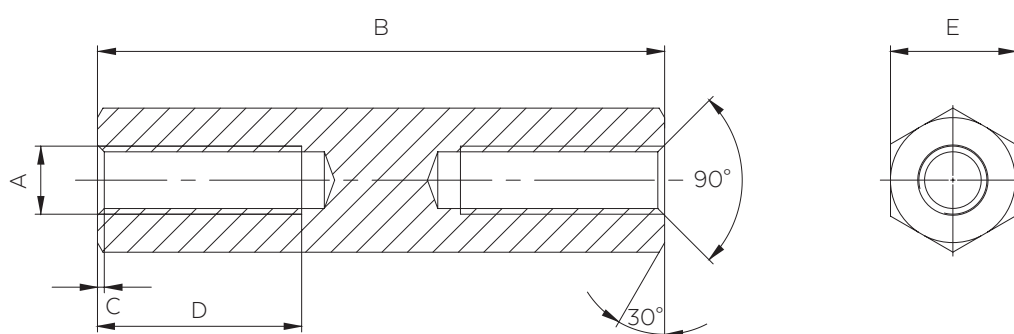


MATERIAL INFORMATION

| Material | Surface | Part number |
|-------------------|---------------------------------------|-------------|
| Brass CuZn39Pb3zh | nickel-plated (DIN 267 E1E gal. Ni 3) | 06.1.090X |



SCALE DRAWINGS



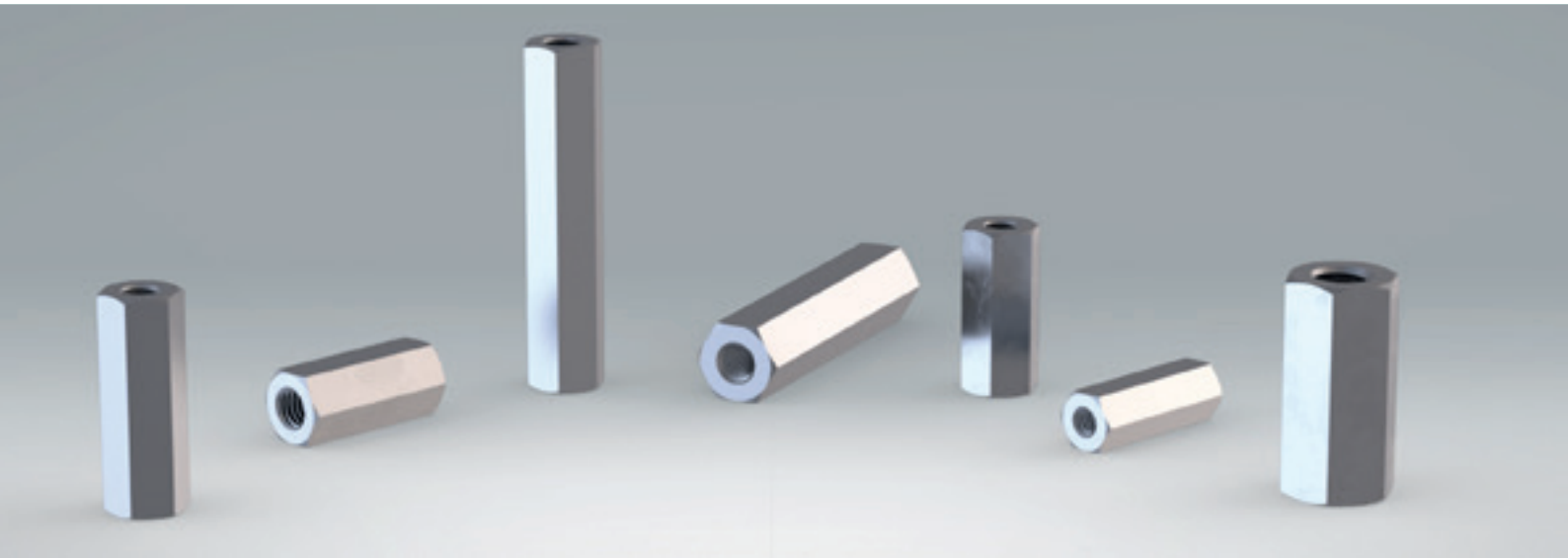
TECHNICAL DATA

| A | B | C | D | E | Part number |
|----|----|-----|---|-------|------------------|
| M3 | 22 | 0.3 | 9 | SW5,5 | 06.1.0901 |
| M3 | 25 | 0.3 | 9 | SW5,5 | 06.1.0902 |
| M3 | 30 | 0.3 | 9 | SW5,5 | 06.1.0903 |

Measurements B - D in mm

POWER SPACER

INTERNAL-INTERNAL, M4, THREAD BOTH SIDES



PRODUCT SPECIFICATION

- ✦ Hexagonal spacer bolts with thread both sides internal thread
- ✦ For exact distancing of different components
- ✦ Prevent mechanical contact between components
- ✦ For precise, durable and efficient circuit-board construction
- ✦ Easy to use and highly versatile
- ✦ RoHS compliant

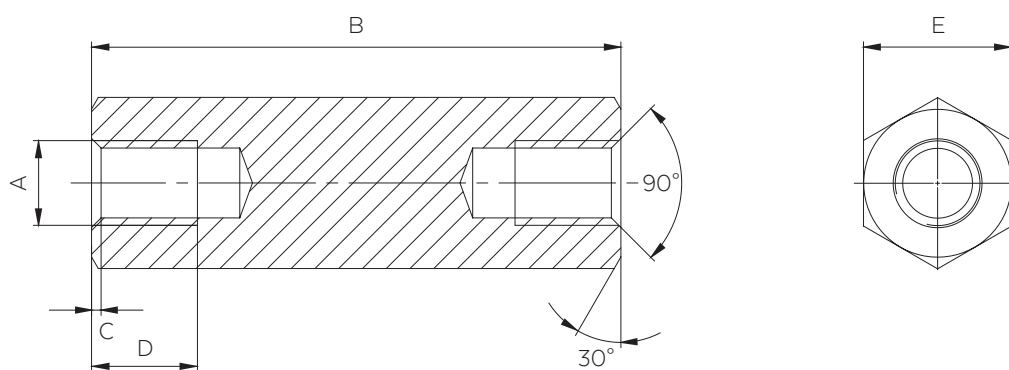


MATERIAL INFORMATION

| Material | Surface | Part number |
|-----------------|---------------------------------------|-------------|
| Brass CuZn39Pb3 | nickel-plated (DIN 267 E1E gal. Ni 3) | 06.1.0COX |



SCALE DRAWINGS

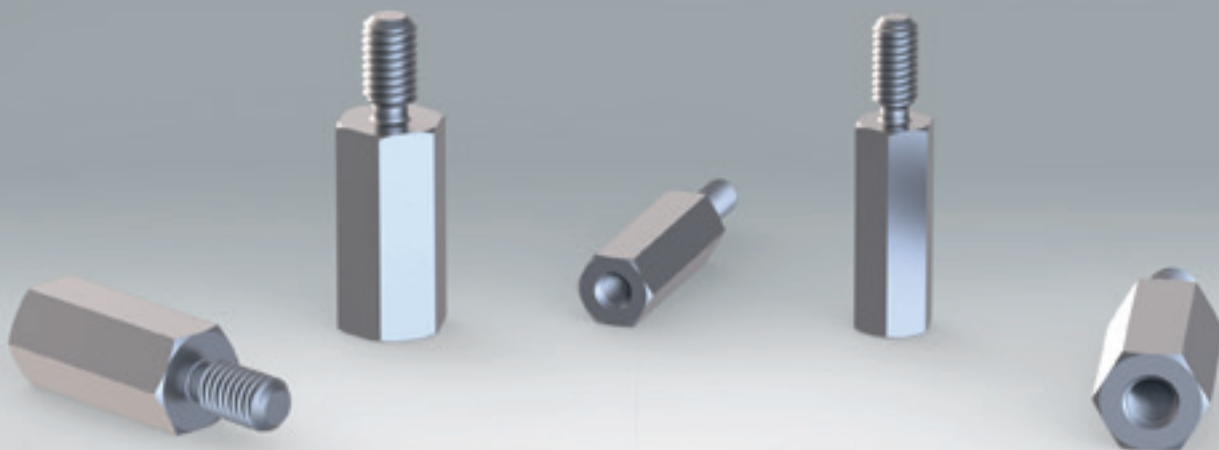


TECHNICAL DATA

| A | B | C | D | E | Part number |
|----|----|------|---|-----|------------------|
| M4 | 23 | 0.45 | 9 | SW7 | 06.1.0C01 |
| M4 | 25 | 0.45 | 9 | SW7 | 06.1.0C02 |
| M4 | 30 | 0.45 | 9 | SW7 | 06.1.0C03 |
| M4 | 40 | 0.45 | 9 | SW7 | 06.1.0C04 |
| M4 | 52 | 0.45 | 9 | SW7 | 06.1.0C05 |
| M4 | 55 | 0.45 | 9 | SW7 | 06.1.0C06 |
| M4 | 60 | 0.45 | 9 | SW7 | 06.1.0C07 |

Measurements B - D in mm

POWER SPACER INTERNAL-EXTERNAL, M2



PRODUCT SPECIFICATION

- ✚ Hexagonal spacer bolts with internal and external threads
- ✚ For exact distancing of different components
- ✚ Prevent mechanical contact between components
- ✚ For precise, durable and efficient circuit-board construction
- ✚ Easy to use and highly versatile
- ✚ RoHS compliant

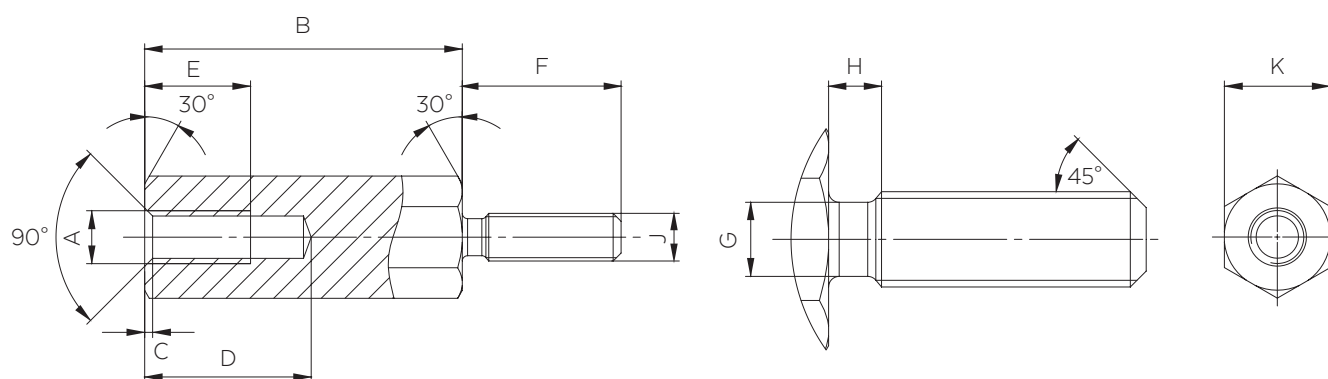


MATERIAL INFORMATION

| Material | Surface | Part number |
|-----------------|---------------------------------------|-------------|
| Brass CuZn39Pb3 | nickel-plated (DIN 267 E1E gal. Ni 3) | 06.2.00XX |



SCALE DRAWINGS

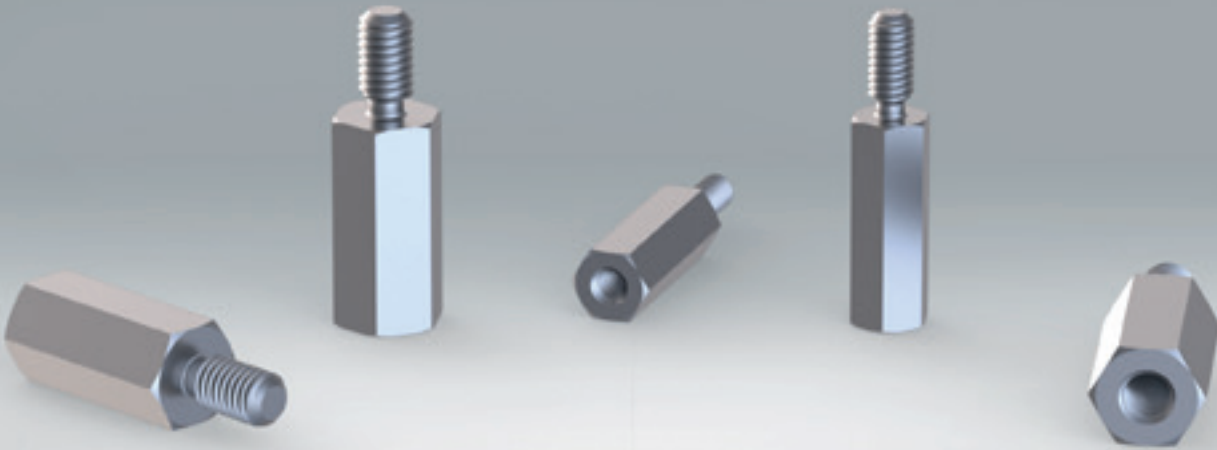


TECHNICAL DATA

| A | B | C | D | E | F | G | H | J | K | Part number |
|----|-----|-----|-----|-----|---|------|---|----|-----|------------------|
| M2 | 5 | 0.3 | 4.5 | 3.5 | 5 | Ø1.4 | 1 | M2 | SW5 | 06.2.0001 |
| M2 | 5 | 0.3 | 4 | 2.8 | 6 | Ø1.4 | 1 | M2 | SW5 | 06.2.0002 |
| M2 | 6.3 | 0.3 | 6 | 5 | 5 | Ø1.4 | 1 | M2 | SW5 | 06.2.0003 |
| M2 | 7 | 0.3 | 6.5 | 5.1 | 6 | Ø1.4 | 1 | M2 | SW5 | 06.2.0004 |
| M2 | 8 | 0.3 | 6.5 | 5 | 6 | Ø1.4 | 1 | M2 | SW5 | 06.2.0005 |
| M2 | 10 | 0.3 | 8.5 | 7 | 6 | Ø1.4 | 1 | M2 | SW5 | 06.2.0006 |
| M2 | 11 | 0.3 | 9 | 7 | 6 | Ø1.4 | 1 | M2 | SW5 | 06.2.0007 |
| M2 | 12 | 0.3 | 9.5 | 7 | 6 | Ø1.4 | 1 | M2 | SW5 | 06.2.0008 |
| M2 | 15 | 0.3 | 9 | 7 | 6 | Ø1.4 | 1 | M2 | SW5 | 06.2.0009 |
| M2 | 16 | 0.3 | 9.5 | 7 | 6 | Ø1.4 | 1 | M2 | SW5 | 06.2.0010 |
| M2 | 25 | 0.3 | 9.5 | 7 | 6 | Ø1.4 | 1 | M2 | SW5 | 06.2.0011 |
| M2 | 30 | 0.3 | 9.5 | 7 | 6 | Ø1.4 | 1 | M2 | SW5 | 06.2.0012 |

Measurements B - H in mm

POWER SPACER INTERNAL-EXTERNAL, M2.5



PRODUCT SPECIFICATION

- ✚ Hexagonal spacer bolts with internal and external threads
- ✚ For exact distancing of different components
- ✚ Prevent mechanical contact between components
- ✚ For precise, durable and efficient circuit-board construction
- ✚ Easy to use and highly versatile
- ✚ RoHS compliant

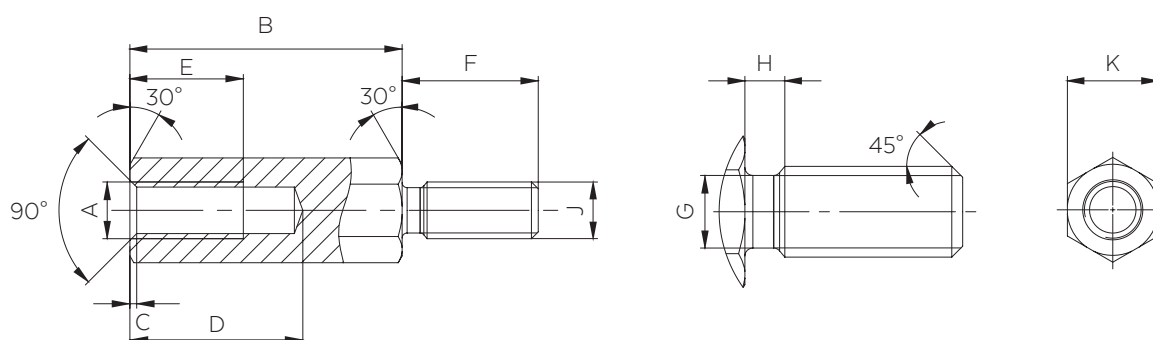


MATERIAL INFORMATION

| Material | Surface | Part number |
|-----------------|---------------------------------------|-------------|
| Brass CuZn39Pb3 | nickel-plated (DIN 267 E1E gal. Ni 3) | 06.2.02XX |



SCALE DRAWINGS



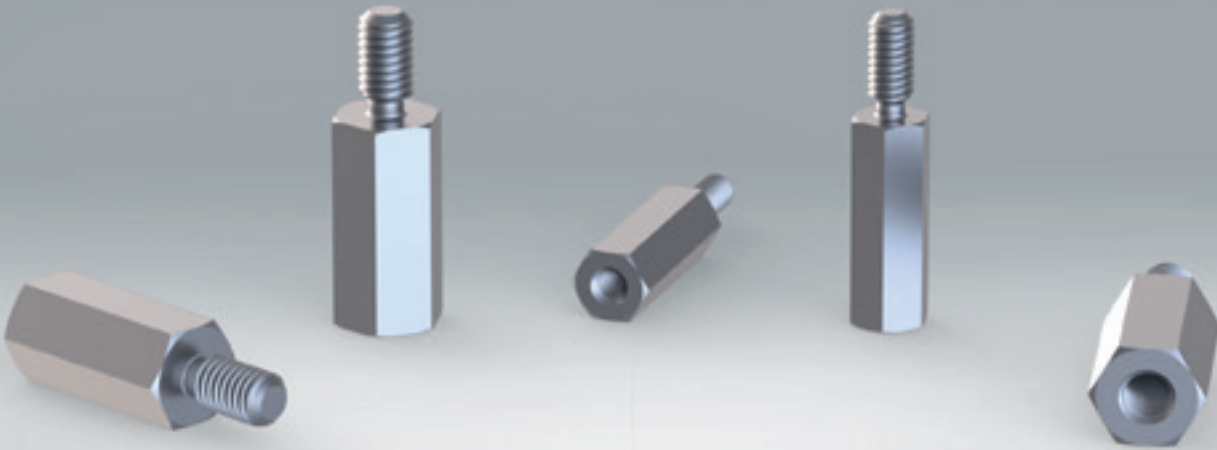
TECHNICAL DATA

| A | B | C | D | E | F | G | H | J | K | Part number |
|------|------|-----|-----|-----|-----|-----|-----|------|-----|-------------|
| M2.5 | 5 | 0.3 | 4.5 | 3 | 6 | Ø 2 | 1.1 | M2.5 | SW4 | 06.2.0201 |
| M2.5 | 6 | 0.3 | 5.5 | 4.5 | 3.5 | Ø 2 | 1.1 | M2.5 | SW4 | 06.2.0202 |
| M2.5 | 6 | 0.3 | 4.5 | 2.5 | 6 | Ø 2 | 1.1 | M2.5 | SW4 | 06.2.0203 |
| M2.5 | 6.5 | 0.3 | 6 | 4 | 6 | Ø 2 | 1.1 | M2.5 | SW4 | 06.2.0204 |
| M2.5 | 7 | 0.3 | 6.5 | 5.5 | 6 | Ø 2 | 1.1 | M2.5 | SW4 | 06.2.0205 |
| M2.5 | 8 | 0.3 | 7 | 5.5 | 6 | Ø 2 | 1.1 | M2.5 | SW4 | 06.2.0206 |
| M2.5 | 10 | 0.3 | 9 | 7 | 4 | Ø 2 | 1.1 | M2.5 | SW4 | 06.2.0207 |
| M2.5 | 10 | 0.3 | 9 | 7 | 6 | Ø 2 | 1.1 | M2.5 | SW4 | 06.2.0208 |
| M2.5 | 11 | 0.3 | 10 | 7 | 5 | Ø 2 | 1.1 | M2.5 | SW4 | 06.2.0209 |
| M2.5 | 11 | 0.3 | 10 | 7 | 6 | Ø 2 | 1.1 | M2.5 | SW4 | 06.2.0210 |
| M2.5 | 11.5 | 0.3 | 10 | 7 | 6 | Ø 2 | 1.1 | M2.5 | SW4 | 06.2.0211 |
| M2.5 | 12 | 0.3 | 10 | 7 | 6 | Ø 2 | 1.1 | M2.5 | SW4 | 06.2.0212 |
| M2.5 | 13 | 0.3 | 10 | 7 | 6 | Ø 2 | 1.1 | M2.5 | SW4 | 06.2.0213 |

Measurements B - H in mm

CONTINUED ON NEXT PAGE →

POWER SPACER INTERNAL-EXTERNAL, M2.5



PRODUCT SPECIFICATION

- ✎ Hexagonal spacer bolts with internal and external threads
- ✎ For exact distancing of different components
- ✎ Prevent mechanical contact between components
- ✎ For precise, durable and efficient circuit-board construction
- ✎ Easy to use and highly versatile
- ✎ RoHS compliant

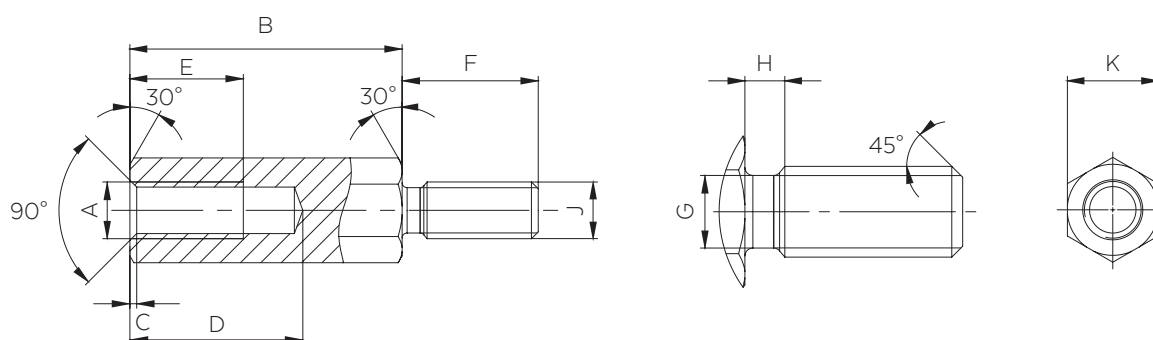


MATERIAL INFORMATION

| Material | Surface | Part number |
|-----------------|---------------------------------------|-------------|
| Brass CuZn39Pb3 | nickel-plated (DIN 267 E1E gal. Ni 3) | 06.2.02XX |



SCALE DRAWINGS

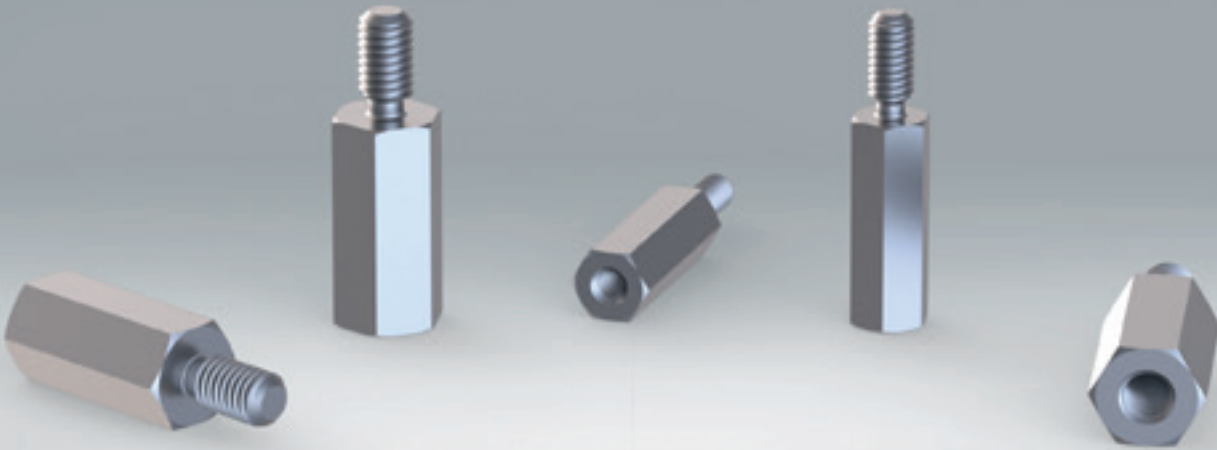


TECHNICAL DATA

| A | B | C | D | E | F | G | H | J | K | Part number |
|------|----|-----|----|---|---|-----|-----|------|-----|------------------|
| M2.5 | 14 | 0.3 | 10 | 7 | 6 | Ø 2 | 1.1 | M2.5 | SW4 | 06.2.0214 |
| M2.5 | 15 | 0.3 | 10 | 7 | 6 | Ø 2 | 1.1 | M2.5 | SW4 | 06.2.0215 |
| M2.5 | 16 | 0.3 | 10 | 7 | 6 | Ø 2 | 1.1 | M2.5 | SW4 | 06.2.0216 |
| M2.5 | 17 | 0.3 | 10 | 7 | 6 | Ø 2 | 1.1 | M2.5 | SW4 | 06.2.0217 |
| M2.5 | 18 | 0.3 | 10 | 7 | 6 | Ø 2 | 1.1 | M2.5 | SW4 | 06.2.0218 |
| M2.5 | 20 | 0.3 | 10 | 7 | 6 | Ø 2 | 1.1 | M2.5 | SW4 | 06.2.0219 |
| M2.5 | 22 | 0.3 | 10 | 7 | 6 | Ø 2 | 1.1 | M2.5 | SW4 | 06.2.0220 |
| M2.5 | 25 | 0.3 | 10 | 7 | 6 | Ø 2 | 1.1 | M2.5 | SW4 | 06.2.0221 |
| M2.5 | 28 | 0.3 | 10 | 7 | 6 | Ø 2 | 1.1 | M2.5 | SW4 | 06.2.0222 |
| M2.5 | 29 | 0.3 | 10 | 7 | 6 | Ø 2 | 1.1 | M2.5 | SW4 | 06.2.0223 |
| M2.5 | 30 | 0.3 | 10 | 7 | 6 | Ø 2 | 1.1 | M2.5 | SW4 | 06.2.0224 |
| M2.5 | 40 | 0.3 | 10 | 7 | 6 | Ø 2 | 1.1 | M2.5 | SW4 | 06.2.0225 |
| M2.5 | 50 | 0.3 | 10 | 7 | 6 | Ø 2 | 1.1 | M2.5 | SW4 | 06.2.0226 |

Measurements B - H in mm

POWER SPACER INTERNAL-EXTERNAL, M2.5



PRODUCT SPECIFICATION

- ✚ Hexagonal spacer bolts with internal and external threads
- ✚ For exact distancing of different components
- ✚ Prevent mechanical contact between components
- ✚ For precise, durable and efficient circuit-board construction
- ✚ Easy to use and highly versatile
- ✚ RoHS compliant

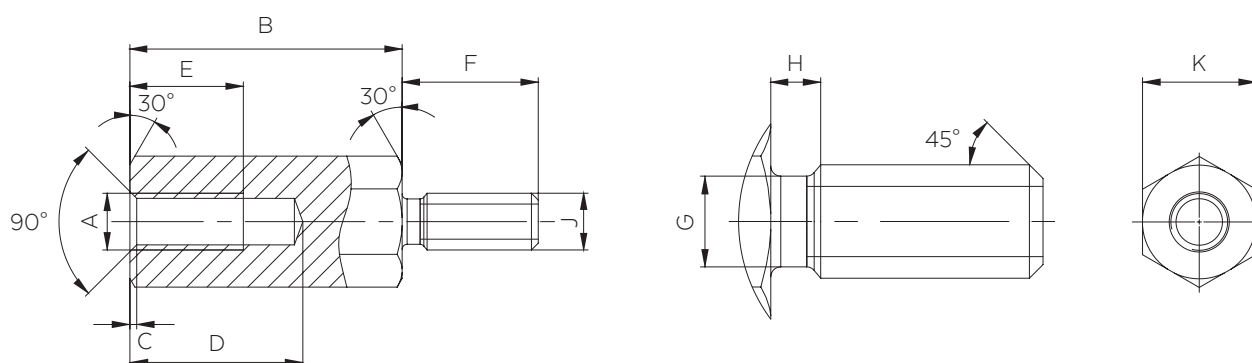


MATERIAL INFORMATION

| Material | Surface | Part number |
|-----------------|---------------------------------------|-------------|
| Brass CuZn39Pb3 | nickel-plated (DIN 267 E1E gal. Ni 3) | 06.2.010X |



SCALE DRAWINGS

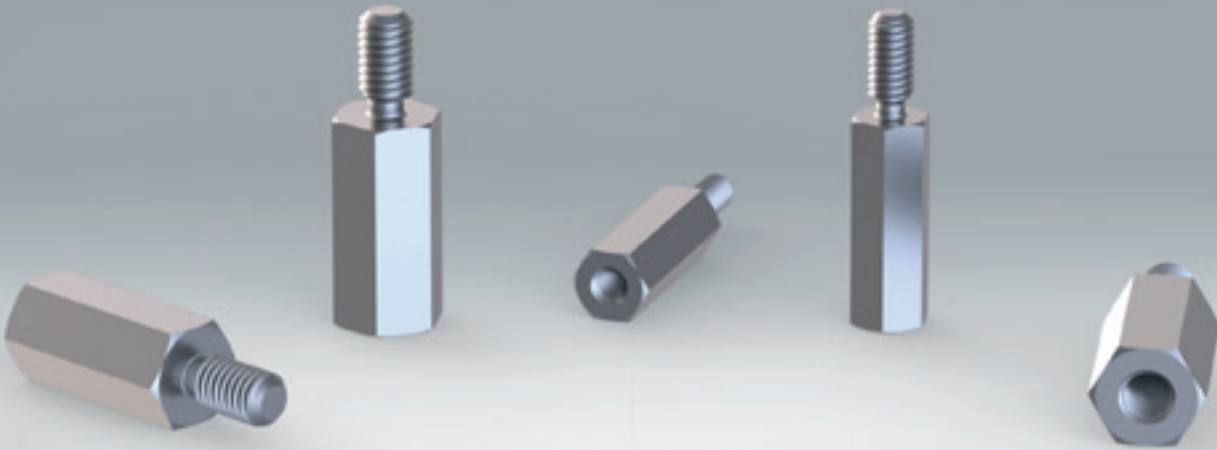


TECHNICAL DATA

| A | B | C | D | E | F | G | H | J | K | Part number |
|------|----|-----|---|---|---|-----|-----|------|-----|-------------|
| M2.5 | 9 | 0.3 | 8 | 6 | 6 | Ø 2 | 1.1 | M2.5 | SW5 | 06.2.0101 |
| M2.5 | 10 | 0.3 | 8 | 6 | 6 | Ø 2 | 1.1 | M2.5 | SW5 | 06.2.0102 |
| M2.5 | 15 | 0.3 | 8 | 6 | 6 | Ø 2 | 1.1 | M2.5 | SW5 | 06.2.0103 |
| M2.5 | 18 | 0.3 | 8 | 6 | 6 | Ø 2 | 1.1 | M2.5 | SW5 | 06.2.0104 |
| M2.5 | 20 | 0.3 | 8 | 6 | 6 | Ø 2 | 1.1 | M2.5 | SW5 | 06.2.0105 |

Measurements B - H in mm

POWER SPACER INTERNAL-EXTERNAL, M3



PRODUCT SPECIFICATION

- ✚ Hexagonal spacer bolts with internal and external threads
- ✚ For exact distancing of different components
- ✚ Prevent mechanical contact between components
- ✚ For precise, durable and efficient circuit-board construction
- ✚ Easy to use and highly versatile
- ✚ RoHS compliant

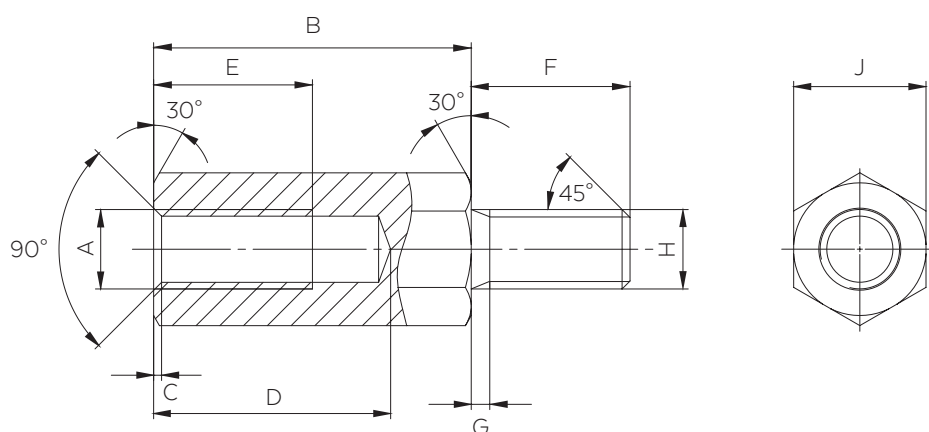


MATERIAL INFORMATION

| Material | Surface | Part number |
|-----------------|---------------------------------------|-------------|
| Brass CuZn39Pb3 | nickel-plated (DIN 267 E1E gal. Ni 3) | 06.2.030X |



SCALE DRAWINGS

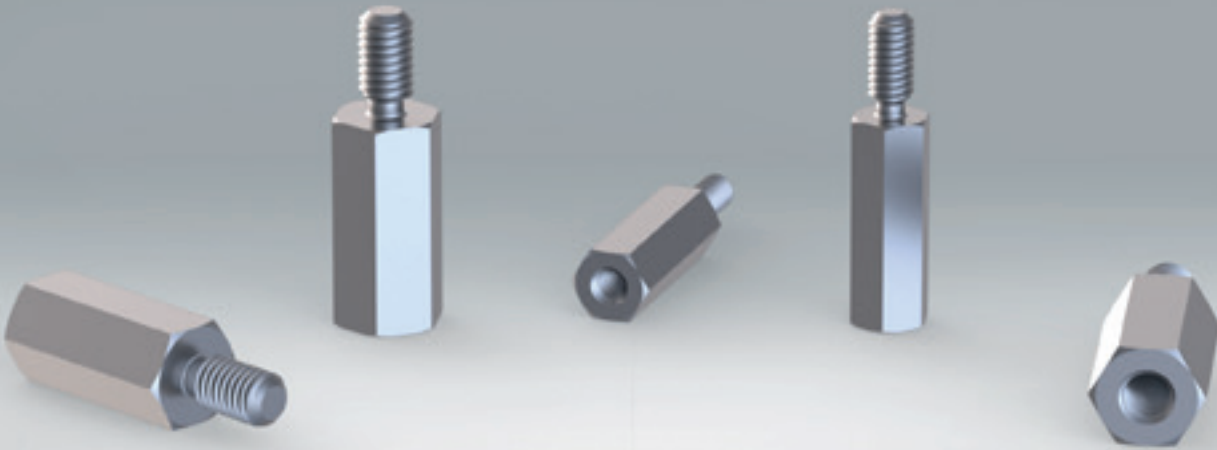


TECHNICAL DATA

| A | B | C | D | E | F | G | H | J | Part number |
|----|-----|-----|------|-----|----|-----|----|-----|------------------|
| M3 | 5 | 0.3 | 4.5 | 3 | 8 | 0,7 | M3 | SW5 | 06.2.0301 |
| M3 | 5 | 0.3 | 4 | 2.5 | 12 | 0,7 | M3 | SW5 | 06.2.0302 |
| M3 | 6.5 | 0.3 | 4.5 | 2.5 | 5 | 0,7 | M3 | SW5 | 06.2.0303 |
| M3 | 8 | 0.3 | 7 | 5 | 8 | 0,7 | M3 | SW5 | 06.2.0304 |
| M3 | 10 | 0.3 | 8.5 | 6.5 | 8 | 0,7 | M3 | SW5 | 06.2.0305 |
| M3 | 12 | 0.3 | 9.5 | 7 | 8 | 0,7 | M3 | SW5 | 06.2.0306 |
| M3 | 15 | 0.3 | 9.5 | 7 | 8 | 0,7 | M3 | SW5 | 06.2.0307 |
| M3 | 16 | 0.3 | 10.5 | 8 | 8 | 0,7 | M3 | SW5 | 06.2.0308 |

Measurements B - G in mm

POWER SPACER INTERNAL-EXTERNAL, M3



PRODUCT SPECIFICATION

- ✚ Hexagonal spacer bolts with internal and external threads
- ✚ For exact distancing of different components
- ✚ Prevent mechanical contact between components
- ✚ For precise, durable and efficient circuit-board construction
- ✚ Easy to use and highly versatile
- ✚ RoHS compliant

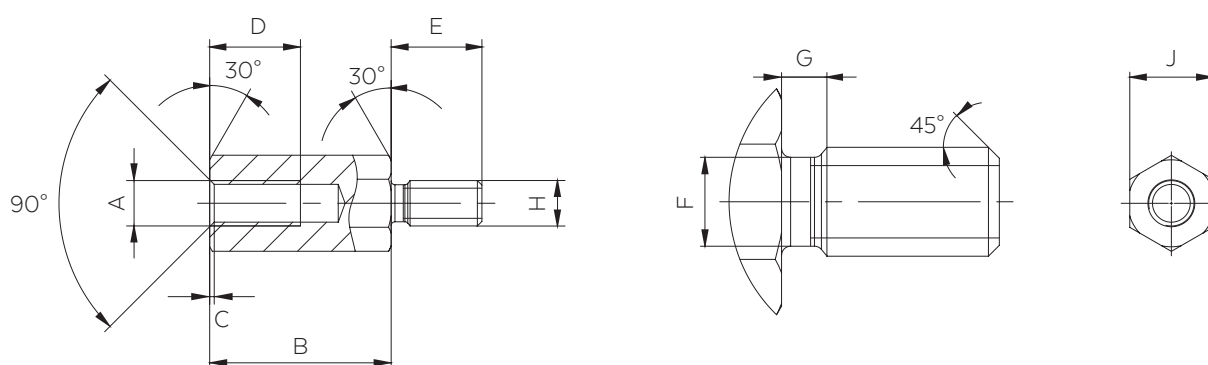


MATERIAL INFORMATION

| Material | Surface | Part number |
|-----------------|---------------------------------------|-------------|
| Brass CuZn39Pb3 | nickel-plated (DIN 267 E1E gal. Ni 3) | 06.2.04XX |



SCALE DRAWINGS



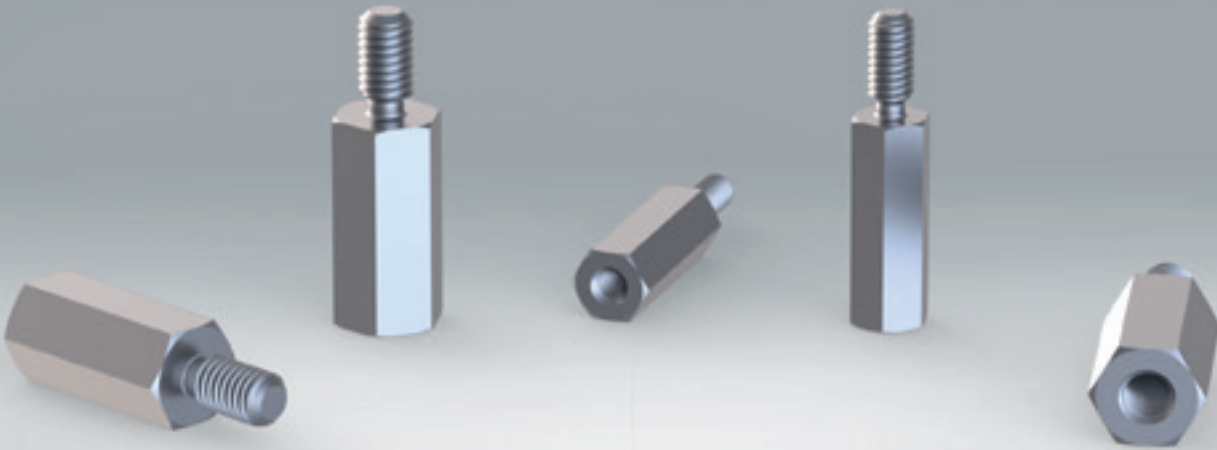
TECHNICAL DATA

| A | B | C | D | E | F | G | H | J | Part number |
|----|-----|-----|--------|---|--------|------|----|-------|------------------|
| M3 | 5 | 0.3 | 2.5 | 5 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.0401 |
| M3 | 5 | 0.3 | 3.5 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.0402 |
| M3 | 5 | 0.3 | min. 3 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.0403 |
| M3 | 6 | 0.3 | 2.5 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.0404 |
| M3 | 7 | 0.3 | 4.5 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.0405 |
| M3 | 8 | 0.3 | 5 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.0406 |
| M3 | 8.5 | 0.3 | 6 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.0407 |
| M3 | 9 | 0.3 | 7 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.0408 |
| M3 | 9.5 | 0.3 | 7 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.0409 |
| M3 | 10 | 0.3 | 6.5 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.0410 |
| M3 | 10 | 0.3 | 6.5 | 8 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.0411 |
| M3 | 11 | 0.3 | 7 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.0412 |
| M3 | 12 | 0.3 | 7 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.0413 |
| M3 | 13 | 0.3 | 7 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.0414 |
| M3 | 14 | 0.3 | 7 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.0415 |
| M3 | 14 | 0.3 | 7 | 8 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.0416 |

Measurements B - G in mm

CONTINUED ON NEXT PAGE →

POWER SPACER INTERNAL-EXTERNAL, M3



PRODUCT SPECIFICATION

- ✚ Hexagonal spacer bolts with internal and external threads
- ✚ For exact distancing of different components
- ✚ Prevent mechanical contact between components
- ✚ For precise, durable and efficient circuit-board construction
- ✚ Easy to use and highly versatile
- ✚ RoHS compliant

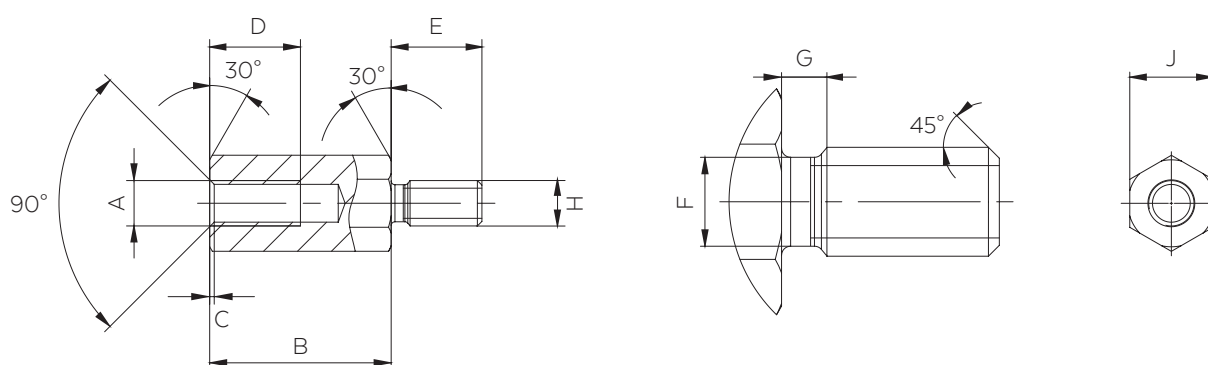


MATERIAL INFORMATION

| Material | Surface | Part number |
|-----------------|---------------------------------------|-------------|
| Brass CuZn39Pb3 | nickel-plated (DIN 267 E1E gal. Ni 3) | 06.2.04XX |



SCALE DRAWINGS

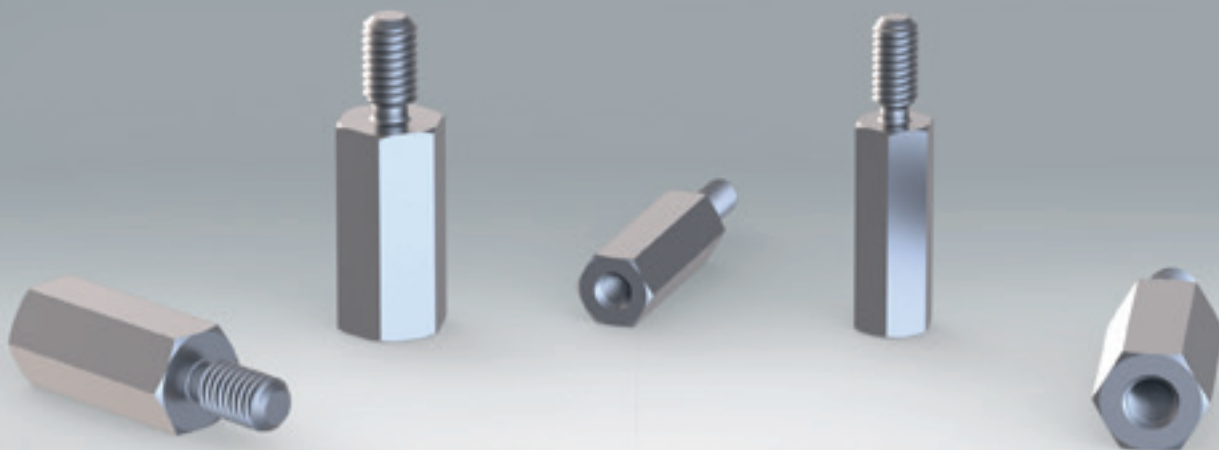


TECHNICAL DATA

| A | B | C | D | E | F | G | H | J | Part number |
|----|-------|-----|---|---|--------|------|----|-------|------------------|
| M3 | 15 | 0.3 | 7 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.0417 |
| M3 | 16 | 0.3 | 7 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.0418 |
| M3 | 17 | 0.3 | 7 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.0419 |
| M3 | 18 | 0.3 | 7 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.0420 |
| M3 | 18.72 | 0.3 | 7 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.0421 |
| M3 | 20 | 0.3 | 7 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.0422 |
| M3 | 20.5 | 0.3 | 7 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.0423 |
| M3 | 22 | 0.3 | 7 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.0424 |
| M3 | 25 | 0.3 | 7 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.0425 |
| M3 | 30 | 0.3 | 7 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.0426 |
| M3 | 35 | 0.3 | 7 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.0427 |
| M3 | 37 | 0.3 | 7 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.0428 |
| M3 | 40 | 0.3 | 7 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.0429 |
| M3 | 42.5 | 0.3 | 7 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.0430 |
| M3 | 45 | 0.3 | 7 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.0431 |
| M3 | 60 | 0.3 | 7 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.0432 |

Measurements B - G in mm

POWER SPACER INTERNAL-EXTERNAL, M3



PRODUCT SPECIFICATION

- ✚ Hexagonal spacer bolts with internal and external threads
- ✚ For exact distancing of different components
- ✚ Prevent mechanical contact between components
- ✚ For precise, durable and efficient circuit-board construction
- ✚ Easy to use and highly versatile
- ✚ RoHS compliant

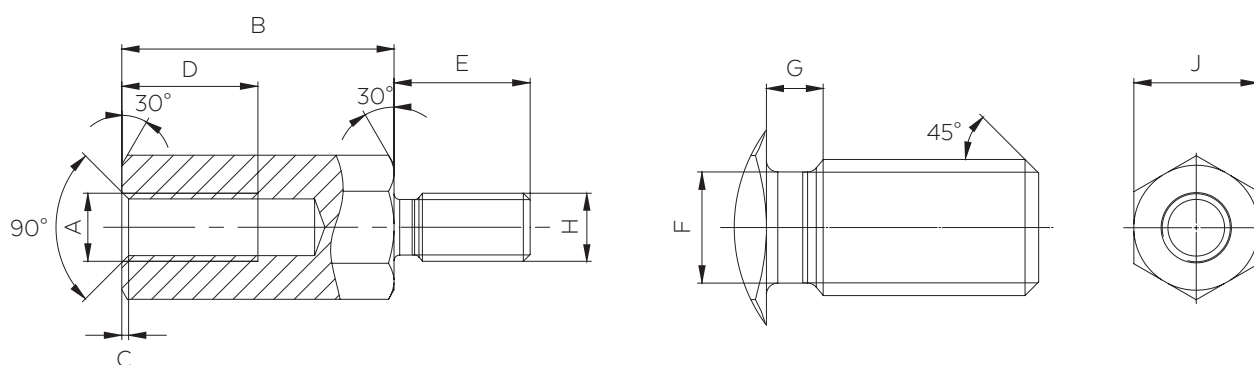


MATERIAL INFORMATION

| Material | Surface | Part number |
|------------------|--|-------------|
| Steel 11SMnPb30C | galvanized, blue passivated (ISO 4042 A2K, Fe/Zn 8cB) | 06.2.200X |



SCALE DRAWINGS

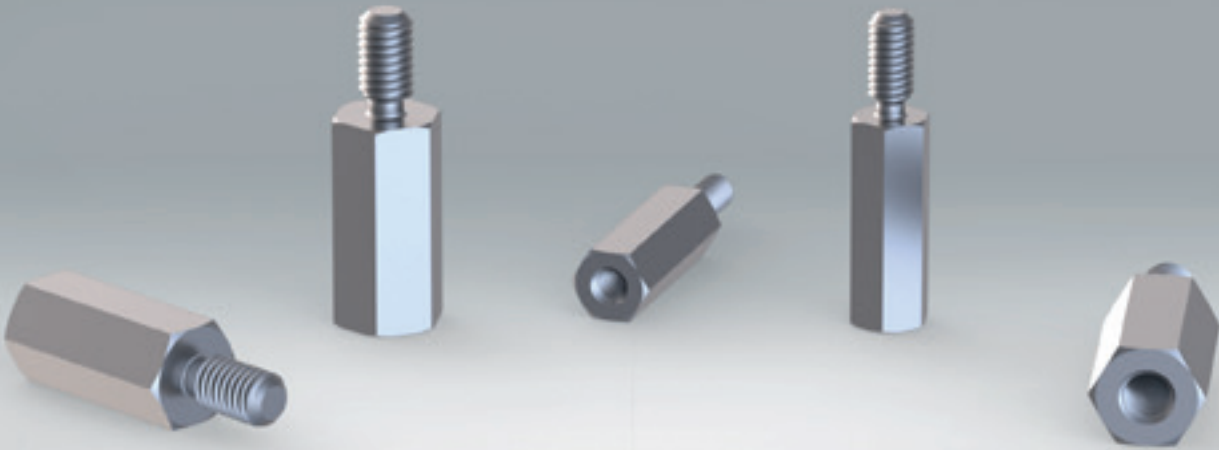


TECHNICAL DATA

| A | B | C | D | E | F | G | H | J | Part number |
|----|-----|-----|-----|---|--------|------|----|-------|-------------|
| M3 | 7 | 0.3 | 4.5 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.2001 |
| M3 | 7.5 | 0.3 | 4.5 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.2002 |
| M3 | 8 | 0.3 | 5 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.2003 |
| M3 | 9 | 0.3 | 6 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.2004 |
| M3 | 23 | 0.3 | 7 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.2005 |
| M3 | 30 | 0.3 | 7 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.2006 |

Measurements B - G in mm

POWER SPACER INTERNAL-EXTERNAL, M3



PRODUCT SPECIFICATION

- ✚ Hexagonal spacer bolts with internal and external threads
- ✚ For exact distancing of different components
- ✚ Prevent mechanical contact between components
- ✚ For precise, durable and efficient circuit-board construction
- ✚ Easy to use and highly versatile
- ✚ RoHS compliant

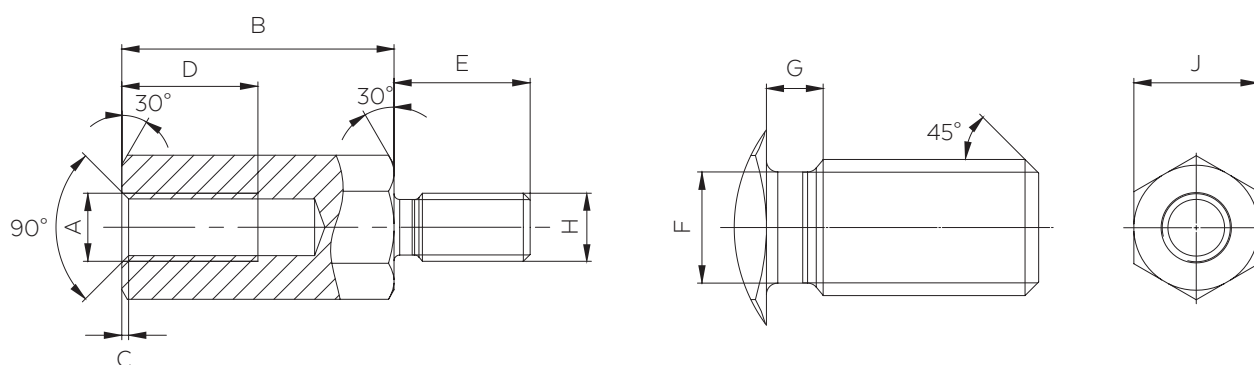


MATERIAL INFORMATION

| Material | Surface | Part number |
|------------------|--|-------------|
| Steel 11SMnPb30C | galvanized, white (DIN 267 A2E galvanized 5 µm) | 06.2.30XX |



SCALE DRAWINGS

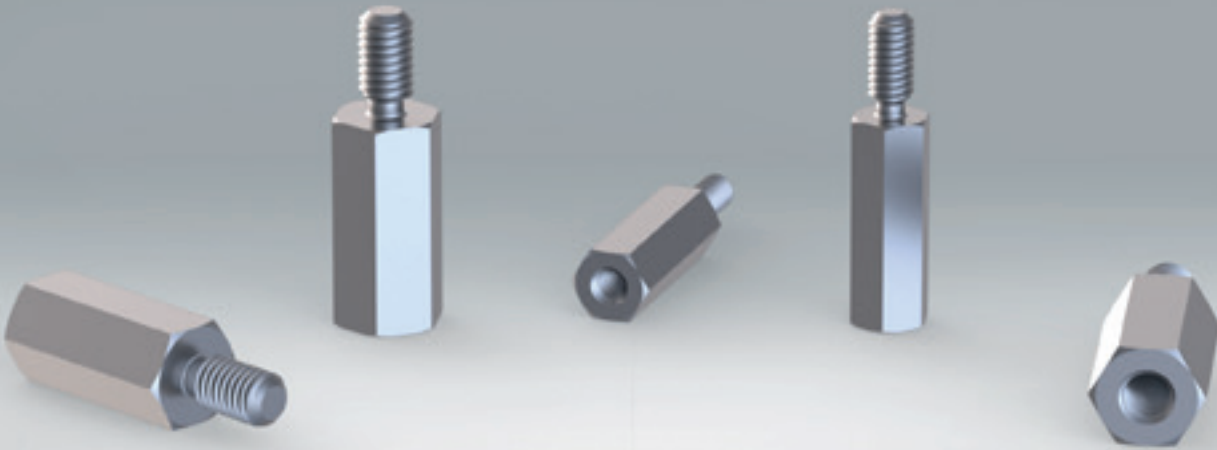


TECHNICAL DATA

| A | B | C | D | E | F | G | H | J | Part number |
|----|-----|-----|-----|-----|--------|------|----|-------|------------------|
| M3 | 5 | 0.3 | 3 | 3.5 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.3001 |
| M3 | 5 | 0.3 | 2.5 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.3002 |
| M3 | 6 | 0.3 | 2.5 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.3003 |
| M3 | 7 | 0.3 | 4.5 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.3004 |
| M3 | 8.5 | 0.3 | 6 | 9 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.3005 |
| M3 | 8 | 0.3 | 5 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.3006 |
| M3 | 10 | 0.3 | 6.5 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.3007 |
| M3 | 12 | 0.3 | 7 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.3008 |
| M3 | 15 | 0.3 | 7 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.3009 |
| M3 | 20 | 0.3 | 7 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.3010 |
| M3 | 25 | 0.3 | 7 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.3011 |
| M3 | 28 | 0.3 | 7 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.3012 |
| M3 | 30 | 0.3 | 7 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.3013 |
| M3 | 40 | 0.3 | 7 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.3014 |

Measurements B - G in mm

POWER SPACER INTERNAL-EXTERNAL, M3



PRODUCT SPECIFICATION

- ✎ Hexagonal spacer bolts with internal and external threads
- ✎ For exact distancing of different components
- ✎ Prevent mechanical contact between components
- ✎ For precise, durable and efficient circuit-board construction
- ✎ Easy to use and highly versatile
- ✎ RoHS compliant

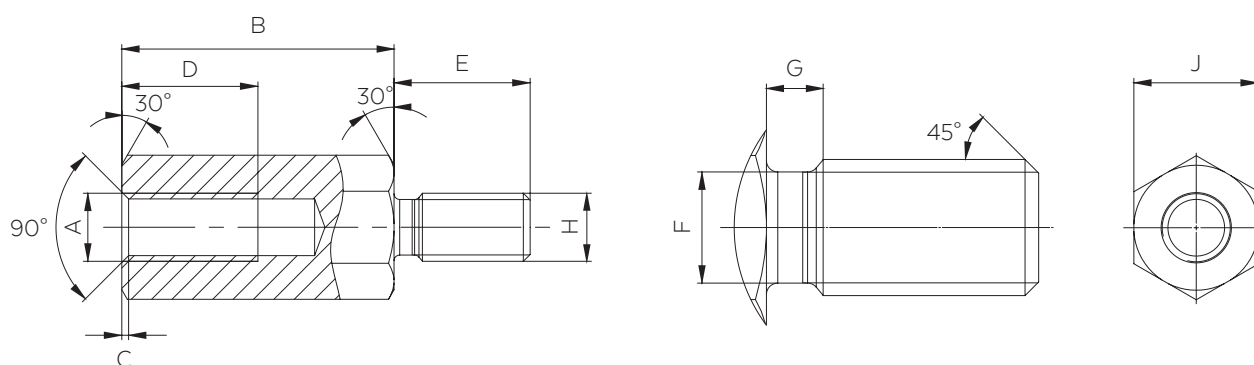


MATERIAL INFORMATION

| Material | Surface | Part number |
|------------------|---|-------------|
| Steel 11SMnPb30C | galvanized, yellow chromated (ISO 4042 A3G, Fe/Zn 8cC) | 06.2.400X |



SCALE DRAWINGS

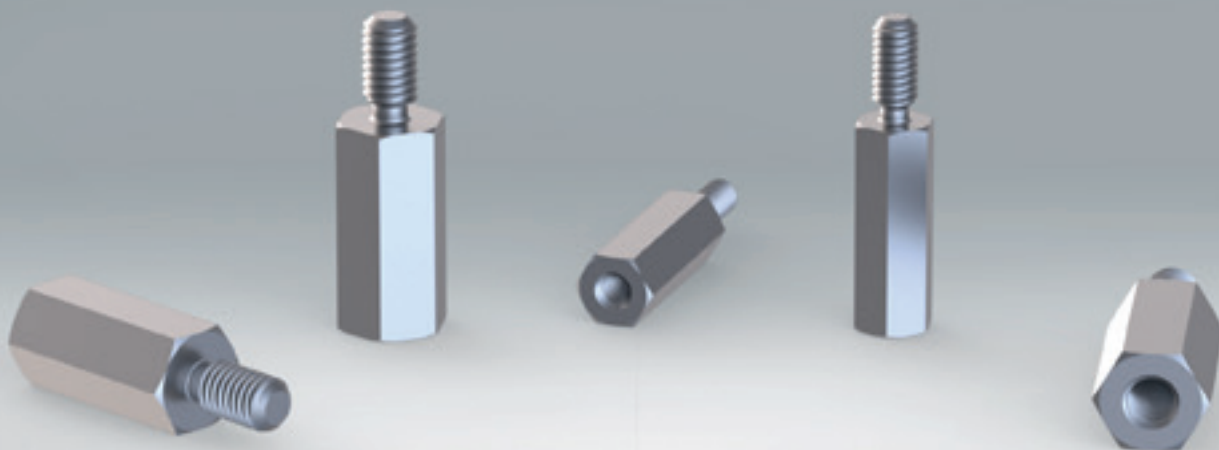


TECHNICAL DATA

| A | B | C | D | E | F | G | H | J | Part number |
|----|-----|-----|-----|---|--------|------|----|-------|------------------|
| M3 | 7 | 0.3 | 4.5 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.4001 |
| M3 | 7.5 | 0.3 | 4.5 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.4002 |
| M3 | 8 | 0.3 | 5 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.4003 |
| M3 | 9 | 0.3 | 6 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.4004 |
| M3 | 17 | 0.3 | 7 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.4005 |
| M3 | 23 | 0.3 | 7 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.4006 |
| M3 | 30 | 0.3 | 7 | 6 | Ø 2.45 | 1.25 | M3 | SW5.5 | 06.2.4007 |

Measurements B - G in mm

POWER SPACER INTERNAL-EXTERNAL, M4



PRODUCT SPECIFICATION

- ✎ Hexagonal spacer bolts with internal and external threads
- ✎ For exact distancing of different components
- ✎ Prevent mechanical contact between components
- ✎ For precise, durable and efficient circuit-board construction
- ✎ Easy to use and highly versatile
- ✎ RoHS compliant

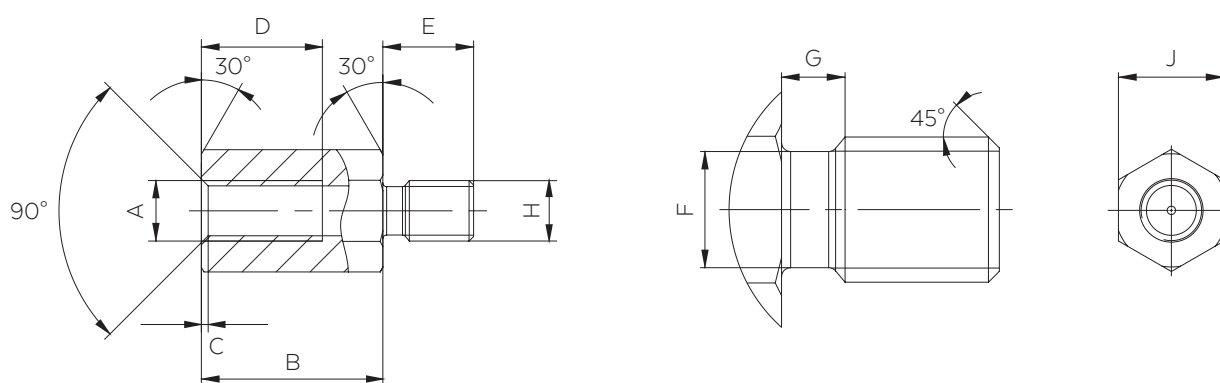


MATERIAL INFORMATION

| Material | Surface | Part number |
|-----------------|---------------------------------------|-------------|
| Brass CuZn39Pb3 | nickel-plated (DIN 267 E1E gal. Ni 3) | 06.2.05XX |



SCALE DRAWINGS



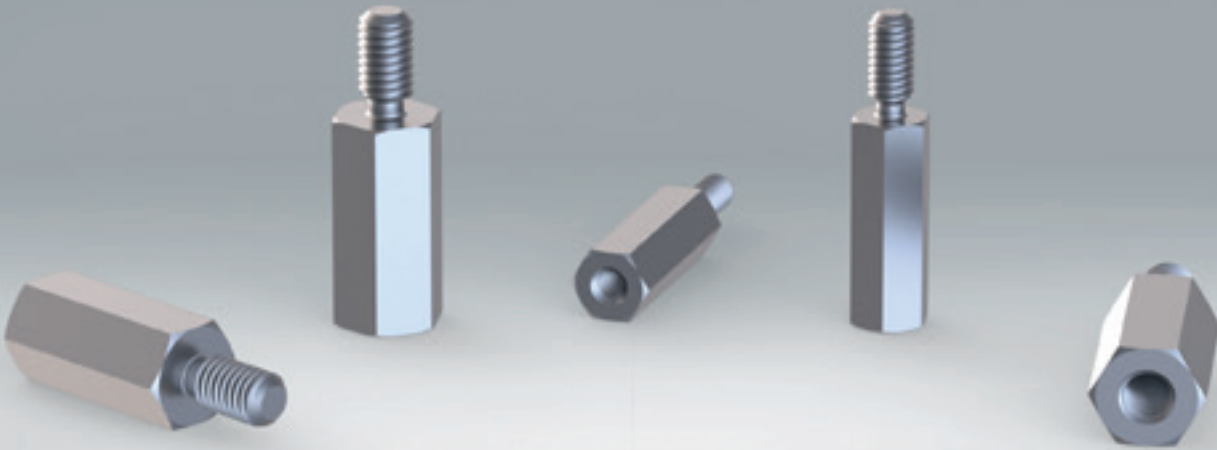
TECHNICAL DATA

| A | B | C | D | E | F | G | H | J | Part number |
|----|----|------|-----|----|-------|------|----|-----|------------------|
| M4 | 5 | 0.45 | 2.3 | 8 | Ø 3.2 | 1.75 | M4 | SW7 | 06.2.0501 |
| M4 | 6 | 0.45 | 4 | 5 | Ø 3.2 | 1.75 | M4 | SW7 | 06.2.0502 |
| M4 | 7 | 0.45 | 4.5 | 8 | Ø 3.2 | 1.75 | M4 | SW7 | 06.2.0503 |
| M4 | 8 | 0.45 | 4.5 | 8 | Ø 3.2 | 1.75 | M4 | SW7 | 06.2.0504 |
| M4 | 10 | 0.45 | 6 | 8 | Ø 3.2 | 1.75 | M4 | SW7 | 06.2.0505 |
| M4 | 12 | 0.45 | 9 | 8 | Ø 3.2 | 1.75 | M4 | SW7 | 06.2.0506 |
| M4 | 12 | 0.45 | 9 | 10 | Ø 3.2 | 1.75 | M4 | SW7 | 06.2.0507 |
| M4 | 14 | 0.45 | 9 | 8 | Ø 3.2 | 1.75 | M4 | SW7 | 06.2.0508 |
| M4 | 15 | 0.45 | 9 | 8 | Ø 3.2 | 1.75 | M4 | SW7 | 06.2.0509 |
| M4 | 17 | 0.45 | 9 | 8 | Ø 3.2 | 1.75 | M4 | SW7 | 06.2.0510 |

Measurements B - G in mm

CONTINUED ON NEXT PAGE →

POWER SPACER INTERNAL-EXTERNAL, M4



PRODUCT SPECIFICATION

- ✚ Hexagonal spacer bolts with internal and external threads
- ✚ For exact distancing of different components
- ✚ Prevent mechanical contact between components
- ✚ For precise, durable and efficient circuit-board construction
- ✚ Easy to use and highly versatile
- ✚ RoHS compliant

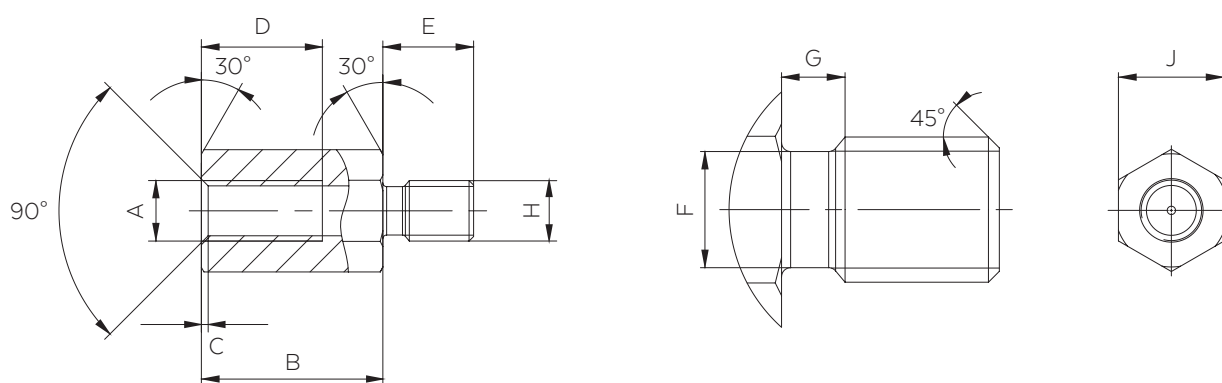


MATERIAL INFORMATION

| Material | Surface | Part number |
|-----------------|---------------------------------------|-------------|
| Brass CuZn39Pb3 | nickel-plated (DIN 267 E1E gal. Ni 3) | 06.2.05XX |



SCALE DRAWINGS

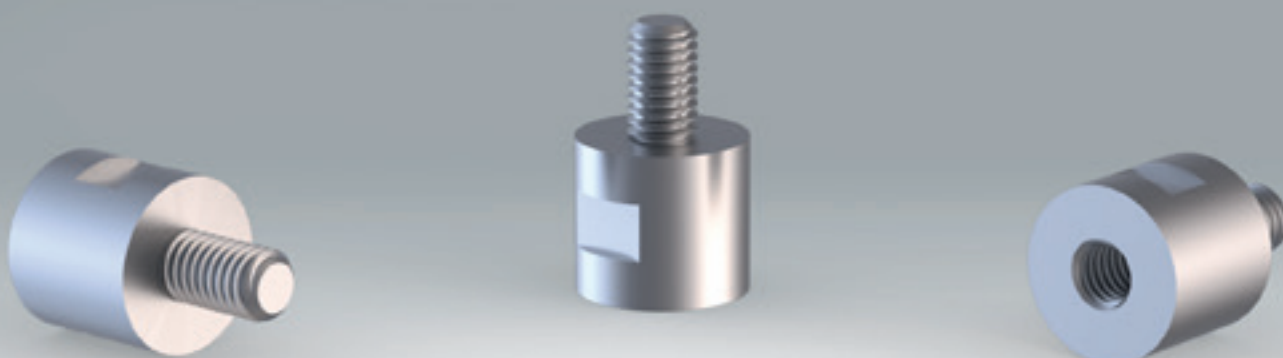


TECHNICAL DATA

| A | B | C | D | E | F | G | H | J | Part number |
|----|----|------|---|---|-------|------|----|-----|------------------|
| M4 | 18 | 0.45 | 9 | 8 | Ø 3.2 | 1.75 | M4 | SW7 | 06.2.0511 |
| M4 | 20 | 0.45 | 9 | 8 | Ø 3.2 | 1.75 | M4 | SW7 | 06.2.0512 |
| M4 | 25 | 0.45 | 9 | 8 | Ø 3.2 | 1.75 | M4 | SW7 | 06.2.0513 |
| M4 | 27 | 0.45 | 9 | 8 | Ø 3.2 | 1.75 | M4 | SW7 | 06.2.0514 |
| M4 | 30 | 0.45 | 9 | 8 | Ø 3.2 | 1.75 | M4 | SW7 | 06.2.0515 |
| M4 | 32 | 0.45 | 9 | 8 | Ø 3.2 | 1.75 | M4 | SW7 | 06.2.0516 |
| M4 | 35 | 0.45 | 9 | 8 | Ø 3.2 | 1.75 | M4 | SW7 | 06.2.0517 |
| M4 | 45 | 0.45 | 9 | 8 | Ø 3.2 | 1.75 | M4 | SW7 | 06.2.0518 |
| M4 | 55 | 0.45 | 9 | 8 | Ø 3.2 | 1.75 | M4 | SW7 | 06.2.0519 |

Measurements B - G in mm

POWER SPACER INTERNAL-EXTERNAL, M6



PRODUCT SPECIFICATION

- ↳ Round spacer bolts with internal and external threads
- ↳ For exact spacing between different components or to define a uniform gap
- ↳ For the optimal and precise solution of your construction task
- ↳ Easy to use and highly versatile
- ↳ RoHS compliant

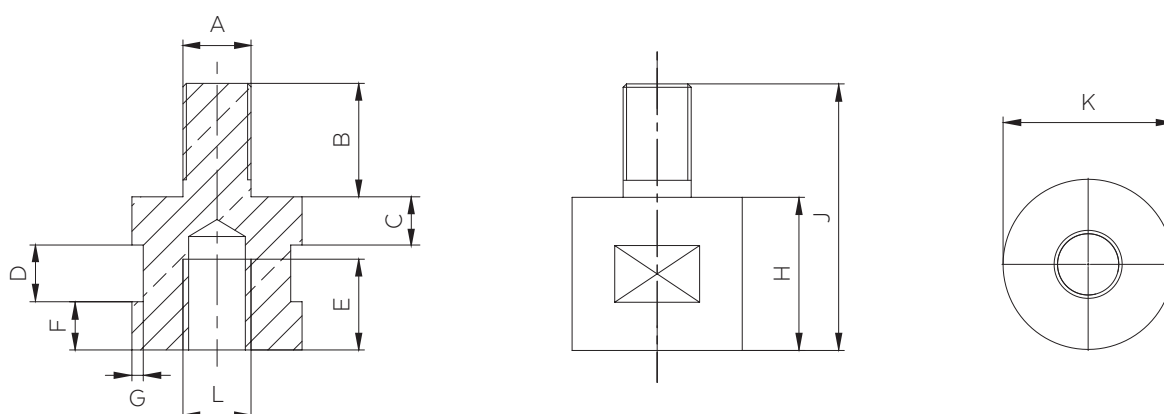


MATERIAL INFORMATION

| Material | Surface | Part number |
|-----------------|----------|-------------|
| Brass CuZn39Pb3 | verzinkt | 06.7.0001 |



SCALE DRAWINGS



TECHNICAL DATA

| A | B | C | D | E | F | G | H | J | K | L | Part number |
|----|----|------|---|---|------|---|------|------|------|----|-------------|
| M6 | 10 | 4.25 | 5 | 8 | 4.25 | 1 | 13.5 | 23.5 | Ø 15 | M6 | 06.7.0001 |

Measurements B - K in mm

POWER SPACER SPACER ROLLERS, WITHOUT THREAD



PRODUCT SPECIFICATION

- ✚ Spacer rollers/distance sleeves without thread
- ✚ For exact distancing of different components
- ✚ Prevent mechanical contact between components
- ✚ For an optimal and precise solution of your construction task
- ✚ Can be mounted with a screw exactly as required and can be used in a variety of ways
- ✚ RoHS compliant

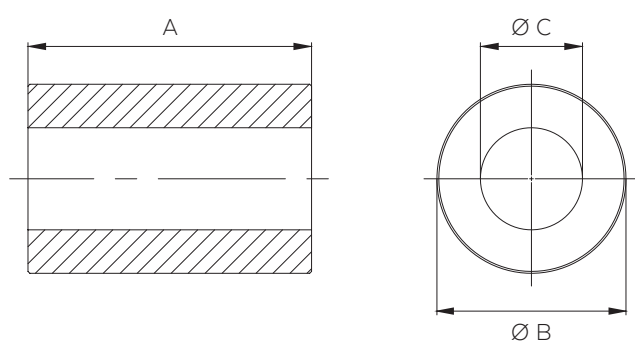


MATERIAL INFORMATION

| Material | Surface | Part number |
|--------------------|---------------------------------------|-------------|
| Brass CuZn39Pb3 | nickel-plated (DIN 267 E1E gal. Ni 3) | 06.4.000X |
| A2 stainless steel | rustproof | 06.4.0005 |



SCALE DRAWINGS



TECHNICAL DATA

| A | B | C | Part number |
|------|----|-----|-------------|
| 5 | 10 | 5.4 | 06.4.0001 |
| 10 | 10 | 5.4 | 06.4.0002 |
| 15 | 10 | 5.4 | 06.4.0003 |
| 20 | 10 | 5.4 | 06.4.0004 |
| 10.2 | 12 | 9 | 06.4.0005 |

Measurements A - C in mm

POWER SPACER

BOARD2BOARD, PINS ON BOTH SIDES, FULL SURFACE



PRODUCT SPECIFICATION

- ✚ Extremely robust high-performance connection between circuit-boards or between circuit-board and copper bar
- ✚ Perfectly suited for complex connections and confined spaces
- ✚ Busbar
- ✚ Extremely durable, robust, vibration-resistant
- ✚ Suitable for high currents
- ✚ High durability and reliability even in demanding mechanical and electrical scenarios
- ✚ Ultimate performance over full machine or system life-time
- ✚ Press-fit technology
- ✚ RoHS compliant, REACH compliant



MATERIAL INFORMATION

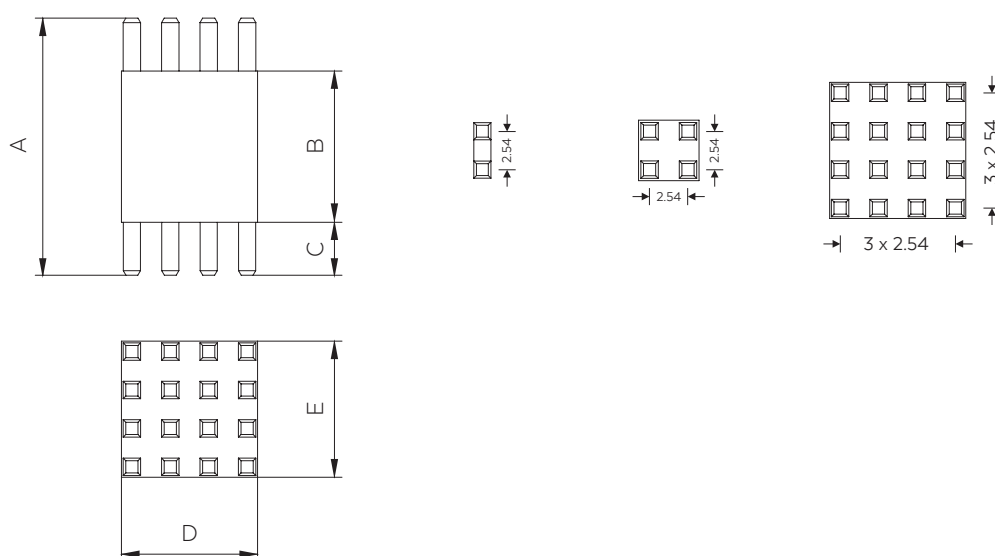
| Option | Part number |
|-----------|--------------|
| BlueBrass | 06.6.000X.BB |



Our product series 06.6.000X.BB meet all requirements of the which will come into force in the future REACH, RoHS and ELV regulations, just like the future tightened regulation the required lead-free.



SCALE DRAWINGS



TECHNICAL DATA

| A | B | C | D | E | No. of Pins | Current class | Part number |
|----|----|-----|-------|-------|-------------|---------------|-------------|
| 17 | 10 | 3.5 | 9 | 9 | 16 | 150 Ampere | 06.6.0001 |
| 10 | 3 | 3.5 | 4 | 4 | 4 | 50 Ampere | 06.6.0002 |
| 10 | 3 | 3.5 | 1.131 | 3.671 | 2 | 25 Ampere | 06.6.0003 |

Measurements A - E in mm

POWER SPACER FLEX POWER SOCKET, ROUND



PRODUCT SPECIFICATION

- ✚ Maximum flexibility and precision for your circuit-board connections
- ✚ Combine screwing, soldering, and press-fitting as required
- ✚ We supply a customized Power Spacer for your specific application
- ✚ Perfectly suited for complex connections and confined spaces
- ✚ Spacer bolt features a special grooved surface for press-fitting
- ✚ The other side of the bolt can come with an internal, an external thread or no thread at all
- ✚ Ensures durable precision spacing between different components
- ✚ Permanent prevention of unwanted mechanical contact between individual components
- ✚ Durable, robust, vibration-resistant
- ✚ Easy and high-precision handling
- ✚ RoHS compliant

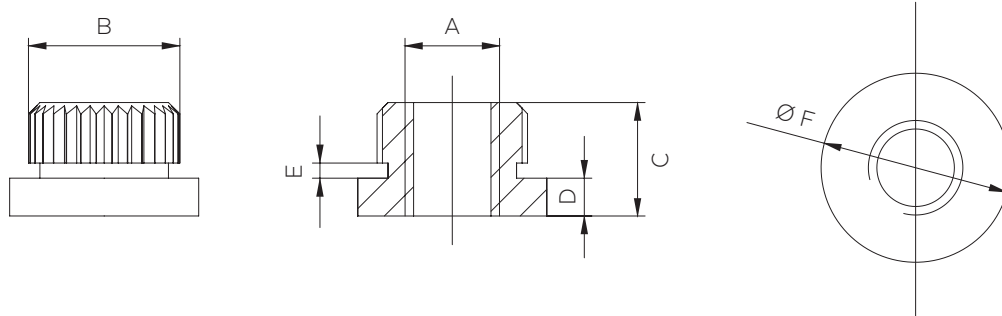


MATERIAL INFORMATION

| Material | Surface | Part number |
|-------------------|-----------|-------------|
| Steel X8CrNiS18-9 | rustproof | 06.5.0015 |



SCALE DRAWINGS








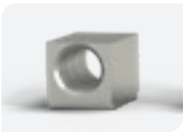

TECHNICAL DATA

| A | B | C | D | E | F | Execution | Part number |
|------|---|---|---|-----|---|--------------|-------------|
| M2.5 | 4 | 3 | 1 | 0.4 | 5 | Power Socket | 06.5.0015 |

Measurements B - F in mm

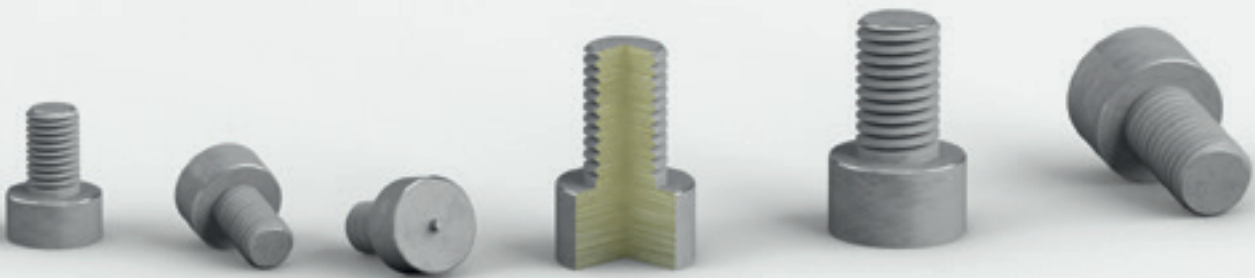
PRODUCT OVERVIEW

SMT SOLDERING

| | Diameter | 7 | 9 | 13 | 16 |
|---|--|---------------------------------|----------|---------------------|-----|
|  | POWER TOWER SMD | M3 | M4 M5 | M6 M8 | M10 |
|  | POWER TOWER SMD with spigot | M3 | M4 M5 | M6 M8 | M10 |
|  | POWER SOCKET SMD | M3 | M4 M5 | M6 M8 | M10 |
|  | POWER SOCKET SMD with spigot | M3 | M4 M5 | M6 M8 | M10 |
|  | POWER SMD with full-length thread | M3 | M4 M5 | M6 M8 | M10 |
|  | POWER EDGE SMD | M3: Full-length internal thread | | Ø 3.3: Through hole | |
|  | POWER EDGE SMD with spigot | M3: Full-length internal thread | | Ø 3.3: Through hole | |



POWER TOWER SMD EXTERNAL THREAD



PRODUCT SPECIFICATION

- ✚ SMT soldering
- ✚ Available with or without spigot
- ✚ Suitable for fully automatic assembly
- ✚ UNC thread or custom alterations on demand
- ✚ For attaching cable lugs to PCBs
- ✚ RoHS compliant, REACH compliant

MATERIAL INFORMATION

| Option | Part number |
|-----------|--------------|
| BlueBrass | 01.6.00XX.BB |



Our product series 01.6.00XX.BB meet all requirements of the which will come into force in the future REACH, RoHS and ELV regulations, just like the future tightened regulation the required lead-free.



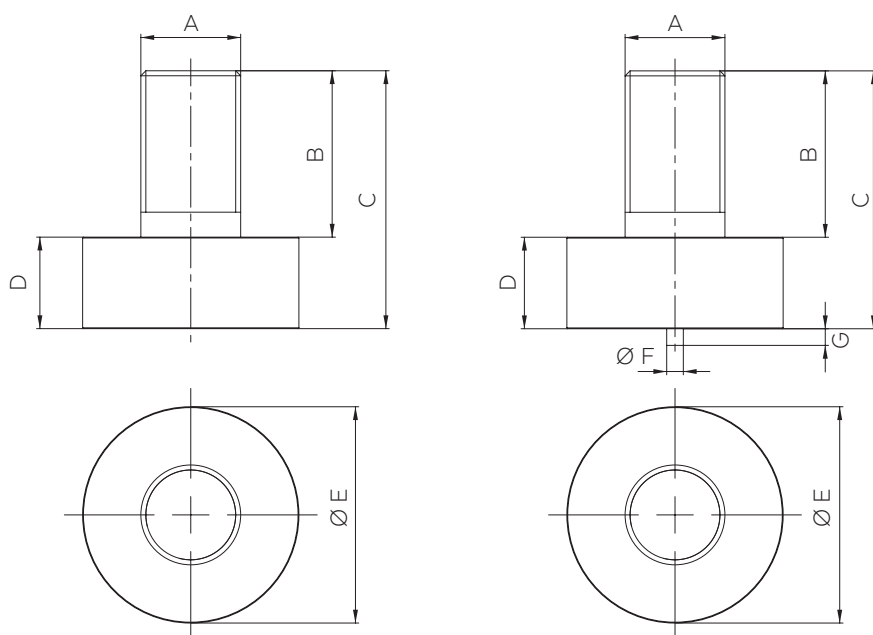
PACKAGING INFORMATION

| Option | Part number |
|-------------------|-----------------|
| Bulk | 01.6.00XX |
| Taped | 01.6.00XX.GU |
| Taped (BlueBrass) | 01.6.00XX.BBGU |
| Taped with Kapton | 01.6.00XX.GUDD* |

*DD = Diameter of Kapton pad



SCALE DRAWINGS



TECHNICAL DATA

| A | B | C | D | E | F | G | Spigot | Part number |
|-----|----|------|-----|----|---|---|--------|-------------|
| M3 | 5 | 8 | 3 | 7 | - | - | No | 01.6.0001 |
| M4 | 6 | 9.5 | 3.5 | 9 | - | - | No | 01.6.0002 |
| M5 | 8 | 12.5 | 4.5 | 9 | - | - | No | 01.6.0003 |
| M6 | 10 | 15.5 | 5.5 | 13 | - | - | No | 01.6.0004 |
| M8 | 13 | 20.5 | 7.5 | 13 | - | - | No | 01.6.0005 |
| M10 | 16 | 24 | 8 | 16 | - | - | No | 01.6.0006 |
| M3 | 5 | 8 | 3 | 7 | 1 | 1 | Yes | 01.6.0007 |
| M4 | 6 | 9.5 | 3.5 | 9 | 1 | 1 | Yes | 01.6.0008 |
| M5 | 8 | 12.5 | 4.5 | 9 | 1 | 1 | Yes | 01.6.0009 |
| M6 | 10 | 15.5 | 5.5 | 13 | 1 | 1 | Yes | 01.6.0010 |
| M8 | 13 | 20.5 | 7.5 | 13 | 1 | 1 | Yes | 01.6.0011 |
| M10 | 16 | 24 | 8 | 16 | 1 | 1 | Yes | 01.6.0012 |

Measurements B - G in mm

POWER SOCKET SMD INTERNAL THREAD



PRODUCT SPECIFICATION

- ✚ SMT soldering
- ✚ Available with or without spigot
- ✚ Suitable for fully automatic assembly
- ✚ UNC thread or custom alterations on demand
- ✚ For attaching cable lugs to PCBs
- ✚ RoHS compliant, REACH compliant

MATERIAL INFORMATION

| Option | Part number |
|-----------|--------------|
| BlueBrass | 02.6.00XX.BB |



Our product series 02.6.00XX.BB meet all requirements of the which will come into force in the future REACH, RoHS and ELV regulations, just like the future tightened regulation the required lead-free.



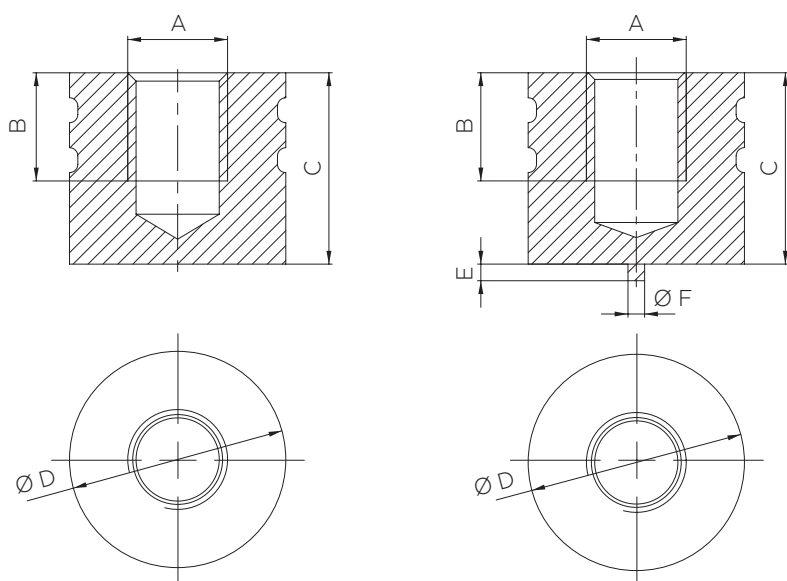
PACKAGING INFORMATION

| Option | Part number |
|-------------------|-----------------|
| Bulk | 02.6.00XX |
| Taped | 02.6.00XX.GU |
| Taped (BlueBrass) | 02.6.00XX.BBGU |
| Taped with Kapton | 02.6.00XX.GUDD* |

*DD = Diameter of Kapton pad



SCALE DRAWINGS



TECHNICAL DATA

| A | B | C | D | E | F | Spigot | Part number |
|-----|-----|------|----|---|---|--------|-------------|
| M3 | 3.5 | 6 | 7 | - | - | No | 02.6.0054 |
| M4 | 4 | 7 | 9 | - | - | No | 02.6.0055 |
| M5 | 4 | 7 | 9 | - | - | No | 02.6.0056 |
| M6 | 6.5 | 11.5 | 13 | - | - | No | 02.6.0057 |
| M8 | 8 | 13.5 | 13 | - | - | No | 02.6.0058 |
| M10 | 11 | 17.5 | 16 | - | - | No | 02.6.0059 |
| M3 | 3.5 | 6 | 7 | 1 | 1 | Yes | 02.6.0060 |
| M4 | 4 | 7 | 9 | 1 | 1 | Yes | 02.6.0061 |
| M5 | 4 | 7 | 9 | 1 | 1 | Yes | 02.6.0062 |
| M6 | 6.5 | 11.5 | 13 | 1 | 1 | Yes | 02.6.0063 |
| M8 | 8 | 13.5 | 13 | 1 | 1 | Yes | 02.6.0064 |
| M10 | 11 | 17.5 | 16 | 1 | 1 | Yes | 02.6.0065 |

Measurements B - F in mm

POWER SOCKET SMD

FULL-LENGTH INTERNAL THREAD



PRODUCT SPECIFICATION

- ✚ SMT soldering
- ✚ Suitable for fully automatic assembly
- ✚ UNC thread or custom alterations on demand
- ✚ For attaching cable lugs to PCBs
- ✚ RoHS compliant, REACH compliant

MATERIAL INFORMATION

| Option | Part number |
|-----------|--------------|
| BlueBrass | 02.6.00XX.BB |



Our product series 02.6.00XX.BB meet all requirements of the which will come into force in the future REACH, RoHS and ELV regulations, just like the future tightened regulation the required lead-free.



PACKAGING INFORMATION

| Option | Part number |
|-------------------|-----------------|
| Bulk | 02.6.00XX |
| Taped | 02.6.00XX.GU |
| Taped (BlueBrass) | 02.6.00XX.BBGU |
| Taped with Kapton | 02.6.00XX.GUDD* |

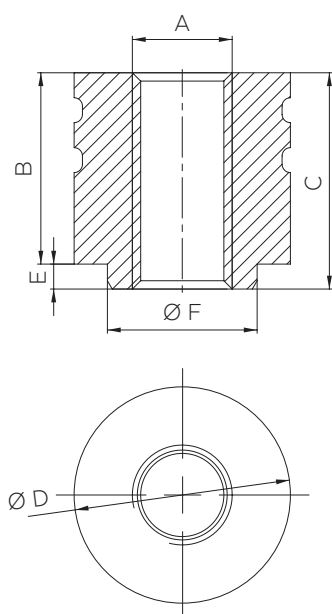
*DD = Diameter of Kapton pad

NOTE

Please note that the torque specifications from page 21 and page 154 for the Power Socket SMD internal threads are **max. 70%** throughout.



SCALE DRAWINGS



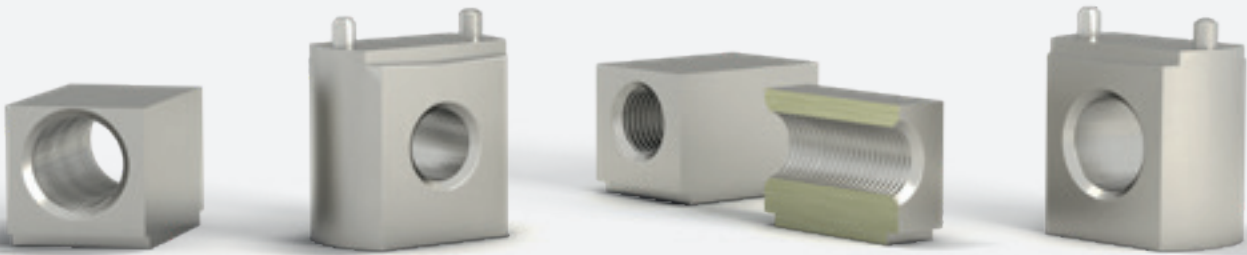
TECHNICAL DATA

| A | B | C | D | E | F | Part number |
|-----|------|-----|----|-----|------|-------------|
| M3 | 6 | 7.5 | 7 | 1.5 | 5.0 | 02.6.0066 |
| M4 | 7 | 8.5 | 9 | 1.5 | 6.0 | 02.6.0067 |
| M5 | 7 | 8.5 | 9 | 1.5 | 6.0 | 02.6.0068 |
| M6 | 11.5 | 13 | 13 | 1.5 | 9.0 | 02.6.0069 |
| M8 | 13.5 | 15 | 13 | 1.5 | 9.0 | 02.6.0070 |
| M10 | 17.5 | 19 | 16 | 1.5 | 12.0 | 02.6.0071 |

Measurements B - F in mm

POWER EDGE SMD

FULL-LENGTH INTERNAL THREAD



PRODUCT SPECIFICATION

- ✚ SMT soldering
- ✚ Suitable for fully automatic assembly
- ✚ UNC thread or custom alterations on demand
- ✚ For attaching components to PCBs
- ✚ RoHS compliant, REACH compliant



MATERIAL INFORMATION

| Option | Part number |
|-----------|--------------|
| BlueBrass | 03.6.000X.BB |



Our product series 03.6.000X.BB meet all requirements of the which will come into force in the future REACH, RoHS and ELV regulations, just like the future tightened regulation the required lead-free.

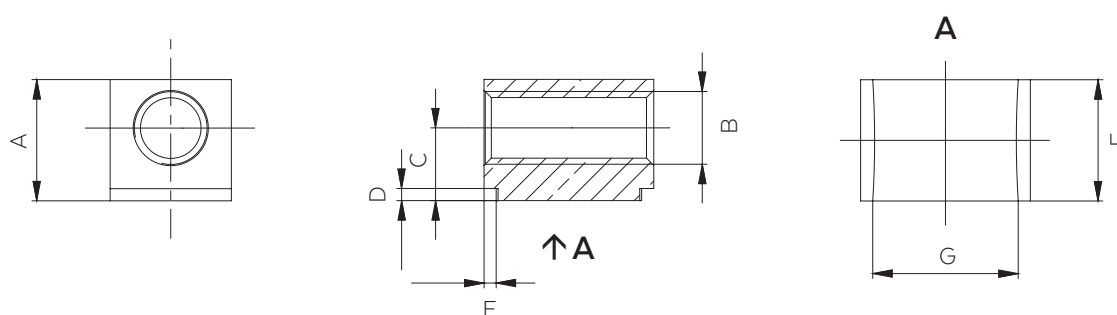
PACKAGING INFORMATION

| Option | Part number |
|-------------------|-----------------|
| Bulk | 03.6.000X |
| Taped | 03.6.000X.GU |
| Taped (BlueBrass) | 03.6.000X.BBGU |
| Taped with Kapton | 03.6.000X.GUDD* |

*DD = Diameter of Kapton pad



SCALE DRAWINGS

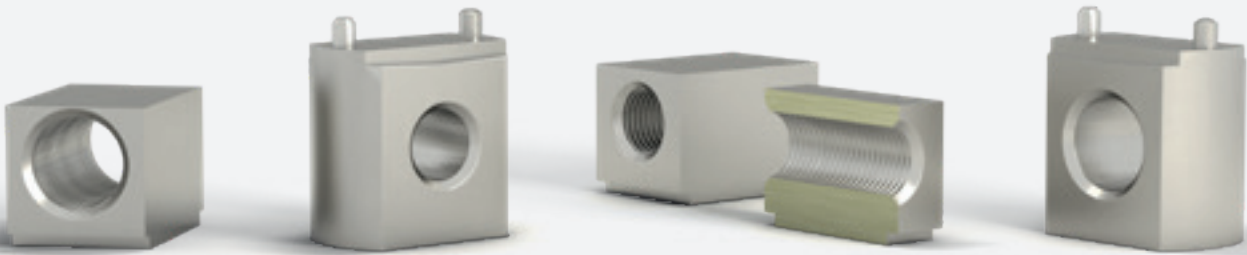


TECHNICAL DATA

| A | B | C | D | E | F | G | Spigot | Part number |
|---|-------|---|-----|-----|---|---|--------|-------------|
| 5 | M3 | 3 | 0.5 | 0.5 | 5 | 6 | No | 03.6.0001 |
| 5 | Ø 3.3 | 3 | 0.5 | 0.5 | 5 | 6 | No | 03.6.0002 |

Measurements A - G in mm

POWER EDGE SMD THROUGH HOLE



PRODUCT SPECIFICATION

- ✚ SMT soldering
- ✚ Suitable for fully automatic assembly
- ✚ UNC thread or custom alterations on demand
- ✚ For attaching components to PCBs
- ✚ RoHS compliant, REACH compliant

MATERIAL INFORMATION

| Option | Part number |
|-----------|--------------|
| BlueBrass | 03.6.000X.BB |



Our product series 03.6.000X.BB meet all requirements of the which will come into force in the future REACH, RoHS and ELV regulations, just like the future tightened regulation the required lead-free.



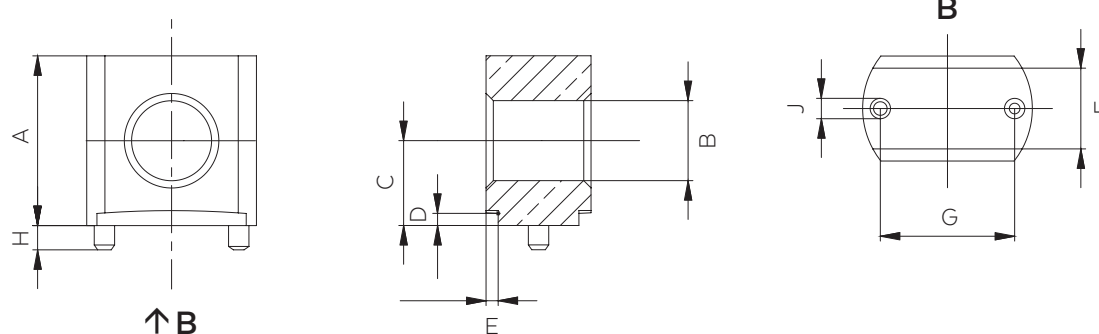
PACKAGING INFORMATION

| Option | Part number |
|-------------------|-----------------|
| Bulk | 03.6.000X |
| Taped | 03.6.000X.GU |
| Taped (BlueBrass) | 03.6.000X.BBGU |
| Taped with Kapton | 03.6.000X.GUDD* |

*DD = Diameter of Kapton pad



SCALE DRAWINGS




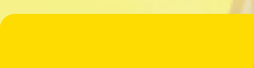
TECHNICAL DATA

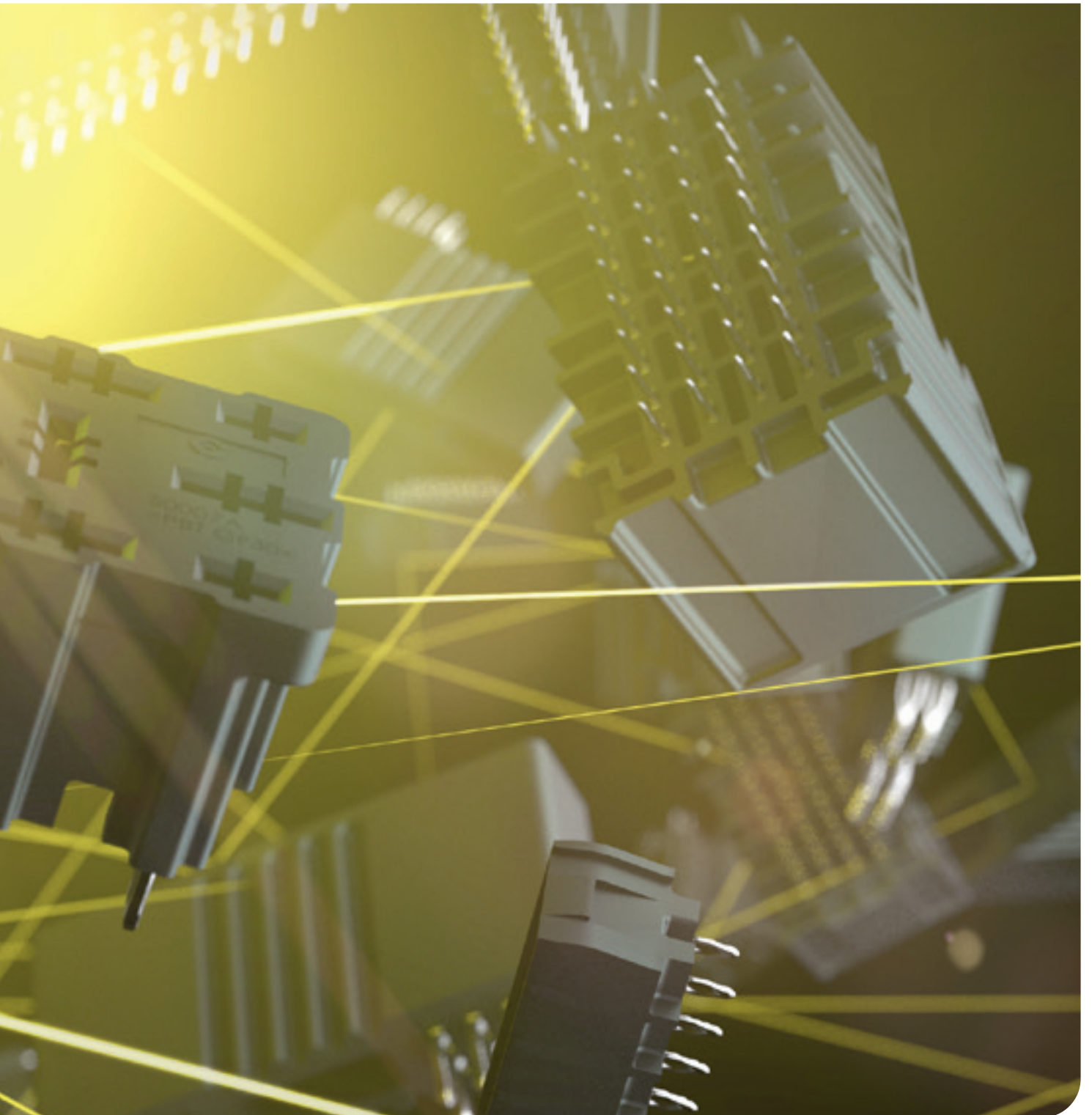
| A | B | C | D | E | F | G | H | J | Spigot | Part number |
|---|-------|-----|-----|-----|------|------|---|--------|--------|-------------|
| 7 | M3 | 3.5 | 0.5 | 0.5 | 3.33 | 5.54 | 1 | Ø 0.84 | Yes | 03.6.0003 |
| 7 | Ø 3.3 | 3.5 | 0.5 | 0.5 | 3.33 | 5.54 | 1 | Ø 0.84 | Yes | 03.6.0004 |

Measurements A - J in mm

CONNECTORS

YOU ARE ALWAYS PERFECTLY CONNECTED WITH US

FUSE HOLDERS 
RELAY SOCKETS 
PCB CONNECTORS 
CONTACT ELEMENTS 



PRODUCT OVERVIEW CONNECTORS



FUSE HOLDERS

Available in different versions.

- 2nd Gen from page 158
- 3rd Gen from 196



RELAY SOCKETS

Available in different versions.

- 2nd Gen from page 170
- 3rd Gen from page 214



PCB CONNECTORS

Available in different versions and colors.

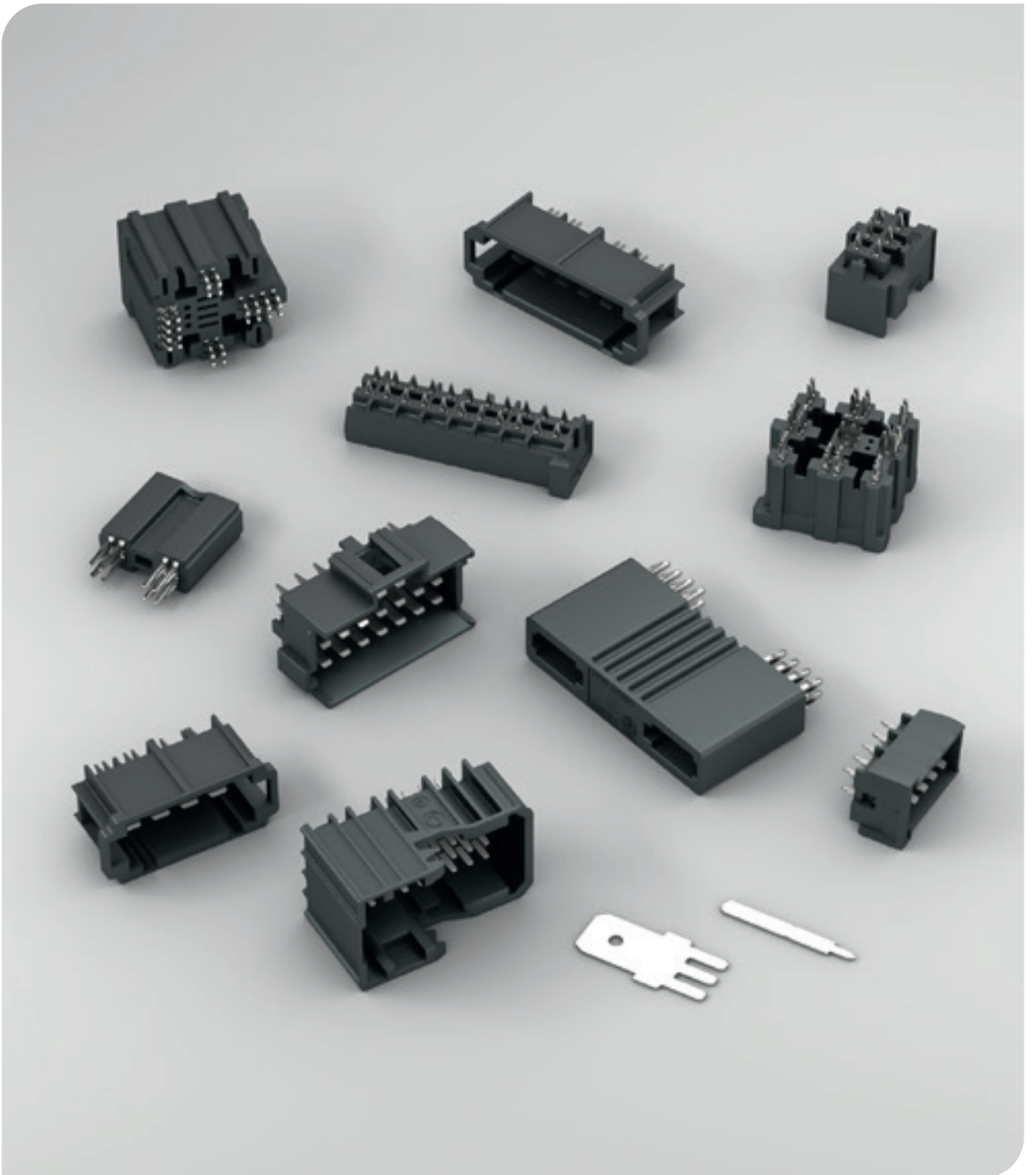
- 2nd Gen from page 180
- 3rd Gen from page 230



CONTACT ELEMENTS

Available in modern press-fit technology (massive, flexible) and in soldering technology (THT).

- 2nd Gen from page 194
- 3rd Gen from page 250



SELECTION CRITERIA

FUSE HOLDER AND RELAY SOCKET FAMILIES



VIBRATIONS AND SHOCK RESISTANCE

Determines a component's robustness, stability and durability in extreme conditions.



RETENTION FORCE

Defines a component's contact reliability and stability in the respective environmental conditions. Higher retention force means higher contact stability.



CURRENT CARRYING CAPACITY

Indicates the power current category, in which this component can be operated. High current carrying capacity prevents undue heating during continuous load.



POTTING ABILITY

Describes a component's resistance against capillary effects. Pottable components can be seamlessly integrated into electronic assemblies.



TEMPERATURE RESISTANCE

Indicates the maximum temperature (climate, external & operating temperatures) which a component can tolerate without losing its desired durability or functionality.



OPTIMIZED LAYOUT

Creates maximum integration flexibility of the component in limited space or when designing complex assemblies.



ADDED FUNCTIONS WITH ACCESSORIES

Our components feature even more flexibility with our high performance accessories, eg. [fuse mounts](#) and diode holders.



COST SAVINGS

The above criteria help you design the perfect component for your individual application. You only pay for the functions you really need!



SELECTION CRITERIA APPLICATION CATEGORIES

HIGH DENSITY (HD)

For extreme or high security applications.

Application examples:

Construction machines, airplanes, medical engineering



MEDIUM (M)

Suitable for medium to high loads.

Application examples:

Beet harvester, snowcat, truck



LIGHT (L)

Suitable for no or low shock, vibration or other external impacts on the product.

Application examples:

Caravan, crane, aircraft tractors



PLEASE NOTE

All above recommendations are based on long experience and expertise to best support your component selection. However, please always have your final assemblies containing selected components perform a qualification

test to confirm desired reliability and durability performance. Please also note that we do not assume any liability, as each assembly will be subject to different framework conditions .

HOLE SPECIFICATIONS

POWER ELEMENTS

SSP LOS ANGELES MASSIVE PRESS-FIT ZONE



Drilling diameter
1.600 ± 0.025 mm



Final diameter, tin
1.475 ± 0.05 mm



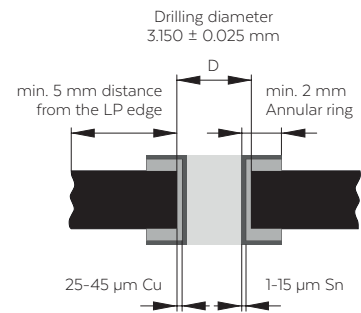
Final diameter, HAL surface

1.450 ± 0.05 mm

| | |
|---------------|--------------------------|
| Cu - in hole: | min. 25 µm max. 80 µm |
|---------------|--------------------------|

| | |
|---------------|-------------|
| Annular ring: | min. 125 µm |
|---------------|-------------|

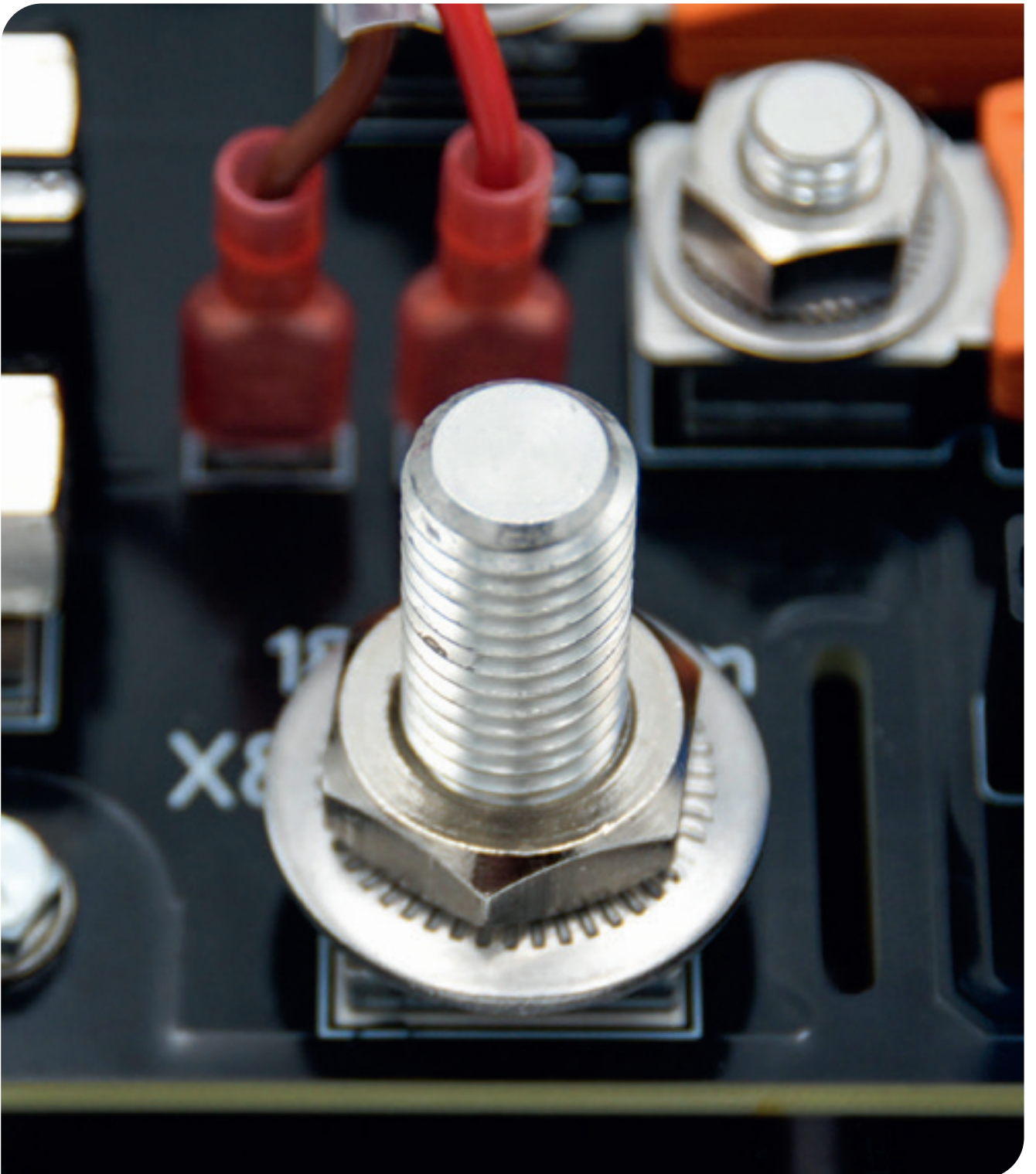
SSP ATLANTA SEMI MASSIVE PRESS-FIT ZONE BROX BREAK SERIES



NOTE

Drilling diameters and final diameters listed on these pages must be strictly observed in dependence on the PCB used, to ensure full press-fit functionality.

Final diameter, metal with min. Cu 25 µm (must not be smaller, even in parts). For HAL (covered edge) Ni/Au or tin; for circuit board thickness > 1.50 mm



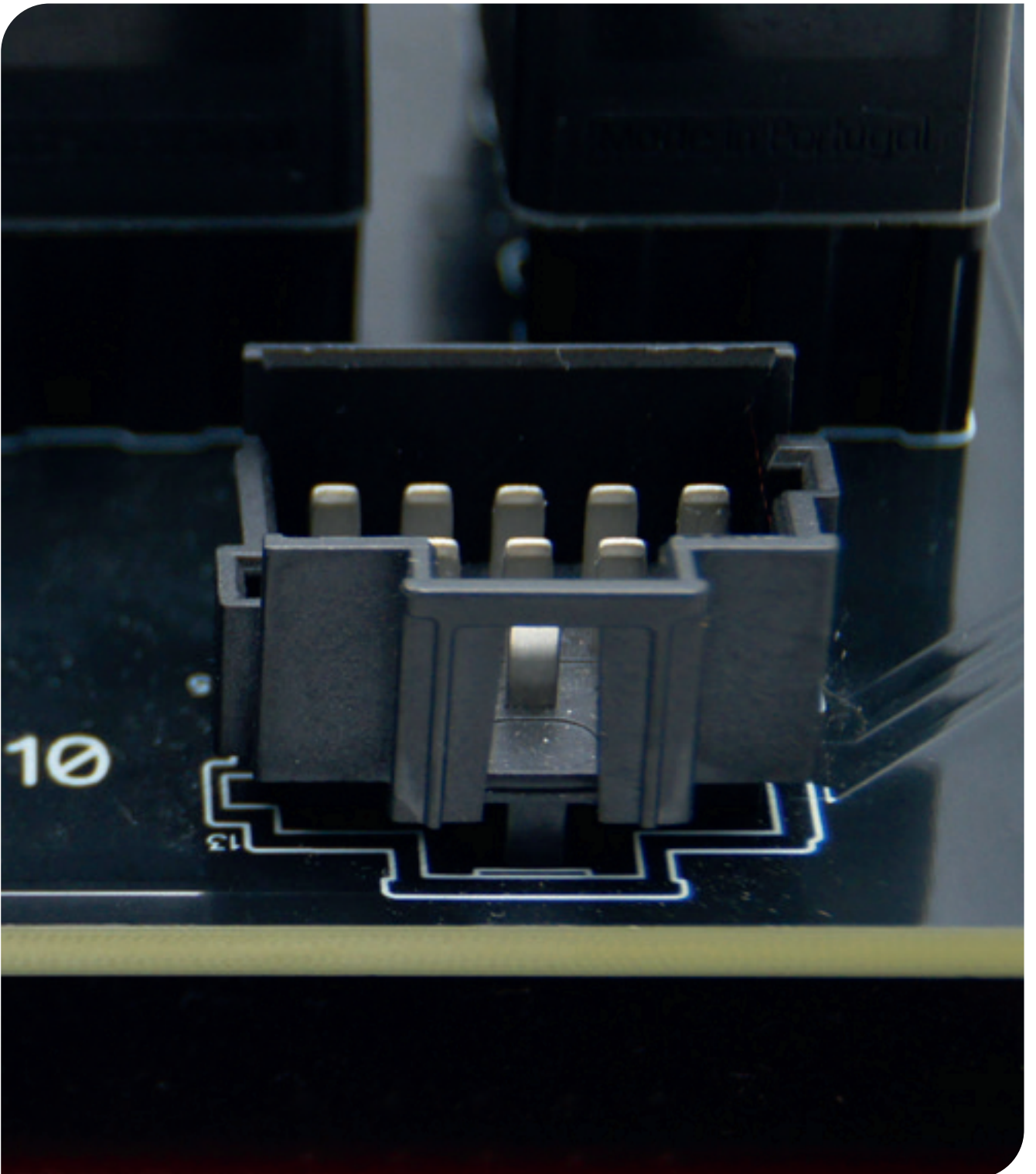
HOLE SPECIFICATIONS CONNECTORS

PCB CONNECTOR, RELAY SOCKET AND FUSE HOLDER INFORMATION

| | Drilling diameter | Final diameter depending on PCB surface | | | Note |
|--|-----------------------|---|----------------------|----------------------------|--------------------------------------|
| System parameters PCB-Pin (MTCON- component) [SPP] | - | X [Surface X] | Y [Surface Y] | Z [Surface Z] | - |
| Material PCB surface | - | Sn OSP Ni/Au | HAL HAL lead-free | all common PCB surfaces | - |
| Los Angeles class (press-fit) | Ø 1.600 ± 0.025 mm | Ø 1.475 ± 0.05 mm | Ø 1.450 ± 0.05 mm | - | Please refer to chart on page 154 |
| Denver class (press-fit) | Ø 1.200 ± 0.025 mm | Ø 1.100 ± 0.05 mm | Ø 1.080 ± 0.05 mm | - | - |
| Dallas class (THT) | - | - | - | Ø 1.450 ± 0.05 mm | - |
| Miami class (THT) | - | - | - | Ø 1.450 ± 0.05 mm | - |
| New York City class (press-fit) | - | - | - | Ø 1.450 ± 0.05 mm | - |
| Atlanta class (press-fit) | Ø 3,150 ± 0,025 mm | - | - | - | Please refer to chart on page 154 |

NOTE

In order to ensure the complete function of the press-fit technology, it is essential that the drilling and end diameter specifications given on this and the previous double page are adhered to by the PCB manufacturer.



FUSE AND DIODE HOLDERS ATO, PRESS-FIT



PRODUCT SPECIFICATION

- ✚ Fuse and diode holders for all commercial mini fuses
- ✚ For voltages of 12 V and 24 V
- ✚ Maximum switching current: approx. 30 A (depending on layout and circuit board version)
- ✚ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ✚ In proven flexible press-fit technology (pressure insertion tools available on demand)

RoHS
COMPLIANT

REACH
COMPLIANT

ELV
END-OF-LIFE-VEHICLES

COLOR VARIANTS

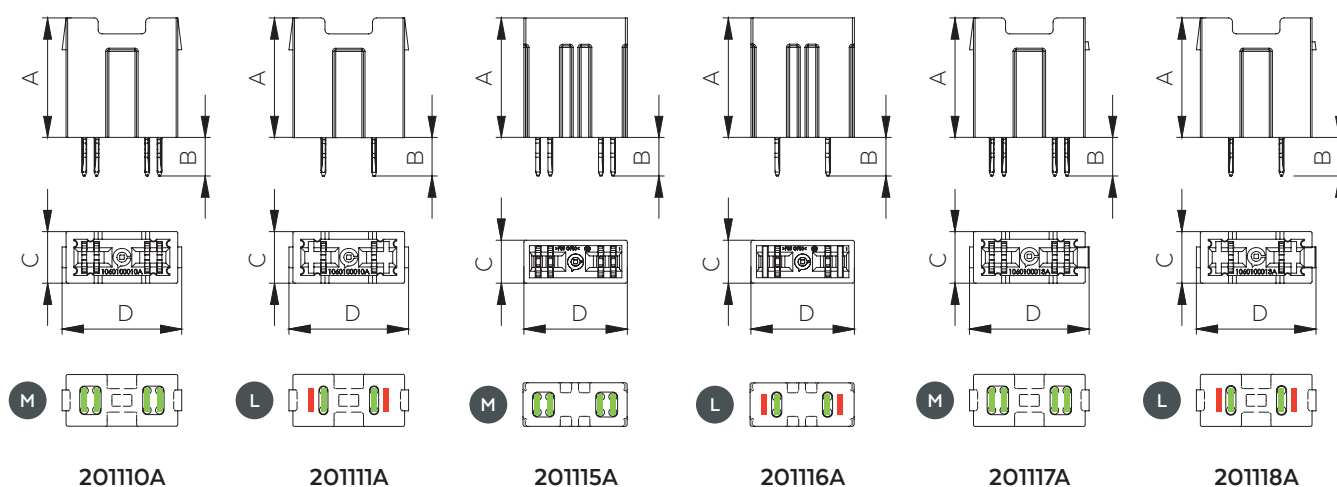
| Color | Part number |
|---------|-------------|
| ● Black | 20111XABK |

ASSEMBLY

| Mark | Meaning |
|--------------|-------------------|
| ● Anthracite | Application class |
| ● Green | Equipped |
| ● Red | Unequipped |



SCALE DRAWINGS



RATING

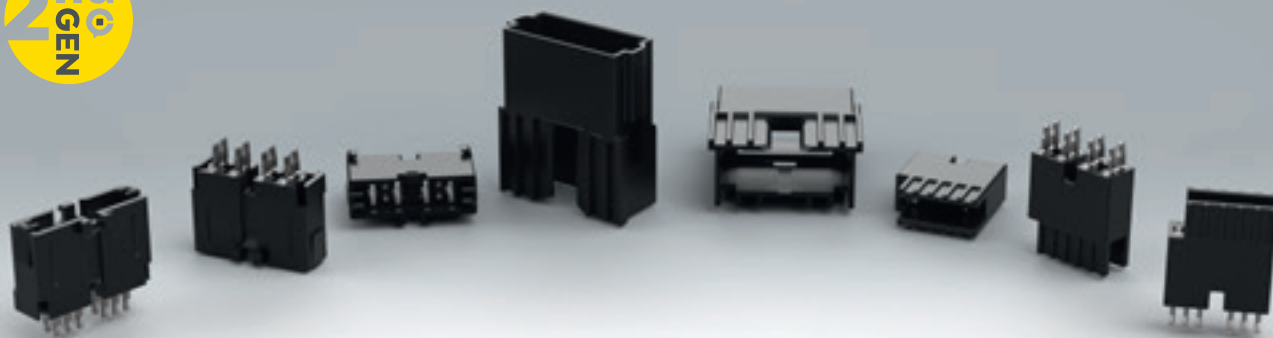
| | | | | | | | | Part number |
|-------|-------|-------|-------|-------|-------|-------|-------|-------------|
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 201110A |
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 201111A |
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 201115A |
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 201116A |
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 201117A |
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 201118A |

TECHNICAL DATA

| A | B | C | D | Dimensions | Assembly | Part number |
|----|------|-----|------|---------------------|------------|-------------|
| 15 | 4.85 | 6.7 | 15.1 | Mini | M (medium) | 201110A |
| 15 | 4.85 | 6.7 | 15.1 | Mini | L (light) | 201111A |
| 15 | 4.85 | 5.6 | 13.1 | Mini | M (medium) | 201115A |
| 15 | 4.85 | 5.6 | 13.1 | Mini | L (light) | 201116A |
| 15 | 4.85 | 6.7 | 15.1 | Mini (diode holder) | M (medium) | 201117A |
| 15 | 4.85 | 6.7 | 15.1 | Mini (diode holder) | L (light) | 201118A |

Measurements A - D in mm

FUSE AND DIODE HOLDERS ATO, PRESS-FIT



PRODUCT SPECIFICATION

- ↳ Fuse holders for all commercial ATO fuses
- ↳ For voltages of 12 V and 24 V
- ↳ Maximum switching current: approx. 40 A (depending on layout and circuit board version)
- ↳ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ↳ In proven flexible press-fit technology (pressure insertion tools available on demand)

RoHS
COMPLIANT

REACH
COMPLIANT

ELV
END-OF-LIFE-
VEHICLES

COLOR VARIANTS

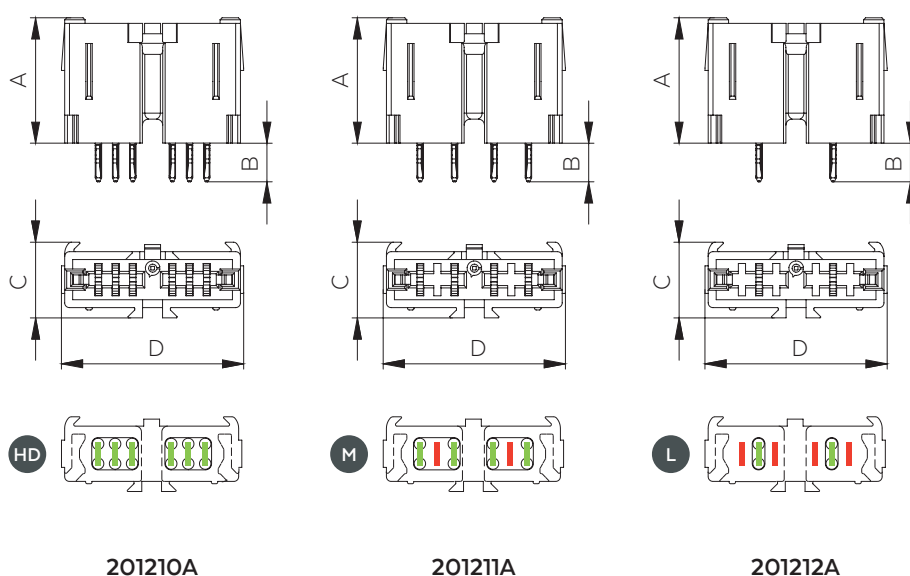
| Color | Part number |
|---------|-------------|
| ● Black | 20121XABK |

ASSEMBLY

| Mark | Meaning |
|--------------|-------------------|
| ● Anthracite | Application class |
| ● Green | Equipped |
| ● Red | Unequipped |



SCALE DRAWINGS



RATING

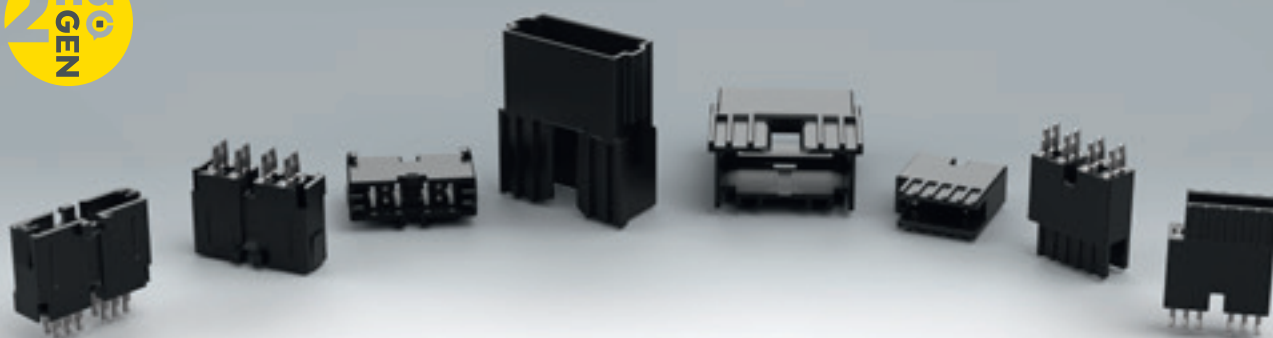
| | | | | | | | | Part number |
|-------|-------|-------|-------|-------|-------|-------|-------|-------------|
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 201210A |
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 201211A |
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 201212A |

TECHNICAL DATA

| A | B | C | D | Dimensions | Assembly | Part number |
|------|------|-----|------|------------|-------------------|-------------|
| 15.7 | 4.85 | 9.6 | 22.8 | ATO | HD (high density) | 201210A |
| 15.7 | 4.85 | 9.6 | 22.8 | ATO | M (medium) | 201211A |
| 15.7 | 4.85 | 9.6 | 22.8 | ATO | L (light) | 201212A |

Measurements A - D in mm

FUSE AND DIODE HOLDERS ATO, PRESS-FIT



PRODUCT SPECIFICATION

- ↳ Diode holders and attachments for all commercial ATO fuses
- ↳ For voltages of 12 V and 24 V
- ↳ Maximum switching current: approx. 40 A (depending on layout and circuit board version)
- ↳ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ↳ In proven flexible press-fit technology (pressure insertion tools available on demand)

RoHS
COMPLIANT

REACH
COMPLIANT

ELV
END-OF-LIFE-
VEHICLES

COLOR VARIANTS

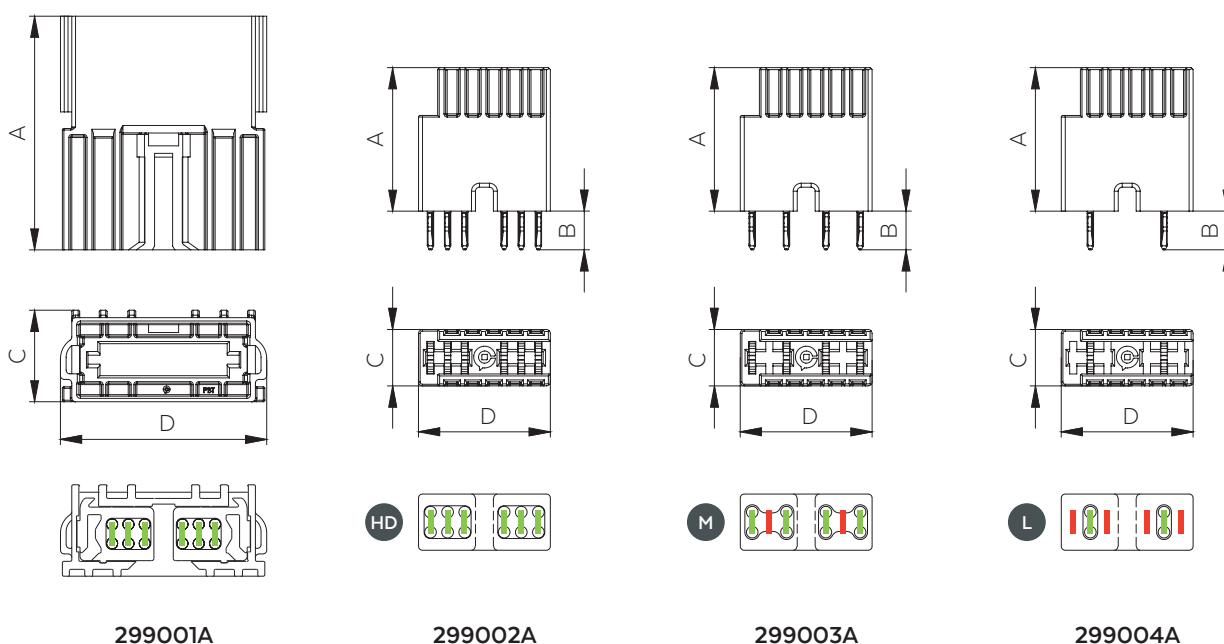
| Color | Part number |
|---------|-------------|
| ● Black | 29900XABK |

ASSEMBLY

| Mark | Meaning |
|--------------|-------------------|
| ● Anthracite | Application class |
| ● Green | Equipped |
| ● Red | Unequipped |



SCALE DRAWINGS



RATING

| | | | | | | | | Part number |
|-------|-------|-------|-------|-------|-------|-------|-------|-------------|
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 299002A |
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 299003A |
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 299004A |

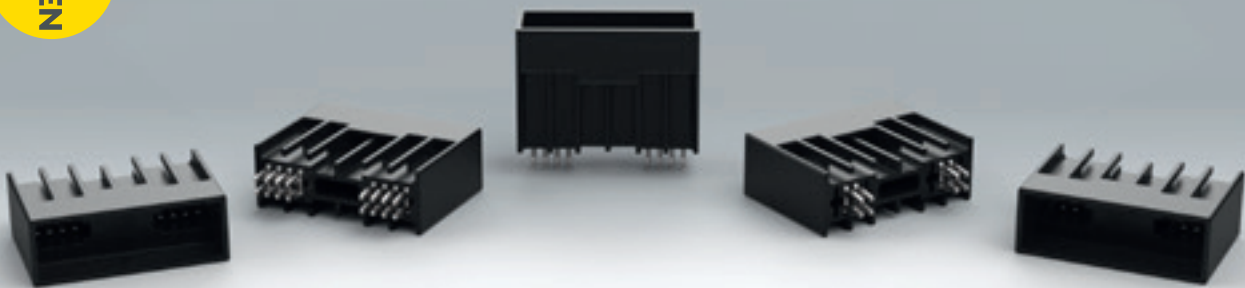
TECHNICAL DATA

| A | B | C | D | Dimensions | Assembly | Part number |
|------|------|------|-------|----------------------|-------------------|-------------|
| 31 | - | 12.3 | 27.4 | ATO (ETA attachment) | - | 299001A |
| 18 | 4.85 | 7.1 | 16.55 | ATO (diode holder) | HD (high density) | 299002A |
| 15.7 | 4.85 | 9.6 | 22.8 | ATO (diode holder) | M (medium) | 299003A |
| 15.7 | 4.85 | 9.6 | 22.8 | ATO (diode holder) | L (light) | 299004A |

Measurements A - D in mm

FUSE AND DIODE HOLDERS

MAXI, PRESS-FIT



PRODUCT SPECIFICATION

- ✚ Fuse holders for all commercial maxi fuses
- ✚ For voltages of 12 V and 24 V
- ✚ Maximum switching current: approx. 70 A (depending on layout and circuit board version)
- ✚ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ✚ In proven flexible press-fit technology (pressure insertion tools available on demand)



COLOR VARIANTS

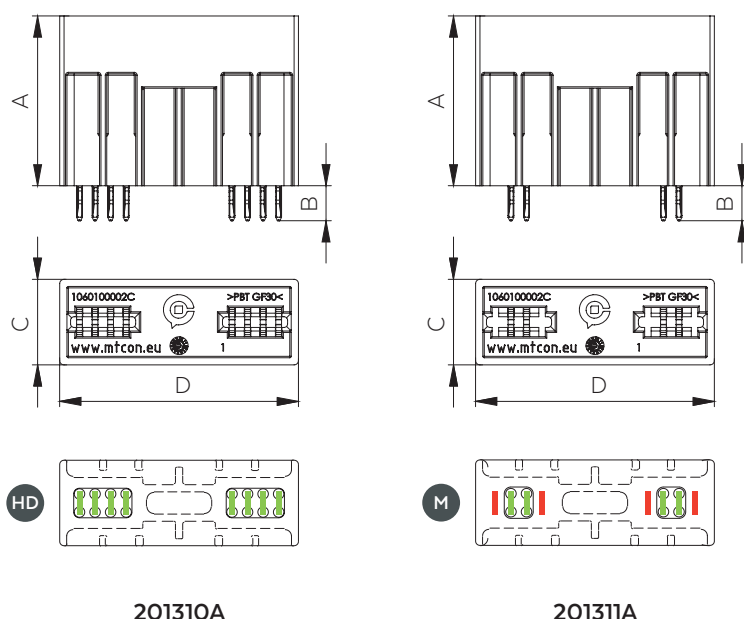
| Color | Part number |
|---------|-------------|
| ● Black | 20131XABK |

ASSEMBLY

| Mark | Meaning |
|--------------|-------------------|
| ● Anthracite | Application class |
| ● Green | Equipped |
| ● Red | Unequipped |



SCALE DRAWINGS



201310A

201311A

RATING

| | | | | | | | | Part number |
|-------|-------|-------|-------|-------|-------|-------|-------|-------------|
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 201310A |
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 201311A |

TECHNICAL DATA

| A | B | C | D | Dimensions | Assembly | Part number |
|------|------|----|----|------------|-------------------|-------------|
| 23.5 | 4.85 | 12 | 33 | Maxi | HD (high density) | 201310A |
| 23.5 | 4.85 | 12 | 33 | Maxi | M (medium) | 201311A |

Measurements A - D in mm

FUSE AND DIODE HOLDERS ATO, THT SOLDERING



PRODUCT SPECIFICATION

- ✚ Fuse holder for all commercial ATO fuses
- ✚ For voltages of 12 V and 24 V
- ✚ Maximum switching current: approx. 40 A (depending on layout and circuit board version)
- ✚ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ✚ For THT wave soldering

RoHS
COMPLIANT

REACH
COMPLIANT

ELV
END-OF-LIFE-VEHICLES

COLOR VARIANTS

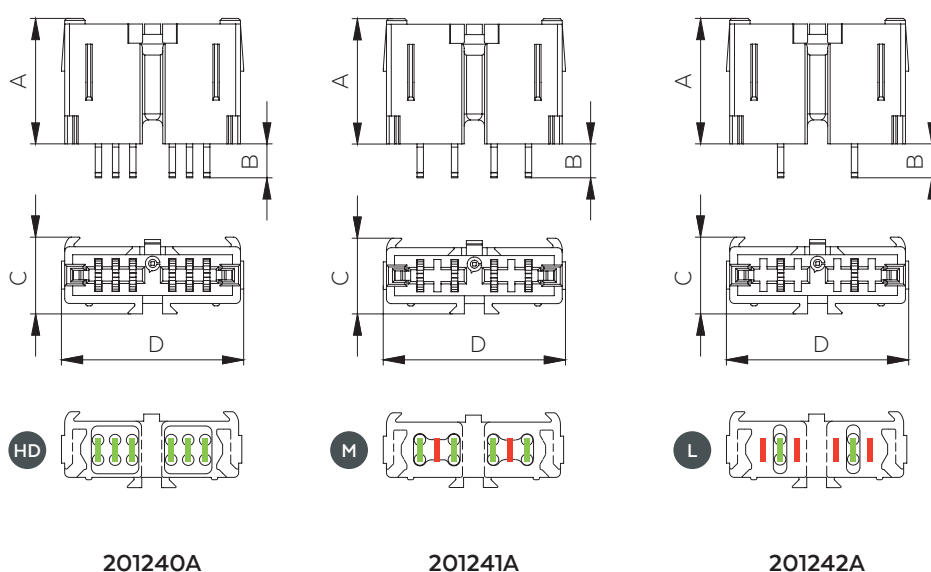
| Color | Part number |
|---------|-------------|
| ● Black | 201241ABK |

ASSEMBLY

| Mark | Meaning |
|--------------|-------------------|
| ● Anthracite | Application class |
| ● Green | Equipped |
| ● Red | Unequipped |



SCALE DRAWINGS



201240A

201241A

201242A

RATING

| | | | | | | | | Part number |
|-------|-------|-------|-------|-------|-------|-------|-------|-------------|
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 201240A |
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 201241A |
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 201242A |

TECHNISCHE DATEN

| A | B | C | D | Dimensions | Assembly | Part number |
|------|------|-----|------|------------|-------------------|-------------|
| 15.7 | 4.25 | 9.6 | 22.8 | ATO | HD (high density) | 201240A |
| 15.7 | 4.25 | 9.6 | 22.8 | ATO | M (medium) | 201241A |
| 15.7 | 4.25 | 9.6 | 22.8 | ATO | L (light) | 201242A |

Measurements A - D in mm

FUSE HOLDER ACCESSORIES FASTON, PRESS-FIT



PRODUCT SPECIFICATION

- ↘ Pin sockets for all commercial fuses or applications with matching latch plates or blade contacts
- ↘ For voltages of 12 V and 24 V
- ↘ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ↘ In proven flexible press-fit technology (pressure insertion tools available on demand)

RoHS
COMPLIANT

REACH
COMPLIANT

ELV
END-OF-LIFE-
VEHICLES

COLOR VARIANTS

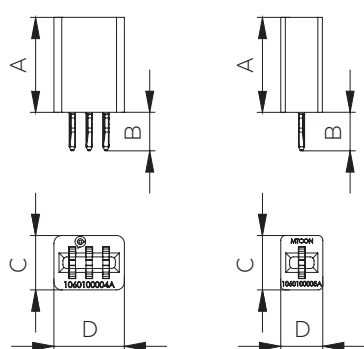
| Color | Part number |
|---------|-------------|
| ● Black | 29905XABK |

ASSEMBLY

| Mark | Meaning |
|--------------|-------------------|
| ● Anthracite | Application class |
| ● Green | Equipped |
| ● Red | Unequipped |



SCALE DRAWINGS



299050A



299051A

RATING

| | | | | | | | | Part number |
|-------|-------|-------|-------|-------|-------|-------|-------|-------------|
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 299050A |
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 299051A |

TECHNICAL DATA

| A | B | C | D | Dimensions | Assembly | Part number |
|----|------|---|-----|----------------|-------------------|-------------|
| 12 | 4.85 | 7 | 9 | 3-pin (female) | HD (high density) | 299050A |
| 12 | 4.85 | 7 | 5.5 | 1-pin (female) | L (light) | 299051A |

Measurements A - D in mm

RELAY SOCKETS MICRO, PRESS-FIT



PRODUCT SPECIFICATION

- ↳ Relay sockets for all commercial micro relays
- ↳ For voltages of 12 V and 24 V
- ↳ Maximum switching current: approx. 30 A (depending on layout and circuit board version)
- ↳ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ↳ In proven flexible press-fit technology (pressure insertion tools available on demand)



COLOR VARIANTS

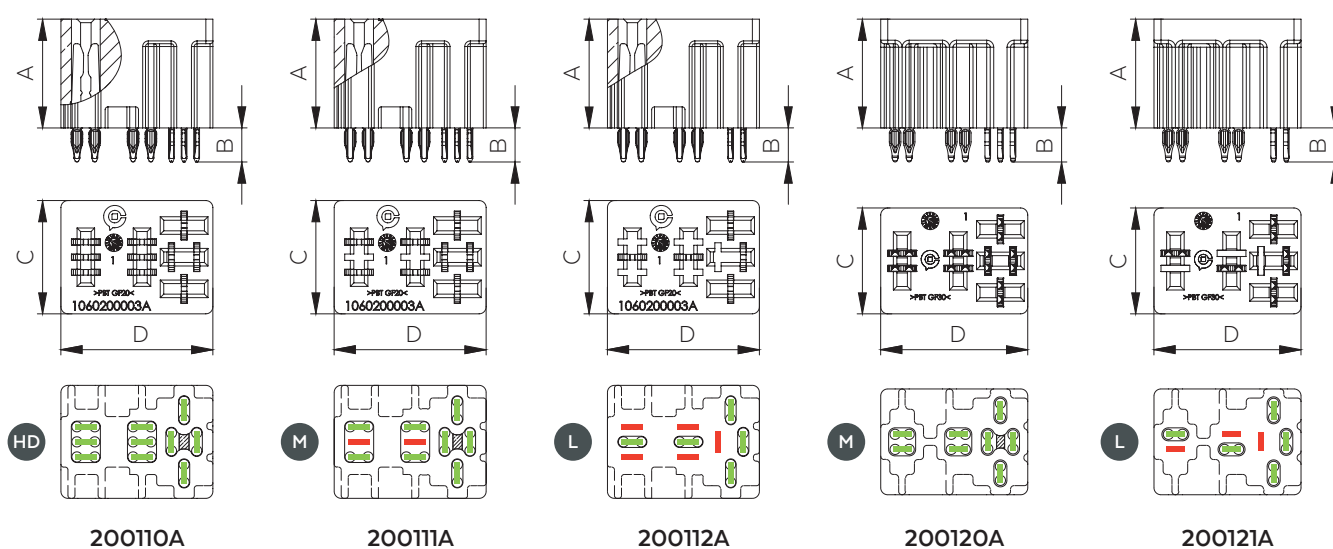
| Color | Part number |
|---------|-------------|
| ● Black | 2001XXABK |

ASSEMBLY

| Mark | Meaning |
|--------------|-------------------|
| ● Anthracite | Application class |
| ● Green | Equipped |
| ● Red | Unequipped |



SCALE DRAWINGS



RATING

| | | | | | | | | Part number |
|-------|-------|-------|-------|-------|-------|-------|-------|-------------|
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 200110A |
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 200111A |
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 200112A |
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 200120A |
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 200121A |

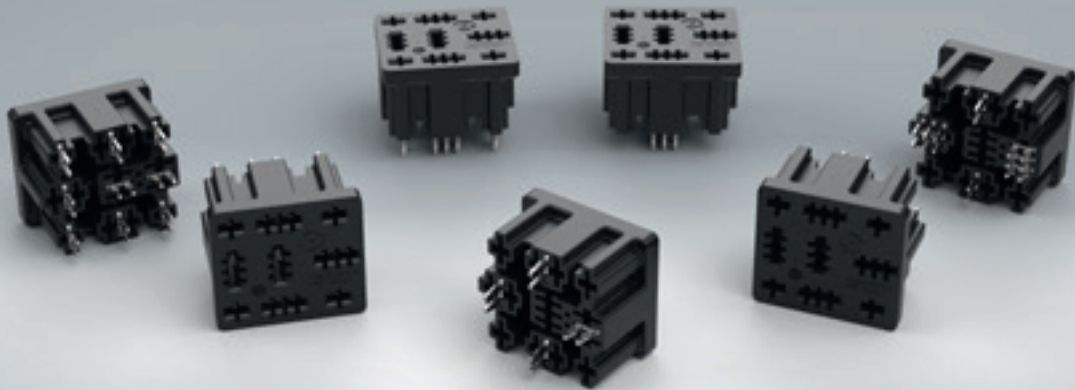
TECHNICAL DATA

| A | B | C | D | Dimensions | Assembly | Part number |
|------|------|------|-------|------------|-------------------|-------------|
| 15.5 | 4.85 | 16.1 | 21.65 | Micro | HD (high density) | 200110A |
| 15.5 | 4.85 | 16.1 | 21.65 | Micro | M (medium) | 200111A |
| 15.5 | 4.85 | 16.1 | 21.65 | Micro | L (light) | 200112A |
| 15.5 | 4.85 | 15.1 | 20.95 | Micro | M (medium) | 200120A |
| 15.5 | 4.85 | 15.1 | 20.95 | Micro | L (light) | 200121A |

Measurements A - D in mm

RELAY SOCKETS

MINI 9-PIN, PRESS-FIT



PRODUCT SPECIFICATION

- ↳ 9-pin relay sockets for all commercial mini relays
- ↳ For voltages of 12 V and 24 V
- ↳ Maximum switching current: approx. 40 A (depending on layout and circuit board version)
- ↳ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ↳ In proven flexible press-fit technology (pressure insertion tools available on demand)

RoHS
COMPLIANT

REACH
COMPLIANT

ELV
END-OF-LIFE-VEHICLES

COLOR VARIANTS

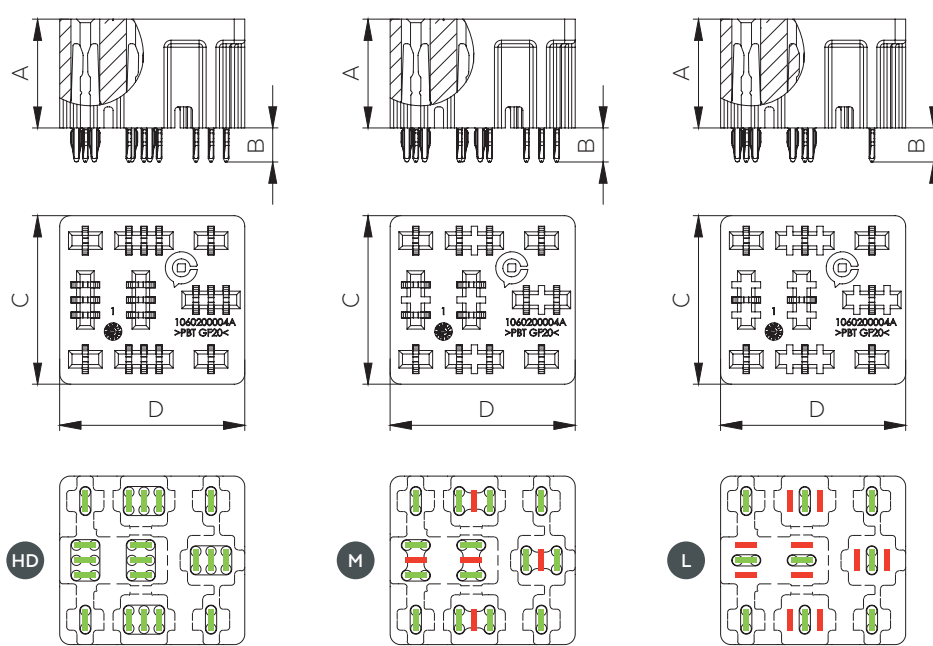
| Color | Part number |
|---------|-------------|
| ● Black | 20021XABK |

ASSEMBLY

| Mark | Meaning |
|--------------|-------------------|
| ● Anthracite | Application class |
| ● Green | Equipped |
| ● Red | Unequipped |



SCALE DRAWINGS



200210A

200211A

200212A

RATING

| | | | | | | | | Part number |
|-------|-------|-------|-------|-------|-------|-------|-------|-------------|
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 200210A |
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 200211A |
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 200212A |

TECHNICAL DATA

| A | B | C | D | Dimensions | Assembly | Part number |
|------|------|----|-------|--------------|-------------------|-------------|
| 15.5 | 4.85 | 24 | 26.35 | Mini (9-pin) | HD (high density) | 200210A |
| 15.5 | 4.85 | 24 | 26.35 | Mini (9-pin) | M (medium) | 200211A |
| 15.5 | 4.85 | 24 | 26.35 | Mini (9-pin) | L (light) | 200212A |

Measurements A-D in mm

RELAY SOCKETS

MINI 5-PIN, PRESS-FIT



PRODUCT SPECIFICATION

- ↳ 5-pin relay sockets for all commercial mini relays
- ↳ For voltages of 12 V and 24 V
- ↳ Maximum switching current: approx. 40 A (depending on layout and circuit board version)
- ↳ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ↳ In proven flexible press-fit technology (pressure insertion tools available on demand)



COLOR VARIANTS

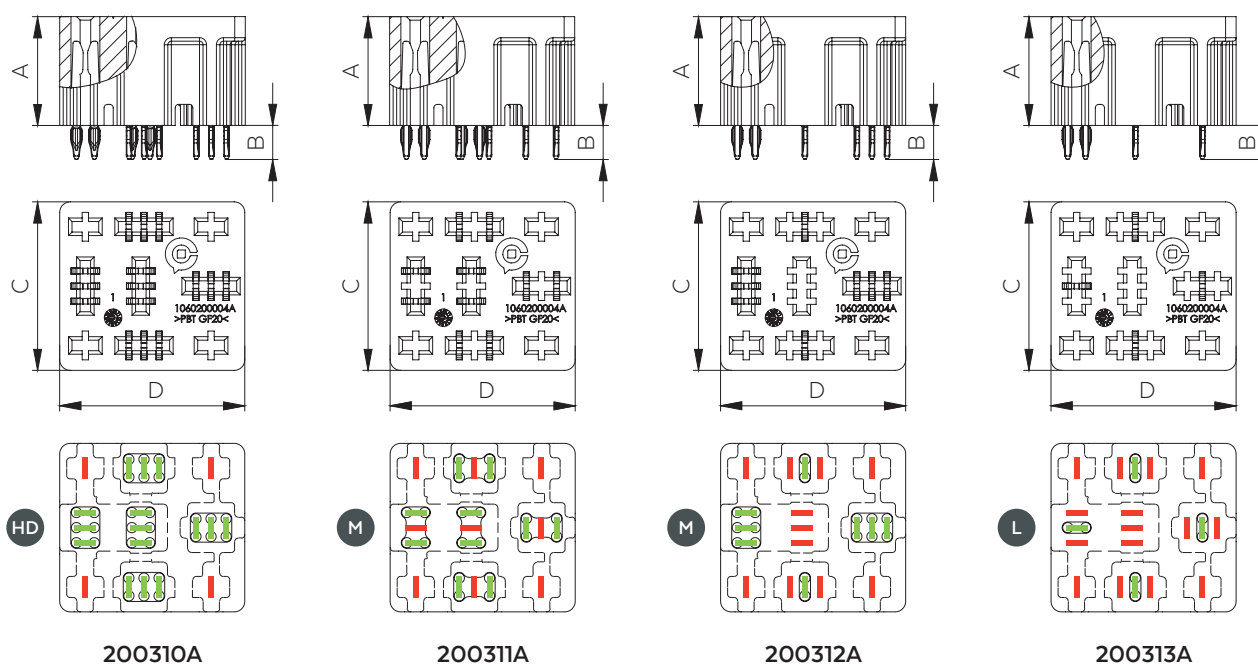
| Color | Part number |
|---------|-------------|
| ● Black | 20031XABK |

ASSEMBLY

| Mark | Meaning |
|--------------|-------------------|
| ● Anthracite | Application class |
| ● Green | Equipped |
| ● Red | Unequipped |



SCALE DRAWINGS



RATING

| | | | | | | | | Part number |
|-------|-------|-------|-------|-------|-------|-------|-------|-------------|
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 200310A |
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 200311A |
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 200312A |
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 200313A |

TECHNICAL DATA

| A | B | C | D | Dimensions | Assembly | Part number |
|------|------|----|-------|--------------|-------------------|-------------|
| 15.5 | 4.85 | 24 | 26.35 | Mini (5-pin) | HD (high density) | 200310A |
| 15.5 | 4.85 | 24 | 26.35 | Mini (5-pin) | M (medium) | 200311A |
| 15.5 | 4.85 | 24 | 26.35 | Mini (5-pin) | M (medium) | 200312A |
| 15.5 | 4.85 | 24 | 26.35 | Mini (5-pin) | L (light) | 200313A |

Measurements A - D in mm

RELAY SOCKETS MAXI, PRESS-FIT



PRODUCT SPECIFICATION

- ✚ Relay sockets for all commercial maxi relays
- ✚ For voltages of 12 V and 24 V
- ✚ Maximum switching current: approx. 70 A (depending on layout and circuit board version)
- ✚ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ✚ In proven flexible press-fit technology (pressure insertion tools available on demand)



COLOR VARIANTS

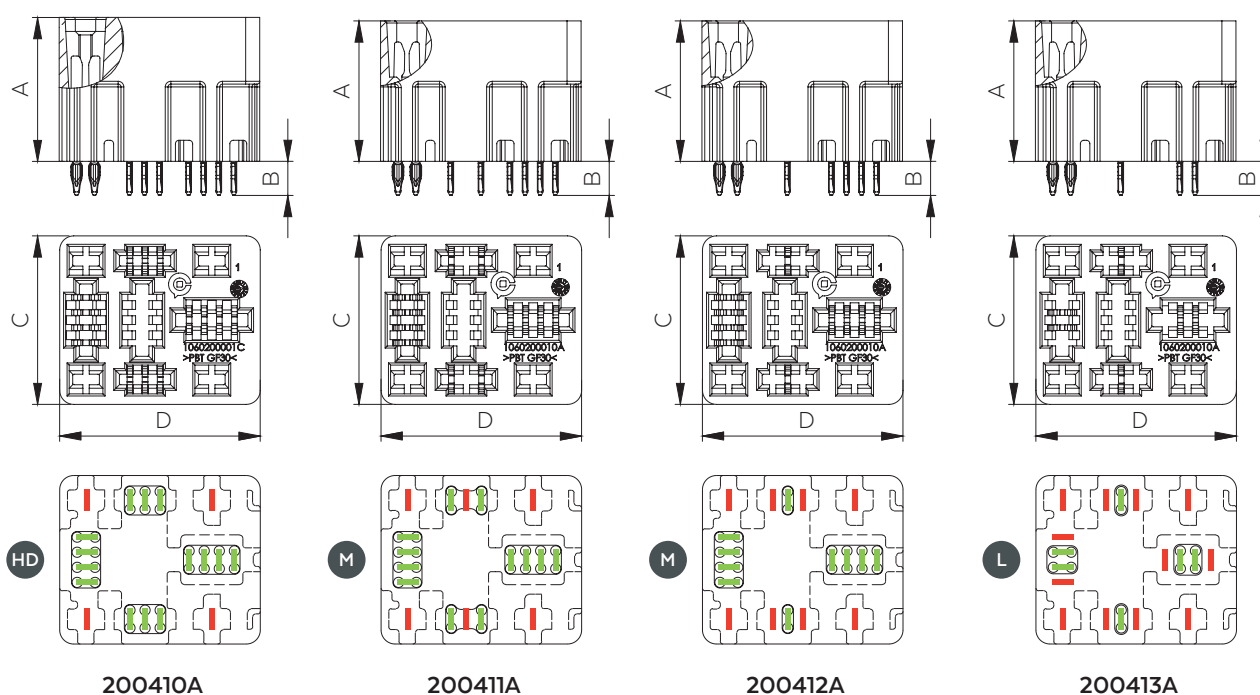
| Color | Part number |
|---------|-------------|
| ● Black | 20041XABK |

ASSEMBLY

| Mark | Meaning |
|--------------|-------------------|
| ● Anthracite | Application class |
| ● Green | Equipped |
| ● Red | Unequipped |



SCALE DRAWINGS



RATING

| | | | | | | | | Part number |
|-------|-------|-------|-------|-------|-------|-------|-------|-------------|
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 200410A |
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 200411A |
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 200412A |
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 200413A |

TECHNICAL DATA

| A | B | C | D | Dimensions | Assembly | Part number |
|------|------|----|-------|------------|-------------------|-------------|
| 20.5 | 4.85 | 24 | 28.55 | Maxi | HD (high density) | 200410A |
| 20 | 4.85 | 24 | 28.55 | Maxi | M (medium) | 200411A |
| 20 | 4.85 | 24 | 28.55 | Maxi | M (medium) | 200412A |
| 20 | 4.85 | 24 | 28.55 | Maxi | L (light) | 200413A |

Measurements A - D in mm

RELAY SOCKETS

XL, PRESS-FIT



PRODUCT SPECIFICATION

- ✚ XL relay socket for many commercial power relays
- ✚ For voltages of 12 V and 24 V
- ✚ Maximum switching current: approx. 30 A (depending on layout and circuit board version)
- ✚ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ✚ In proven flexible press-fit technology (pressure insertion tools available on demand)



COLOR VARIANTS

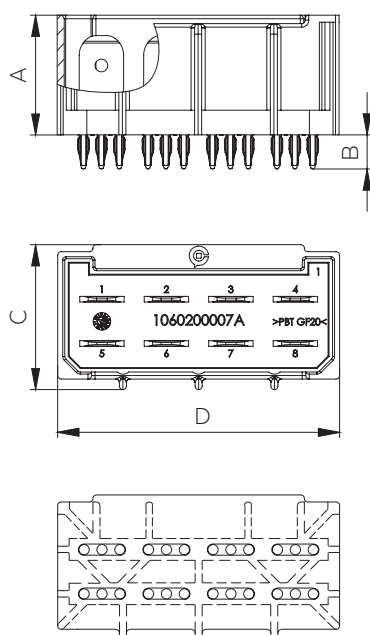
| Color | Part number |
|---------|-------------|
| ● Black | 200511ABK |

ASSEMBLY

| Mark | Meaning |
|--------------|-------------------|
| ● Anthracite | Application class |
| ● Green | Equipped |
| ● Red | Unequipped |



SCALE DRAWINGS



20051XA

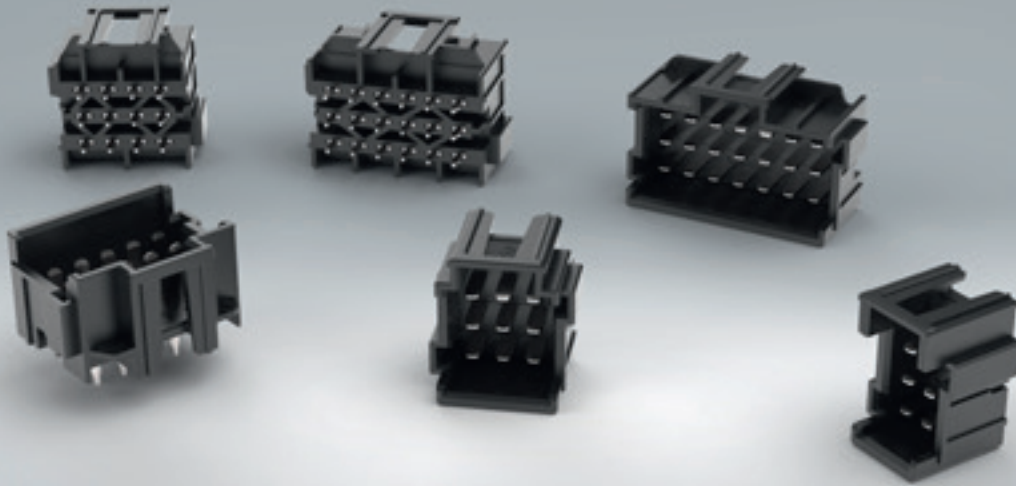
TECHNICAL DATA

| A | B | C | D | Dimensions | Coating | Part number |
|----|------|------|----|------------|---------|-------------|
| 17 | 4.85 | 20.6 | 40 | XL | Tin | 200511A |
| 17 | 4.85 | 20.6 | 40 | XL | Silver | 200512A |

Measurements A - D in mm

PCB CONNECTORS

JPT, 3-ROWED, PRESS-FIT



PRODUCT SPECIFICATION

- ✚ 3-rowed PCB connector series in the number of poles: 6 - 9 - 12 - 15 - 18 - 21
- ✚ For voltages of 12 V and 24 V
- ✚ Maximum switching current: approx. 15 A
(depending on number of poles, layout and circuit board version)
- ✚ 2.8 mm blade contacts
- ✚ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ✚ Compatible with commercial plug systems
- ✚ Additional codings and colors available on demand
- ✚ In proven flexible press-fit technology (pressure insertion tools available on demand)

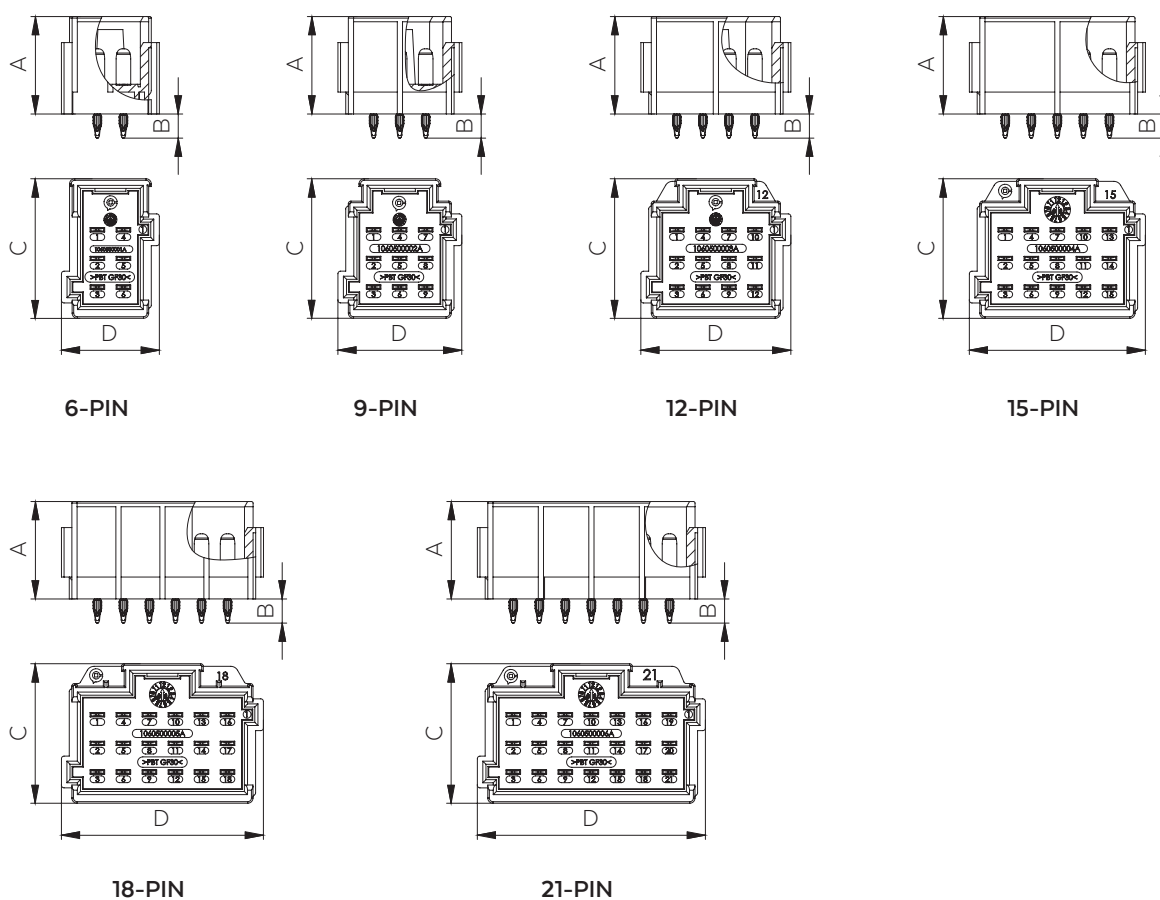


COLOR VARIANTS

| Color | Part number |
|----------|-------------|
| ● Black | 400X10ABK |
| ● Blue | 400X10ABU |
| ● Grey | 400X10AGY |
| ● Yellow | 400X10AYE |
| ● Green | 400X10AGN |
| ● Pink | 400X10APK |
| ● Brown | 400X10ABN |



SCALE DRAWINGS



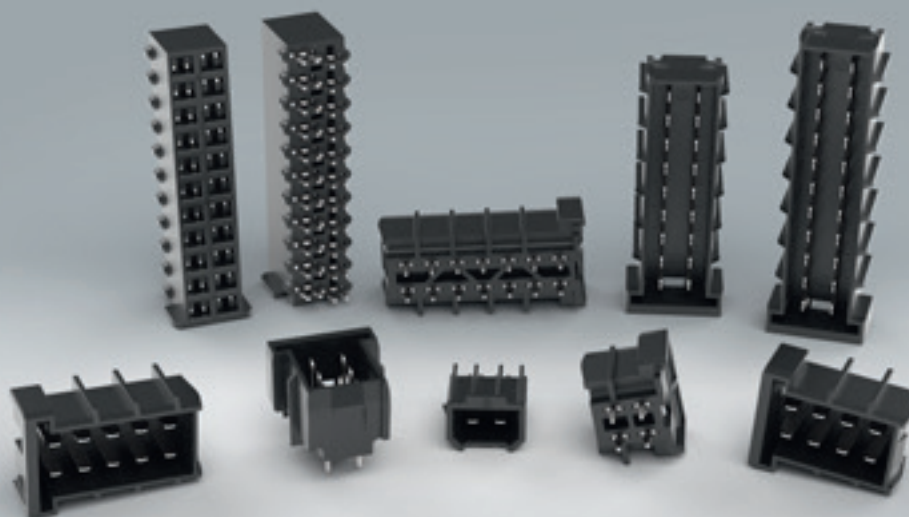
TECHNICAL DATA

| A | B | C | D | Dimensions | Part number |
|------|------|------|------|------------|-------------|
| 18.7 | 4.65 | 26.8 | 18.8 | 6-pin | 400110A |
| 18.7 | 4.65 | 26.8 | 23.8 | 9-pin | 400210A |
| 18.7 | 4.65 | 26.8 | 28.8 | 12-pin | 400310A |
| 18.7 | 4.65 | 26.8 | 33.8 | 15-pin | 400410A |
| 18.7 | 4.65 | 26.8 | 38.8 | 18-pin | 400510A |
| 18.7 | 4.65 | 26.8 | 43.8 | 21-pin | 400610A |

Measurements A-D in mm

PCB CONNECTORS

JPT, 2-ROWED, PRESS-FIT



PRODUCT SPECIFICATION

- ✎ 2-rowed PCB connector series in the number of poles: 2 - 4 - 6 - 8 - 10 - 14 - 18 - 22
- ✎ For voltages of 12 V and 24 V
- ✎ Maximum switching current: approx. 15 A
(depending on number of poles, layout and circuit board version)
- ✎ 2.8 mm blade contacts
- ✎ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ✎ Compatible with commercial plug systems
- ✎ Additional codings and colors available on demand
- ✎ In proven flexible press-fit technology (pressure insertion tools available on demand)

RoHS
COMPLIANT

REACH
COMPLIANT

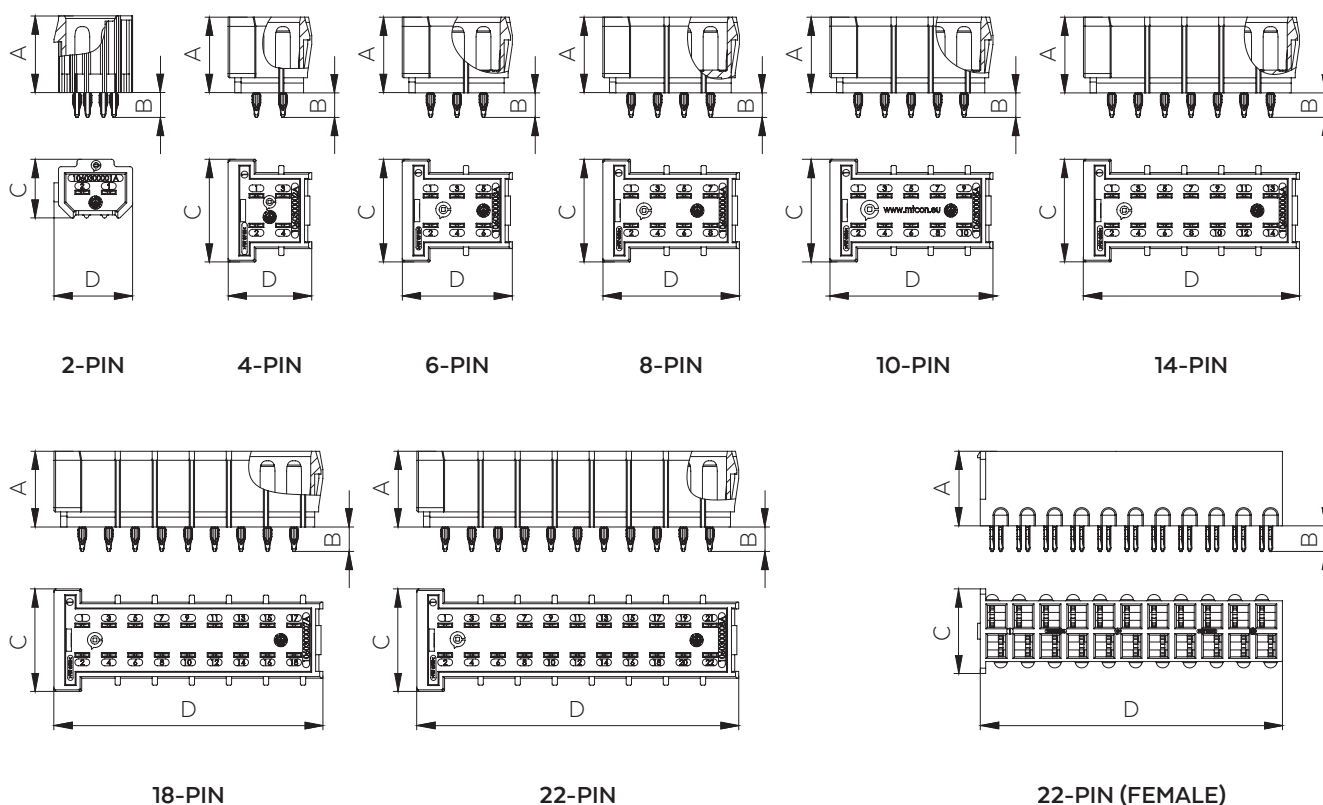
ELV
END-OF-LIFE-
VEHICLES

COLOR VARIANTS

| Color | Part number |
|---------|-------------|
| ● Black | 40XX10ABK |
| ● Green | 405110AGN |
| ● White | 405110AWH |



SCALE DRAWINGS

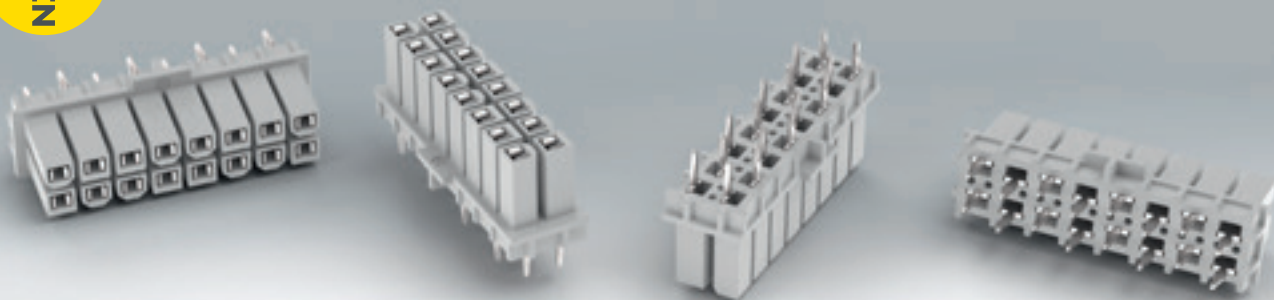


TECHNICAL DATA

| A | B | C | D | Dimensions | Part number |
|------|------|-------|-------|-----------------|-------------|
| 14.5 | 4.7 | 11.1 | 14.85 | 2-pin | 405010A |
| 14.3 | 4.65 | 19.38 | 15.8 | 4-pin | 405110A |
| 14.3 | 4.65 | 19.38 | 20.8 | 6-pin | 405210A |
| 14.3 | 4.65 | 19.38 | 25.8 | 8-pin | 405310A |
| 14.3 | 4.65 | 19.37 | 30.8 | 10-pin | 405410A |
| 14.3 | 4.65 | 19.37 | 40.8 | 14-pin | 405510A |
| 14.3 | 4.65 | 19.37 | 50.8 | 18-pin | 405610A |
| 14.3 | 4.65 | 19.37 | 60.8 | 22-pin | 405710A |
| 14 | 4.85 | 16 | 56.5 | 22-pin (female) | 406710A |

Measurements A-D in mm

PCB CONNECTORS MINIFIT, PRESS-FIT



PRODUCT SPECIFICATION

- ✚ Female PCB connector for 16-pin minifit connectors
- ✚ For voltages of 12 V and 24 V
- ✚ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)

RoHS
COMPLIANT

REACH
COMPLIANT

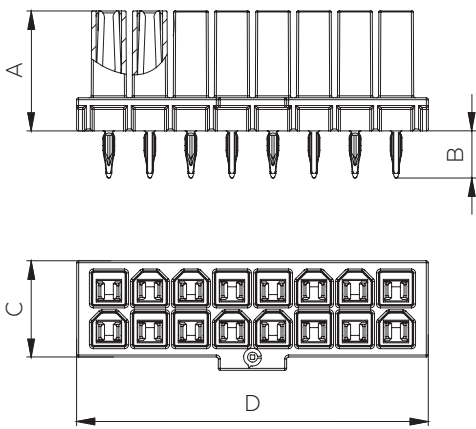
ELV
END-OF-LIFE-
VEHICLES

COLOR VARIANTS

| Color | Part number |
|---------|-------------|
| ● White | 408610AWH |



SCALE DRAWINGS



16-PIN

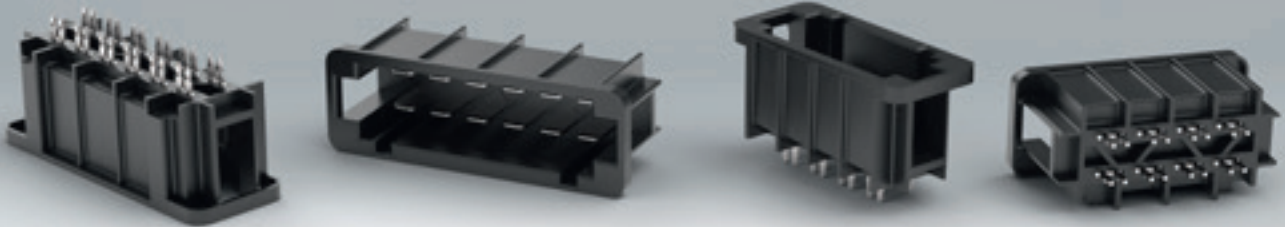
TECHNICAL DATA

| A | B | C | D | Dimensions | Part number |
|------|------|-----|------|-----------------|-------------|
| 12.3 | 4.85 | 9.9 | 35.8 | 16-pin (female) | 408610AWH |

Measurements A-D in mm

PCB CONNECTORS

G&H, PRESS-FIT



PRODUCT SPECIFICATION

- ✎ 2-rowed PCB connector series in the number of poles: 8 - 12
- ✎ For voltages of 12 V and 24 V
- ✎ Maximum switching current: approx. 40 A
(depending on number of poles, layout and circuit board version)
- ✎ 4.8 mm blade contact
- ✎ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ✎ Compatible with commercial plug systems
- ✎ Additional codings and colors available on demand
- ✎ In proven flexible press-fit technology (pressure insertion tools available on demand)

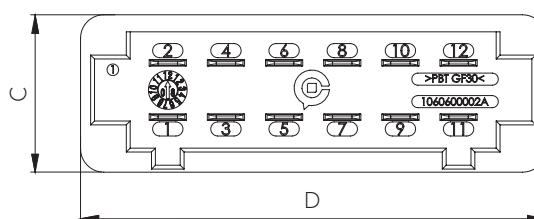
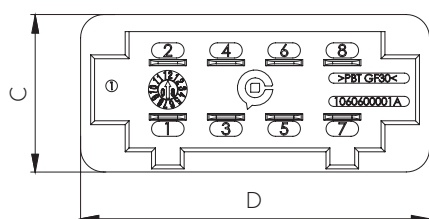
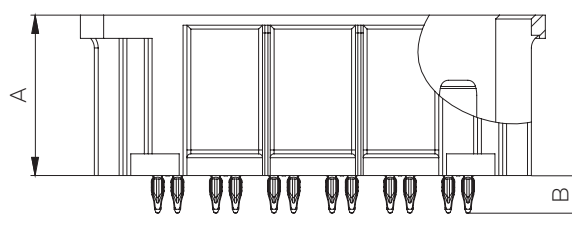
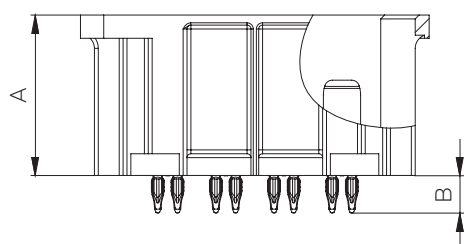


COLOR VARIANTS

| Color | Part number |
|---------|-------------|
| ● Black | 401X10ABK |
| ● Blue | 401X00ABU |
| ● White | 401X00AWH |
| ● Red | 401X00ARD |



SCALE DRAWINGS



8-PIN

12-PIN

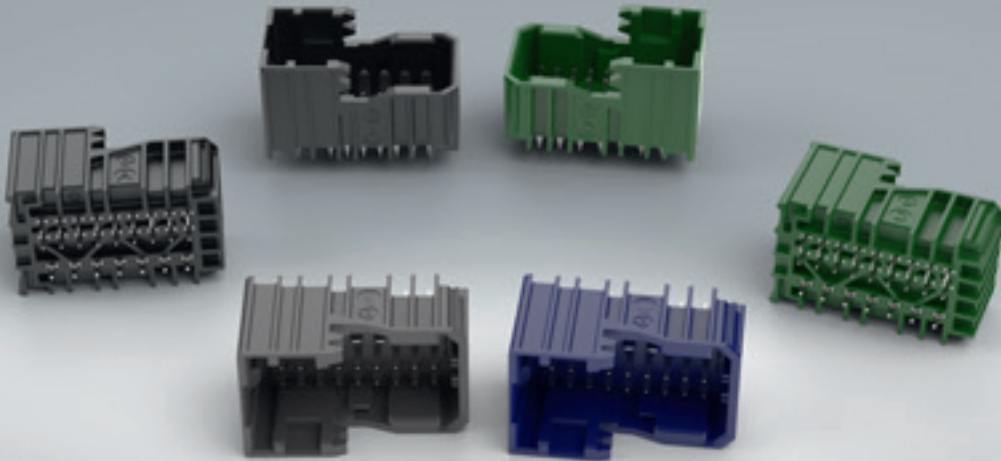
TECHNICAL DATA

| A | B | C | D | Dimensions | Part number |
|------|------|------|----|------------|-------------|
| 20.7 | 4.85 | 20.3 | 45 | 8-pin | 401110A |
| 20.7 | 4.85 | 20.3 | 60 | 12-pin | 401210A |

Measurements A - D in mm

PCB CONNECTORS

MCPIN 25-PIN, PRESS-FIT



PRODUCT SPECIFICATION

- 25-pin PCB connector series
- For voltages of 12 V and 24 V
- Maximum switching current: approx. 3 A for 1.6 mm blades and approx. 15 A for 2.8 mm blades (depending on number of poles, layout and circuit board version)
- 1.6 mm and 2.8 mm blade contacts
- Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- Compatible with commercial plug systems
- Additional codings and colors available on demand
- In proven flexible press-fit technology (pressure insertion tools available on demand)

RoHS
COMPLIANT

REACH
COMPLIANT

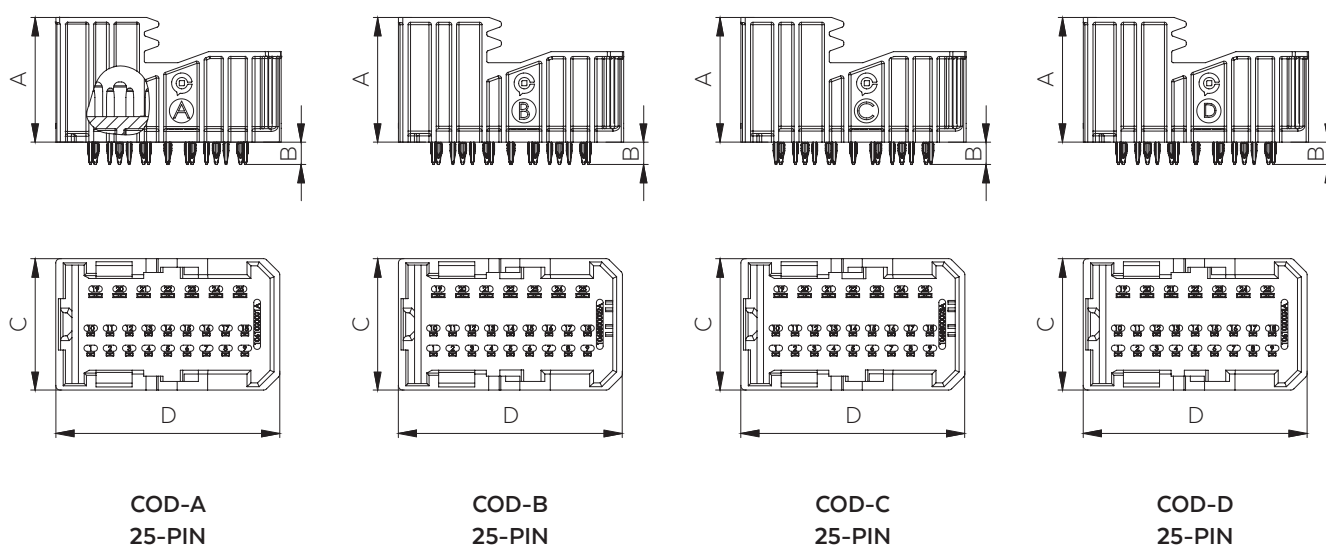
ELV
END-OF-LIFE-VEHICLES

COLOR VARIANTS

| Color | Part number |
|---------|-------------|
| ● Black | 403110ABKA |
| ● Grey | 403110AGYB |
| ● Blue | 403110ABUC |
| ● Green | 403110AGND |



SCALE DRAWINGS



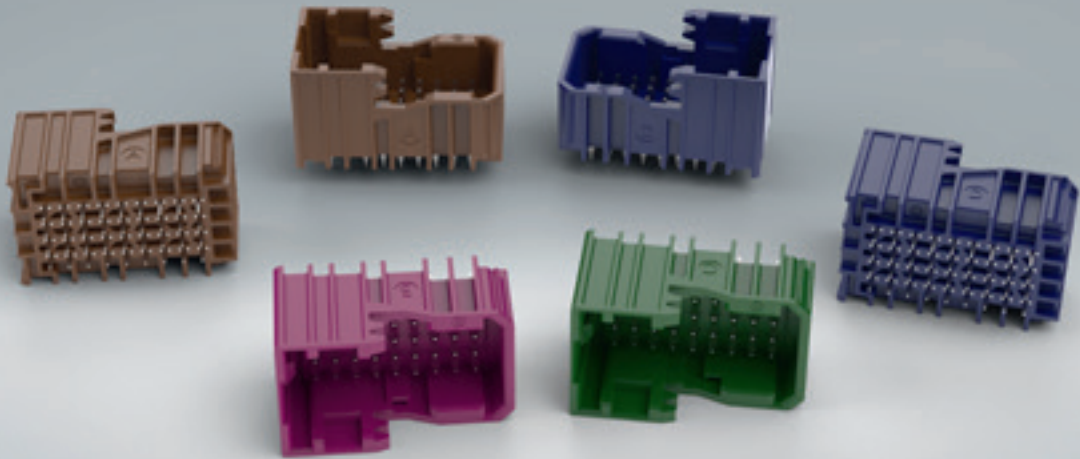
TECHNICAL DATA

| A | B | C | D | Dimensions | Part number |
|------|------|------|------|------------|-------------|
| 25.9 | 4.65 | 27.5 | 46.5 | 25-pin | 403110ABKA |
| 25.9 | 4.65 | 27.5 | 46.5 | 25-pin | 403110AGYB |
| 25.9 | 4.65 | 27.5 | 46.5 | 25-pin | 403110ABUC |
| 25.9 | 4.65 | 27.5 | 46.5 | 25-pin | 403110AGND |

Measurements A - D in mm

PCB CONNECTORS

MCPIN 36-PIN, PRESS-FIT



PRODUCT SPECIFICATION

- ✎ 36-pin PCB connector series
- ✎ For voltages of 12 V and 24 V
- ✎ Maximum switching current: approx. 3 A for 1.6 mm blades
(depending on number of poles, layout and circuit board version)
- ✎ 1.6 mm blade contacts
- ✎ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ✎ Compatible with commercial plug systems
- ✎ Additional codings and colors available on demand
- ✎ In proven flexible press-fit technology (pressure insertion tools available on demand)

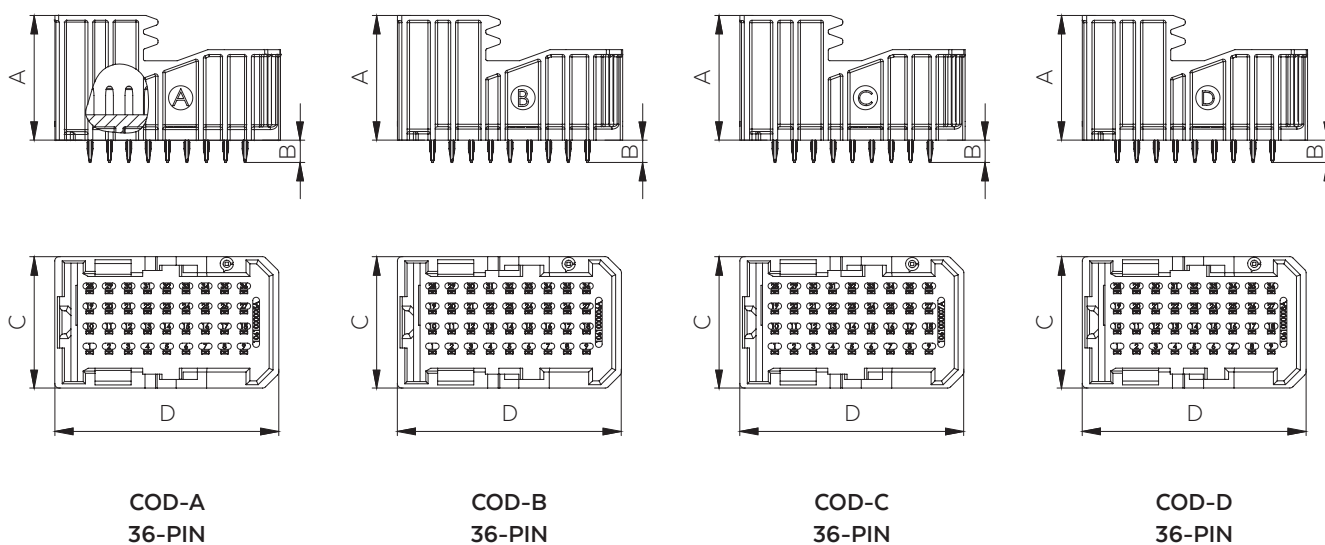


COLOR VARIANTS

| Color | Part number |
|----------|-------------|
| ● Brown | 403210ABNA |
| ● Violet | 403210AVIB |
| ● Green | 403210AGNC |
| ● Blue | 403210ABUD |



SCALE DRAWINGS



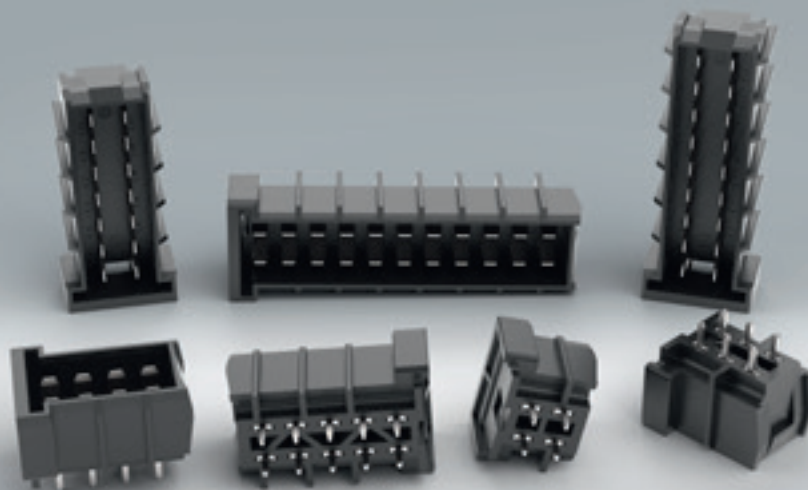
TECHNICAL DATA

| A | B | C | D | Dimensions | Part number |
|------|------|------|------|------------|-------------|
| 25.9 | 4.65 | 27.5 | 46.5 | 36-pin | 403210ABNA |
| 25.9 | 4.65 | 27.5 | 46.5 | 36-pin | 403210AVIB |
| 25.9 | 4.65 | 27.5 | 46.5 | 36-pin | 403210AGNC |
| 25.9 | 4.65 | 27.5 | 46.5 | 36-pin | 403210ABUD |

Measurements A - D in mm

PCB CONNECTORS

JPT, 2-ROWED, THT SOLDERING



PRODUCT SPECIFICATION

- ✚ 2-rowed PCB connector series in the number of poles: 4 - 6 - 8 - 10 - 14 - 18 - 22
- ✚ For voltages of 12 V and 24 V
- ✚ Maximum current value: approx. 15 A
(depending on number of poles, layout and circuit board version)
- ✚ 2.8 mm blade contacts
- ✚ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ✚ Compatible with commercial plug systems
- ✚ Additional codings and colors available on demand
- ✚ For THT wave soldering

RoHS
COMPLIANT

REACH
COMPLIANT

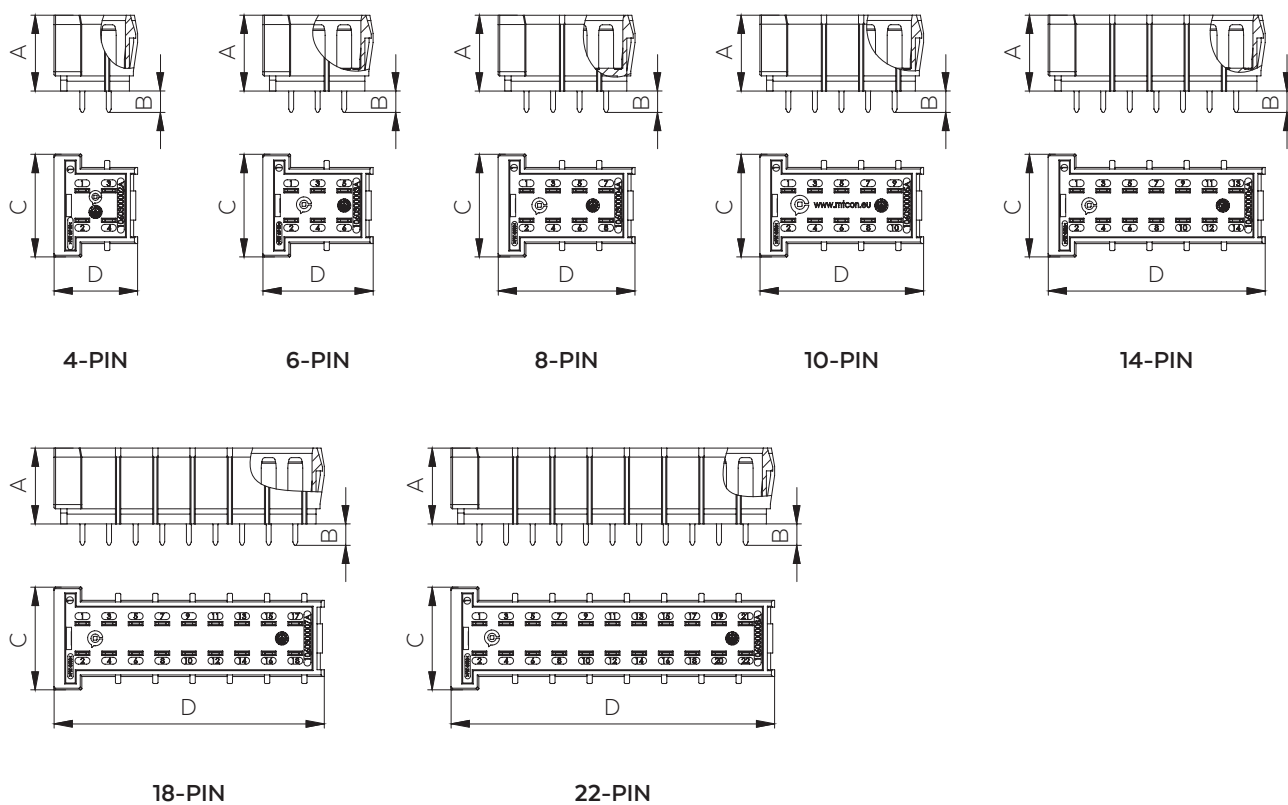
ELV
END-OF-LIFE-VEHICLES

COLOR VARIANTS

| Color | Part number |
|---------|-------------|
| ● Black | 405X31ABK |
| ● Green | 405131AGN |
| ● White | 405131AWH |



SCALE DRAWINGS



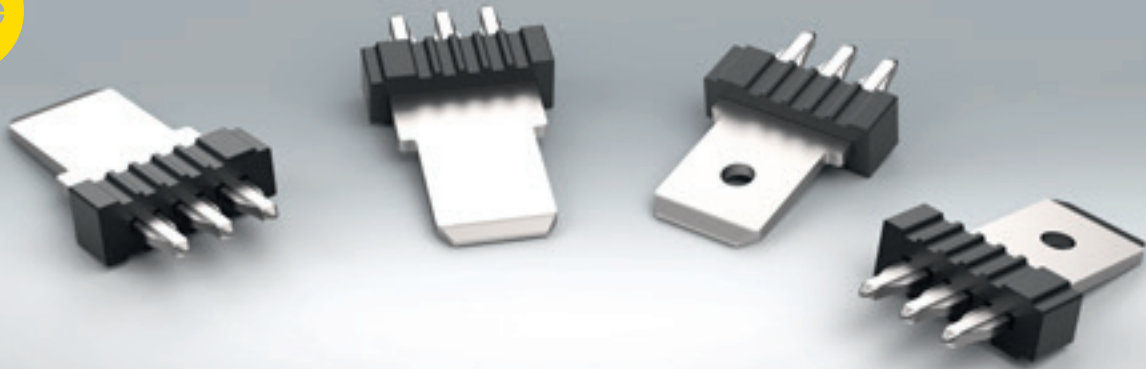
TECHNICAL DATA

| A | B | C | D | Dimensions | Part number |
|------|------|-------|------|------------|-------------|
| 14.3 | 4.05 | 19.38 | 15.8 | 4-pin | 405131A |
| 14.3 | 4.05 | 19.38 | 20.8 | 6-pin | 405231A |
| 14.3 | 4.05 | 19.38 | 25.8 | 8-pin | 405331A |
| 14.3 | 4.05 | 19.37 | 30.8 | 10-pin | 405431A |
| 14.3 | 4.05 | 19.37 | 40.8 | 14-pin | 405531A |
| 14.3 | 4.05 | 19.37 | 50.8 | 18-pin | 405631A |
| 14.3 | 4.05 | 19.37 | 60.8 | 22-pin | 405731A |

Measurements A - D in mm

CONTACT ELEMENTS

PRESS-FIT IN MASSIVE PRESS-FIT ZONE



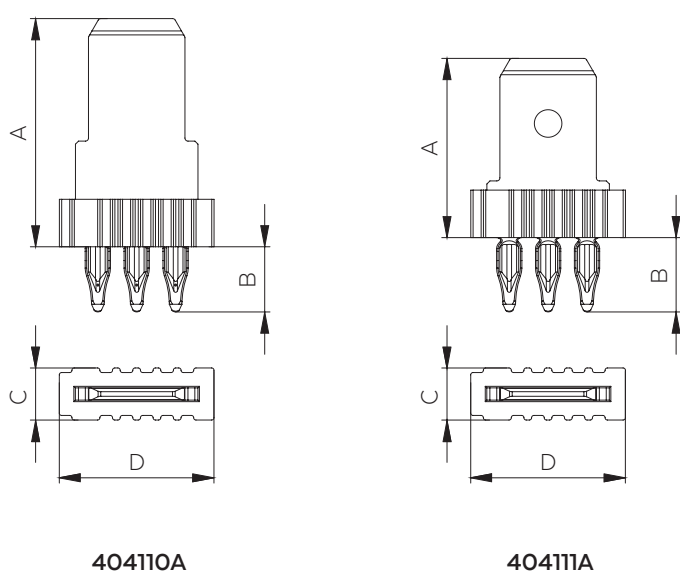
PRODUCT SPECIFICATION

- ✚ In modern press-fit and soldering technology (THT)
- ✚ Standard components/catalog goods
- ✚ Customer specific designs possible regarding:
shape, size, material, surface and much more





SCALE DRAWINGS



TECHNICAL DATA

| A | B | C | D | Dimensions | Part number |
|------|------|-----|------|------------|-------------|
| 14.9 | 4.25 | 3.4 | 10.1 | 6.3 (IFM) | 404110A |
| 11.7 | 4.85 | 3.4 | 10.1 | 6.3 | 404111A |

Measurements A - D and dimensions in mm

FUSE HOLDERS

MINI, PRESS-FIT



PRODUCT SPECIFICATION

- ✚ Fuse holders for all commercial mini fuses
- ✚ For voltages of 12 V and 24 V
- ✚ Maximum switching current: approx. 30 A (depending on layout and circuit board version)
- ✚ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ✚ In proven flexible press-fit technology (pressure insertion tools available on demand)



COLOR VARIANTS

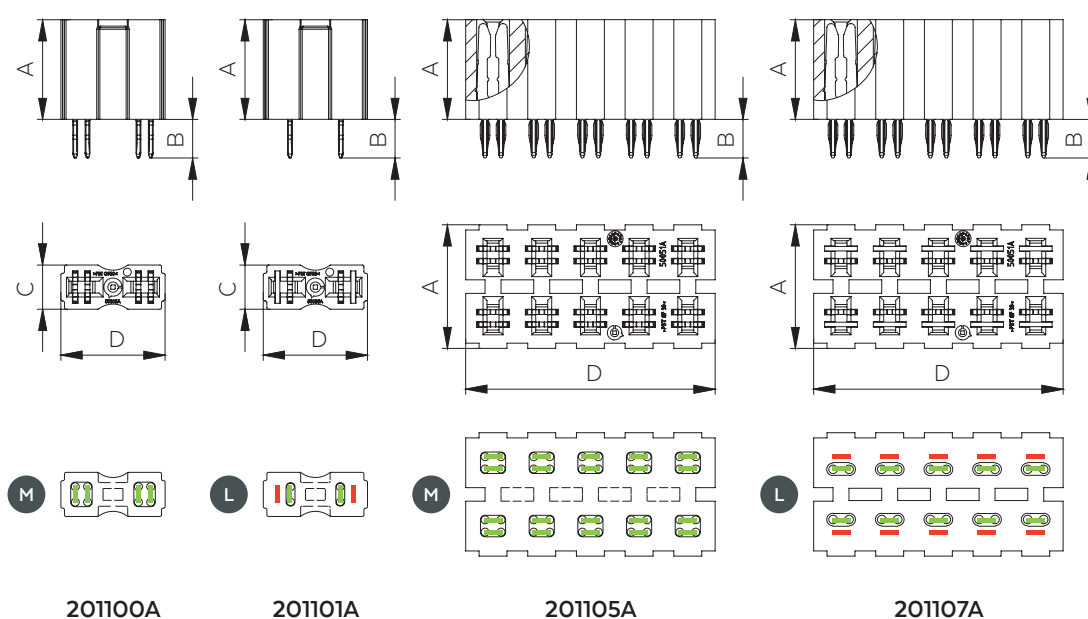
| Color | Part number |
|---------|-------------|
| ● Black | 20110XABK |

ASSEMBLY

| Mark | Meaning |
|--------------|-------------------|
| ● Anthracite | Application class |
| ● Green | Equipped |
| ● Red | Unequipped |



SCALE DRAWINGS



RATING

| | | | | | | | | Part number |
|-------|-------|-------|-------|-------|-------|-------|-------|-------------|
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 201100A |
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TECHNICAL DATA

| A | B | C | D | Dimensions | Assembly | Part number |
|------|------|------|-------|-------------------|------------|-------------|
| 12.5 | 4.85 | 5.6 | 13.1 | Mini | M (medium) | 201100A |
| 12.5 | 4.85 | 5.6 | 13.1 | Mini | L (light) | 201101A |
| 12.5 | 4.85 | 15.5 | 31.25 | Mini (block of 5) | M (medium) | 201105A |
| 12.5 | 4.85 | 15.5 | 31.25 | Mini (block of 5) | L (light) | 201107A |

Measurements A - D in mm

FUSE HOLDERS MINI, PRESS-FIT



PRODUCT SPECIFICATION

- ✚ Fuse holders for all commercial mini fuses
- ✚ For voltages of 12 V and 24 V
- ✚ Maximum switching current: approx. 30 A (depending on layout and circuit board version)
- ✚ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ✚ In proven flexible press-fit technology (pressure insertion tools available on demand)



COLOR VARIANTS

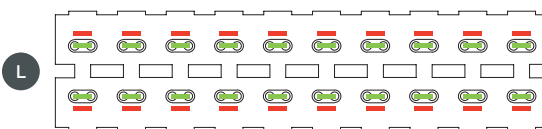
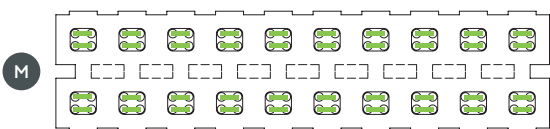
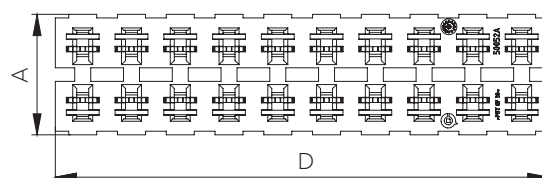
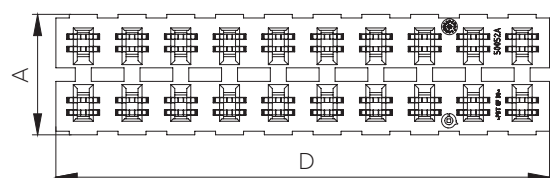
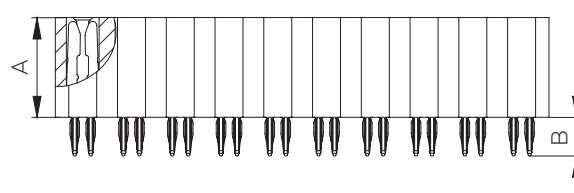
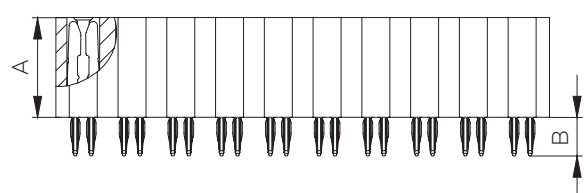
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|---------|-------------|
| ● Black | 20110XABK |

ASSEMBLY

| Mark | Meaning |
|--------------|-------------------|
| ● Anthracite | Application class |
| ● Green | Equipped |
| ● Red | Unequipped |



SCALE DRAWINGS



201106A

201108A

RATING

| | | | | | | | | Part number |
|------------|------------|------------|------------|------------|------------|------------|------------|-------------|
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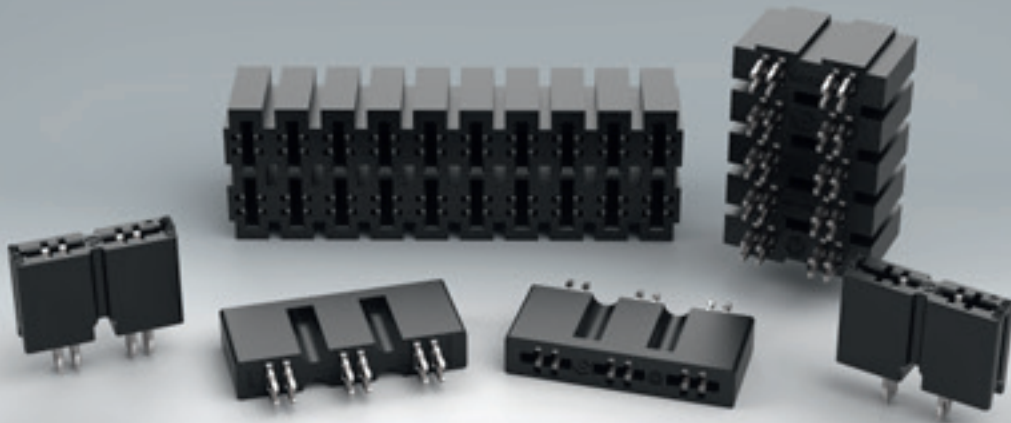
TECHNICAL DATA

| A | B | C | D | Dimensions | Assembly | Part number |
|------|------|------|-------|--------------------|------------|-------------|
| 12.5 | 4.85 | 15.1 | 61.75 | Mini (block of 10) | M (medium) | 201106A |
| 12.5 | 4.85 | 15.1 | 61.75 | Mini (block of 10) | L (light) | 201108A |

Measurements A - D in mm

FUSE HOLDERS

ATO, PRESS-FIT



PRODUCT SPECIFICATION

- ✚ Fuse holders for all commercial ATO fuses
- ✚ For voltages of 12 V and 24 V
- ✚ Maximum switching current: approx. 40 A (depending on layout and circuit board version)
- ✚ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ✚ In proven flexible press-fit technology (pressure insertion tools available on demand)



COLOR VARIANTS

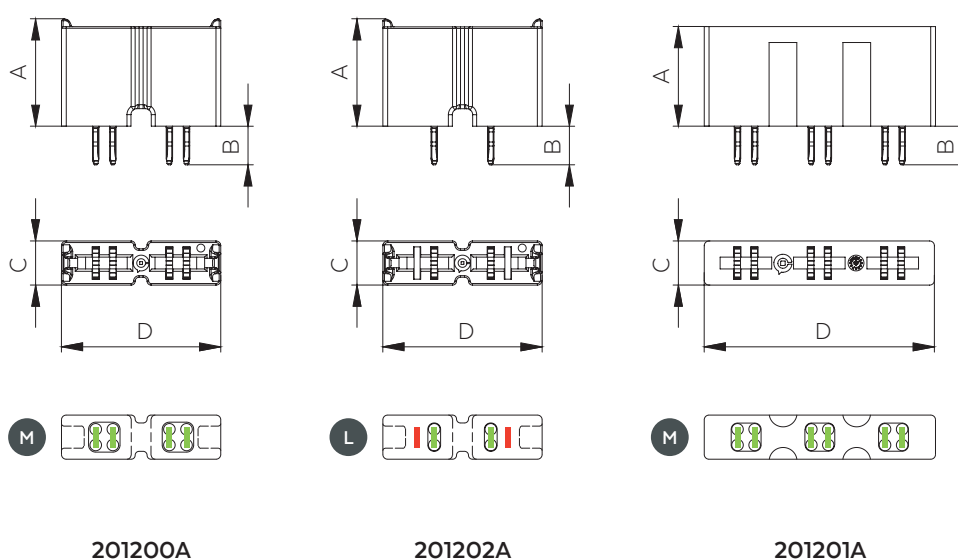
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|---------|-------------|
| ● Black | 20120XABK |

ASSEMBLY

| Mark | Meaning |
|--------------|-------------------|
| ● Anthracite | Application class |
| ● Green | Equipped |
| ● Red | Unequipped |



SCALE DRAWINGS



201200A

201202A

201201A

RATING

| | | | | | | | | Part number |
|------------|------------|------------|------------|------------|------------|------------|------------|-------------|
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TECHNICAL DATA

| A | B | C | D | Dimensions | Assembly | Part number |
|-------|------|-----|----|--------------------|------------|-------------|
| 13.49 | 4.85 | 5.6 | 20 | ATO | M (medium) | 201200A |
| 13.49 | 4.85 | 5.6 | 20 | ATO | L (light) | 201202A |
| 12.5 | 4.85 | 5.6 | 29 | ATO (chamber of 3) | M (medium) | 201201A |

Measurements A - D in mm

FUSE HOLDERS

ATO, PRESS-FIT



PRODUCT SPECIFICATION

- ✚ Fuse holders for all commercial ATO fuses
- ✚ For voltages of 12 V and 24 V
- ✚ Maximum switching current: approx. 40 A (depending on layout and circuit board version)
- ✚ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ✚ In proven flexible press-fit technology (pressure insertion tools available on demand)



COLOR VARIANTS

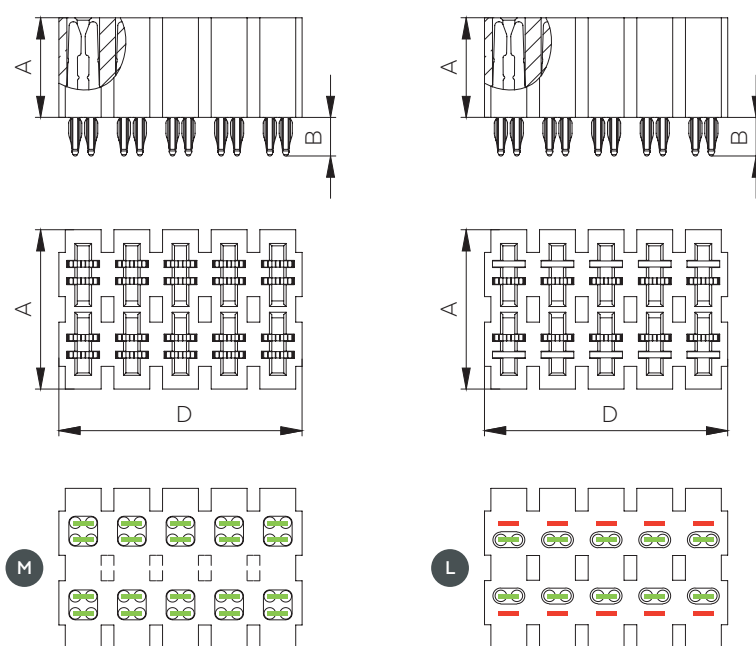
| Color | Part number |
|---------|-------------|
| ● Black | 20120XABK |

ASSEMBLY

| Mark | Meaning |
|--------------|-------------------|
| ● Anthracite | Application class |
| ● Green | Equipped |
| ● Red | Unequipped |



SCALE DRAWINGS



201205A

201207A

RATING

| | | | | | | | | Part number |
|-------|-------|-------|-------|-------|-------|-------|-------|-------------|
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 201205A |
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TECHNICAL DATA

| A | B | C | D | Dimensions | Assembly | Part number |
|------|------|----|------|------------------|------------|-------------|
| 12,5 | 4,85 | 20 | 30,5 | ATO (block of 5) | M (medium) | 201205A |
| 12,5 | 4,85 | 20 | 30,5 | ATO (block of 5) | L (light) | 201207A |

Measurements A - D in mm

FUSE HOLDERS ATO, PRESS-FIT



PRODUCT SPECIFICATION

- ✚ Fuse holders for all commercial ATO fuses
- ✚ For voltages of 12 V and 24 V
- ✚ Maximum switching current: approx. 40 A (depending on layout and circuit board version)
- ✚ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ✚ In proven flexible press-fit technology (pressure insertion tools available on demand)

RoHS
COMPLIANT

REACH
COMPLIANT

ELV
END-OF-LIFE-
VEHICLES

COLOR VARIANTS

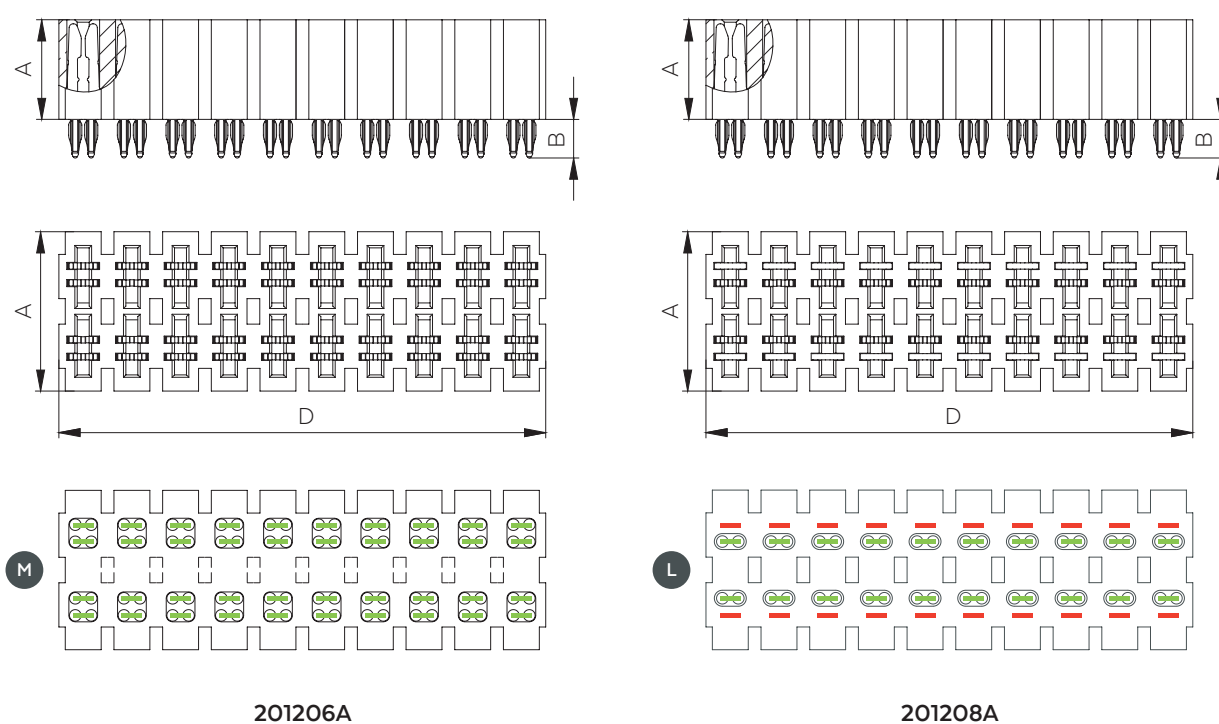
| Color | Part number |
|---------|-------------|
| ● Black | 20120XABK |

ASSEMBLY

| Mark | Meaning |
|--------------|-------------------|
| ● Anthracite | Application class |
| ● Green | Equipped |
| ● Red | Unequipped |



SCALE DRAWINGS



201206A

201208A

RATING

| | | | | | | | | Part number |
|------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | 201206A |
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TECHNICAL DATA

| A | B | C | D | Dimensions | Assembly | Part number |
|------|------|----|----|-------------------|------------|-------------|
| 12,5 | 4,85 | 20 | 61 | ATO (block of 10) | M (medium) | 201206A |
| 12,5 | 4,85 | 20 | 61 | ATO (block of 10) | L (light) | 201208A |

Measurements A - D in mm

FUSE HOLDERS MAXI, PRESS-FIT



PRODUCT SPECIFICATION

- ✚ Fuse holders for all commercial maxi fuses
- ✚ For voltages of 12 V and 24 V
- ✚ Maximum switching current: approx. 70 A (depending on layout and circuit board version)
- ✚ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ✚ In proven flexible press-fit technology (pressure insertion tools available on demand)



COLOR VARIANTS

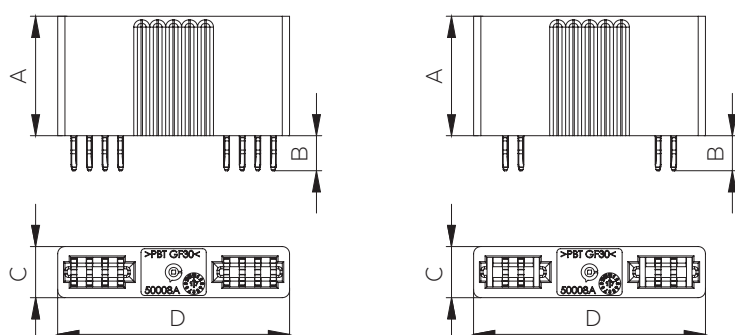
| Color | Part number |
|---------|-------------|
| ● Black | 20130XABK |

ASSEMBLY

| Mark | Meaning |
|--------------|-------------------|
| ● Anthracite | Application class |
| ● Green | Equipped |
| ● Red | Unequipped |



SCALE DRAWINGS



201300A



201301A

RATING

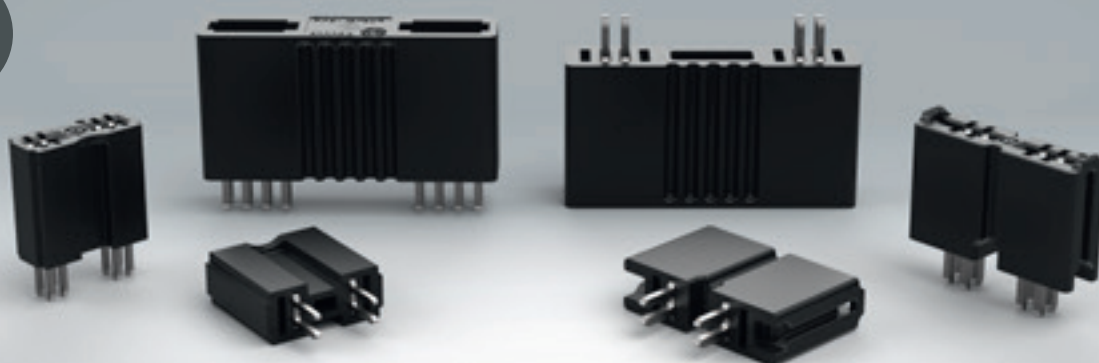
| ⚡ | 👉 | ⚡ | 💧 | 🔧 | 📏 | 👤 | € | Part number |
|-------|-------|-------|-------|-------|-------|-------|-------|-------------|
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 201300A |
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 201301A |

TECHNICAL DATA

| A | B | C | D | Dimensions | Assembly | Part number |
|------|------|-----|----|------------|-------------------|-------------|
| 16.5 | 4.85 | 7.1 | 32 | Maxi | HD (high density) | 201300A |
| 16.5 | 4.85 | 7.1 | 32 | Maxi | M (medium) | 201301A |

Measurements A - D in mm

FUSE HOLDERS ATO, THT SOLDERING



PRODUCT SPECIFICATION

- ✚ Fuse holders for all commercial mini fuses
- ✚ For voltages of 12 V and 24 V
- ✚ Maximum switching current: approx. 30 A (depending on layout and circuit board version)
- ✚ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ✚ For THT wave soldering

RoHS
COMPLIANT

REACH
COMPLIANT

ELV
END-OF-LIFE-VEHICLES

COLOR VARIANTS

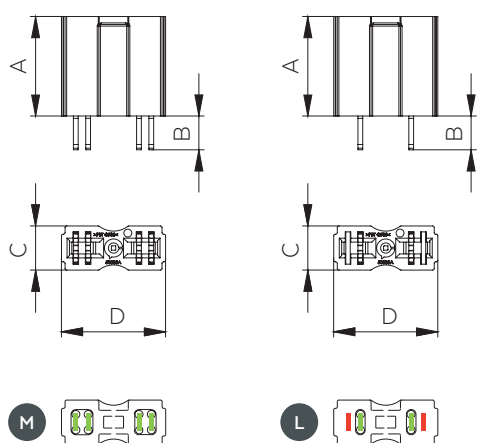
| Color | Part number |
|---------|-------------|
| ● Black | 20113XABK |

ASSEMBLY

| Mark | Meaning |
|--------------|-------------------|
| ● Anthracite | Application class |
| ● Green | Equipped |
| ● Red | Unequipped |



SCALE DRAWINGS



201130A

201131A

RATING

| | | | | | | | | Part number |
|------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | 201130A |
| ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | 201131A |

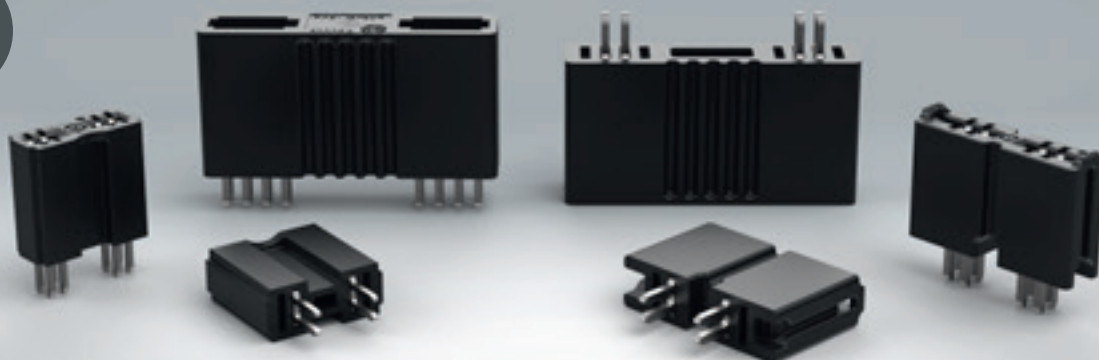
TECHNICAL DATA

| A | B | C | D | Dimensions | Assembly | Part number |
|------|------|-----|------|------------|------------|-------------|
| 12.5 | 4.25 | 5.6 | 13.1 | Mini | M (medium) | 201130A |
| 12.5 | 4.25 | 5.6 | 13.1 | Mini | L (light) | 201131A |

Measurements A - D in mm

FUSE HOLDERS

ATO, THT SOLDERING



PRODUCT SPECIFICATION

- ✚ Fuse holders for all commercial ATO fuses
- ✚ For voltages of 12 V and 24 V
- ✚ Maximum switching current: approx. 40 A (depending on layout and circuit board version)
- ✚ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ✚ For THT wave soldering

RoHS
COMPLIANT

REACH
COMPLIANT

ELV
END-OF-LIFE-VEHICLES

COLOR VARIANTS

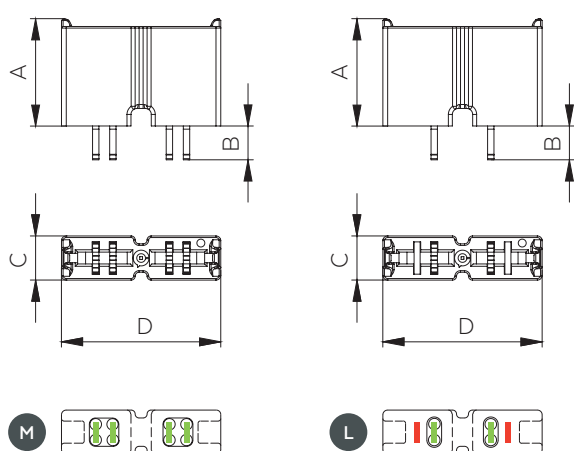
| Color | Part number |
|---------|-------------|
| ● Black | 20123XABK |

ASSEMBLY

| Mark | Meaning |
|--------------|-------------------|
| ● Anthracite | Application class |
| ● Green | Equipped |
| ● Red | Unequipped |



SCALE DRAWINGS



201230A

201231A

RATING

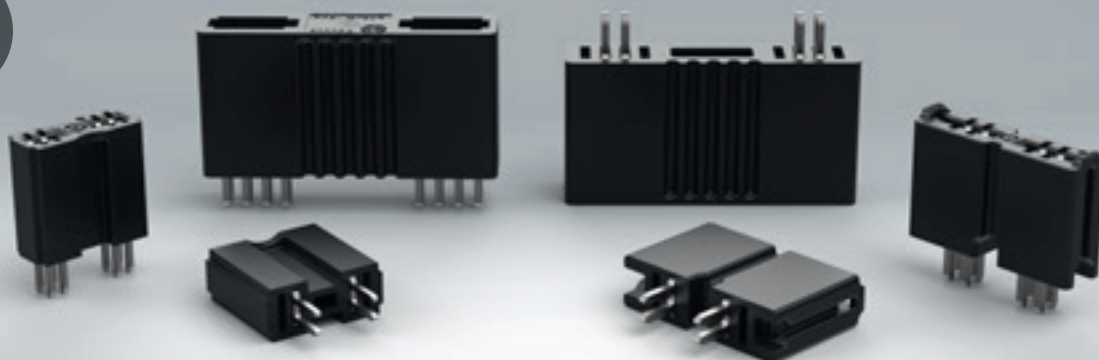
| | | | | | | | | Part number |
|----------|----------|----------|----------|----------|----------|----------|----------|-------------|
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| ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | 201231A |

TECHNICAL DATA

| A | B | C | D | Dimensions | Assembly | Part number |
|-------|------|-----|----|------------|------------|-------------|
| 13.49 | 4.25 | 5.6 | 20 | ATO | M (medium) | 201230A |
| 13.49 | 4.25 | 5.6 | 20 | ATO | L (light) | 201231A |

Measurements A - D in mm

FUSE HOLDERS MAXI, THT SOLDERING



PRODUCT SPECIFICATION

- ✚ Fuse holders for all commercial maxi fuses
- ✚ For voltages of 12 V and 24 V
- ✚ Maximum switching current: approx. 70 A (depending on layout and circuit board version)
- ✚ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ✚ For THT wave soldering

RoHS
COMPLIANT

REACH
COMPLIANT

ELV
END-OF-LIFE-VEHICLES

COLOR VARIANTS

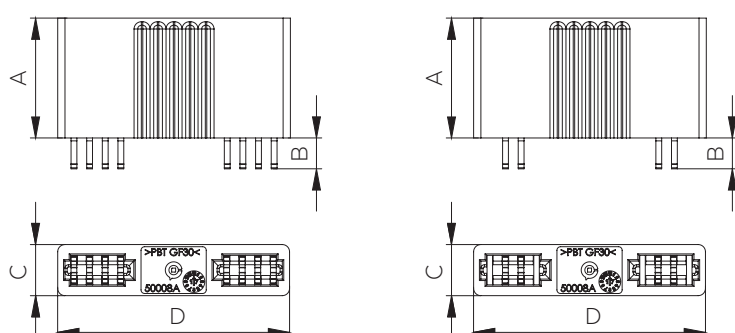
| Color | Part number |
|---------|-------------|
| ● Black | 20133XABK |

ASSEMBLY

| Mark | Meaning |
|--------------|-------------------|
| ● Anthracite | Application class |
| ● Green | Equipped |
| ● Red | Unequipped |



SCALE DRAWINGS



201330A



201331A

RATING

| | | | | | | | | Part number |
|-------|-------|-------|-------|-------|-------|-------|-------|-------------|
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 201330A |
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 201331A |

TECHNICAL DATA

| A | B | C | D | Dimensions | Assembly | Part number |
|------|------|-----|----|------------|-------------------|-------------|
| 16.5 | 4.25 | 7.1 | 32 | Maxi | HD (high density) | 201330A |
| 16.5 | 4.25 | 7.1 | 32 | Maxi | M (medium) | 201331A |

Measurements A - D in mm

RELAY SOCKETS MICRO, PRESS-FIT



PRODUCT SPECIFICATION

- ↳ Relay sockets for all commercial micro relays
- ↳ For voltages of 12 V and 24 V
- ↳ Maximum switching current: approx. 30 A (depending on layout and circuit board version)
- ↳ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ↳ In proven flexible press-fit technology (pressure insertion tools available on demand)



COLOR VARIANTS

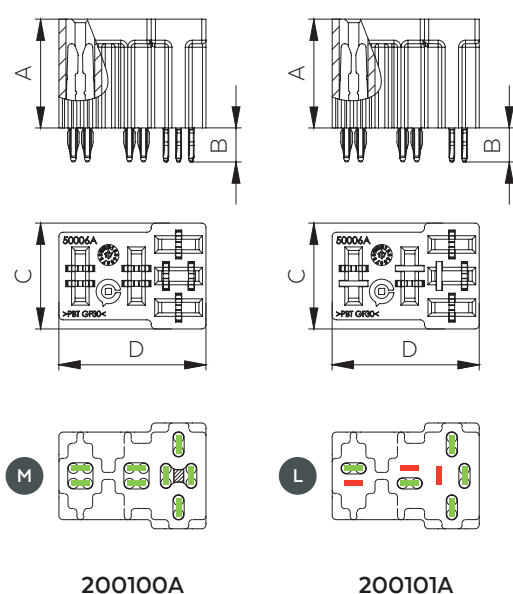
| Color | Part number |
|---------|-------------|
| ● Black | 20010XABK |

ASSEMBLY

| Mark | Meaning |
|--------------|-------------------|
| ● Anthracite | Application class |
| ● Green | Equipped |
| ● Red | Unequipped |



SCALE DRAWINGS



200100A

200101A

RATING

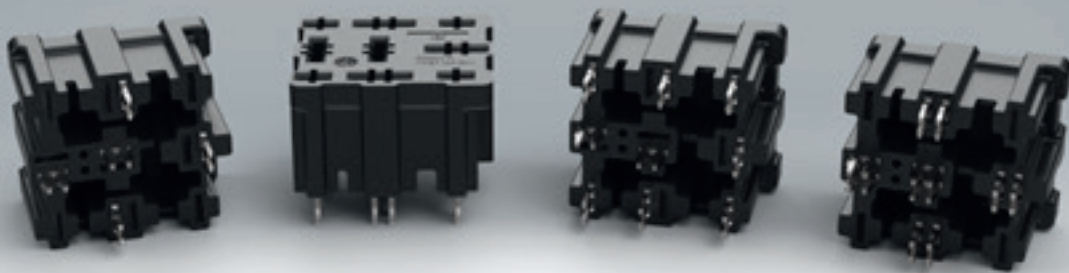
| | | | | | | | | Part number |
|-------|-------|-------|-------|-------|-------|-------|-------|-------------|
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 200100A |
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 200101A |

TECHNICAL DATA

| A | B | C | D | Dimensions | Assembly | Part number |
|------|------|------|-------|------------|------------|-------------|
| 15.5 | 4.85 | 15.1 | 20.95 | Micro | M (medium) | 200100A |
| 15.5 | 4.85 | 15.1 | 20.95 | Micro | L (light) | 200101A |

Measurements A - D in mm

RELAY SOCKETS MINI, PRESS-FIT



PRODUCT SPECIFICATION

- ↳ Relay sockets for all commercial mini relays
- ↳ For voltages of 12 V and 24 V
- ↳ Maximum switching current: approx. 40 A (depending on layout and circuit board version)
- ↳ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ↳ In proven flexible press-fit technology (pressure insertion tools available on demand)



COLOR VARIANTS

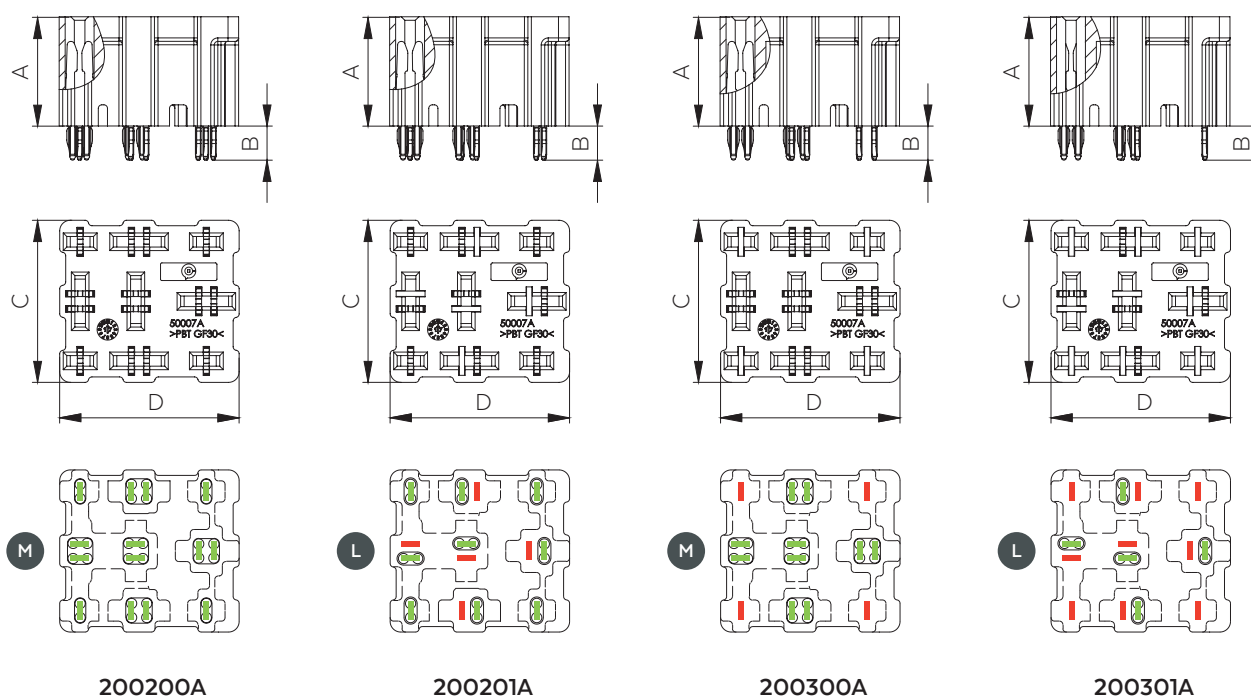
| Color | Part number |
|---------|-------------|
| ● Black | 200X0XABK |

ASSEMBLY

| Mark | Meaning |
|--------------|-------------------|
| ● Anthracite | Application class |
| ● Green | Equipped |
| ● Red | Unequipped |



SCALE DRAWINGS



200200A

200201A

200300A

200301A

RATING

| | | | | | | | | Part number |
|------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | 200200A |
| ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | 200201A |
| ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | 200300A |
| ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | 200301A |

TECHNICAL DATA

| A | B | C | D | Dimensions | Assembly | Part number |
|------|------|----|-------|--------------|------------|-------------|
| 15.5 | 4.85 | 23 | 25.45 | Mini (9-pin) | M (medium) | 200200A |
| 15.5 | 4.85 | 23 | 25.45 | Mini (9-pin) | L (light) | 200201A |
| 15.5 | 4.85 | 23 | 25.45 | Mini (5-pin) | M (medium) | 200300A |
| 15.5 | 4.85 | 23 | 25.45 | Mini (5-pin) | L (light) | 200301A |

Measurements A - D in mm

RELAY SOCKETS

MAXI WITH TWO N.O. CONTACTS, PRESS-FIT



PRODUCT SPECIFICATION

- ↘ Relay sockets with two N.O. contacts for all commercial maxi relays
- ↘ For voltages of 12 V and 24 V
- ↘ Maximum switching current: approx. 70 A (depending on layout and circuit board version)
- ↘ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ↘ In proven flexible press-fit technology (pressure insertion tools available on demand)



COLOR VARIANTS

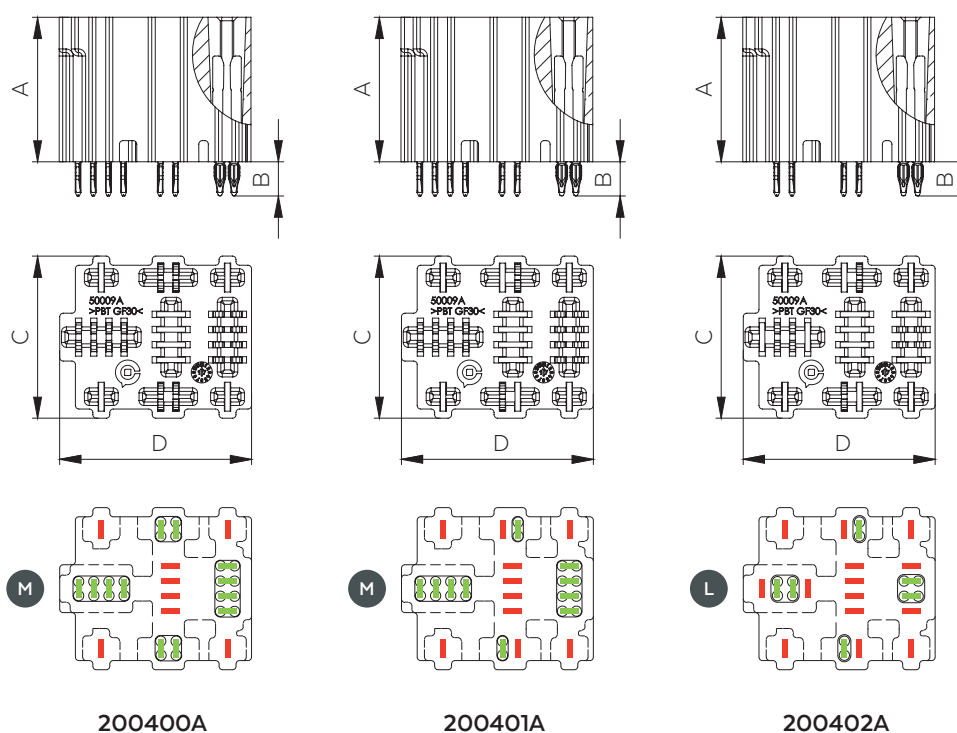
| Color | Part number |
|---------|-------------|
| ● Black | 20040XABK |

ASSEMBLY

| Mark | Meaning |
|--------------|-------------------|
| ● Anthracite | Application class |
| ● Green | Equipped |
| ● Red | Unequipped |



SCALE DRAWINGS



200400A

200401A

200402A

RATING

| | | | | | | | | Part number |
|-------|-------|-------|-------|-------|-------|-------|-------|-------------|
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 200400A |
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 200401A |
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 200402A |

TECHNICAL DATA

| A | B | C | D | Dimensions | Assembly | Part number |
|------|------|----|------|------------|------------|-------------|
| 20.5 | 4.85 | 23 | 27.2 | Maxi | M (medium) | 200400A |
| 20.5 | 4.85 | 23 | 27.2 | Maxi | M (medium) | 200401A |
| 20.5 | 4.85 | 23 | 27.2 | Maxi | L (light) | 200402A |

Measurements A - D in mm

RELAY SOCKETS

MAXI WITH THREE N.O. CONTACTS, PRESS-FIT



PRODUCT SPECIFICATION

- ↘ Relay sockets with three N.O. contacts for all commercial maxi relays
- ↘ For voltages of 12 V and 24 V
- ↘ Maximum switching current: approx. 70 A (depending on layout and circuit board version)
- ↘ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ↘ In proven flexible press-fit technology (pressure insertion tools available on demand)



COLOR VARIANTS

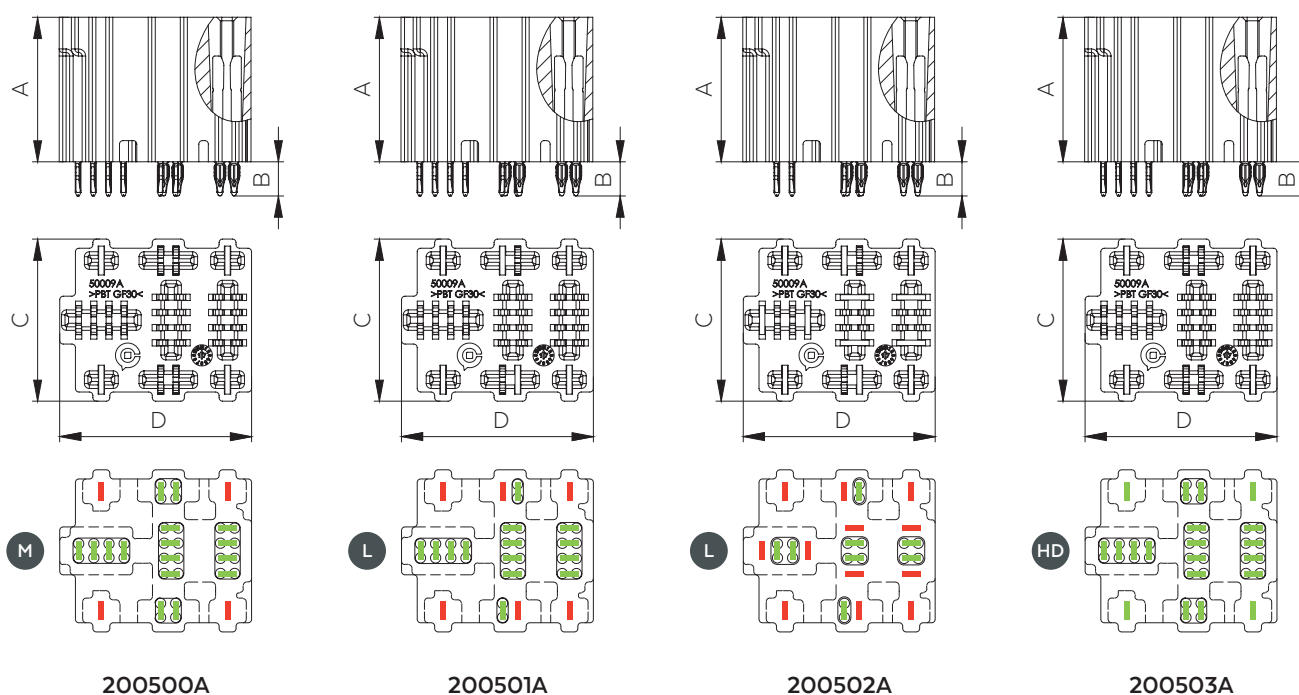
| Color | Part number |
|---------|-------------|
| ● Black | 20050XABK |

ASSEMBLY

| Mark | Meaning |
|--------------|-------------------|
| ● Anthracite | Application class |
| ● Green | Equipped |
| ● Red | Unequipped |



SCALE DRAWINGS



200500A

200501A

200502A

200503A

RATING

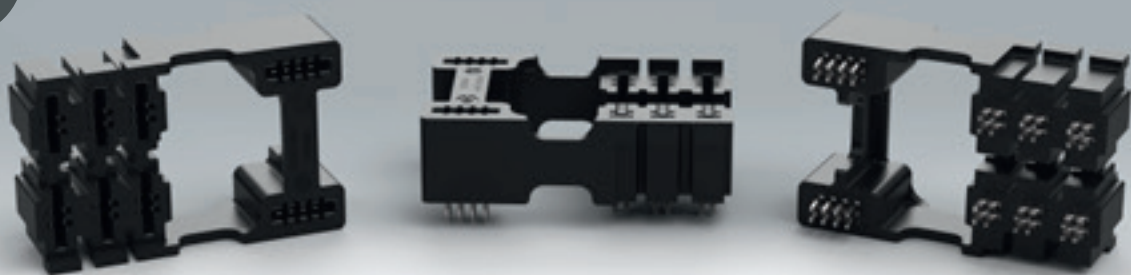
| | | | | | | | | Part number |
|----------|----------|----------|----------|----------|----------|----------|----------|-------------|
| ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | 200500A |
| ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | 200501A |
| ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | 200502A |
| ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | 200503A |

TECHNICAL DATA

| A | B | C | D | Dimensions | Assembly | Part number |
|------|------|----|------|------------|-------------------|-------------|
| 20,5 | 4,85 | 23 | 27,2 | Maxi | M (medium) | 200500A |
| 20,5 | 4,85 | 23 | 27,2 | Maxi | L (light) | 200501A |
| 20,5 | 4,85 | 23 | 27,2 | Maxi | L (light) | 200502A |
| 20,5 | 4,85 | 23 | 27,2 | Maxi | HD (high density) | 200503A |

Measurements A - D in mm

RELAY SOCKET BONE, PRESS-FIT



PRODUCT SPECIFICATION

- ↳ Bone relay sockets for many commercial High Power PCB relays
- ↳ For voltages of 12 V and 24 V
- ↳ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ↳ In proven flexible press-fit technology (pressure insertion tools available on demand)



COLOR VARIANTS

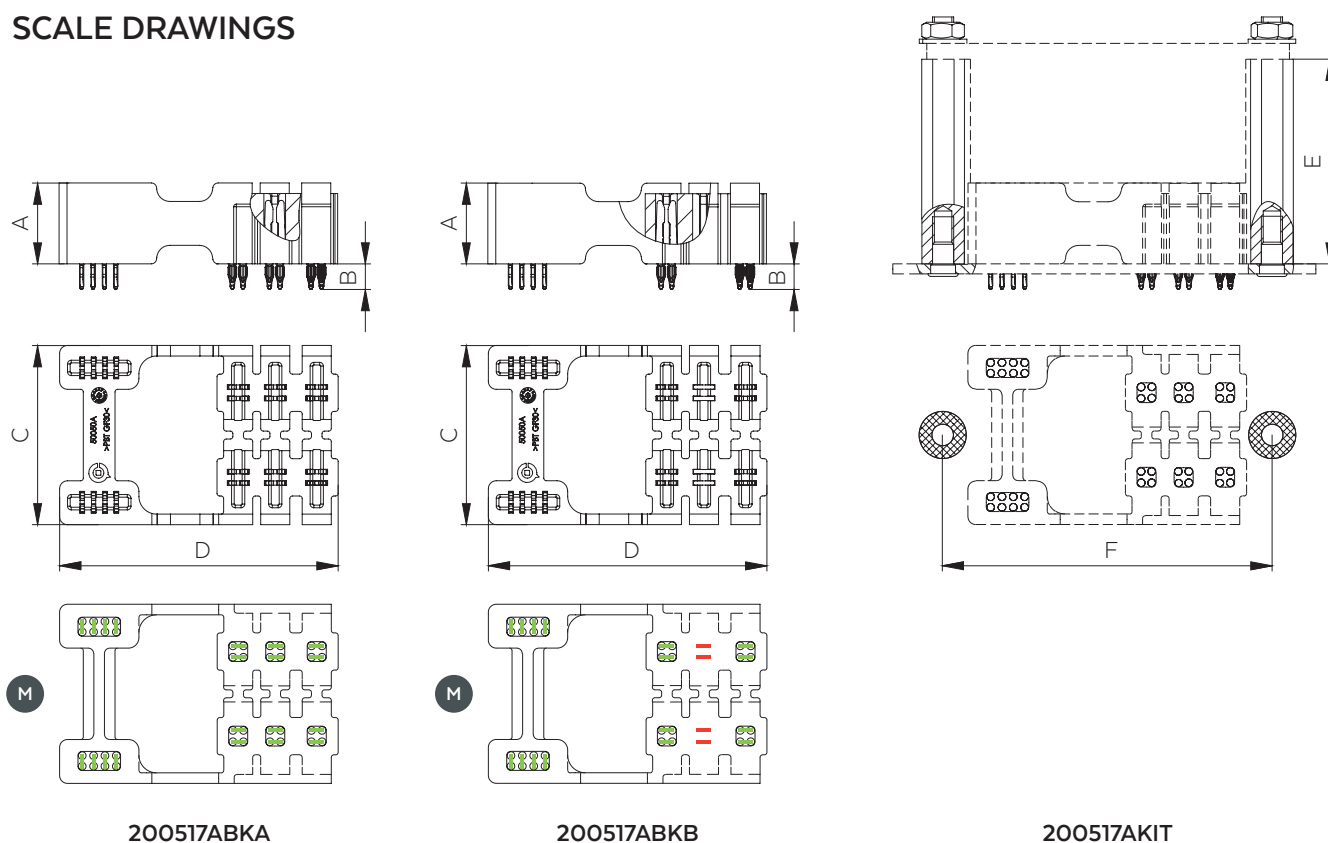
| Color | Part number |
|---------|-------------|
| ● Black | 200517ABKX |

ASSEMBLY

| Mark | Meaning |
|--------------|-------------------|
| ● Anthracite | Application class |
| ● Green | Equipped |
| ● Red | Unequipped |



SCALE DRAWINGS



RATING

| | | | | | | | | Part number |
|----------|----------|----------|----------|----------|----------|----------|----------|-------------|
| ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | 200517ABKA |
| ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | 200517ABKB |

TECHNICAL DATA

| A | B | C | D | E | F | Dimensions | Assembly | Part number |
|------|------|------|-------|------|------|------------|------------|---------------|
| 15.3 | 4.85 | 33.9 | 52.68 | - | - | Bone | M (medium) | 200517ABKA |
| 15.3 | 4.85 | 33.9 | 52.68 | - | - | Bone | M (medium) | 200517ABKB |
| - | - | - | - | 38.5 | 62.2 | Kit (Bone) | - | 200517AKIT I |
| - | - | - | - | 44 | 62.2 | Kit (Bone) | - | 200517AKIT II |

Measurements A - D in mm

RELAY SOCKETS MICRO, THT SOLDERING



PRODUCT SPECIFICATION

- ↳ Relay sockets for all commercial micro relays
- ↳ For voltages of 12 V and 24 V
- ↳ Maximum switching current: approx. 30 A (depending on layout and circuit board version)
- ↳ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ↳ For THT wave soldering



COLOR VARIANTS

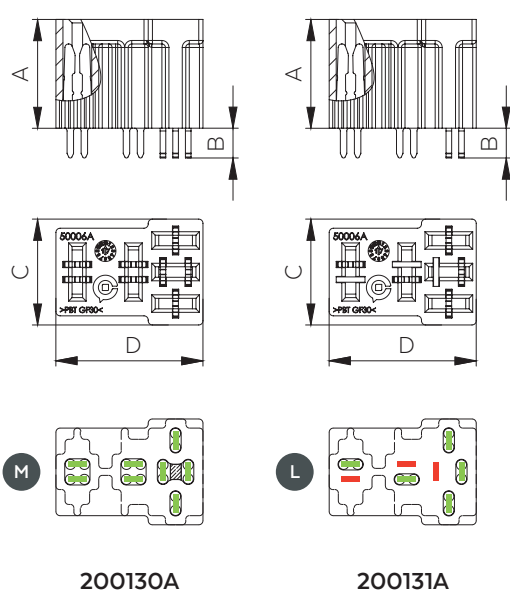
| Color | Part number |
|---------|-------------|
| ● Black | 20013XABK |

ASSEMBLY

| Mark | Meaning |
|--------------|-------------------|
| ● Anthracite | Application class |
| ● Green | Equipped |
| ● Red | Unequipped |



SCALE DRAWINGS



200130A

200131A

RATING

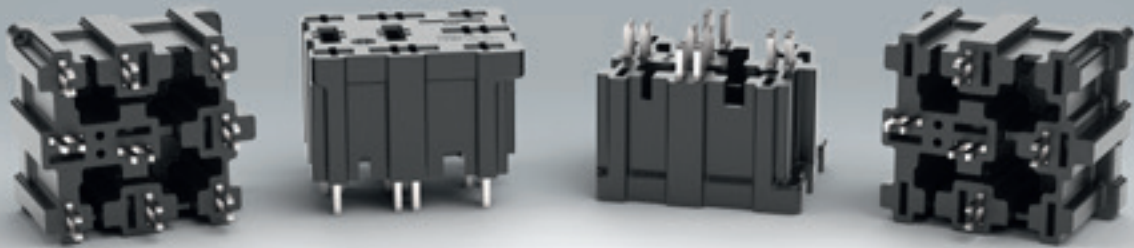
| | | | | | | | | Part number |
|-------|-------|-------|-------|-------|-------|-------|-------|-------------|
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 200130A |
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 200131A |

TECHNICAL DATA

| A | B | C | D | Dimensions | Assembly | Part number |
|------|------|------|-------|------------|------------|-------------|
| 15.5 | 4.25 | 15.1 | 20.95 | Micro | M (medium) | 200130A |
| 15.5 | 4.25 | 15.1 | 20.95 | Micro | L (light) | 200131A |

Measurements A - D in mm

RELAY SOCKETS MINI, THT SOLDERING



PRODUCT SPECIFICATION

- ↳ Relay sockets for all commercial mini relays
- ↳ For voltages of 12 V and 24 V
- ↳ Maximum switching current: approx. 40 A (depending on layout and circuit board version)
- ↳ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ↳ For THT wave soldering



COLOR VARIANTS

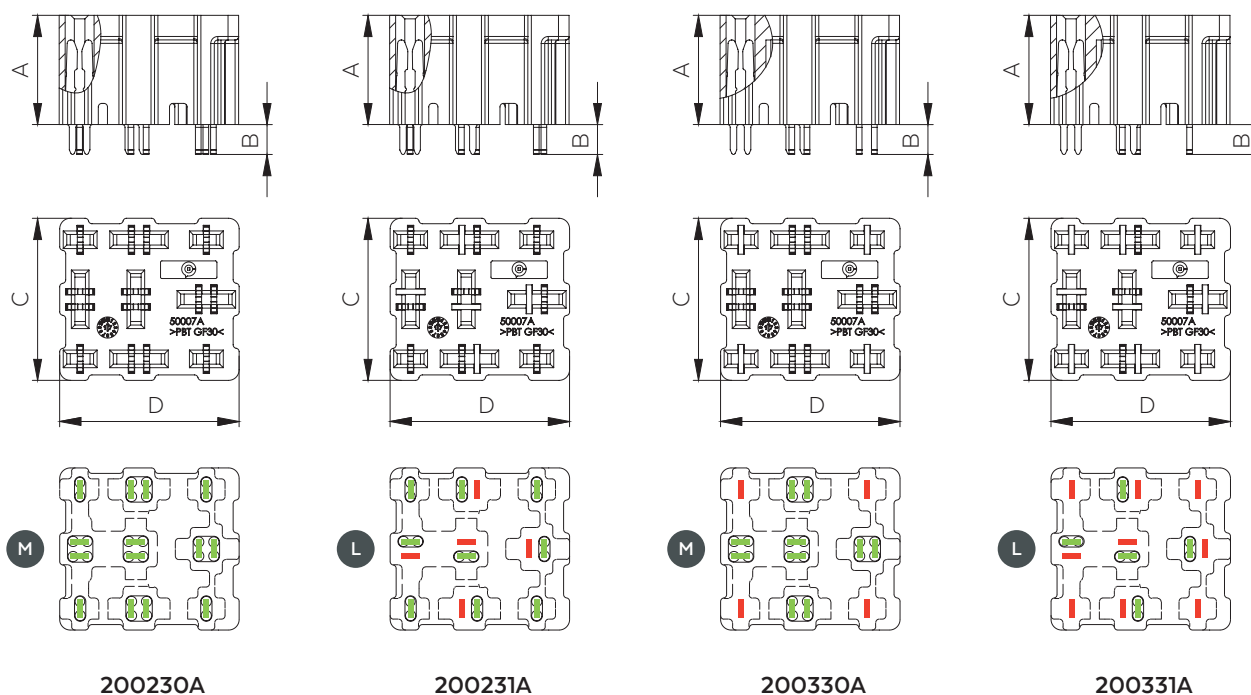
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|---------|-------------|
| ● Black | 200X3XABK |

ASSEMBLY

| Mark | Meaning |
|--------------|-------------------|
| ● Anthracite | Application class |
| ● Green | Equipped |
| ● Red | Unequipped |



SCALE DRAWINGS



200230A

200231A

200330A

200331A

RATING

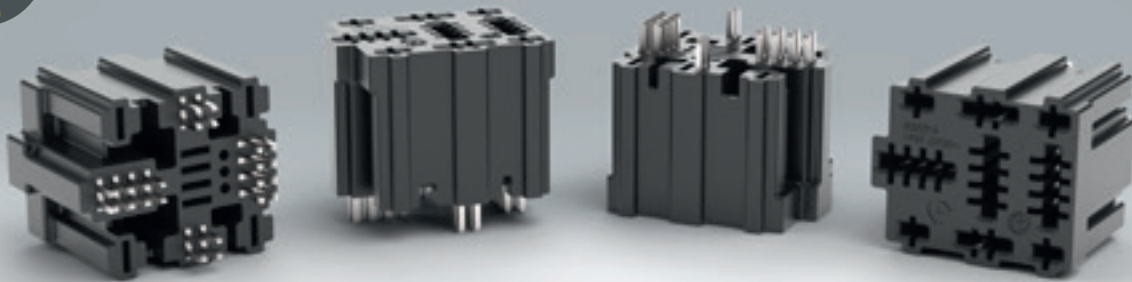
| | | | | | | | | Part number |
|------------|------------|------------|------------|------------|------------|------------|------------|-------------|
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| ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | 200231A |
| ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | 200330A |
| ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | ●●●●●●●●●● | 200331A |

TECHNICAL DATA

| A | B | C | D | Dimensions | Assembly | Part number |
|------|------|----|-------|--------------|------------|-------------|
| 15.5 | 4.25 | 23 | 25.45 | Mini (9-pin) | M (medium) | 200230A |
| 15.5 | 4.25 | 23 | 25.45 | Mini (9-pin) | L (light) | 200231A |
| 15.5 | 4.25 | 23 | 25.45 | Mini (5-pin) | M (medium) | 200330A |
| 15.5 | 4.25 | 23 | 25.45 | Mini (5-pin) | L (light) | 200331A |

Measurements A - D in mm

RELAY SOCKETS MAXI, THT SOLDERING



PRODUCT SPECIFICATION

- ✚ Relay sockets for all commercial maxi relays
- ✚ For voltages of 12 V and 24 V
- ✚ Maximum switching current: approx. 70 A (depending on layout and circuit board version)
- ✚ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ✚ For THT wave soldering



COLOR VARIANTS

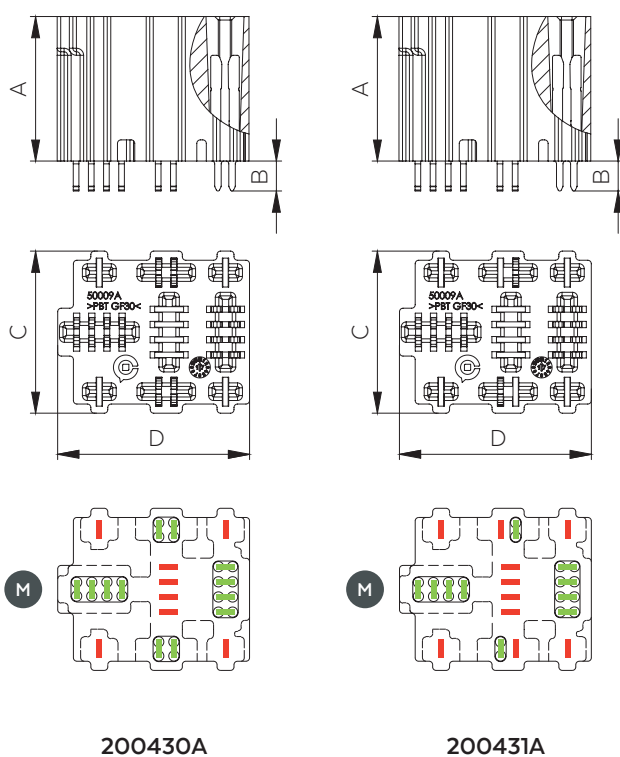
| Color | Part number |
|---------|-------------|
| ● Black | 20043XABK |

ASSEMBLY

| Mark | Meaning |
|--------------|-------------------|
| ● Anthracite | Application class |
| ● Green | Equipped |
| ● Red | Unequipped |



SCALE DRAWINGS



200430A

200431A

RATING

| | | | | | | | | Part number |
|-------|-------|-------|-------|-------|-------|-------|-------|-------------|
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 200430A |
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | 200431A |

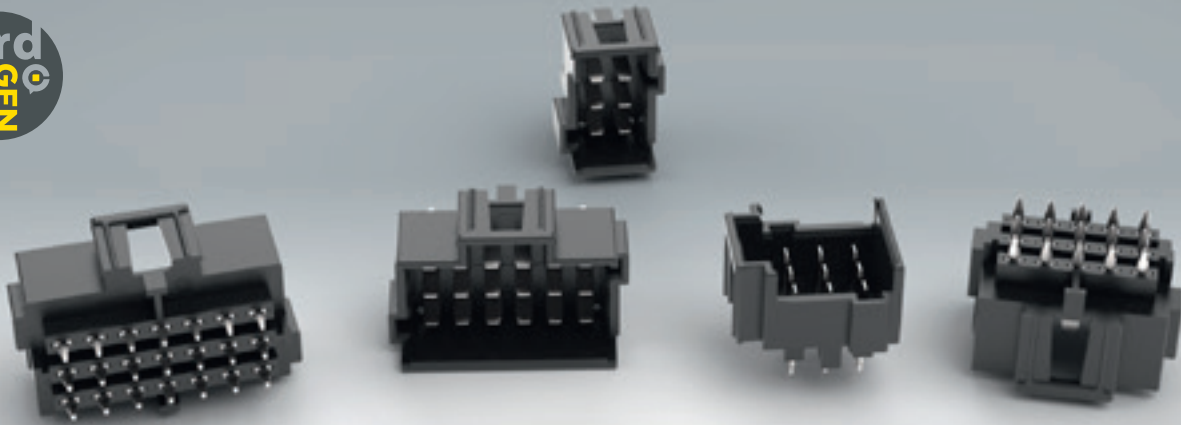
TECHNICAL DATA

| A | B | C | D | Dimensions | Assembly | Part number |
|------|------|----|------|------------|------------|-------------|
| 20.5 | 4.25 | 23 | 27.2 | Maxi | M (medium) | 200430A |
| 20.5 | 4.25 | 23 | 27.2 | Maxi | M (medium) | 200431A |

Measurements A - D in mm

PCB CONNECTORS

JPT, 3-ROWED, PRESS-FIT



PRODUCT SPECIFICATION

- ✚ 3-rowed PCB connector series, number of poles: 6 - 9 - 12 - 15 - 18 - 21
- ✚ For voltages of 12 V and 24 V
- ✚ Maximum switching current: approx. 15 A
(depending on number of poles, layout and circuit board version)
- ✚ 2.8 mm blade contacts
- ✚ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ✚ Compatible with commercial plug systems
- ✚ Additional codings and colors available on demand
- ✚ In proven flexible press-fit technology (pressure insertion tools available on demand)

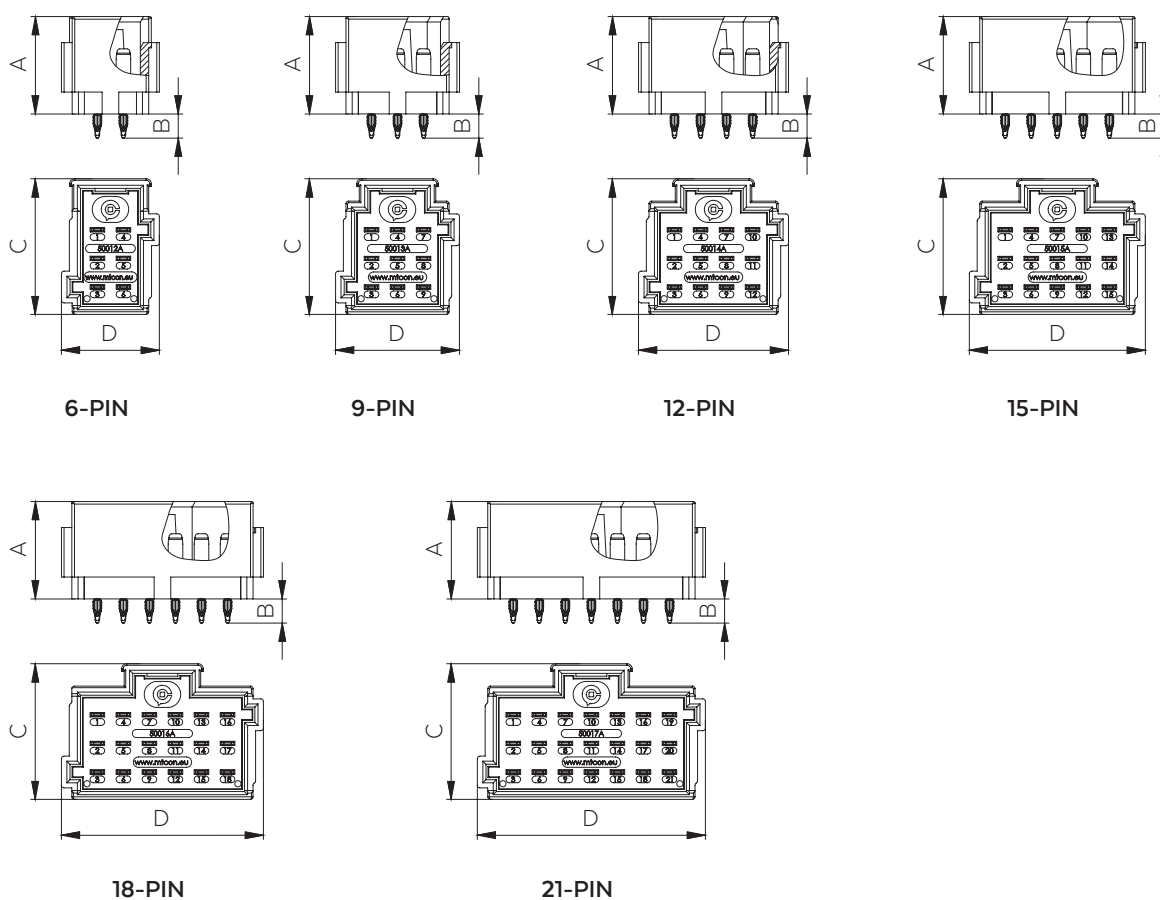


COLOR VARIANTS

| Color | Part number |
|----------|-------------|
| ● Black | 400X00ABK |
| ● Blue | 400X00ABU |
| ● Grey | 400X00AGY |
| ● Yellow | 400X00AYE |
| ● Green | 400X00AGN |
| ● Pink | 400X00APK |
| ● Brown | 400X00ABN |



MASSZEICHNUNGEN



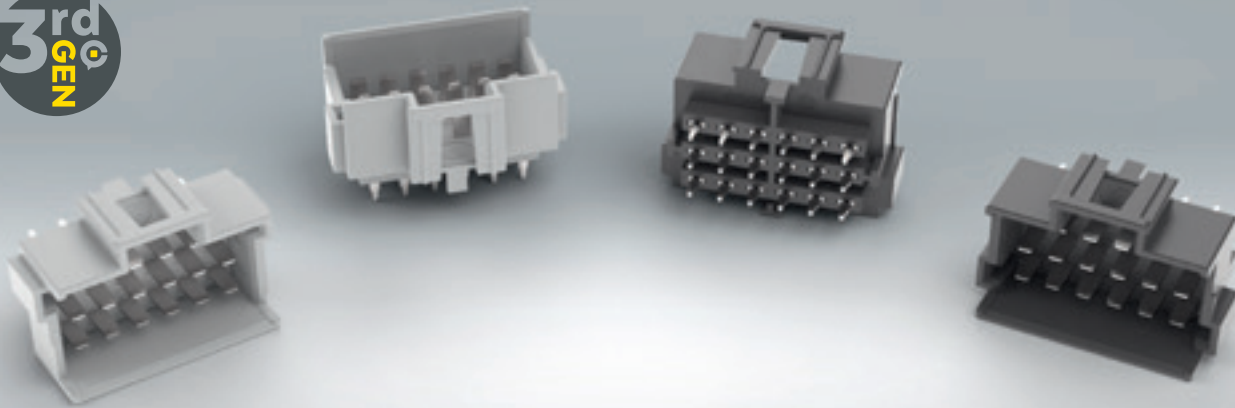
TECHNICAL DATA

| A | B | C | D | Dimensions | Part number |
|------|------|-------|------|------------|-------------|
| 18.7 | 4.65 | 26.05 | 18.8 | 6-pin | 400100A |
| 18.7 | 4.65 | 26.05 | 23.8 | 9-pin | 400200A |
| 18.7 | 4.65 | 26.05 | 28.8 | 12-pin | 400300A |
| 18.7 | 4.65 | 26.05 | 33.8 | 15-pin | 400400A |
| 18.7 | 4.65 | 26.05 | 38.8 | 18-pin | 400500A |
| 18.7 | 4.65 | 26.05 | 43.8 | 21-pin | 400600A |

Measurements A - D in mm

PCB CONNECTORS

JPT, COD, PRESS-FIT



PRODUCT SPECIFICATION

- ✚ 18-pin PCB connectors
- ✚ For voltages of 12 V and 24 V
- ✚ Maximum switching current: approx. 15 A
(depending on number of poles, layout and circuit board version)
- ✚ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ✚ Compatible with commercial plug systems
- ✚ In proven flexible press-fit technology (pressure insertion tools available on demand)

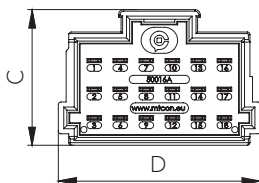
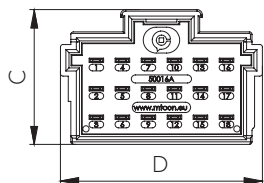
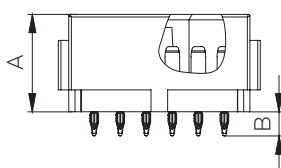
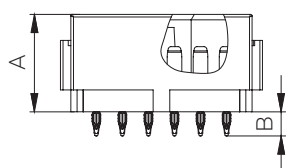


COLOR VARIANTS

| Color | Part number |
|---------|-------------|
| ● White | 400501AWHB |
| ● Grey | 400502AGYC |



SCALE DRAWINGS



18-PIN (COD-B)

18-PIN (COD-C)

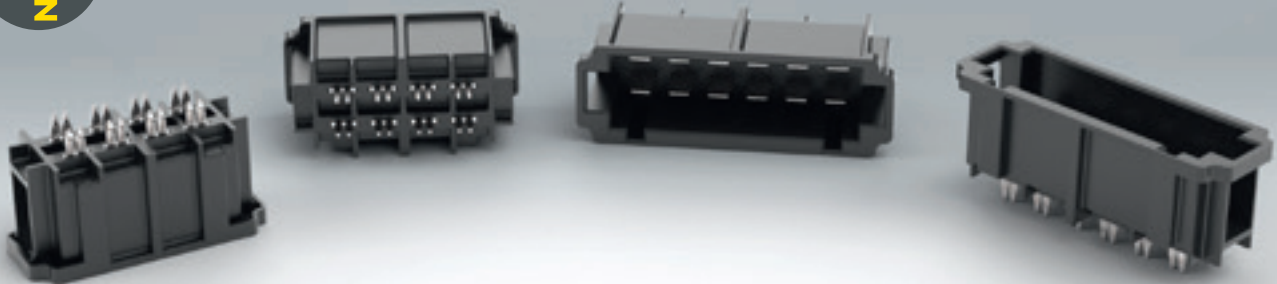
TECHNICAL DATA

| A | B | C | D | Dimensions | Part number |
|------|------|-------|------|----------------|-------------|
| 18.7 | 4.65 | 26.05 | 38.8 | 18-pin (COD-B) | 400501AWHB |
| 18.7 | 4.65 | 26.05 | 38.8 | 18-pin (COD-C) | 400502AGYC |

Measurements A - D in mm

PCB CONNECTORS

G&H, PRESS-FIT



PRODUCT SPECIFICATION

- ↳ 2-rowed PCB connector series, number of poles: 8 - 12
- ↳ For voltages of 12 V and 24 V
- ↳ Maximum switching current: approx. 40 A
(depending on number of poles, layout and circuit board version)
- ↳ 4.8 mm blade contacts
- ↳ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ↳ Compatible with commercial plug systems
- ↳ Additional codings and colors available on demand
- ↳ In proven flexible press-fit technology (pressure insertion tools available on demand)

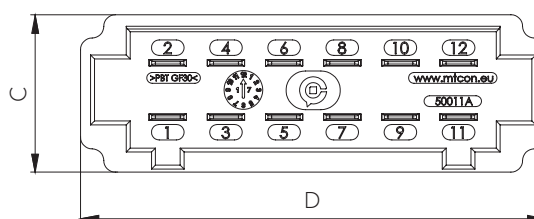
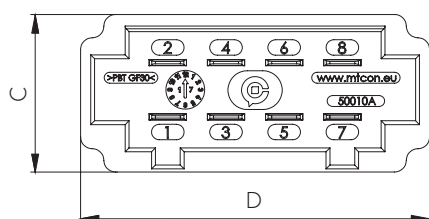
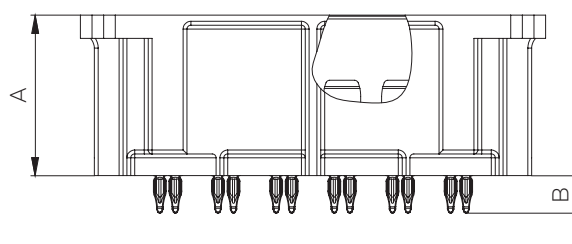
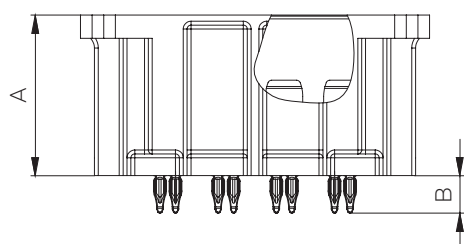


COLOR VARIANTS

| Color | Part number |
|---------|-------------|
| ● Black | 401X00ABK |
| ● Blue | 401X00ABU |
| ● White | 401X00AWH |
| ● Red | 401X00ARD |



SCALE DRAWINGS



8-PIN

12-PIN

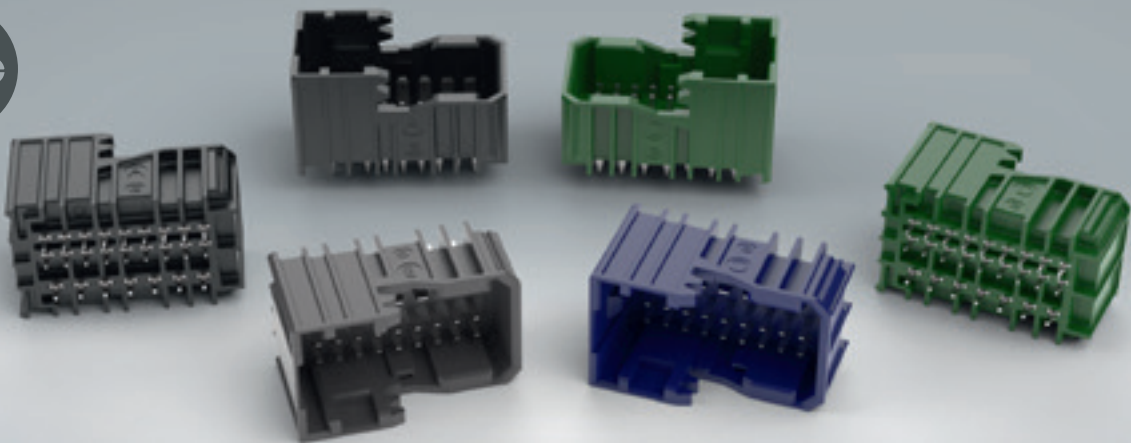
TECHNICAL DATA

| A | B | C | D | Dimensions | Part number |
|------|------|------|----|------------|-------------|
| 20.7 | 4.85 | 20.3 | 45 | 8-pin | 401100A |
| 20.7 | 4.85 | 20.3 | 60 | 12-pin | 401200A |

Measurements A - D in mm

PCB CONNECTORS

MCPIN 25-PIN, PRESS-FIT



PRODUCT SPECIFICATION

- ↳ 25-pin PCB connector series
- ↳ For voltages of 12 V and 24 V
- ↳ Maximum switching current: approx. 3 A for 1.6 mm blades and approx. 15 A for 2.8 mm blades (depending on number of poles, layout and circuit board version)
- ↳ 1.6 mm and 2.8 mm blade contacts
- ↳ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ↳ Compatible with commercial plug systems
- ↳ Additional codings and colors available on demand
- ↳ In proven flexible press-fit technology (pressure insertion tools available on demand)

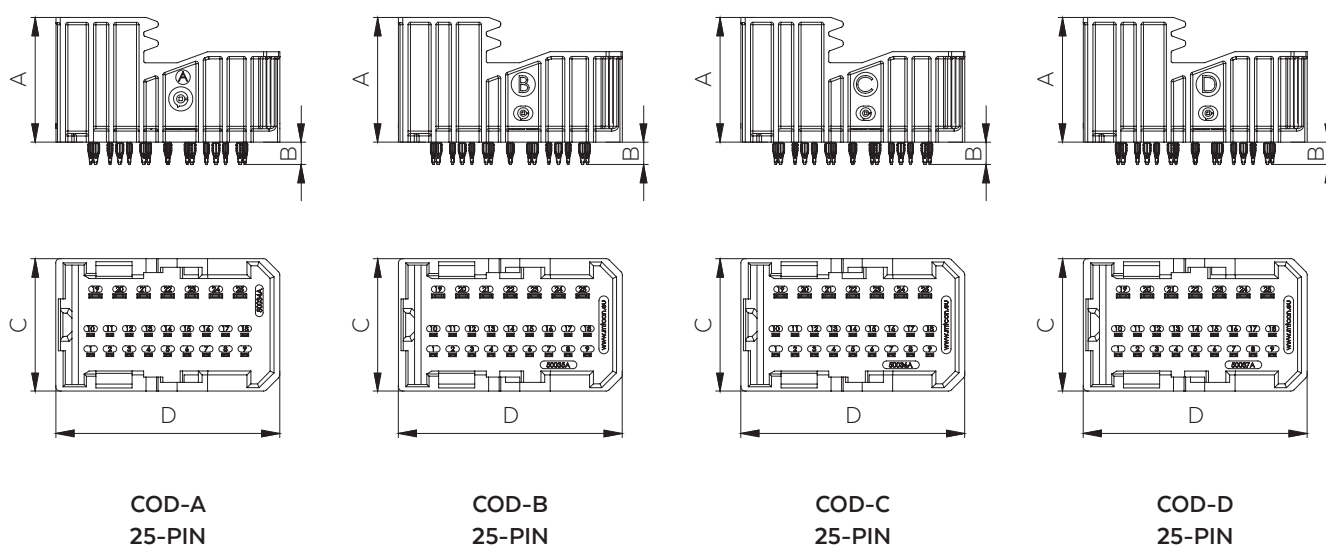


COLOR VARIANTS

| Color | Part number |
|---------|-------------|
| ● Black | 403100ABKA |
| ● Grey | 403100AGYB |
| ● Blue | 403100ABUC |
| ● Green | 403100AGND |



SCALE DRAWINGS



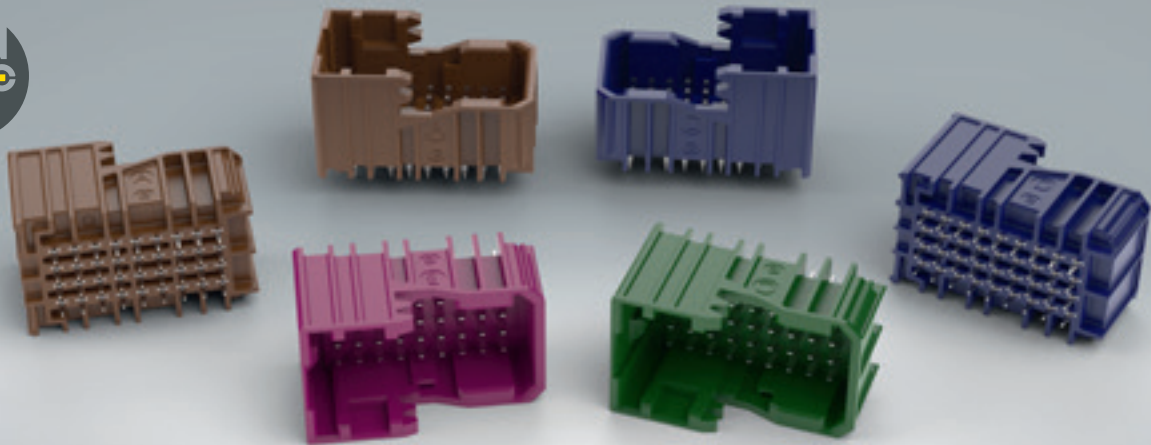
TECHNICAL DATA

| A | B | C | D | Dimensions | Part number |
|------|------|------|------|------------|-------------|
| 25.9 | 4.65 | 27.5 | 46.5 | 25-pin | 403100ABKA |
| 25.9 | 4.65 | 27.5 | 46.5 | 25-pin | 403100AGYB |
| 25.9 | 4.65 | 27.5 | 46.5 | 25-pin | 403100ABUC |
| 25.9 | 4.65 | 27.5 | 46.5 | 25-pin | 403100AGND |

Measurements A - D in mm

PCB CONNECTORS

MCPIN 36-PIN, PRESS-FIT



PRODUCT SPECIFICATION

- ↘ 36-pin PCB connector series
- ↘ For voltages of 12 V and 24 V
- ↘ Maximum switching current: approx. 3 A for 1.6 mm blades
(depending on number of poles, layout and circuit board version)
- ↘ 1.6 mm blade contacts
- ↘ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ↘ Compatible with commercial plug systems
- ↘ Additional codings and colors available on demand
- ↘ In proven flexible press-fit technology (pressure insertion tools available on demand)

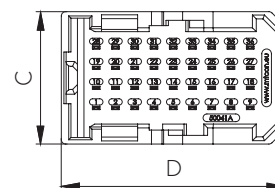
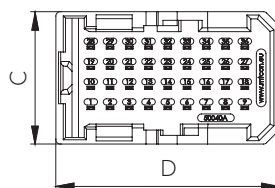
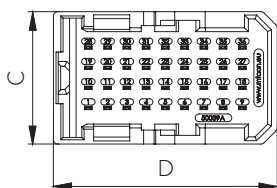
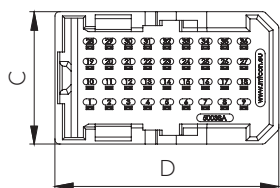
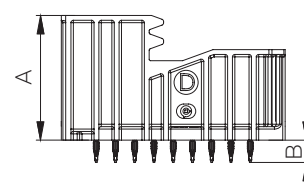
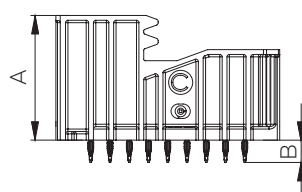
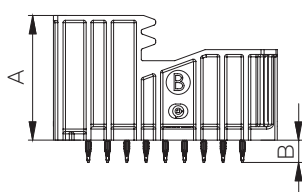
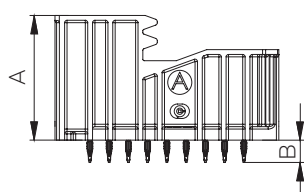


COLOR VARIANTS

| Color | Part number |
|----------|-------------|
| ● Brown | 403200ABNA |
| ● Violet | 403200AVIB |
| ● Green | 403200AGNC |
| ● Blue | 403200ABUD |



SCALE DRAWINGS



COD-A
36-PIN

COD-B
36-PIN

COD-C
36-PIN

COD-D
36-PIN

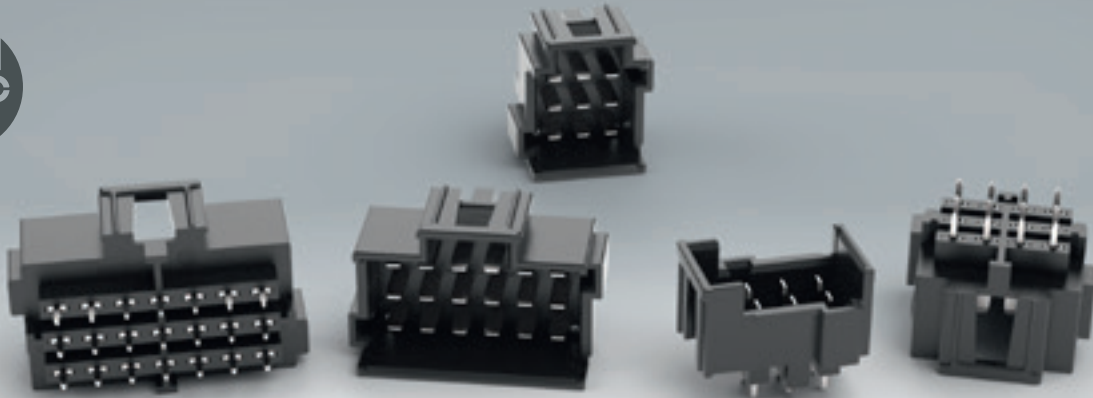
TECHNICAL DATA

| A | B | C | D | Dimensions | Part number |
|------|------|------|------|------------|-------------|
| 25.9 | 4.65 | 27.5 | 46.5 | 36-pin | 403200ABNA |
| 25.9 | 4.65 | 27.5 | 46.5 | 36-pin | 403200AVIB |
| 25.9 | 4.65 | 27.5 | 46.5 | 36-pin | 403200AGNC |
| 25.9 | 4.65 | 27.5 | 46.5 | 36-pin | 403200ABUD |

Measurements A - D in mm

PCB CONNECTORS

JPT, 3-ROWED, THT SOLDERING



PRODUCT SPECIFICATION

- 3-rowed PCB connector series, number of poles: 6 - 9 - 12 - 15 - 18 - 21
- For voltages of 12 V and 24 V
- Maximum switching current: approx. 15 A
(depending on number of poles, layout and circuit board version)
- Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- Compatible with commercial plug systems
- For THT wave soldering

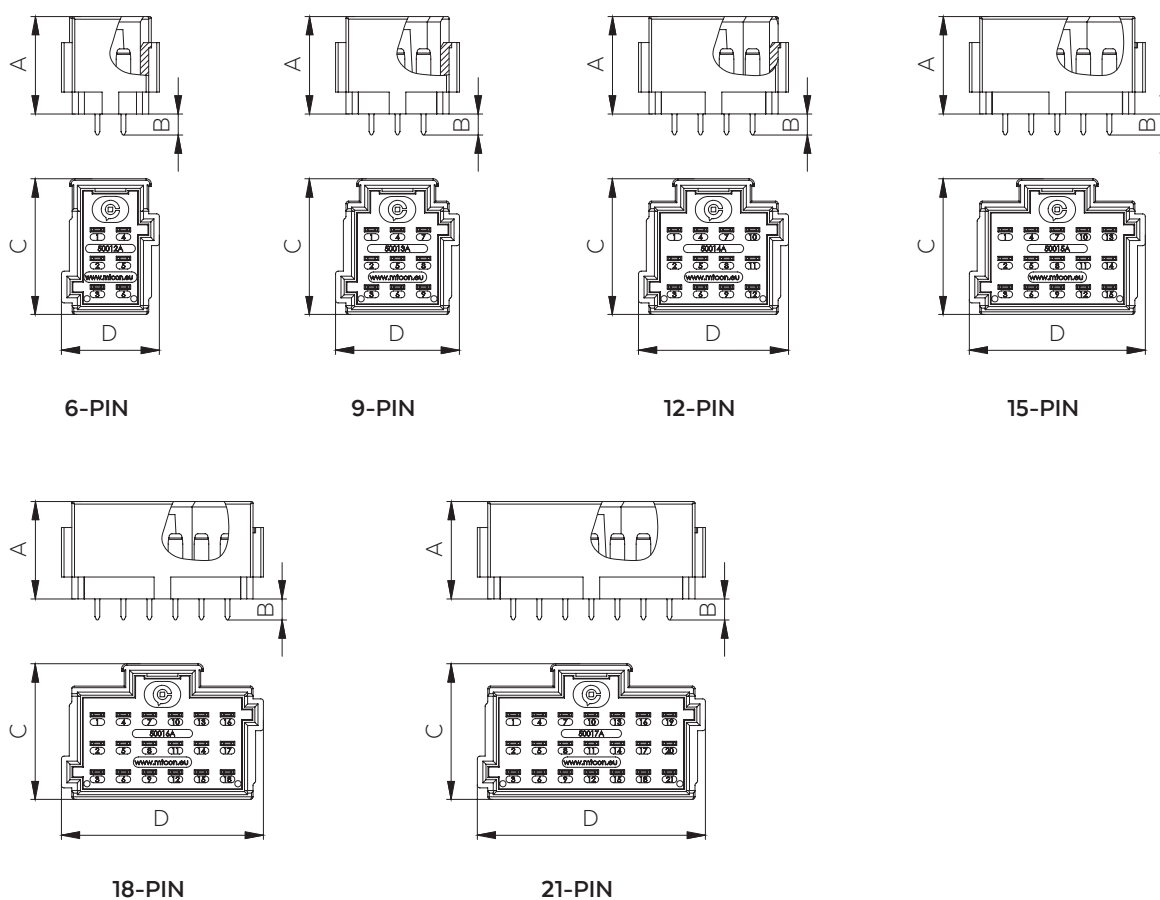


COLOR VARIANTS

| Color | Part number |
|----------|-------------|
| ● Black | 400X30ABK |
| ● Blue | 400X30ABU |
| ● Grey | 400X30AGY |
| ● Yellow | 400X30AYE |
| ● Green | 400X30AGN |
| ● Pink | 400X30APK |
| ● Brown | 400X30ABN |



SCALE DRAWINGS



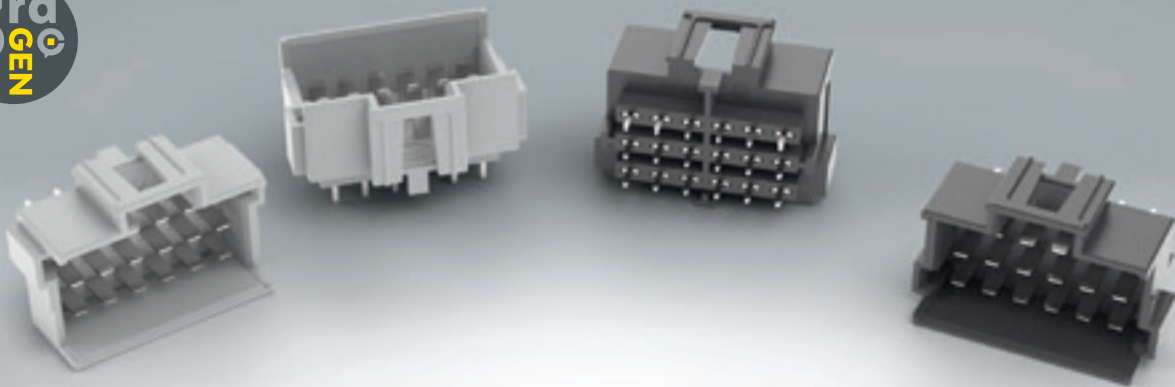
TECHNICAL DATA

| A | B | C | D | Dimensions | Part number |
|------|------|-------|------|------------|-------------|
| 18.7 | 4.05 | 26.05 | 18.8 | 6-pin | 400130A |
| 18.7 | 4.05 | 26.05 | 23.8 | 9-pin | 400230A |
| 18.7 | 4.05 | 26.05 | 28.8 | 12-pin | 400330A |
| 18.7 | 4.05 | 26.05 | 33.8 | 15-pin | 400430A |
| 18.7 | 4.05 | 26.05 | 38.8 | 18-pin | 400530A |
| 18.7 | 4.05 | 26.05 | 43.8 | 21-pin | 400630A |

Measurements A - D in mm

PCB CONNECTORS

JPT, COD, THT SOLDERING



PRODUCT SPECIFICATION

- ✚ 18-pin PCB connectors
- ✚ For voltages of 12 V and 24 V
- ✚ Maximum switching current: approx. 15 A
(depending on number of poles, layout and circuit board version)
- ✚ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ✚ Compatible with commercial plug systems
- ✚ For THT wave soldering

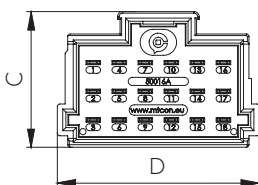
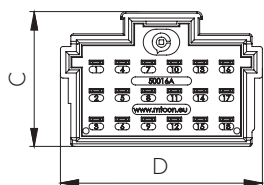
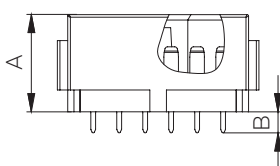
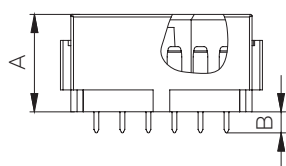


COLOR VARIANTS

| Color | Part number |
|---------|-------------|
| ● White | 400531AWHB |
| ● Grey | 400532AGYC |



SCALE DRAWINGS



18-PIN (COD-B)

18-PIN (COD-C)

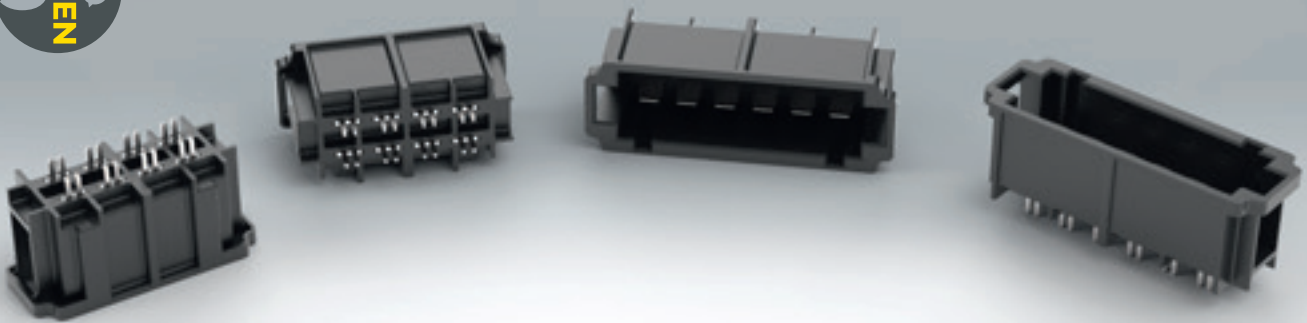
TECHNICAL DATA

| A | B | C | D | Dimensions | Part number |
|------|------|-------|------|----------------|-------------|
| 18.7 | 4.05 | 26.05 | 38.8 | 18-pin (COD-B) | 400531AWHB |
| 18.7 | 4.05 | 26.05 | 38.8 | 18-pin (COD-C) | 400532AGYC |

Measurements A - D in mm

PCB CONNECTORS

G&H, THT SOLDERING



PRODUCT SPECIFICATION

- ↳ 2-rowed PCB connector series, number of poles: 8 - 12
- ↳ For voltages of 12 V and 24 V
- ↳ Maximum switching current: approx. 40 A
(depending on number of poles, layout and circuit board version)
- ↳ 4.8 mm blade contacts
- ↳ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ↳ Compatible with commercial plug systems
- ↳ Additional codings and colors available on demand
- ↳ For THT wave soldering

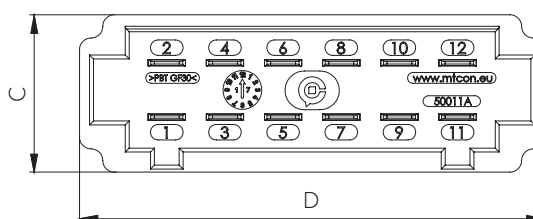
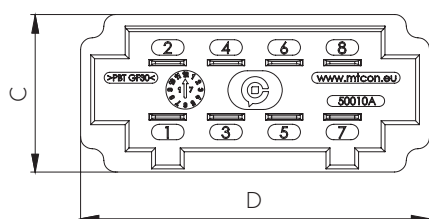
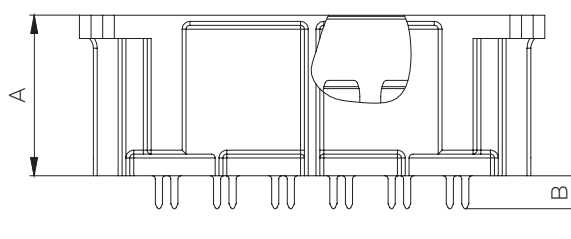
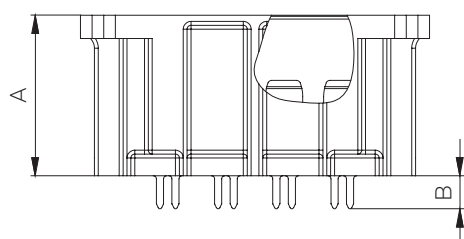


COLOR VARIANTS

| Color | Part number |
|---------|-------------|
| ● Black | 401X30ABK |
| ● Blue | 401X30ABU |
| ● White | 401X30AWH |
| ● Red | 401X30ARD |



SCALE DRAWINGS



8-PIN

12-PIN

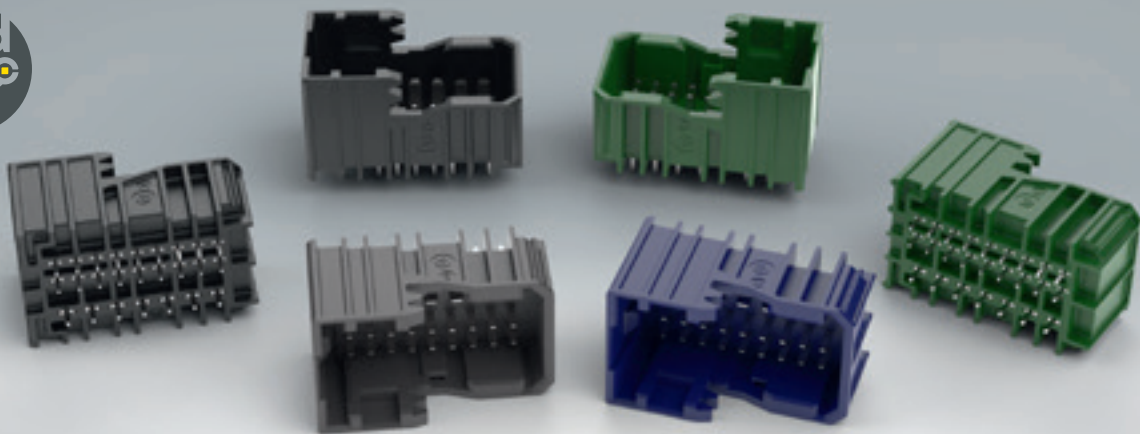
TECHNICAL DATA

| A | B | C | D | Dimensions | Part number |
|------|------|------|----|------------|-------------|
| 20.7 | 4.25 | 20.3 | 45 | 8-pin | 401130A |
| 20.7 | 4.25 | 20.3 | 60 | 12-pin | 401230A |

Measurements A - D in mm

PCB CONNECTORS

MCPIN 25-PIN, THT SOLDERING



PRODUCT SPECIFICATION

- ✚ 25-pin PCB connector series
- ✚ For voltages of 12 V and 24 V
- ✚ Maximum switching current: approx. 3 A for 1.6 mm blades and approx. 15 A for 2.8 mm blades (depending on number of poles, layout and circuit board version)
- ✚ 1.6 mm and 2.8 mm blade contacts
- ✚ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ✚ Compatible with commercial plug systems
- ✚ Additional codings and colors available on demand
- ✚ For THT wave soldering

RoHS
COMPLIANT

REACH
COMPLIANT

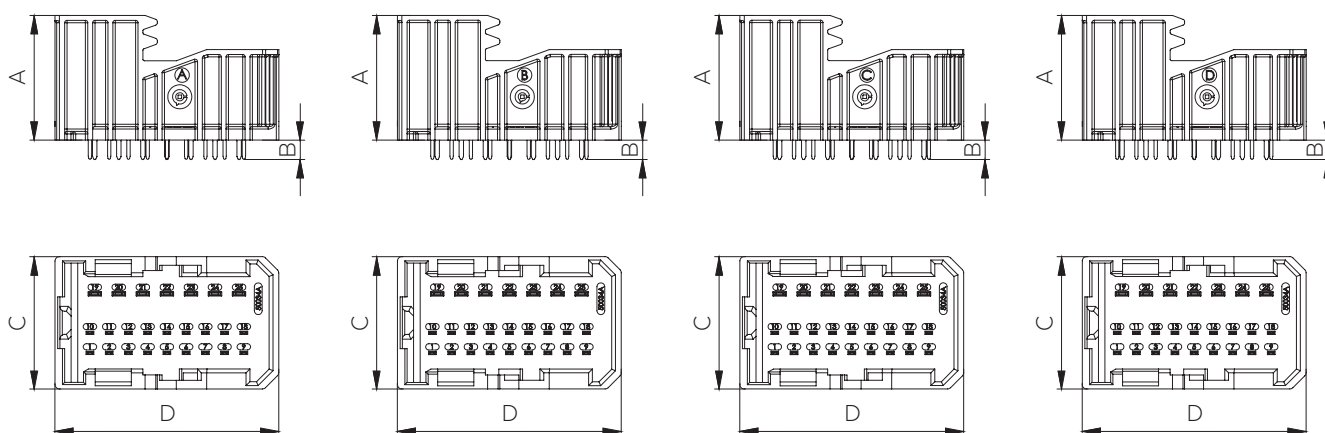
ELV
END-OF-LIFE-VEHICLES

COLOR VARIANTS

| Color | Part number |
|---------|-------------|
| ● Black | 403130ABKA |
| ● Grey | 403130AGYB |
| ● Blue | 403130ABUC |
| ● Green | 403130AGND |



SCALE DRAWINGS



COD-A
25-PIN

COD-B
25-PIN

COD-C
25-PIN

COD-D
25-PIN

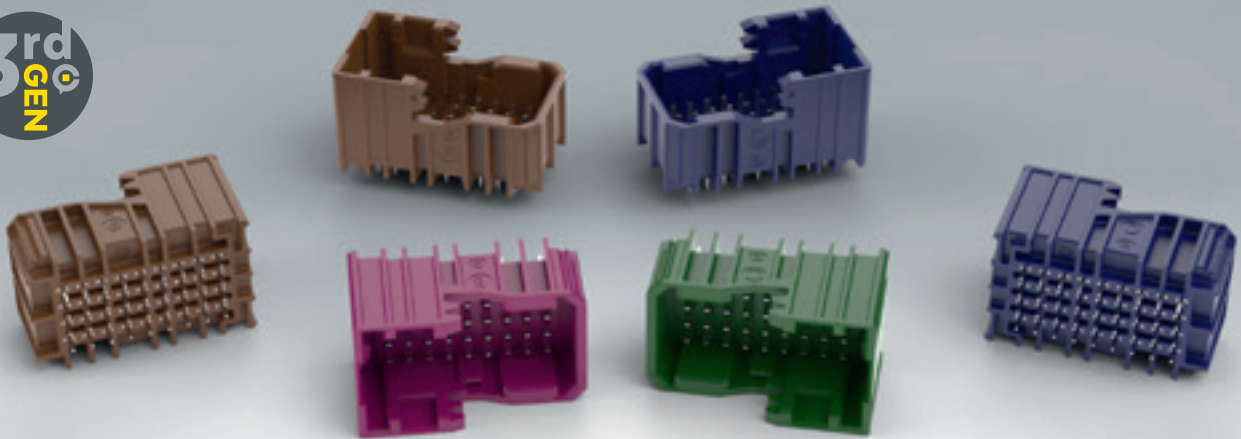
TECHNICAL DATA

| A | B | C | D | Dimensions | Part number |
|------|------|------|------|------------|-------------|
| 25.9 | 4.05 | 27.5 | 46.5 | 25-pin | 403130ABKA |
| 25.9 | 4.05 | 27.5 | 46.5 | 25-pin | 403130AGYB |
| 25.9 | 4.05 | 27.5 | 46.5 | 25-pin | 403130ABUC |
| 25.9 | 4.05 | 27.5 | 46.5 | 25-pin | 403130AGND |

Measurements A - D in mm

PCB CONNECTORS

MCPIN 36-PIN, THT SOLDERING



PRODUCT SPECIFICATION

- ↘ 36-pin PCB connector series
- ↘ For voltages of 12 V and 24 V
- ↘ Maximum switching current: approx. 3 A for 1.6 mm blades
(depending on number of poles, layout and circuit board version)
- ↘ 1.6 mm blade contacts
- ↘ Highest reliability in harsh environmental conditions (temperature change, strong vibrations, etc.)
- ↘ Compatible with commercial plug systems
- ↘ Additional codings and colors available on demand
- ↘ For THT wave soldering

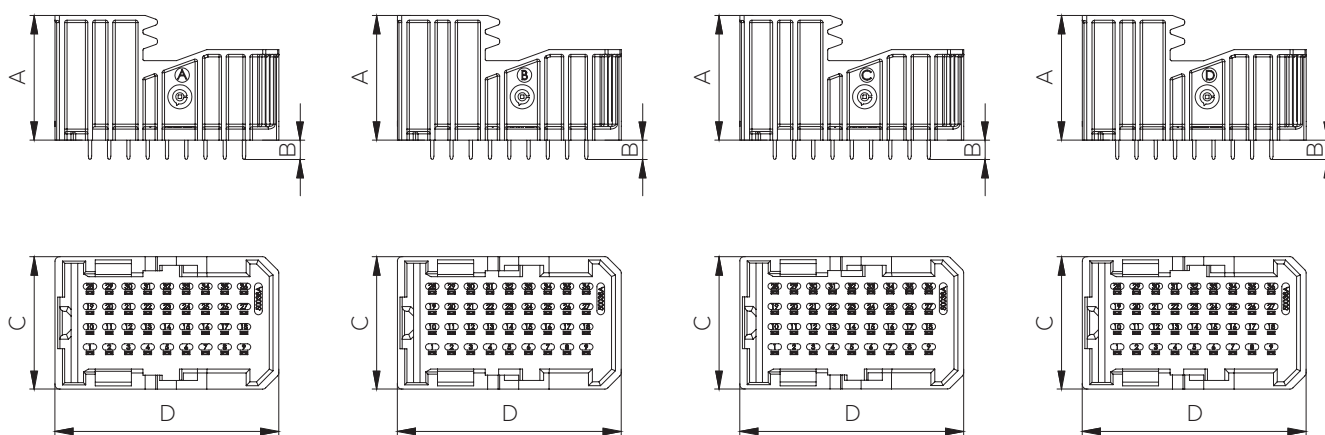


COLOR VARIANTS

| Color | Part number |
|----------|-------------|
| ● Brown | 403230ABNA |
| ● Violet | 403230AVIB |
| ● Green | 403230AGNC |
| ● Blue | 403230ABUD |



SCALE DRAWINGS



COD-A
36-PIN

COD-B
36-PIN

COD-C
36-PIN

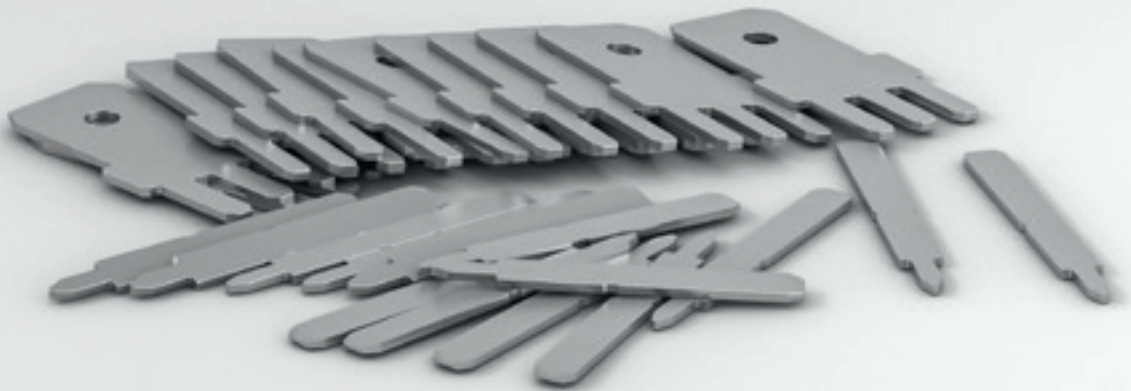
COD-D
36-PIN

TECHNICAL DATA

| A | B | C | D | Dimensions | Part number |
|------|------|------|------|------------|-------------|
| 25.9 | 4.05 | 27.5 | 46.5 | 36-pin | 403230ABNA |
| 25.9 | 4.05 | 27.5 | 46.5 | 36-pin | 403230AVIB |
| 25.9 | 4.05 | 27.5 | 46.5 | 36-pin | 403230AGNC |
| 25.9 | 4.05 | 27.5 | 46.5 | 36-pin | 403230ABUD |

Measurements A - D in mm

CONTACT ELEMENTS PRESS-FIT IN MASSIVE PRESS-FIT ZONE



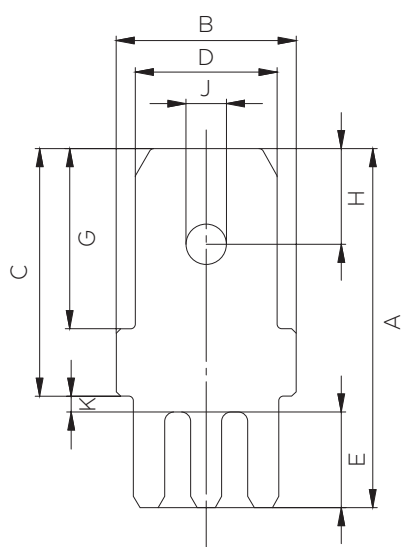
PRODUCT SPECIFICATION

- ↳ Modern press-fit and soldering technology (THT)
- ↳ Standard components/catalog products
- ↳ Customer-specific designs (shape, size, material, surface etc.) available on demand

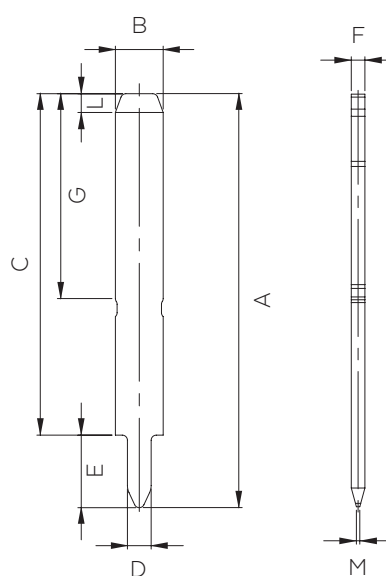




SCALE DRAWINGS



404100A



15.1.0001

TECHNICAL DATA

| A | B | C | D | E | F | G | H | J | K | L | M | Dimensions | Part number |
|-------|-----|----|------|------|-----|----|------|------|-----|-----|-----|------------|-------------|
| 15.95 | 8 | 11 | 6.3 | 4.25 | 0.8 | 8 | 4.25 | Ø1.8 | 0.7 | - | - | 6.3 x 0.8 | 404100A |
| 24.25 | 2.8 | 20 | 1.39 | 4.25 | 0.8 | 12 | - | - | - | 1.1 | 0.2 | 2.8 x 0.8 | 15.1.0001 |

Measurements A - M and dimensions in mm

TECHNICAL SUPPORT
YOUR VISION - OUR PROCESS





TECHNICAL SUPPORT

OUR CONSULTANCY AND SUPPORT SERVICES

ANALYSIS TO TARGETTED CONCEPT DEVELOPMENT

Long market expertise. Competent consultancy. Reliable solutions – even for the most complex press-fit challenges. At MTCONNECTIVITY we have it all!

You want to tap into our press-fit knowledge? You want us to design your ideal press-fit product, no matter what size, material, structure and functionality? We are happy to analyze your application needs, develop customized concepts, and implement the solution for you.

We don't stop where most consultants do:
We will take you the whole route from idea to implementation.
For your success!



YOUR PERSONAL CONSULTANT: MARIO TOLJ (SENIOR CONSULTANT)

Mario Tolj, born in 1973, graduate industrial engineer (Dipl. Wirtschaftsingenieur), trained technical drawer and IHK-certified designer. The father of three children speaks three languages and has registered several patents in the course of his business career. Mario Tolj is a certified IHK trainer and loves to transfer his knowledge to train people and implement new projects.

Before starting MTCONNECTIVITY, he was project manager at ERNI Electronics GmbH, where he was responsible for the 5 year sales, marketing and profit strategy.

Before that he was owner of imt engineering office, which became the imt engineering GmbH subsidiary of WE group, with Mario Tolj as managing director.





A GLANCE INTO OUR PORTFOLIO

APPLICATION: CENTRAL ELECTRICS/PRESS-FIT TECHNOLOGY

We offer specific press-fit and circuit board consultancy and training services for all relevant departments.

You can order the following services, either individually or as a package:

CIRCUIT BOARD TRAINING

Basics

Basic circuit board and manufacturing insights.

Expert insights

High current circuit board technology.

PRESS-FIT TRAINING

Basics

Basic insights into press-fit technology.

Expert insights

Advanced press-fit technology (basic press-fit training required for admission to advanced training).

MANAGEMENT CONSULTANCY

We advise and support your management in the development and implementation of central electrics strategies.

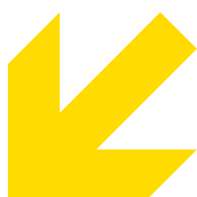
CONSULTANCY \ SUPPORT

We help you with:

- Development
- Layout
- Project management
- Product management
- Manufacturing
- Quality assurance
- Purchasing
- Sales

all relevant central electrics aspects (with a focus on press-fit technology).

SEND US YOUR
NON-BINDING
INQUIRY



WHITE PAPER HIGH VOLTAGE

DESIGN OF HIGH VOLTAGE ELECTRONICS BOARDS FOR AUTOMOTIVE APPLICATIONS

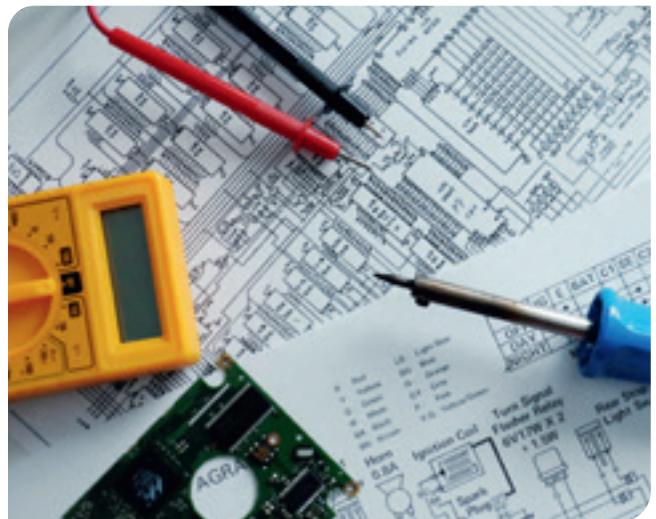
Motors and implements of next generation electric vehicles require a reliable power supply. High power management distribution puts considerable stress on the electronic boards. This white paper discusses design, components, structure, and implementation of high-performance/high voltage electronic boards, using a hydrogen fuel cell truck as an example.

Automotive circuit boards must be extremely robust, durable, and reliable. This is true for electric passenger cars, and even more so for electric trucks and offroad vehicles. The resulting central electric challenges must be addressed in the layout and development of circuit boards for high current applications. The electric components and their design in the electronics board play a major role in this context.

The central electric unit distributes power in the vehicle and ensures supply-line fusing. Circuit board designers require maximum circuit board flexibility to be able to integrate additional functionalities, e.g. more automation and artificial intelligence features and a growing number of advanced security and driver assistance systems. Circuit board design must be as cost effective and functional as possible, while ensuring highest quality standards and allowing for individual customization and affordability even in small and medium size batches. Designers also want to be able to develop high voltage circuit boards specifically for emerging niche markets, e.g. agricultural and construction machines, public vehicles etc.)

BLACK BOX SOLUTION

The central electric is often designed as a simple distribution board on circuit board technology, using copper rail technology and hard wiring. This construction, however, cannot easily be extended and may be subject to fracture in extreme shaking or vibration. For next generation high voltage applications the central electric can be expanded with a »black box« integrating switches, relays and other core products on the circuit board. This black box will not only manage power distribution, but will also bring intelligence to the circuit board.





CONNECTORS FOR HIGH POWER CIRCUIT BOARDS

Press-fit connectors enable direct mounting of the components on the circuit board without requiring soldering or additional cabling, thus ensuring long durability and robustness of the central electric even in the most demanding environmental conditions.

Advantages of a circuit board system solution

- Reduced cost
- Reduced assembly time
- Reduced complexity
- Reduced amount of product numbers in purchasing
- High reliability, reduced number of error sources
- Copper rail and press-fit technology (solder-free high power connections)
- Customized design
- Reduced space requirements
- Easy spare part access
- Reduced weight

Advantages of MTCO's press-fit connection

- 90 % lower electric resistance
- 25 % lower operating temperature
- Min. 80 N holding force per circuit board pin
- Gas-tight, corrosion-free connections
- No pin/soldering interface
- No soldering/PCB interface
- No heat during assembly
- Component assembly from both sides
- No thermal stress on the components

MTCON CIRCUIT BOARD EXPERTISE

In the Consulting business unit, MTCO supports circuit board manufacturers in the design of optimized central electric solutions for demanding automotive applications.



Central technology black box H2 vehicle



High-voltage battery pack

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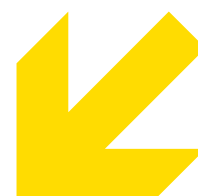
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