MTCONNECTIVITY

ISSUE 2021-03

MTCONNECTIVITY

PRODUCT CATALOG


POWER UP AND CONNECT YOUR PCB WITH MTCONNECTIVITY:
Power elements from 10 A to 1000 A (and more)
Fuse holders and relay sockets
PCB connectors (wire2board)


PARTS IN
PRESS-FIT &
SOLDERABLE
VERSIONS

INHALT
MAKE THE CHANGE

POWER2PCB

CONNECTORS

TECHNICAL SUPPORT

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: MTCON 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:

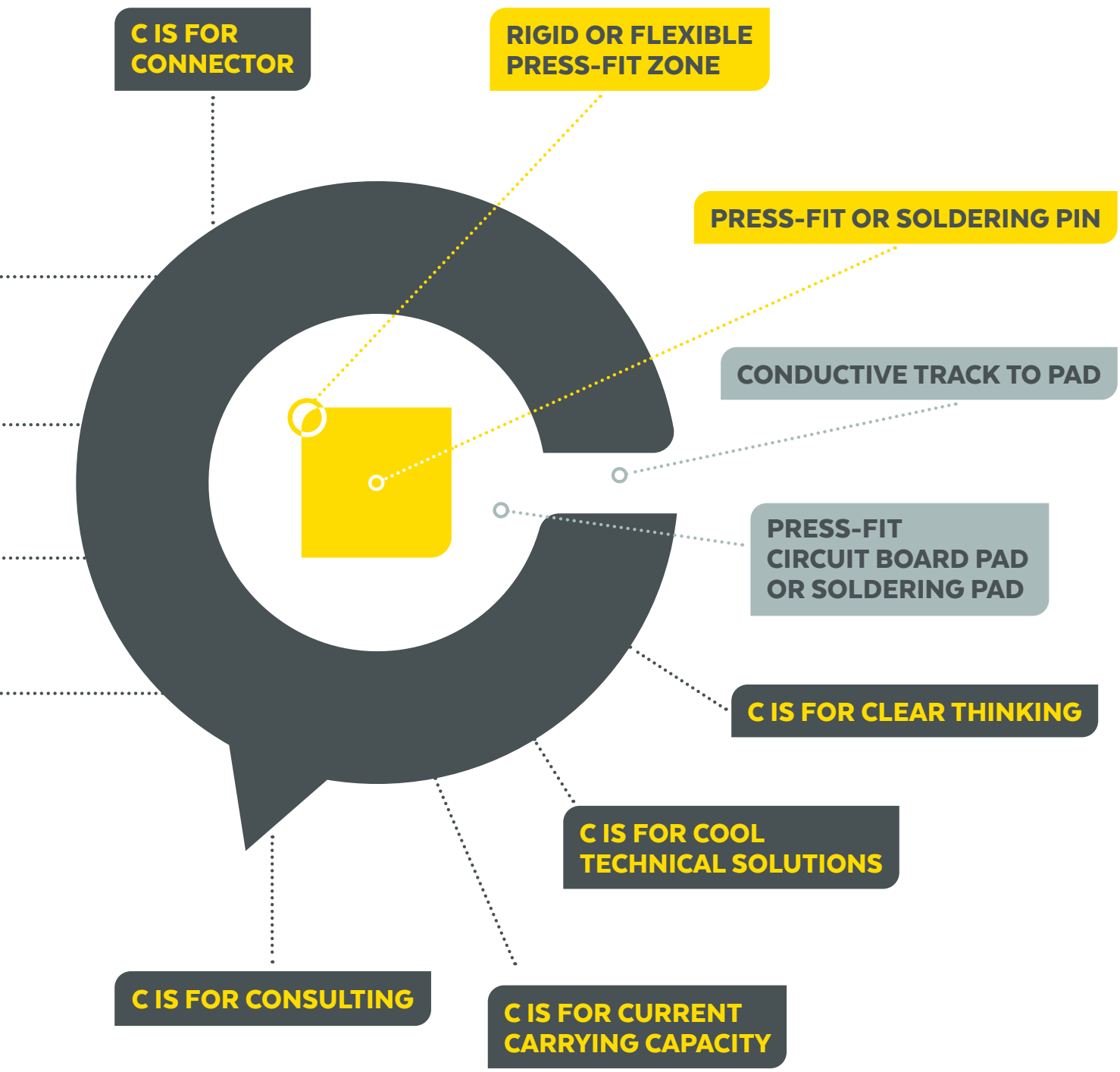
C IS FOR CONTACT (TECHNICAL, CIRCUIT BOARD/PIN)

C IS FOR CONTACT (PERSON TO PERSON)

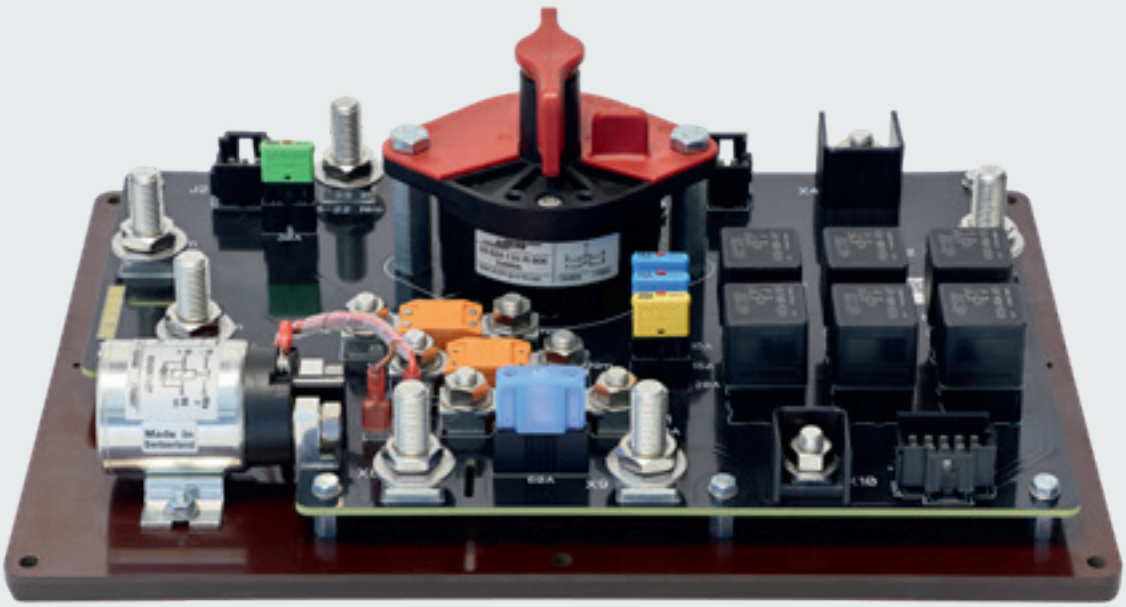
C IS FOR CORRECT DEFINITION

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 cental electric system equipped with MTCON 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

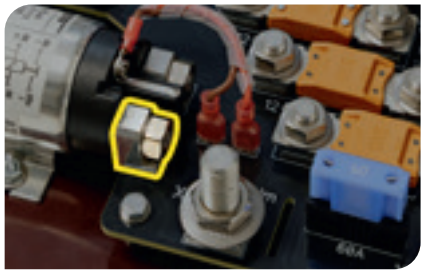
↘ **Page 32 – 33**

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

↘ **Page 60 – 61**



POWER EDGE

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

Picture: Power Edge M8

↘ **Page 42 – 45**

FUSE HOLDERS

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

Picture: Maxi fuse holder

↘ **Page 222 – 223**

PCB CONNECTORS

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

Picture: JPT 3-rowed, 15-pin

↘ **Page 250 – 251**

APPLICATION EXAMPLES
ELECTRIC VEHICLES (HYDROGEN FUEL CELL GARBAGE TRUCK)

SILENT, EMISSION-FREE, INNOVATIVE

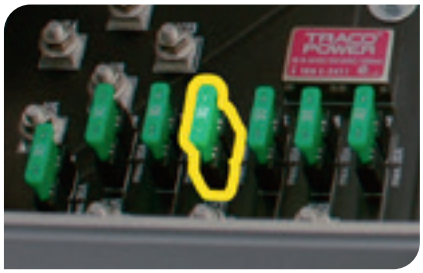
The new Faun hydrogen fuel cell garbage truck prototypes (Blue Power) for even cleaner, more silent and more environmentally friendly garbage collection. The central electric assembly with current sensing is equipped with our MTCON high performance componentes.

POWER TOWER

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

Picture: Power Tower M5

↘ **Page 32 – 33**

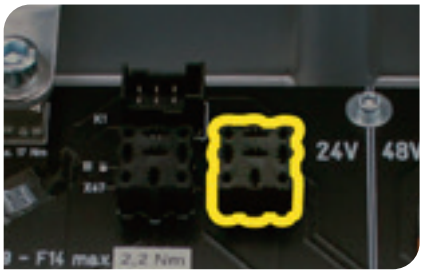


FUSE HOLDERS

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

↘ **Page 220 – 221**

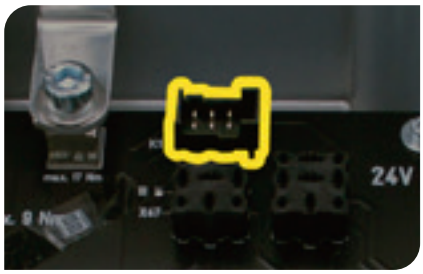


RELAY SOCKETS

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

Picture: Relay socket 9-pin

↘ **Page 236 – 237**



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 sytems.

Picture: JPT 3-rowed

↘ **Page 250 – 251**

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

Vaccuum 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
- Elektrostatic 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 cusomized 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 % recycable

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 MTCON experts and MTCON technology know-how

BRAND YOUR OWN COMPONENTS

Brand your MTCON 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.

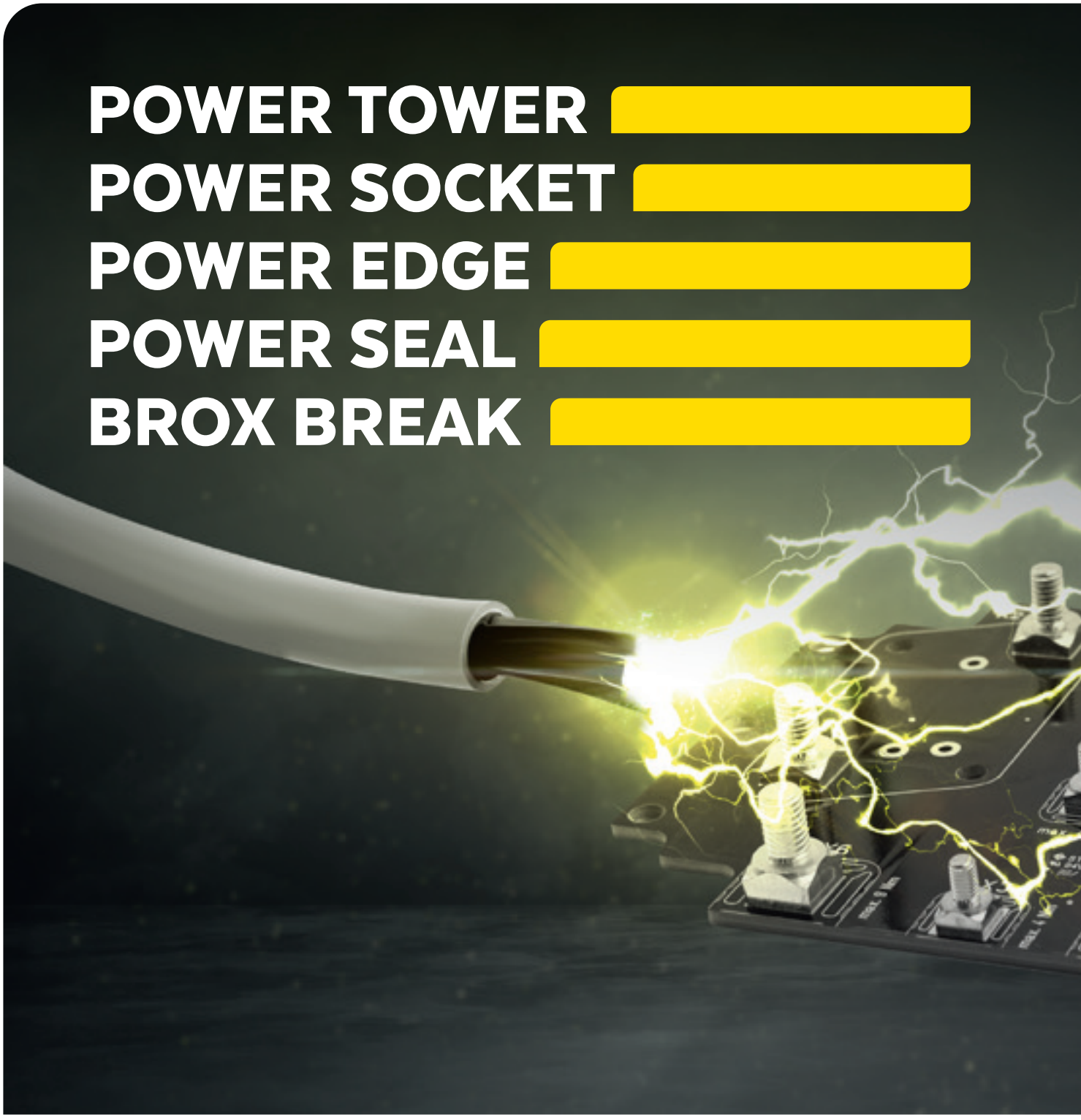
www.BlueBrass.com

MTCON SAMPLE BOX

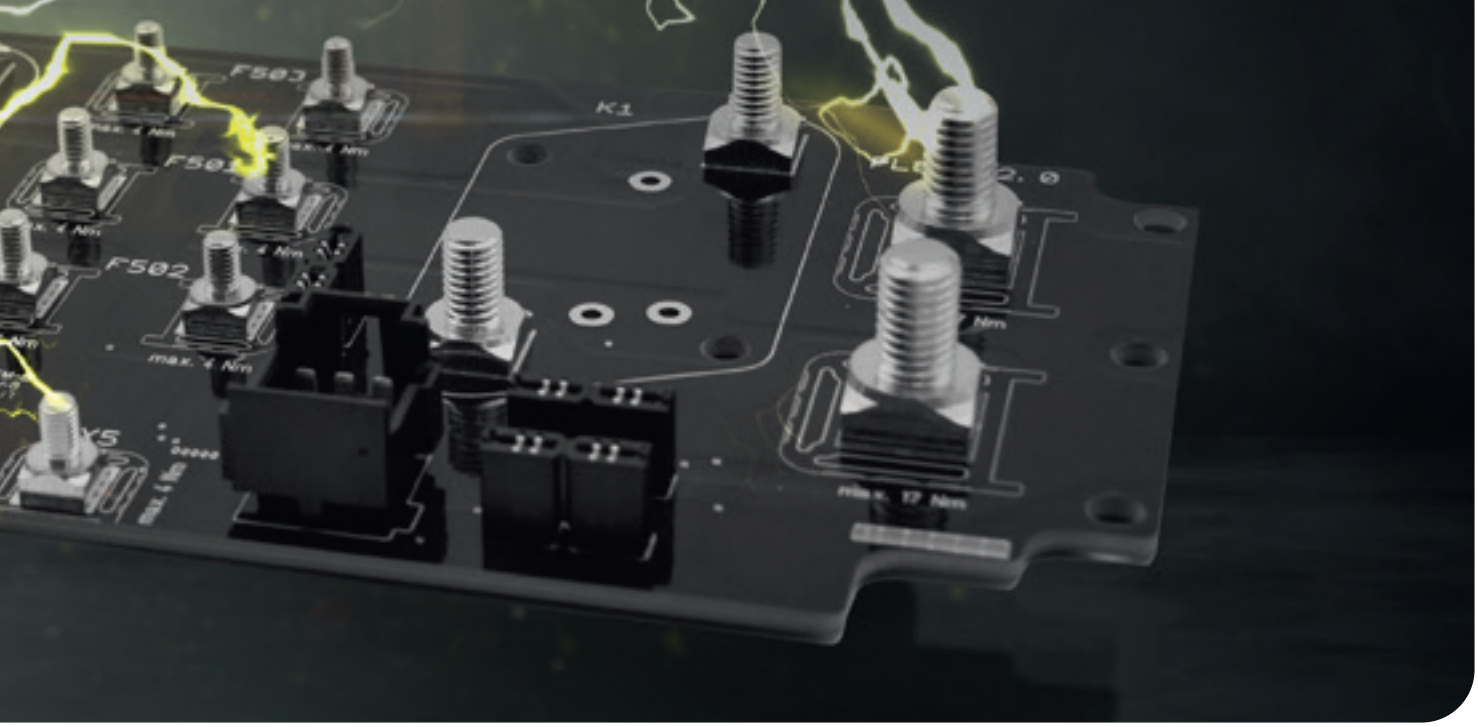
For new customers: Experience our POWER2PCB versatility. Our Sample Box features 13 products from our portfolio for testing and getting a feel of our quality. Contains standard elements, press-fit and soldering products and our power elements.

- 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 PROTECTOR
POWER 2
POWER CROWN
BIZON BLOCK
POWER SPACER
POWER SMD

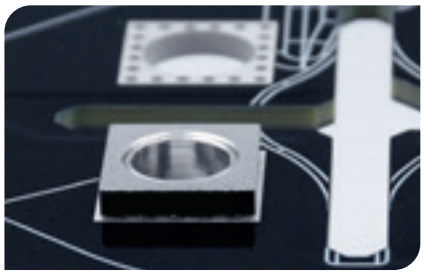


APPLICATION EXAMPLES
TECHNICAL DATA

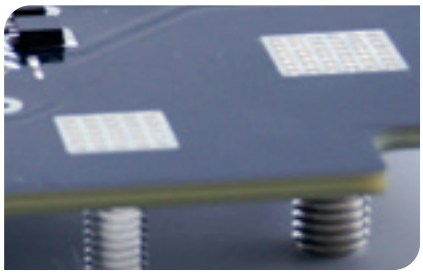
Contact protection around the power element, to prevent short circuits caused by touching cable lugs connected to juxtaposed power elements.

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

Two angled power elements at a defined distance for mechanical and eletrical connection of high-current relays to the cirucuit 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) ti 10 (hard)
Young's modulus:	96 GPa
HB:	90 – 175

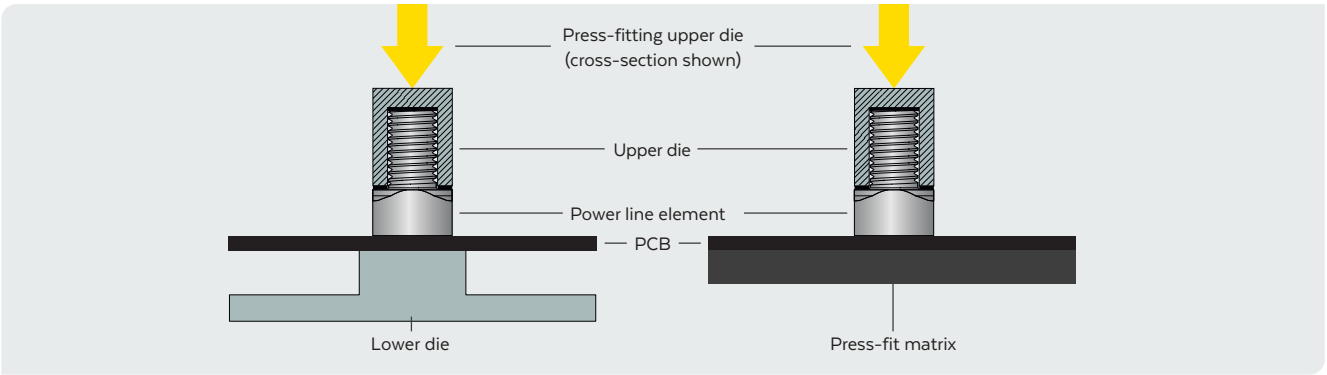
Resulting maximum torque for each thread in brass (MS 63), according to DIN 267 part 25 (fracture torque):

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

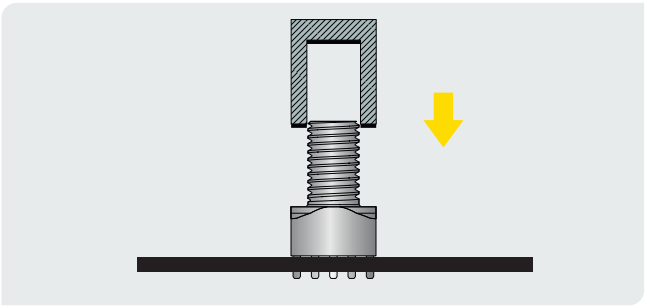
Measurements M3 – M12 in Nm

GENERAL GUIDELINES
PRESS-FITTING

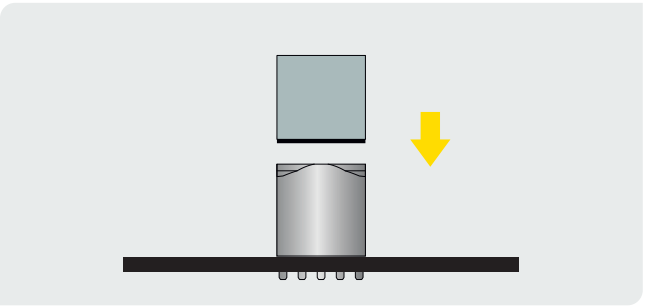
LOWER DIE OR PRESS-FIT MATRIX



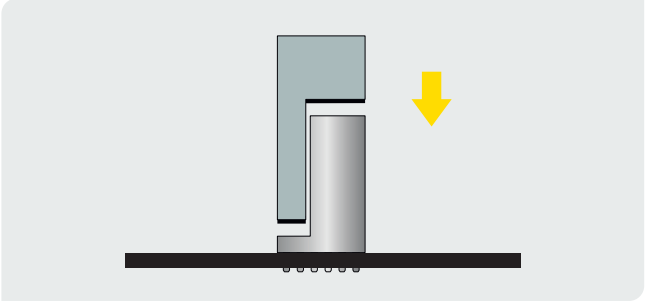
UPPER DIE



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

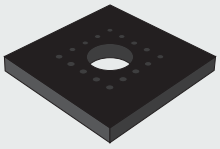
1.450 ± 0.05 mm	
Copper – in hole:	min. 25 µm max. 80 µm
Annular ring:	min. 125 µm

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

GENERAL GUIDELINES
TWO-PIECE COMPONENTS

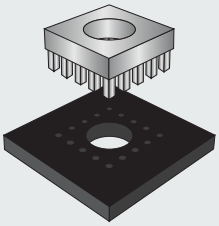
Why use two-part power line elements?

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



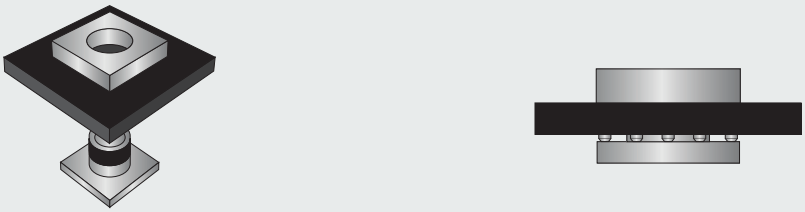
1.

Choose a circuit board with suitable specifications from our catalog.



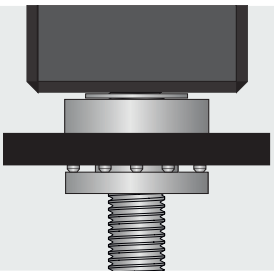
2.

Press the base into the board from above.



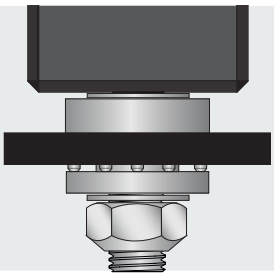
3.

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



4.

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

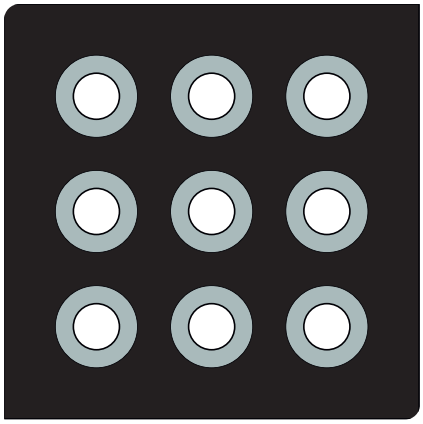


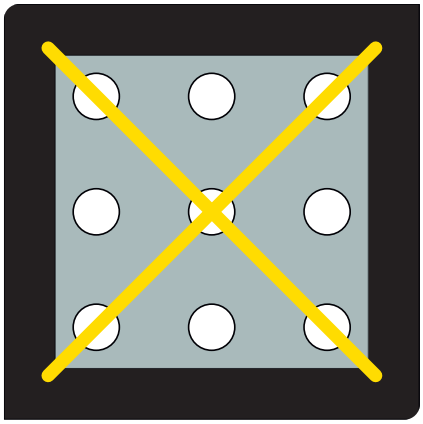
5.

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 µm. Pads across the entire area must be avoided.



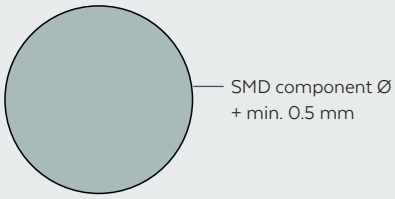


Please inform us with your enquiry if you intend to solder our standard components. We aim to guarantee solderability of our standard press-fit components for at least one year.

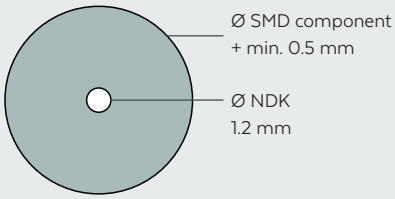
QUESTIONS?
WE ARE ALWAYS
HAPPY TO HELP!

GENERAL GUIDELINES
SOLDERING (SMT)

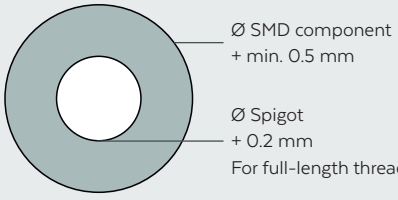
- Pad diameter min. 0.5 mm larger than component
- Vias all around the pad for greater current carrying capacity
- Solder paste thickness: 150 µm to 200 µm
- Please enquire about suitable solder pastes for you application



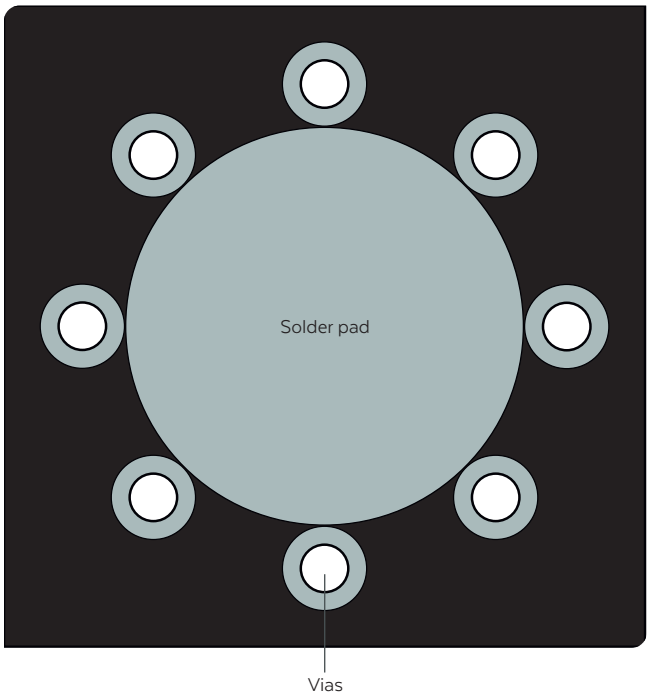
Solder pad



Solder pad with spigot



Solder pad for full-length internal thread

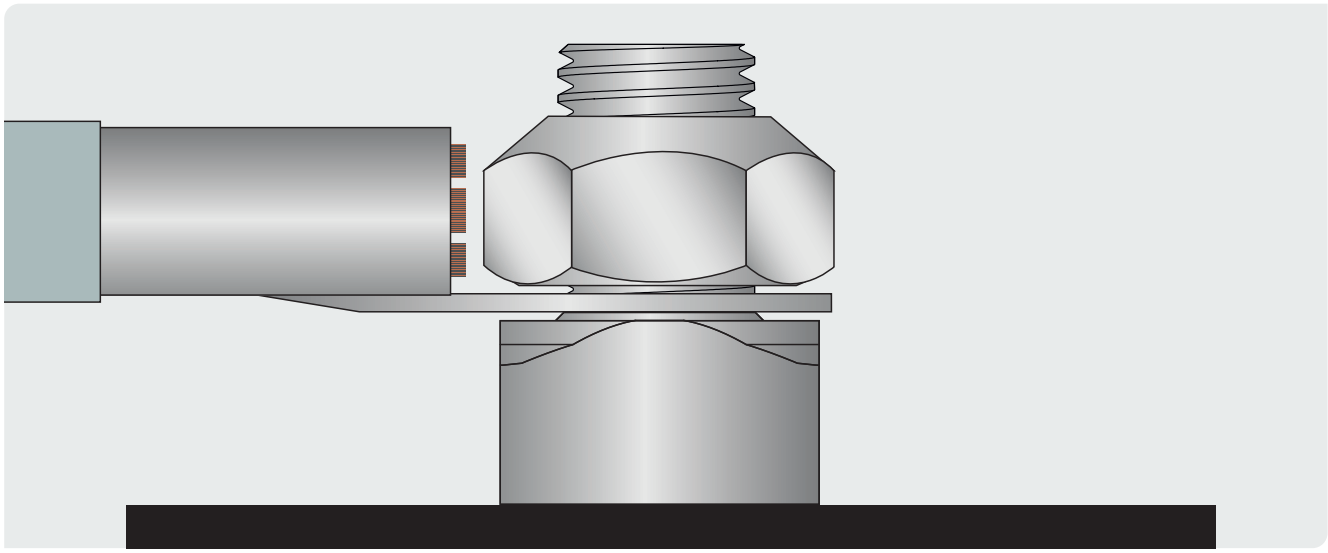


DERATING CURVES
NOTES

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 cuvers 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.

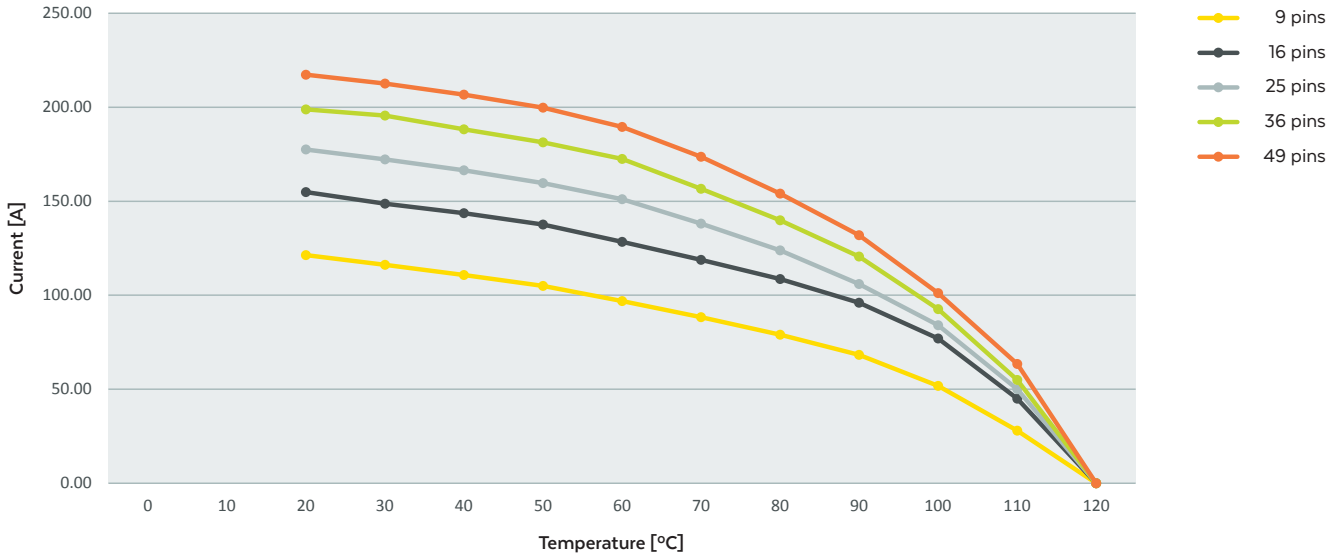
We are always happy to advise you and help you with the design and execution of these tests.

DERATING CURVE
PINS ACROSS ENTIRE SURFACE / PINS IN TWO ROWS

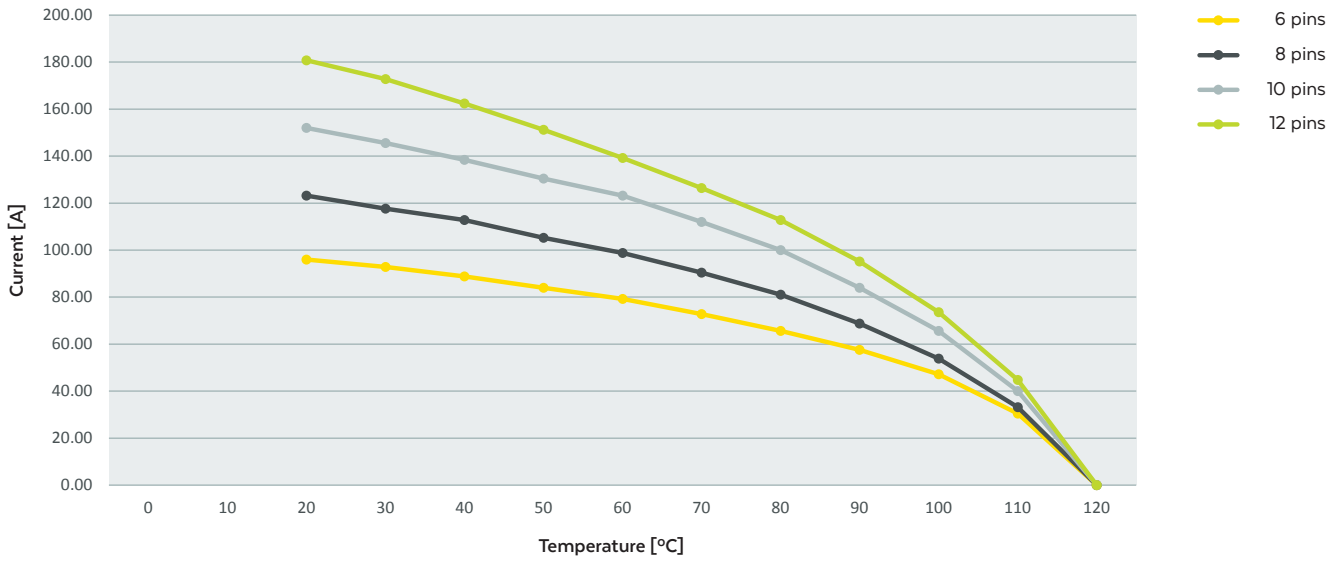
Derating curves are snapshots under test conditions!
Testing was undertaken using a two-layer circuit board, with 70 µm copper.

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.

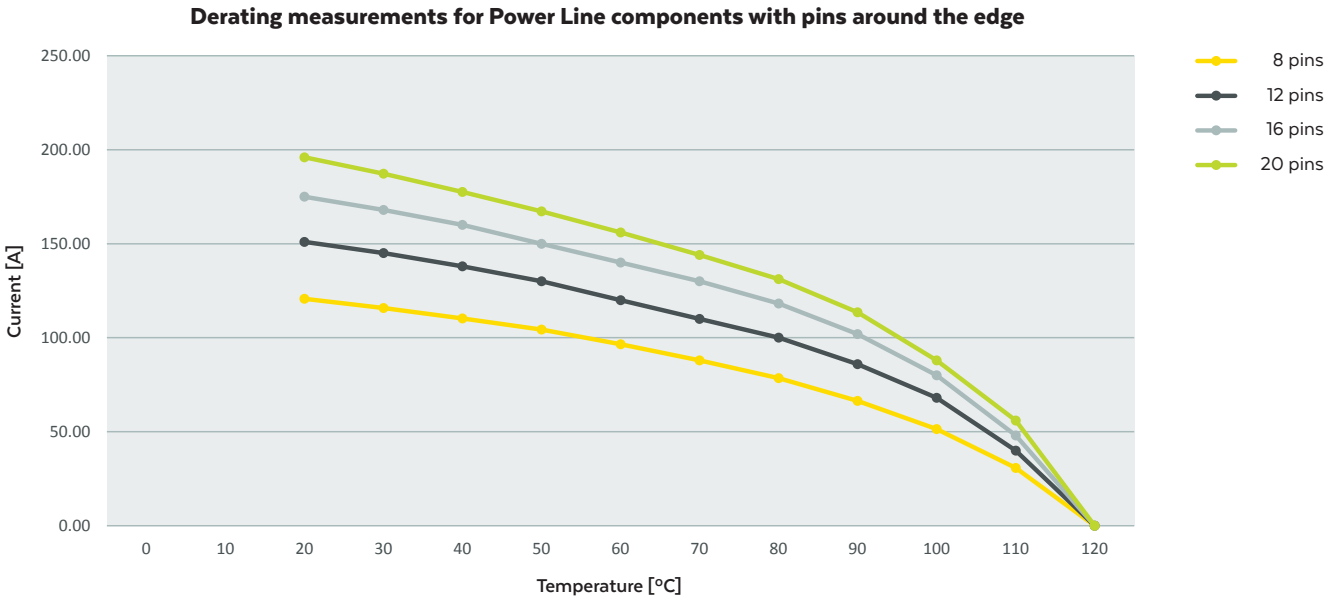
Derating measurements for Power Line components with pins across entire surface

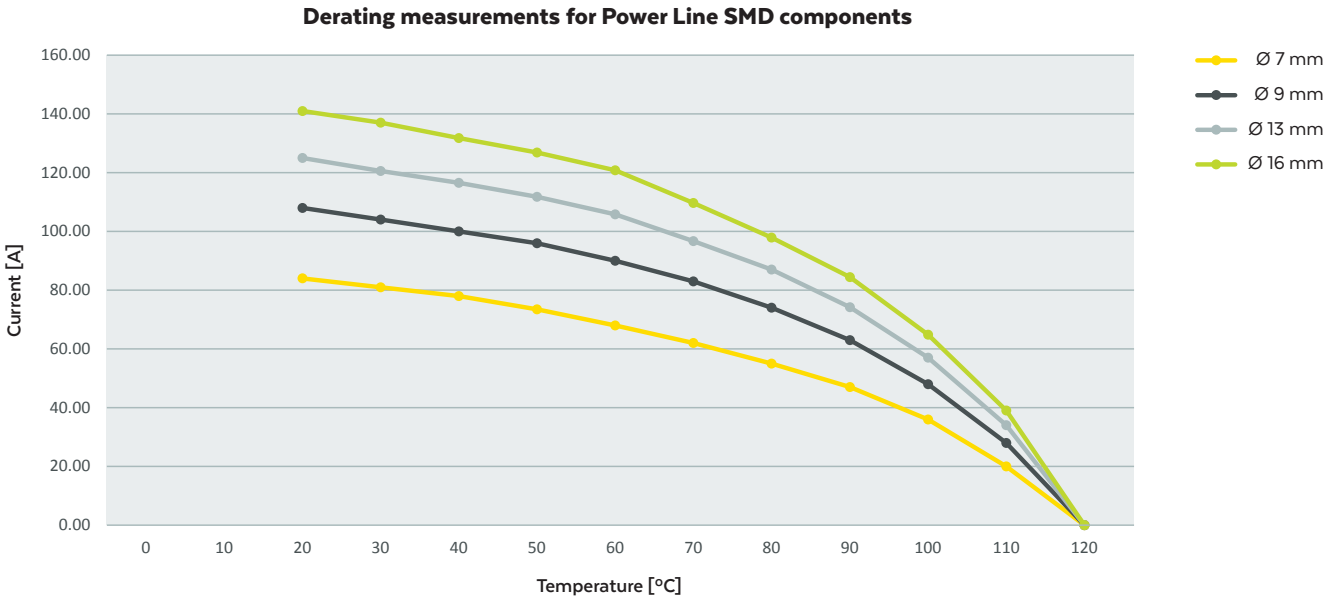


Derating measurements for Power Line components with pins in two rows

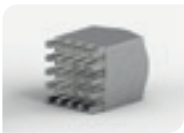


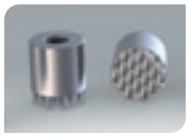
DERATING CURVE
PINS AROUND EDGE / SMD

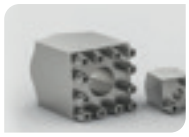




PRODUCT OVERVIEW
PRESS-FIT

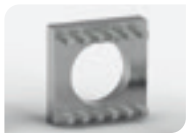
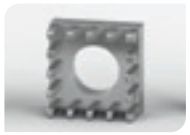
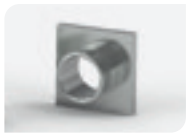
	Number of pins	4	6	8	9	10	12	16	20	25	36	49
	POWER TOWER pins across entire surface				M3 M4 M5			M4 M5		M6 M8	M10	M12
	POWER TOWER RS mates with Radsok® pins across entire surface							Ø 3.2		Ø 6	Ø 8	
	POWER SOCKET pins across entire surface	M3			M3			M4 M5 M6		M8	M10	
	POWER SOCKET pins in two rows		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	12	21
	POWER TOWER SEAL Pinanordnung vollflächig		M6, M8
	POWER SOCKET SEAL Pinanordnung vollflächig	M6	M6, M8
	POWER SOCKET RUND Pinanordnung vollflächig		M6

	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

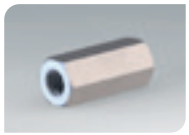
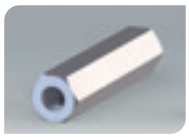
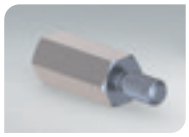
	POWER PROTECTOR	Suitable for Power Tower and Power Socket 7, 9, 13 and 16 basic size

PRODUCT OVERVIEW
PRESS-FIT

	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				

	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	3 around edge
	BIZON BLOCK POWER TOWER	M5		M6	M5
	BIZON BLOCK POWER SOCKET	M5, M6	M5, M6		

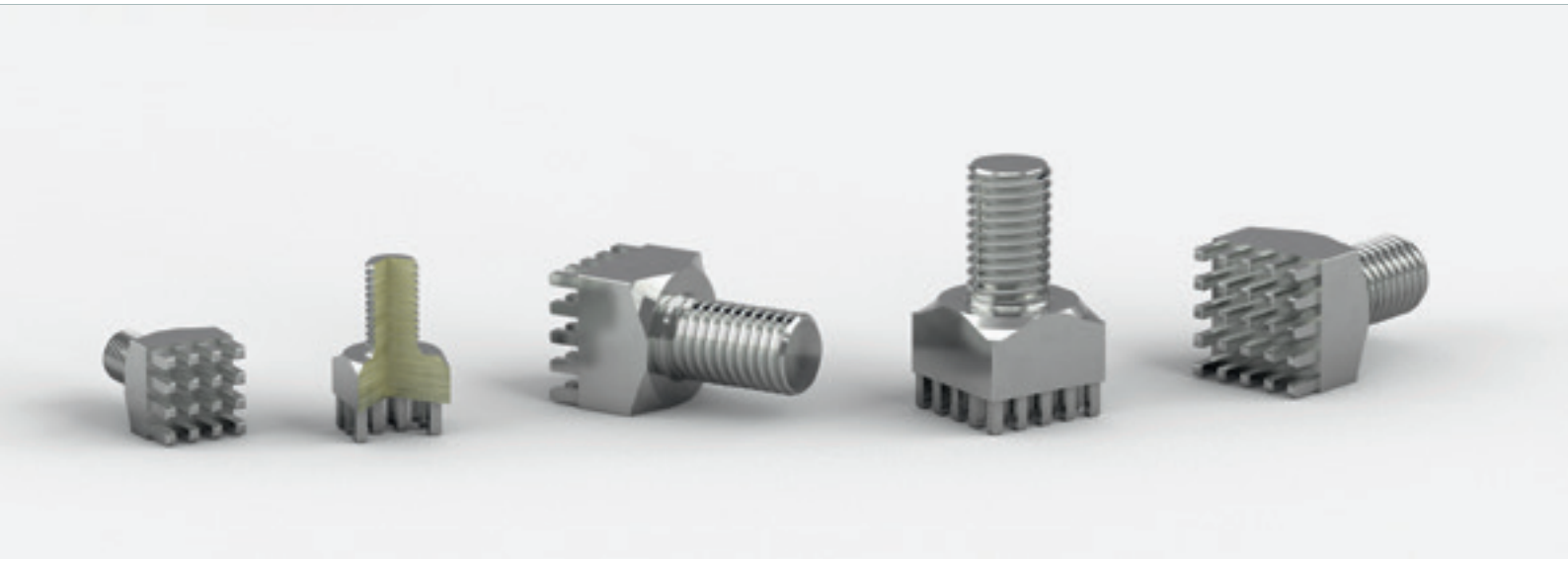
	Wrench sizes	4	5	5,5	7	Ø
	**POWER SPACER Internal-Internal full-length**	M2, M2.5	M2.5, M3	M3, M3 (Steel, white galvanized)	M4	
	**POWER SPACER Internal-Internal thread both sides**	M2, M2.5	M2.5, M3	M2.5, M3	M4	
	**POWER SPACER Internal-External**	M2.5	M2, M2.5, M3	M3, M3 (Steel: white galvanized, blue 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

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

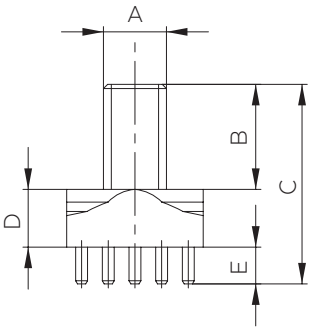
MATERIAL INFORMATION

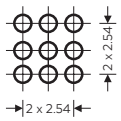
Option	Part number
BlueBrass	01.1.00XX.BB

REACH RoHS COMPLIANT NEW VERSION

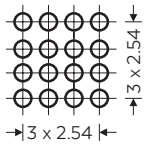
Our product series 01.1.00XX.BB meet all requirements of the which will come into force in the future REACH, RoHS and ELV regulations, just like the future tightened regulation the required lead-free.

SCALE DRAWINGS

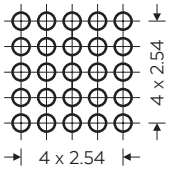




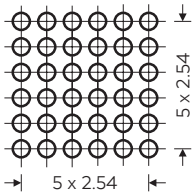
B1



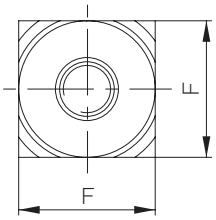
B2

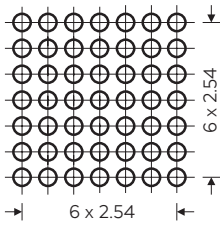


B3



B4





B5

TECHNICAL DATA

A	B	C	D	E	F	No. of pins/ drilling pattern	Mass [g]	Part number
M3	5	11.5	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	26	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
- Plugable 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

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

MATERIAL INFORMATION

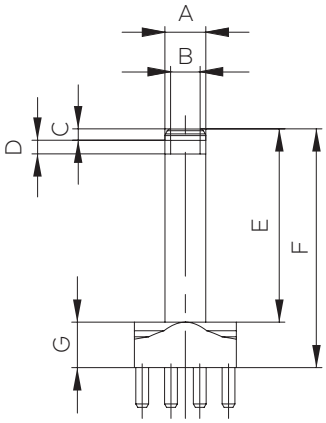
Option	Part number
BlueBrass	01.7.000X.BB

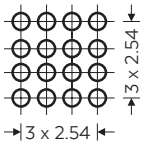
REACH RoHS COMPLIANT NEW VERSION

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.

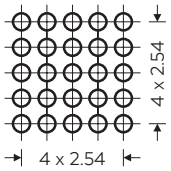
CO-ENGINEERED WITH Amphenol

SCALE DRAWINGS

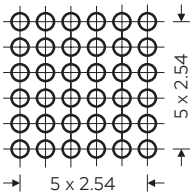




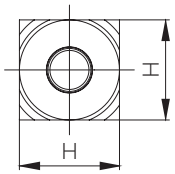
B2



B3



B4

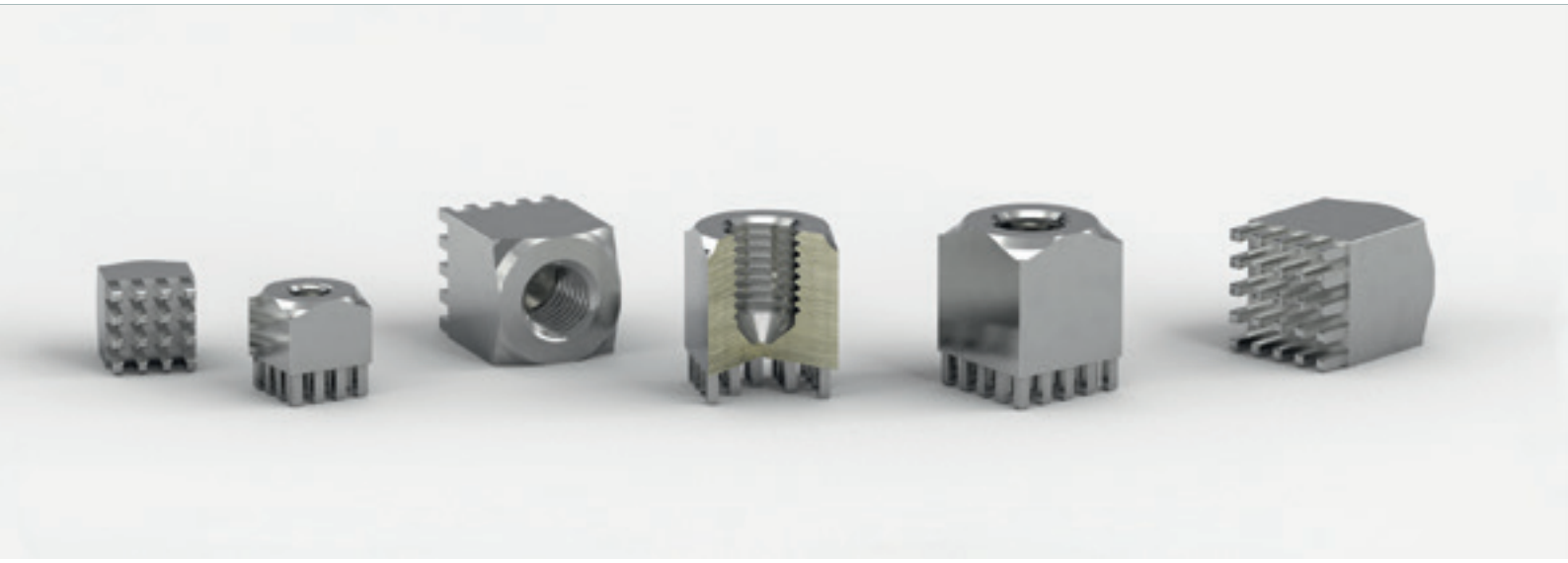


TECHNICAL DATA

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

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

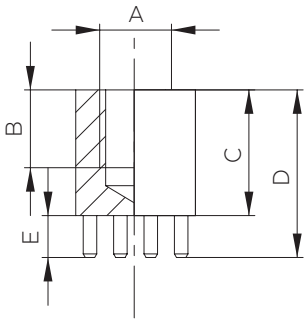
MATERIAL INFORMATION

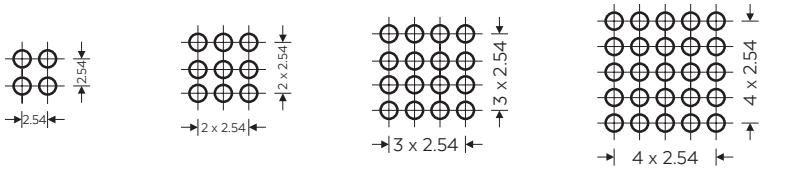
Option	Part number
BlueBrass	02.1.00XX.BB

REACH RoHS COMPLIANT NEW VERSION

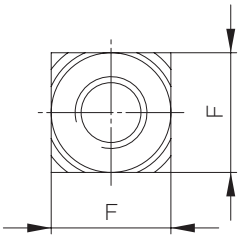
Our product series 02.1.00XX.BB meet all requirements of the which will come into force in the future REACH, RoHS and ELV regulations, just like the future tightened regulation the required lead-free.

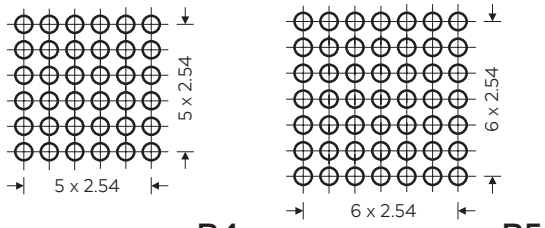
SCALE DRAWINGS





B0 B1 B2 B3





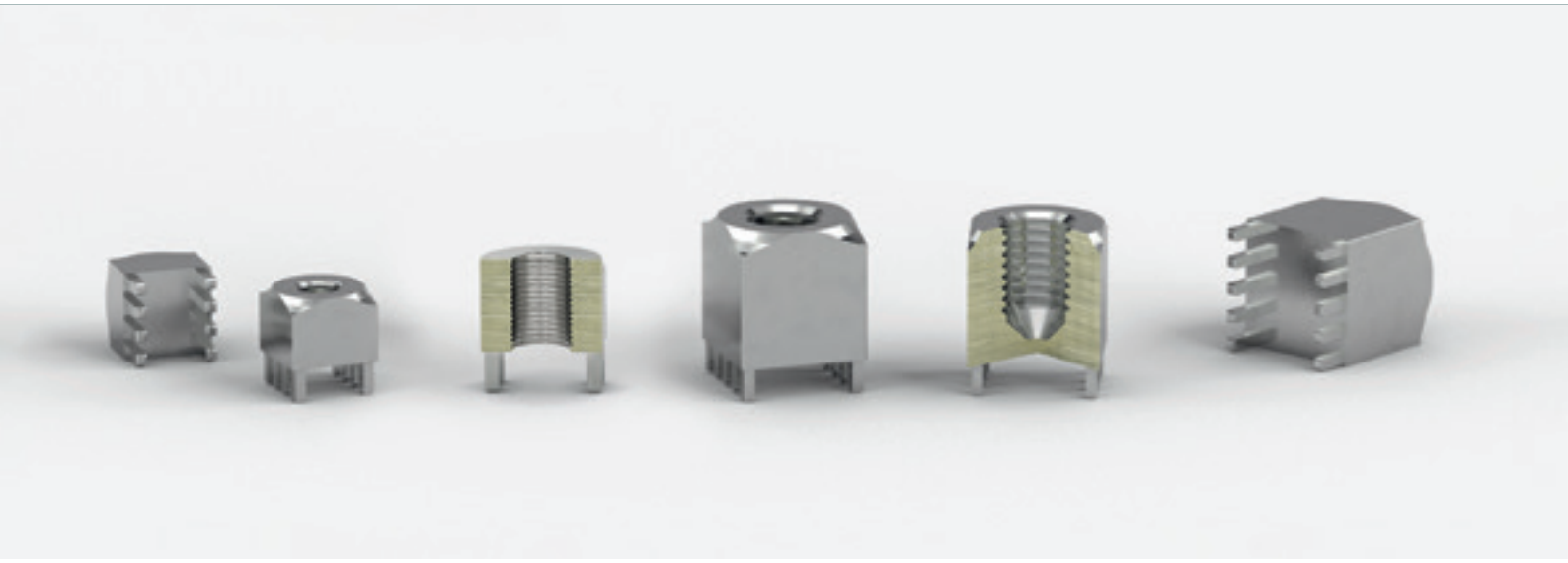
B4 B5

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

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

MATERIAL INFORMATION

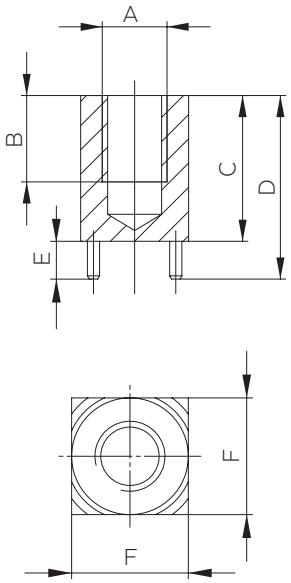
Option	Part number
BlueBrass	02.2.000X.BB

REACH RoHS COMPLIANT NEW VERSION

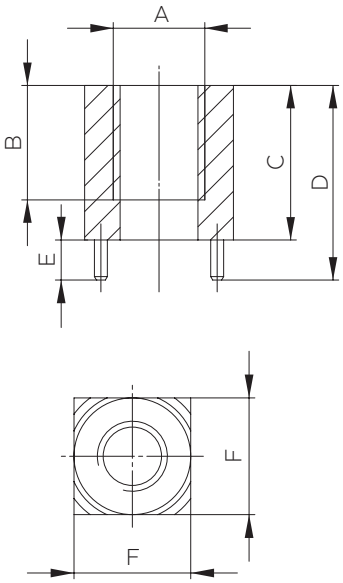
Our product series 02.2.000X.BB meet all requirements of the which will come into force in the future REACH, RoHS and ELV regulations, just like the future tightened regulation the required lead-free.

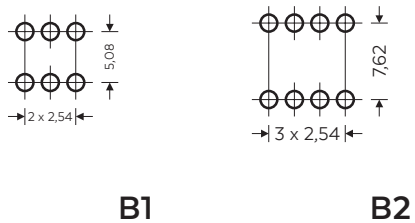
SCALE DRAWINGS

TYPE A

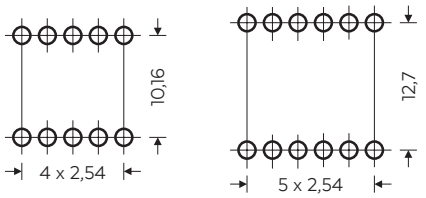


TYPE B





B1 **B2**



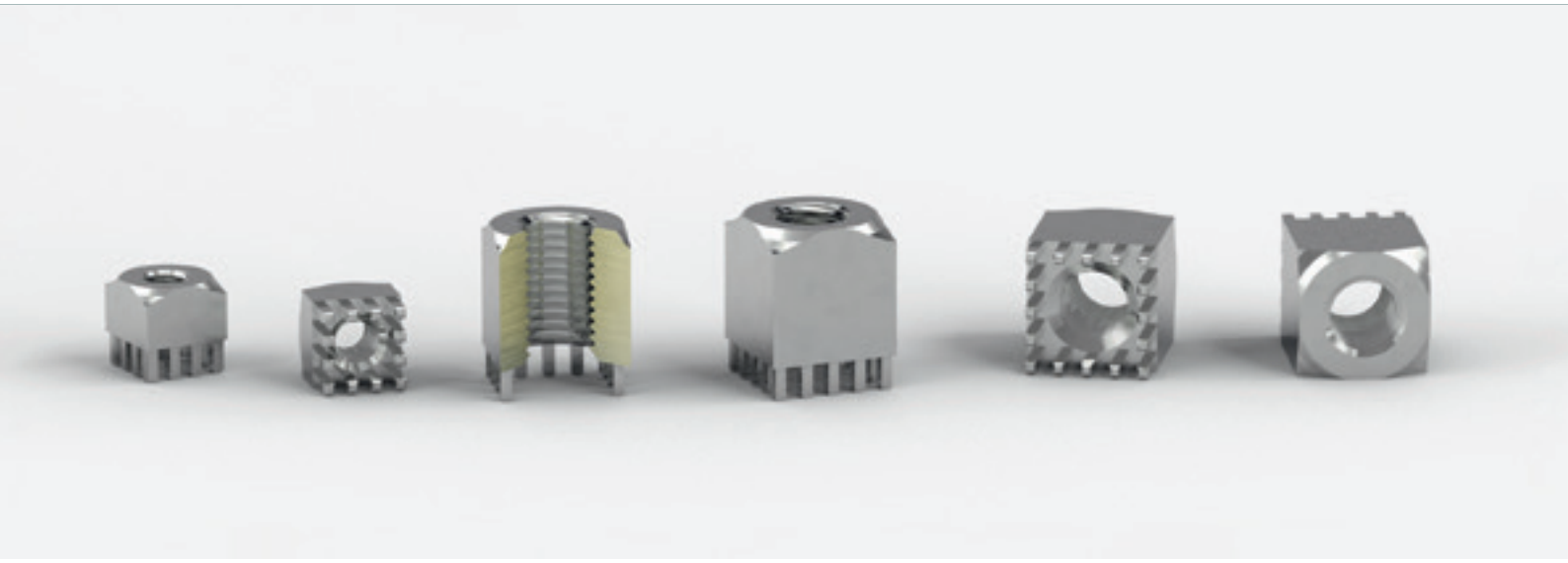
B3 **B4**

TECHNICAL DATA

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

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

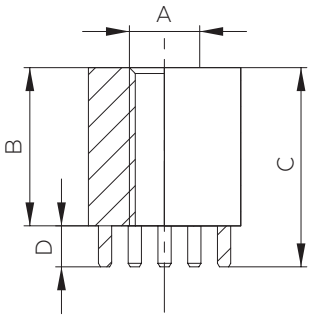
MATERIAL INFORMATION

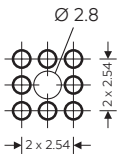
Option	Part number
BlueBrass	02.3.000X.BB

REACH RoHS COMPLIANT NEW VERSION

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





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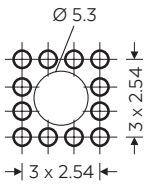
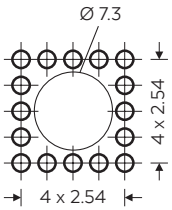
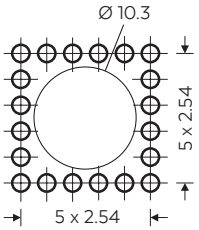


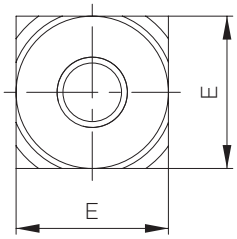
B2



B3



B4

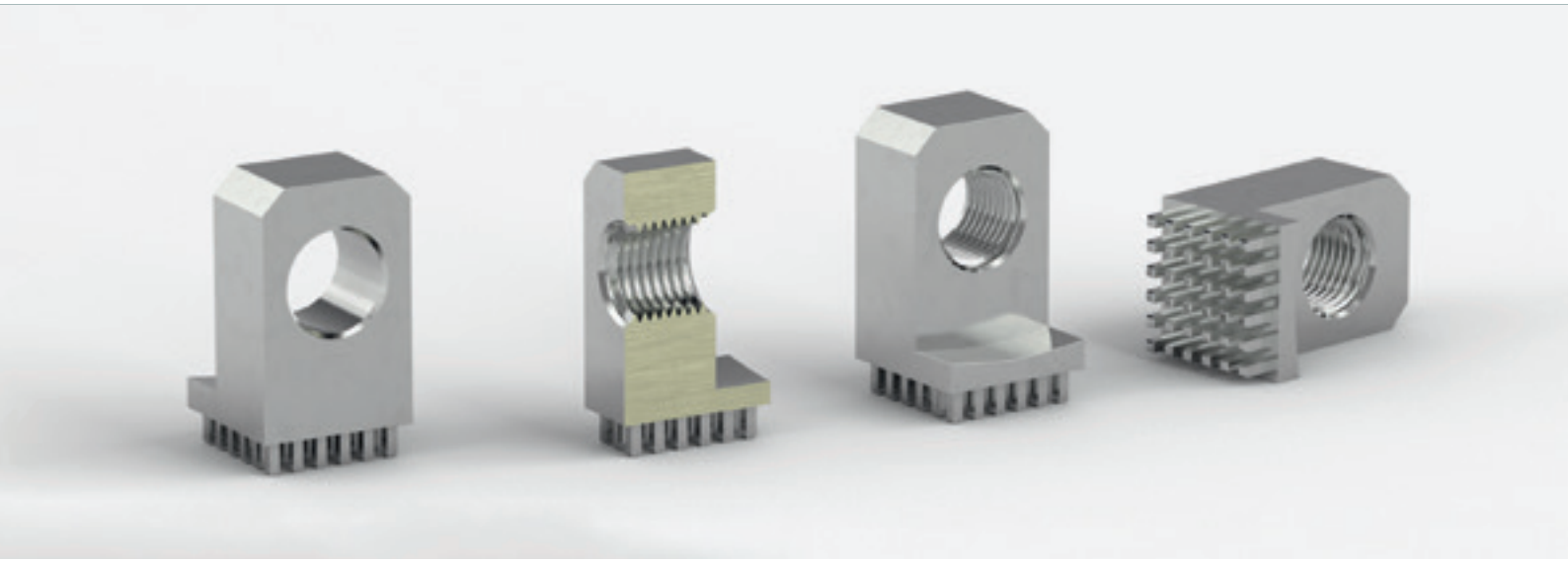


TECHNICAL DATA

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

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

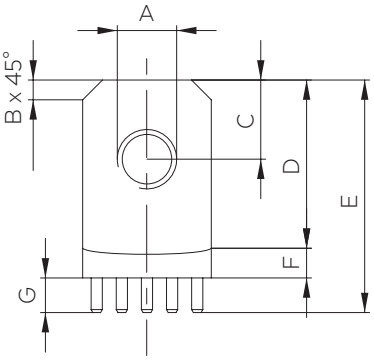
MATERIAL INFORMATION

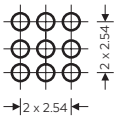
Option	Part number
BlueBrass	03.1.00XX.BB

REACH RoHS COMPLIANT NEW VERSION

Our product series 03.1.00XX.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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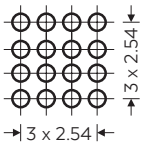
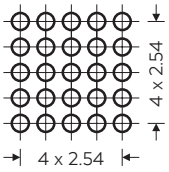
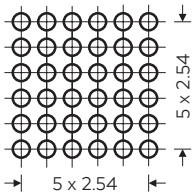


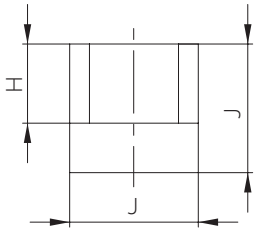
B2



B3



B4



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	**03.1.0001**
M4	1.5	5	11	17.5	3	3.5	5	9	16/B2	6.38	**03.1.0002**
M5	1.5	5	11	17.5	3	3.5	5	9	16/B2	6.15	**03.1.0003**
M6	2	8	17	23.5	3	3.5	8	13	25/B3	18.57	**03.1.0004**
M8	2	8	22	23.5	3	3.5	8	13	25/B3	17.44	**03.1.0005**
M10	2.5	10	28.5	28.5	3	3.5	10	16	36/B4	32.28	**03.1.0006**
Ø 3.2	1	5	11	17.5	3	3.5	4	7	9/B1	3.88	**03.1.0007**
Ø 4.2	1.5	5	11	17.5	3	3.5	5	9	16/B2	6.15	**03.1.0008**
Ø 5.2	1.5	5	11	17.5	3	3.5	5	9	16/B2	5.84	**03.1.0009**
Ø 6.2	2	8	17	23.5	3	3.5	8	13	25/B3	17.86	**03.1.0010**
Ø 8.2	2	8	22	23.5	3	3.5	8	13	25/B3	16.32	**03.1.0011**
Ø 10.2	2.5	10	28.5	28.5	3	3.5	10	16	36/B4	30.16	**03.1.0012**

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

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

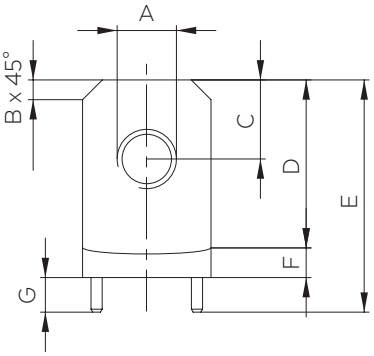
MATERIAL INFORMATION

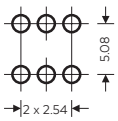
Option	Part number
BlueBrass	03.2.00XX.BB

REACH RoHS COMPLIANT NEW VERSION

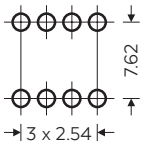
Our product series 03.2.00XX.BB meet all requirements of the which will come into force in the future REACH, RoHS and ELV regulations, just like the future tightened regulation the required lead-free.

SCALE DRAWINGS

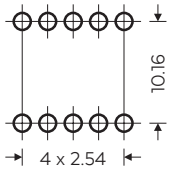




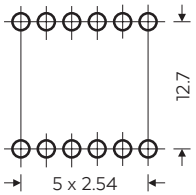
B1



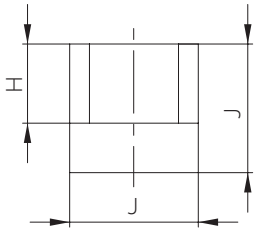
B2



B3



B4

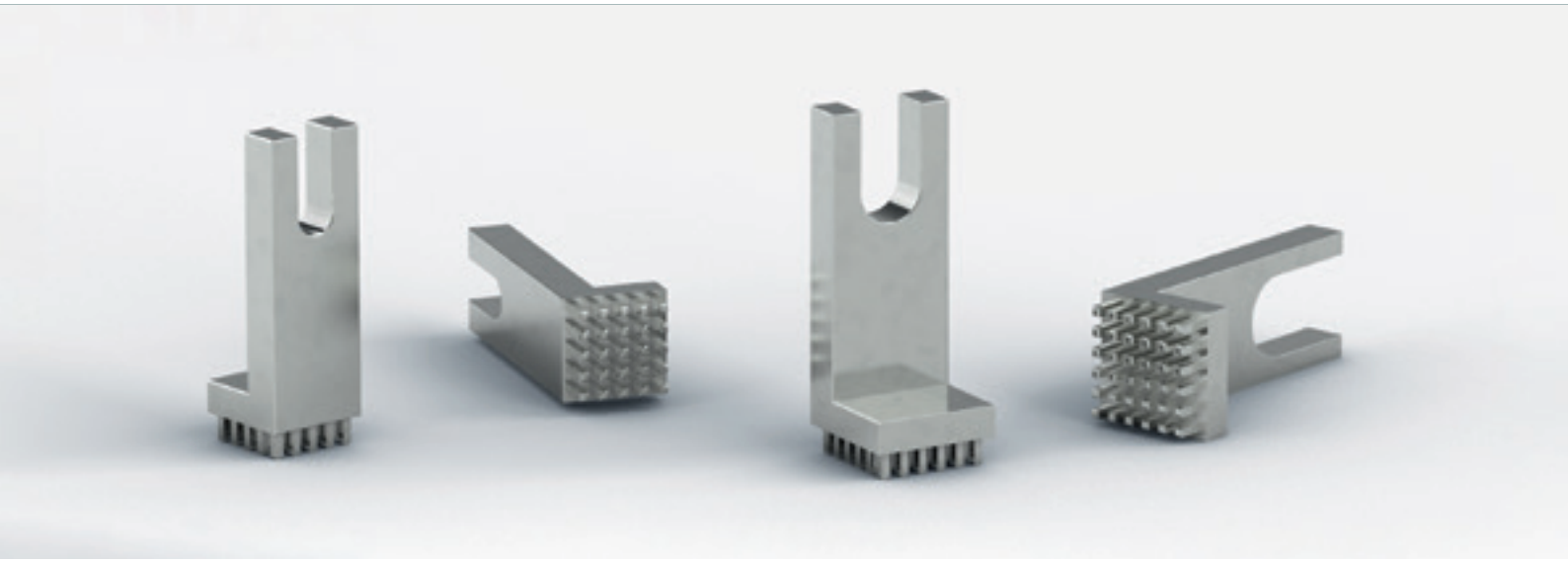


TECHNICAL DATA

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

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

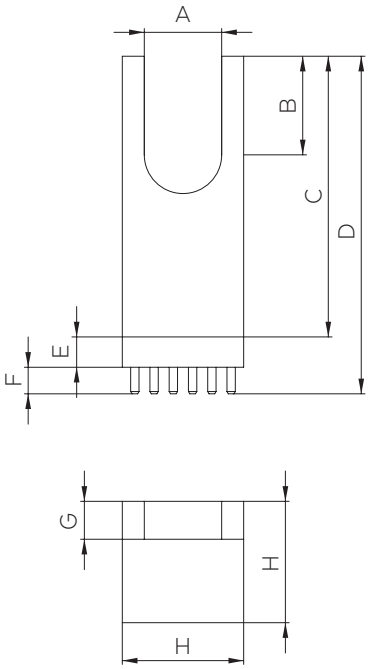
MATERIAL INFORMATION

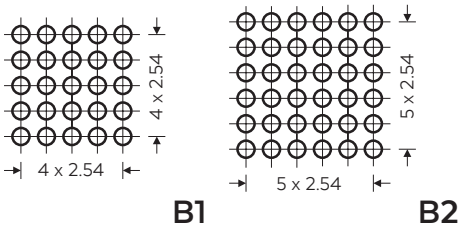
Option	Part number
BlueBrass	03.1.00XX.BB

REACH RoHS COMPLIANT NEW VERSION

Our product series 03.1.00XX.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



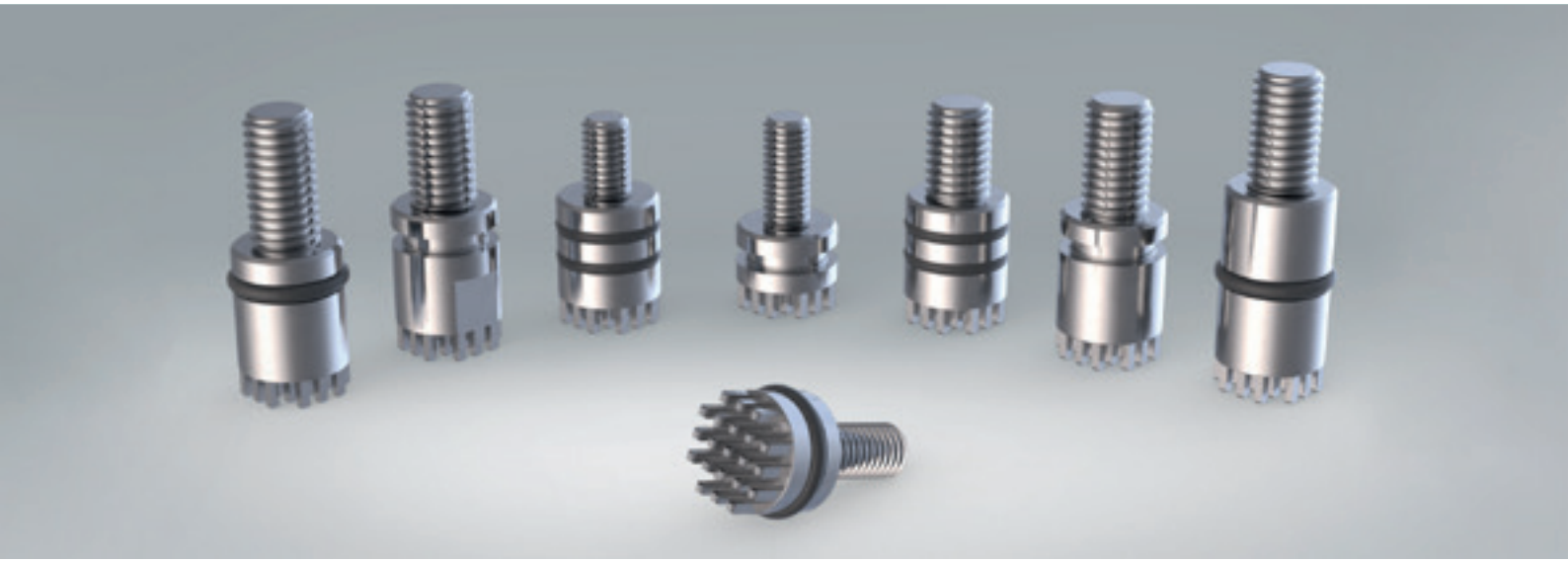


TECHNICAL DATA

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

POWER TOWER SEAL WITH OR WITHOUT SEALING RING
EXTERNAL THREAD, SOLID PRESS-FIT TECHNOLOGY, PIN ARRANGEMENT FULL-SURFACE



PRODUCT SPECIFICATION

- High-current PCB connection with sealing function
- UNC thread or customer-specific modifications on request
- For fastening cable lugs, especially as a sealed version for e.g. a push-through solution through the housing
- Direct connection from printed circuit board to housing outside particularly well suited
- Standard sizes on the right side in the table, customer specific solutions possible on request
- RoHS compliant, REACH compliant

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

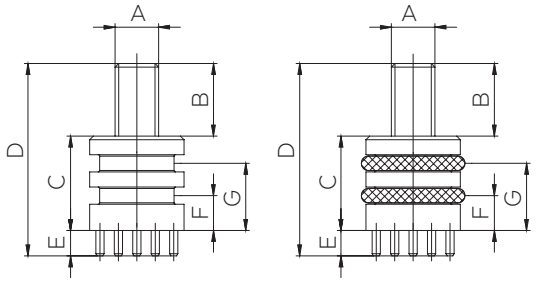
MATERIAL INFORMATION

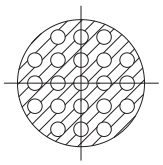
Variant	Part Number
BlueBrass	01.8.00XX.ET.BB
BlueBrass	01.8.00XX.BB

REACH RoHS COMPLIANT NEW VERSION

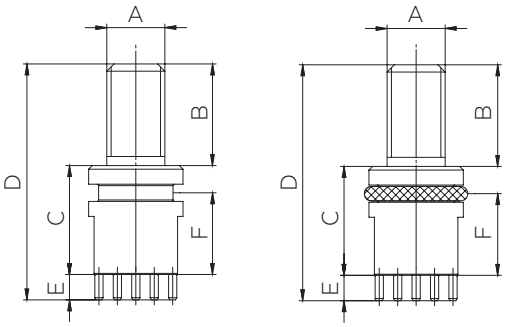
Our 01.8.00XX.BB product series already meet all the already meet all the requirements of the requirements of the stricter REACH, RoHS and REACH, RoHS and ELV regulations that will come into force in the future, as well as the future stricter regulation on the required absence of lead.

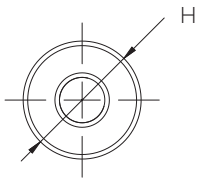
SCALE DRAWINGS

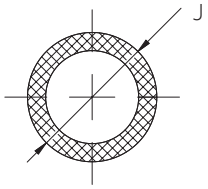




B1







SEALING RING

TECHNICAL DATA

A	B	C	D	E	F	G	H	J	No. of pins/ drilling pattern	Mass [g]	Part number
M6	10	13	26.5	3.5	4.8	9.25	Ø13		21/B1	16.46	**01.8.0004.ET**
M6	10	13	26.5	3.5	4.8	9.25		Ø14.25	21/B1	16.51	**01.8.0004**
M8	14	15	32.5	3.5	11.25	-	Ø13		21/B1	16.46	**01.8.0005.ET**
M8	14	15	32.5	3.5	11.25	-		Ø14.25	21/B1	16.48	**01.8.0005**
M8	14	21.5	39	3.5	10.75	-	Ø13		21/B1	29.73	**01.8.0006.ET**
M8	14	21.5	39	3.5	10.75	-		Ø14.25	21/B1	29.75	**01.8.0006**

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

POWER SOCKET SEAL WITH OR WITHOUT SEALING RING
INTERNAL THREAD, SOLID PRESS-FIT TECHNOLOGY, PIN ARRANGEMENT FULL-SURFACE

PRODUCT SPECIFICATION

- High-current PCB connection with sealing function
- UNC thread or customer-specific modifications on request
- For fastening cable lugs, especially as a sealed version for e.g. a push-through solution through the housing
- Direct connection from printed circuit board to housing outside particularly well suited
- Standard sizes on the right side in the table, customer specific solutions possible on request
- RoHS compliant, REACH compliant

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

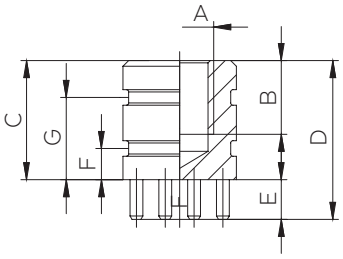
MATERIAL INFORMATION

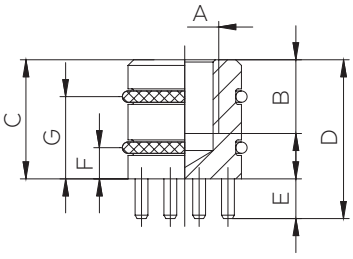
Variant	Part Number
BlueBrass	02.8.00XX.ET.BB
BlueBrass	02.8.00XX.BB

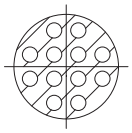
REACH RoHS COMPLIANT NEW VERSION

Our 02.8.00XX.BB product series already meet all the already meet all the requirements of the requirements of the stricter REACH, RoHS and REACH, RoHS and ELV regulations that will come into force in the future, as well as the future stricter regulation on the required absence of lead.

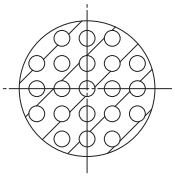
SCALE DRAWINGS



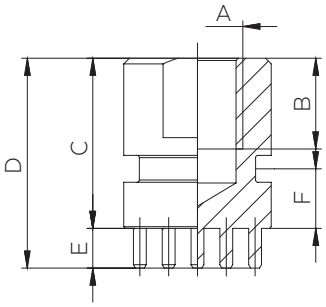


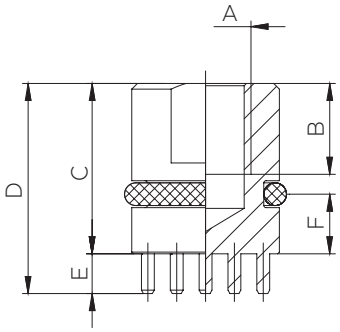


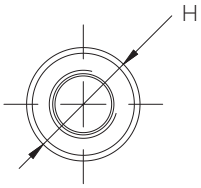
B1

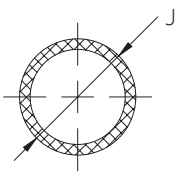


B2









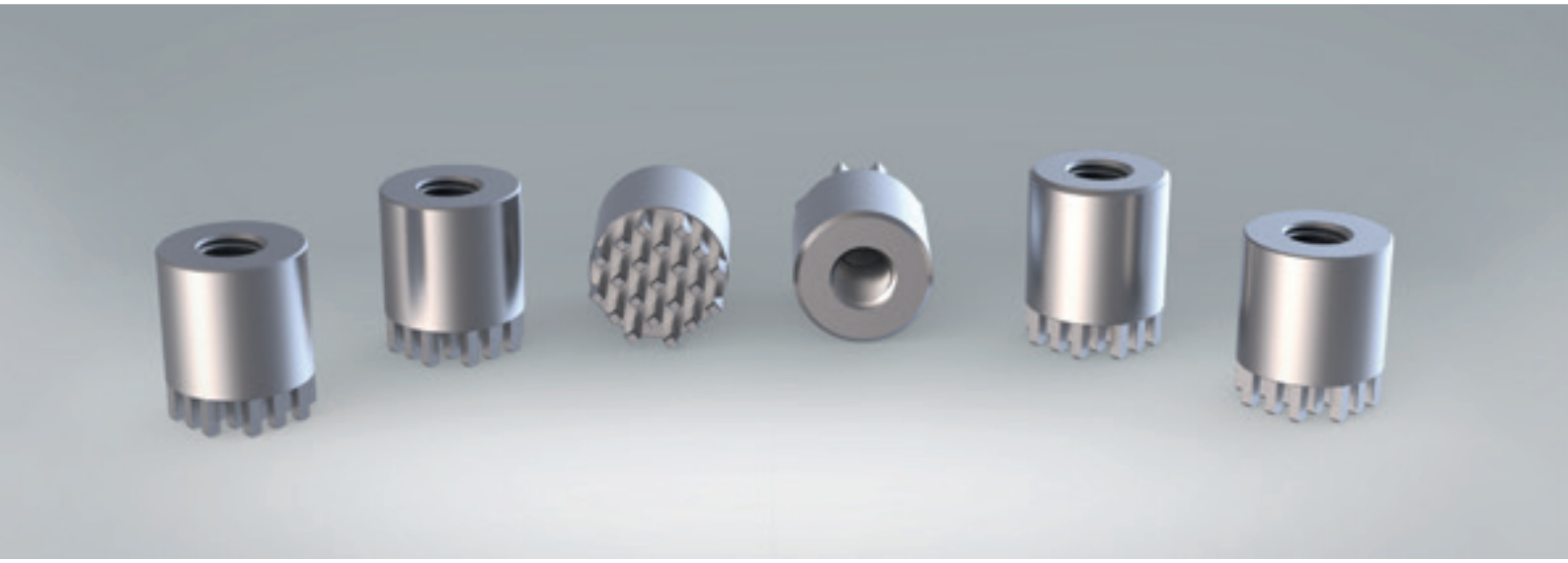
SEALING RING

TECHNICAL DATA

A	B	C	D	E	F	G	H	J	No. of pins/ drilling pattern	Mass [g]	Part number
M6	6.5	10.5	14	3.5	2.75	7.25	Ø10		12/B1	5.6	**02.8.0004.ET**
M6	6.5	10.5	14	3.5	2.75	7.25		Ø11	12/B1	5.62	**02.8.0004**
M6	7	11	14.5	3.5	2.6	7	Ø14.8		21/B2	12.8	**02.8.0006.ET**
M6	7	11	14.5	3.5	2.6	7		Ø16.2	21/B2	12.82	**02.8.0006**
M8	7	11	14.5	3.5	2.6	7	Ø14.8		21/B2	11.22	**02.8.0007.ET**
M8	7	11	14.5	3.5	2.6	7		Ø16.2	21/B2	11.24	**02.8.0007**
M8	8	15	18.5	3.5	5.25	-	Ø13		21/B2	12.63	**02.8.0008.ET**
M8	8	15	18.5	3.5	5.25	-		Ø14.25	21/B2	12.65	**02.8.0008**

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

POWER SOCKET ROUND
INTERNAL THREAD, SOLID PRESS-FIT TECHNOLOGY, PIN ARRANGEMENT FULL-SURFACE



PRODUCT SPECIFICATION

- High-current PCB connection
- UNC thread or customer-specific modifications on request
- For fastening cable lugs
- Direct connection of printed circuit board to housing outside particularly well suited
- Standard sizes on the right side in the table, customer specific solutions possible on request
- RoHS compliant, REACH compliant

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

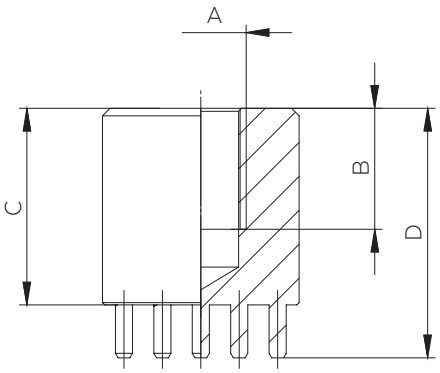
MATERIAL INFORMATION

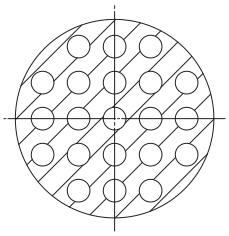
Variant	Part Number
BlueBrass	02.8.00XX.BB

REACH RoHS COMPLIANT NEW VERSION

Our 02.8.00XX.BB product series already meet all the already meet all the requirements of the requirements of the stricter REACH, RoHS and REACH, RoHS and ELV regulations that will come into force in the future, as well as the future stricter regulation on the required absence of lead.

SCALE DRAWINGS





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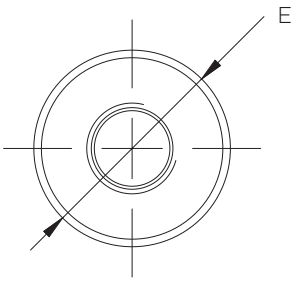


TECHNICAL DATA

A	B	C	D	E	No. of pins/ drilling pattern	Mass [g]	Part number
M6	8	13	16.5	Ø13	21/B1	13.93	**02.8.0005**
M6	8	12	15.5	Ø 13	21/B1	13.75	**02.8.0010**
M6	9	12	15.5	Ø13	21/B1	13.75	**02.8.0011**

Measurements B – E 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 MTCON service
- Cost attractive alternative surce
- Up to 40 % cost savings
- RoHS compliant, REACH compliant

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

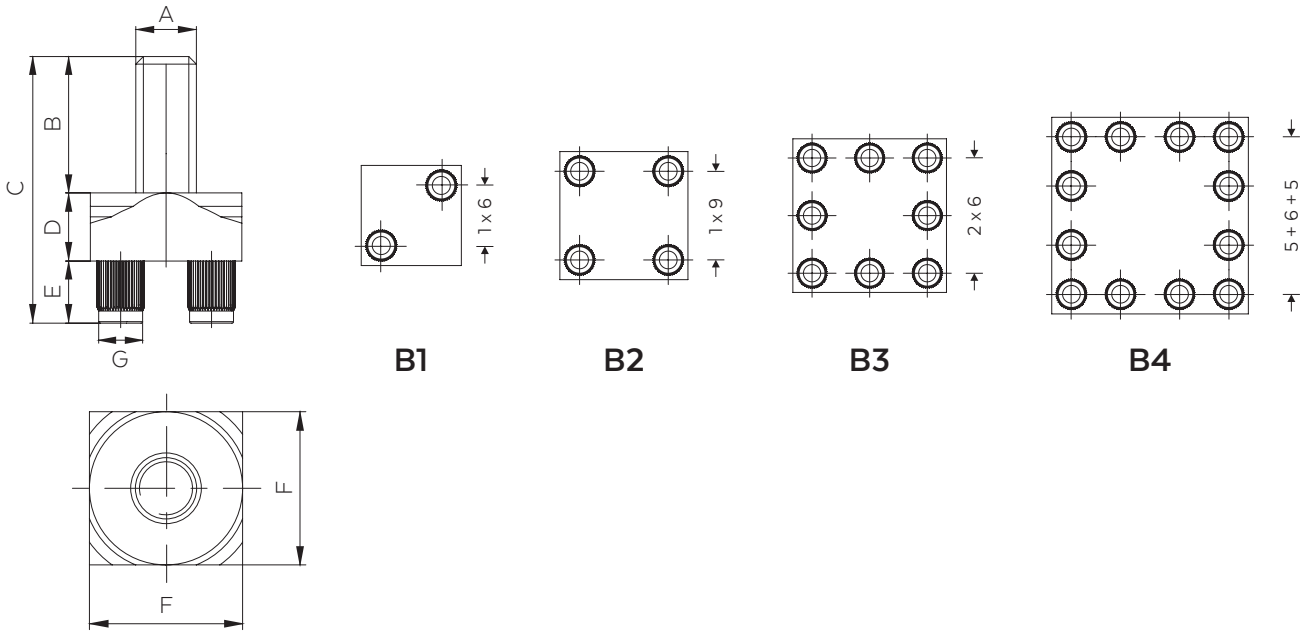
MATERIAL INFORMATION

Option	Part number
BlueBrass	01.4.000X.BB

REACH RoHS COMPLIANT NEW VERSION

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**
M5	9	17.6	4.5	4.1	10	Ø 2.9	2/B1	5.49 g	**01.4.0002**
M5	11	20.6	5.5	4.1	13	Ø 2.9	4/B2	10.00 g	**01.4.0003**
M6	11	20.6	5.5	4.1	13	Ø 2.9	4/B2	10.81 g	**01.4.0004**
M6	14	24.6	6.5	4.1	16	Ø 2.9	8/B3	18.07 g	**01.4.0005**
M8	14	24.6	6.5	4.1	16	Ø 2.9	8/B3	20.67 g	**01.4.0006**
M8	17	28.6	7.5	4.1	20	Ø 2.9	12/B4	33.30 g	**01.4.0007**
M10	17	28.6	7.5	4.1	20	Ø 2.9	12/B4	37.37 g	**01.4.0008**
M12	17	28.6	7.5	4.1	20	Ø 2.9	12/B4	42.34 g	**01.4.0009**

Measurements B – G in mm
Masses are subject to slight variations in production

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

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

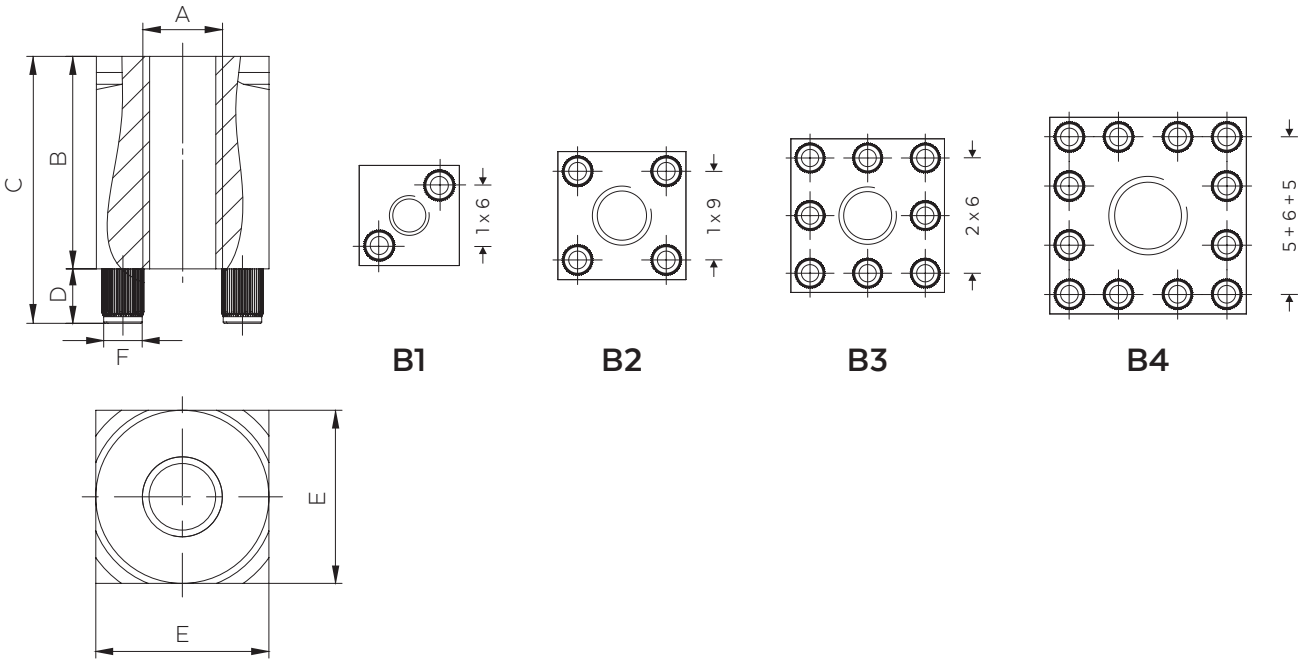
MATERIAL INFORMATION

Option	Part number
BlueBrass	02.4.00XX.BB

REACH RoHS COMPLIANT NEW VERSION

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

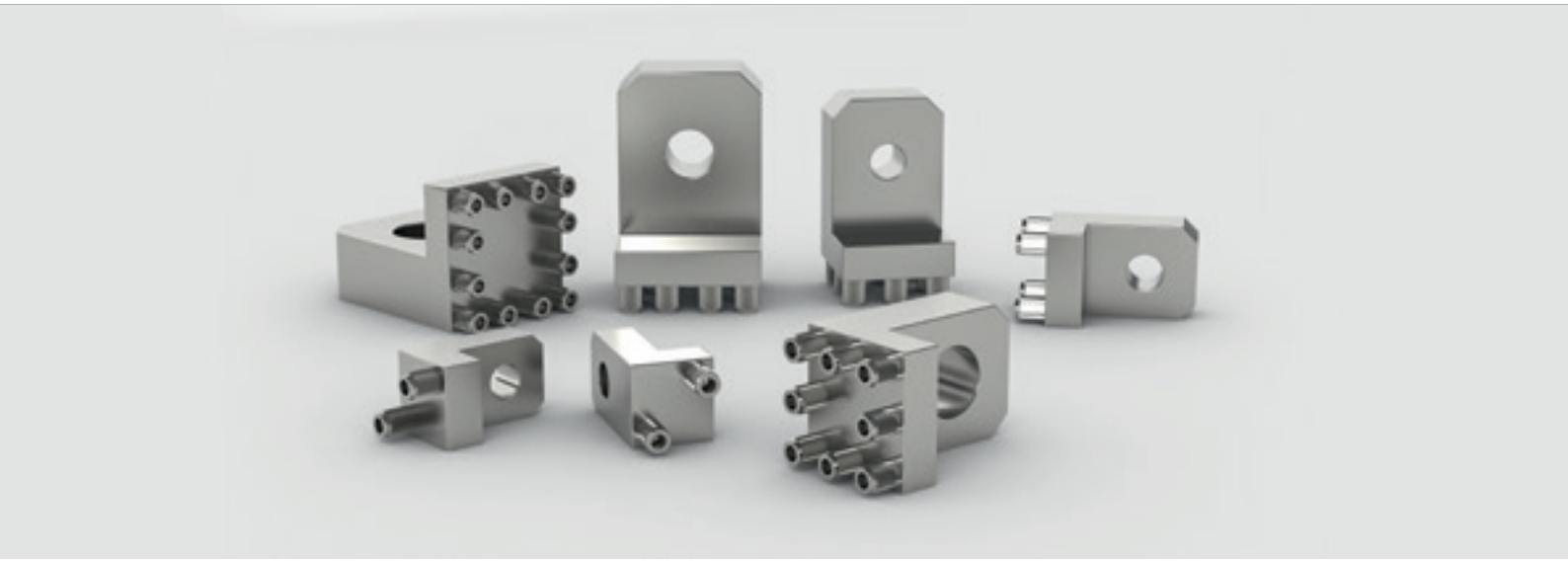


TECHNICAL DATA

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**
M5	13	17.1	4.1	10	Ø 2.9	2/B1	9.68 g	**02.4.0002**
M5	16	20.1	4.1	13	Ø 2.9	4/B2	21.34 g	**02.4.0003**
M6	16	20.1	4.1	13	Ø 2.9	4/B2	20.56 g	**02.4.0004**
M6	20	24.1	4.1	16	Ø 2.9	8/B3	40.64 g	**02.4.0005**
M8	20	24.1	4.1	16	Ø 2.9	8/B3	37.85 g	**02.4.0006**
M8	24	28.1	4.1	20	Ø 2.9	12/B4	74.61 g	**02.4.0007**
M10	24	28.1	4.1	20	Ø 2.9	12/B4	70.46 g	**02.4.0008**
M12	24	28.1	4.1	20	Ø 2.9	12/B4	65.38 g	**02.4.0009**
M5	7	11.1	4.1	10	Ø 2.9	4/B2	5.66 g	**02.4.0010**

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

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

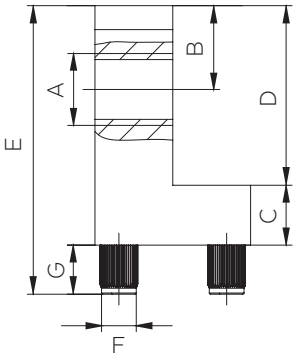
MATERIAL INFORMATION

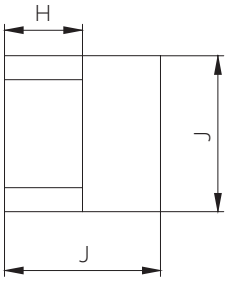
Option	Part number
BlueBrass	03.4.X0XX.BB

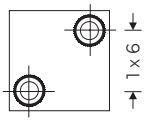
REACH RoHS COMPLIANT NEW VERSION

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







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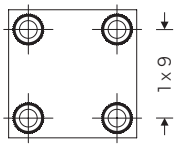

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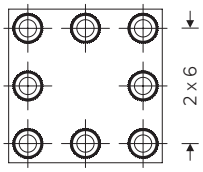

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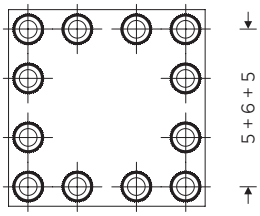


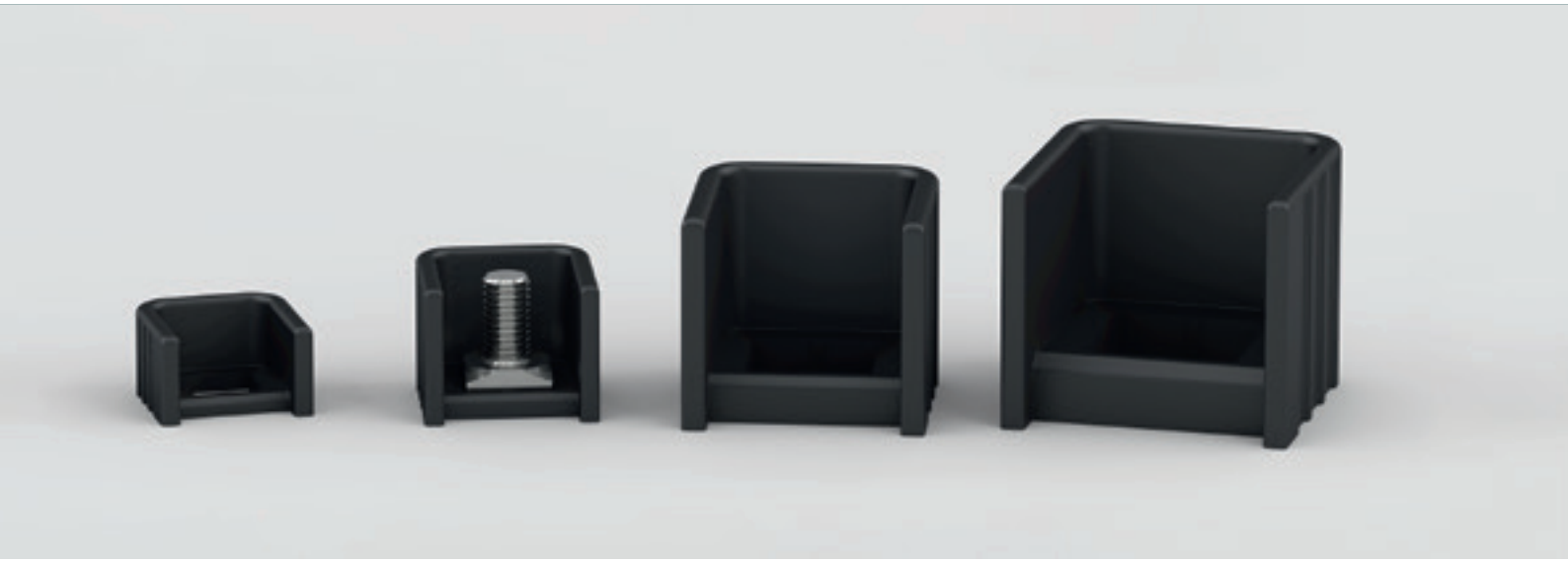
B4

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**
M5	5.5	5	12	21.1	Ø 2.9	4.1	5	10	2/B1	8.99	**03.4.0002**
M5	7	5	15	24.1	Ø 2.9	4.1	6.5	13	4/B2	17.63	**03.4.0003**
M6	7	8	15	24.1	Ø 2.9	4.1	6.5	13	4/B2	17.31	**03.4.0004**
M6	9	8	19	28.1	Ø 2.9	4.1	8	16	8/B3	31.13	**03.4.0005**
M8	9	10	19	28.1	Ø 2.9	4.1	8	16	8/B3	30.00	**03.4.0006**
M8	11.5	5	23	32.1	Ø 2.9	4.1	10	20	12/B4	54.22	**03.4.0007**
M10	11.5	5	23	32.1	Ø 2.9	4.1	10	20	12/B4	52.49	**03.4.0008**
Ø 4.3	5.5	5	12	21.1	Ø 2.9	4.1	5	10	2/B1	8.97	**03.4.0009**
Ø 5.3	5.5	5	12	21.1	Ø 2.9	4.1	5	10	2/B1	8.65	**03.4.0010**
Ø 5.3	7	8	15	24.1	Ø 2.9	4.1	6.5	13	4/B2	17.17	**03.4.0011**
Ø 6.4	7	8	15	24.1	Ø 2.9	4.1	6.5	13	4/B2	16.92	**03.4.0012**
Ø 6.4	9	5	19	28.1	Ø 2.9	4.1	8	16	8/B3	30.28	**03.4.0013**
Ø 8.4	9	5	19	28.1	Ø 2.9	4.1	8	16	8/B3	28.70	**03.4.0014**
Ø 8.4	11.5	5	23	32.1	Ø 2.9	4.1	10	20	12/B4	52.61	**03.4.0015**
Ø 10.5	11.5	5	23	31.1	Ø 2.9	4.1	10	20	12/B4	49.96	**03.4.0016**

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

POWER PROTECTOR
FOR PROTECTING POWER TOWERS AND POWER SOCKETS



PRODUCT SPECIFICATION

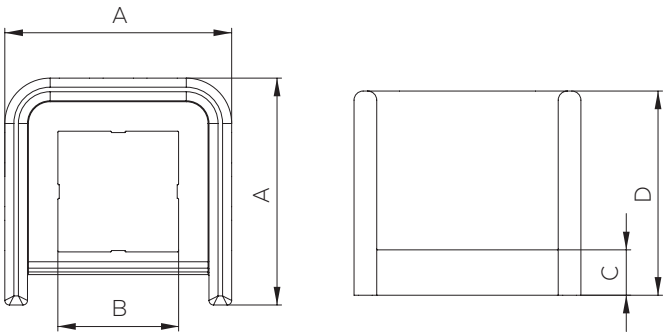
- Designed to fit on all Power Tower and Power Socket elements
- Prevents short circuits with nearby components
- Protects against contact and twisting
- Enables shorter distancing of power elements
- RoHS compliant, REACH compliant

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

SCALE DRAWINGS

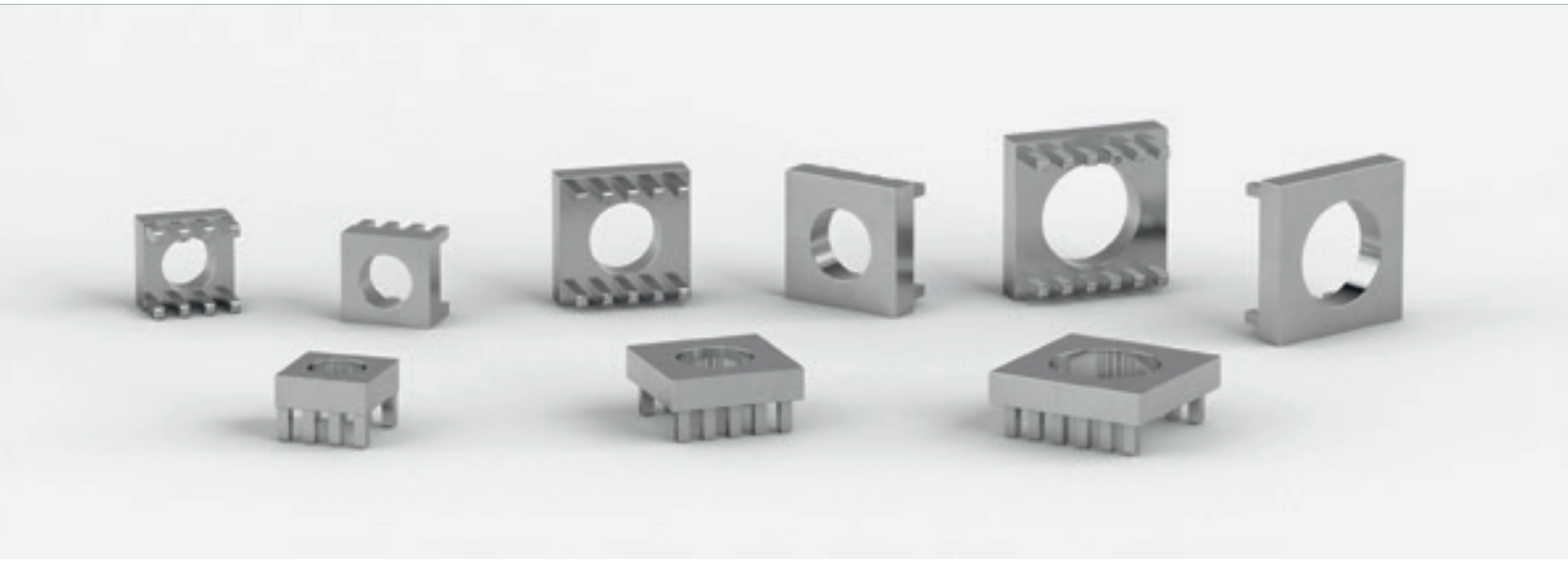


TECHNICAL DATA

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 fasting cable lugs and large, heavy components such as battery isolating switches
- Contact spacing 2.54 mm
- RoHS compliant, REACH compliant

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

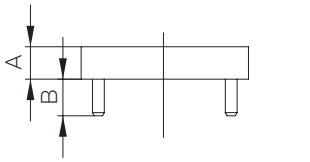
MATERIAL INFORMATION

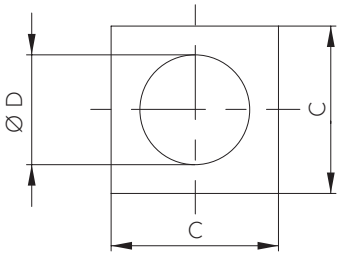
Option	Part number
BlueBrass	09.1.00XX.BB

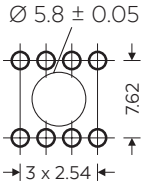
REACH RoHS COMPLIANT NEW VERSION

Our product series 09.1.00XX.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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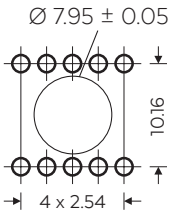
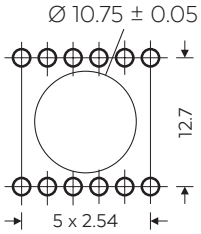


B2



B3

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 fasting cable lugs and large, heavy components such as battery isolating switches
- Contact spacing 2.85 mm
- RoHS compliant, REACH compliant

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

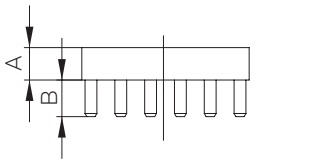
MATERIAL INFORMATION

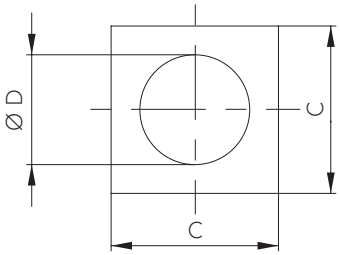
Option	Part number
BlueBrass	09.2.00XX.BB

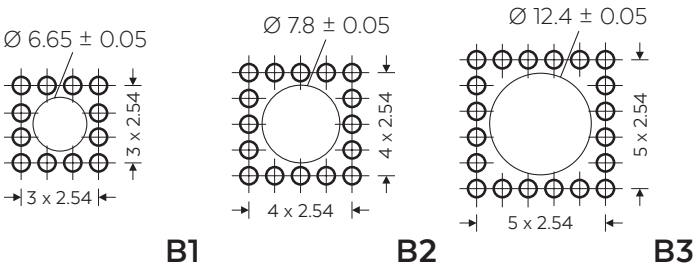
REACH RoHS COMPLIANT NEW VERSION

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





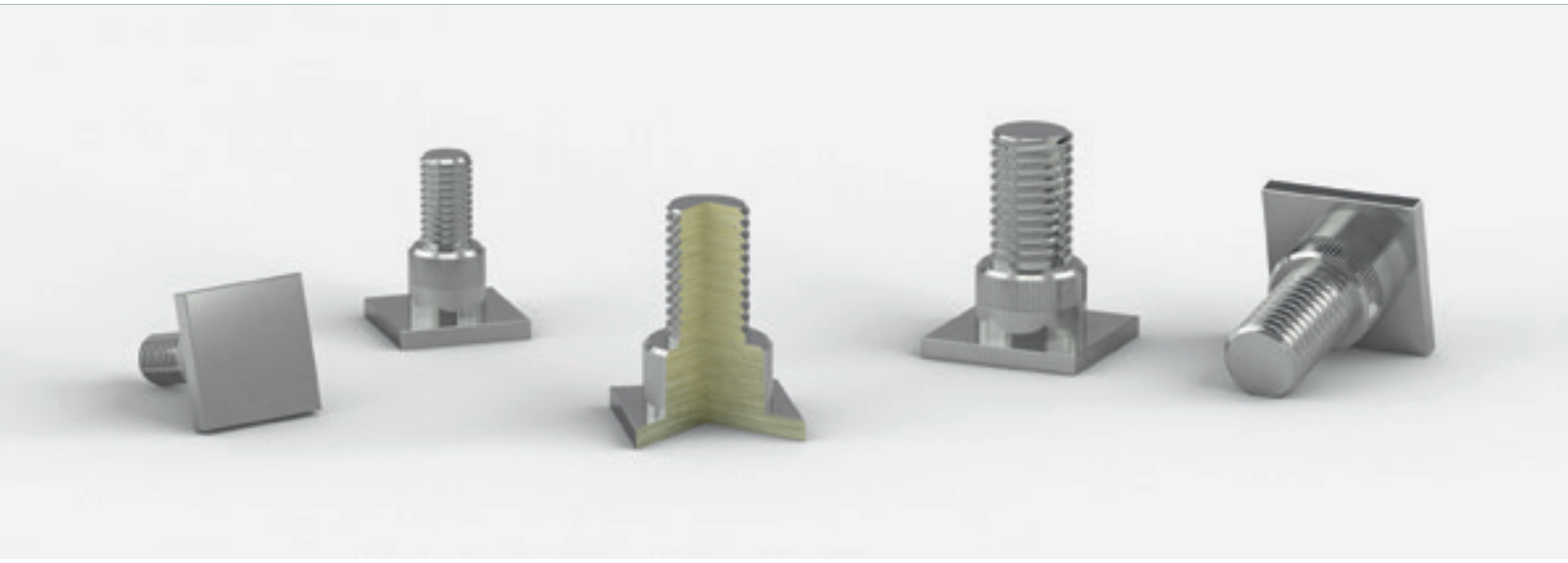


TECHNICAL DATA

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

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

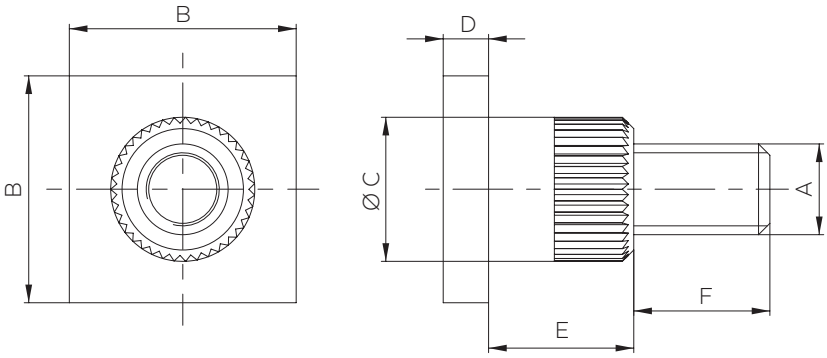
MATERIAL INFORMATION

Option	Part number
BlueBrass	09.3.00XX.BB

REACH RoHS COMPLIANT NEW VERSION

Our product series 09.3.00XX.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

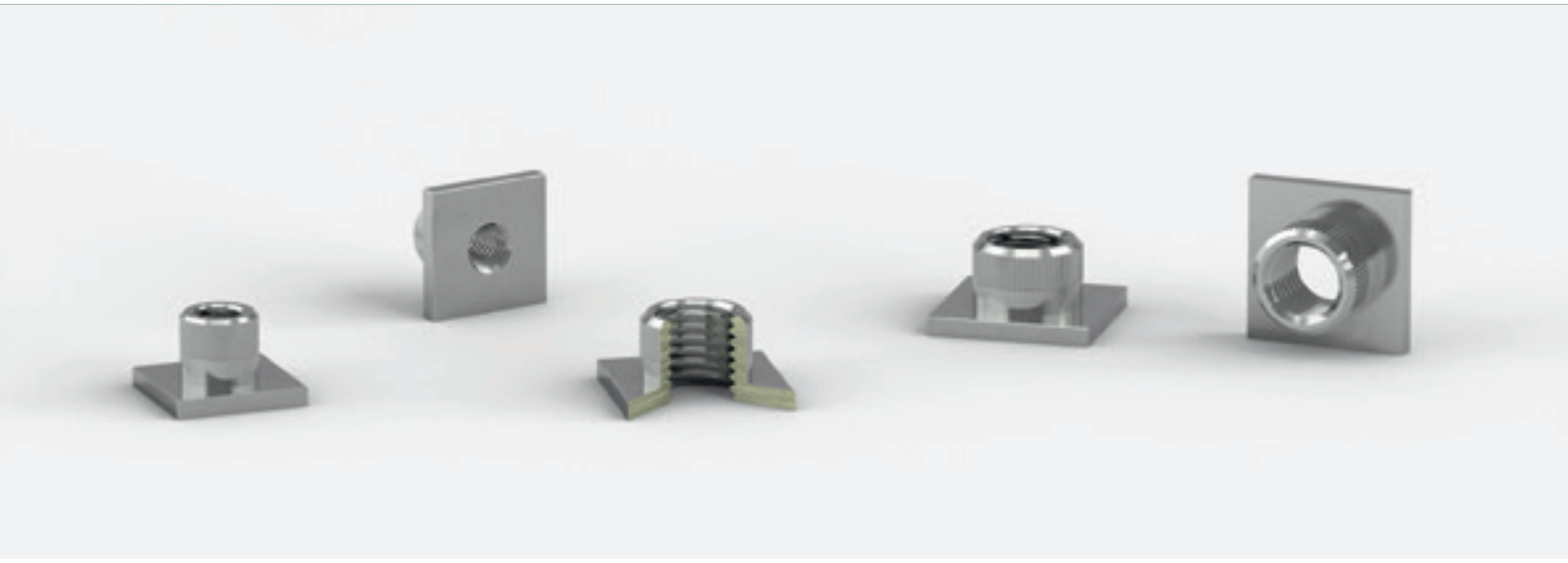


TECHNICAL DATA

A	B	C	D	E	F	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

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

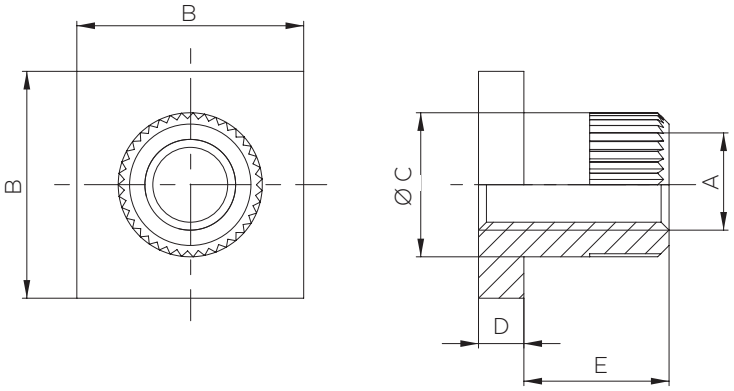
MATERIAL INFORMATION

Option	Part number
BlueBrass	09.4.00XX.BB

REACH RoHS COMPLIANT NEW VERSION

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

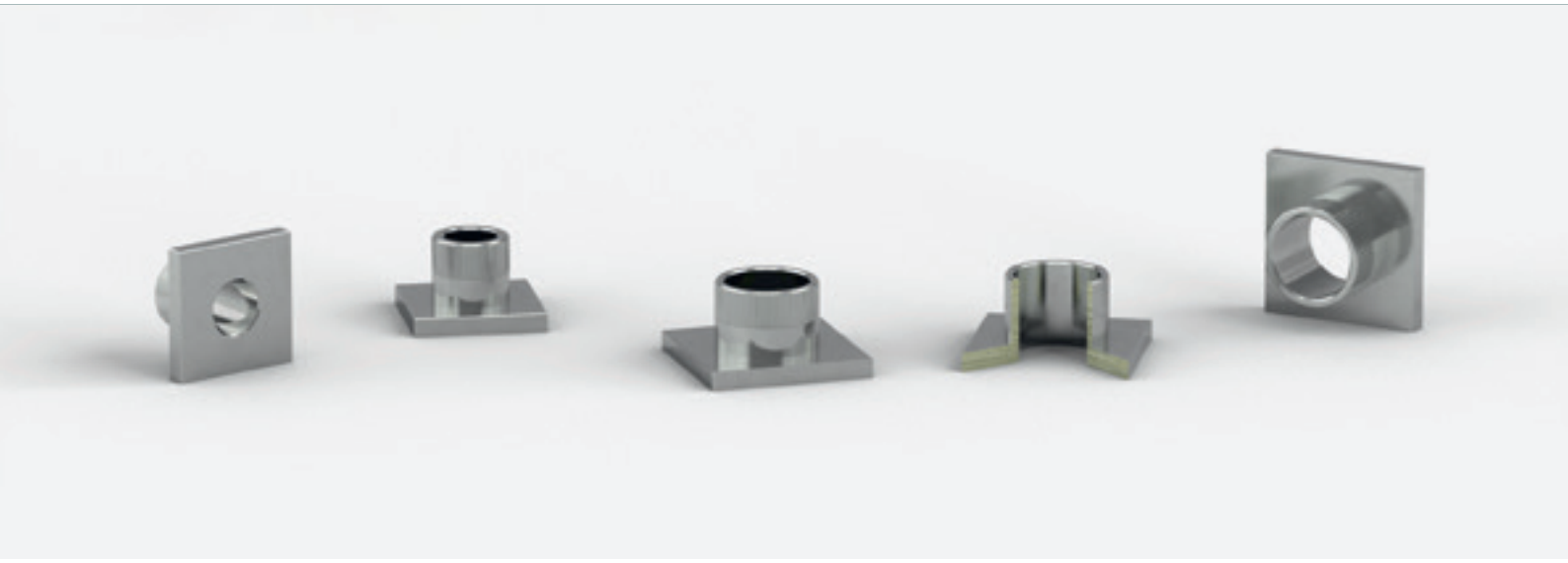


TECHNICAL DATA

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**
M8	16	12.15	2	6.4	7.79	09.2.0003	**09.4.0011**
M10	16	12,15	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

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

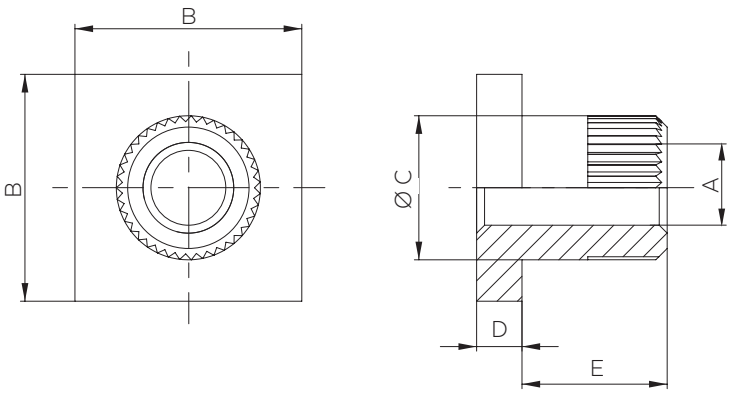
MATERIAL INFORMATION

Option	Part number
BlueBrass	09.5.00XX.BB

REACH RoHS COMPLIANT NEW VERSION

Our product series 09.5.00XX.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

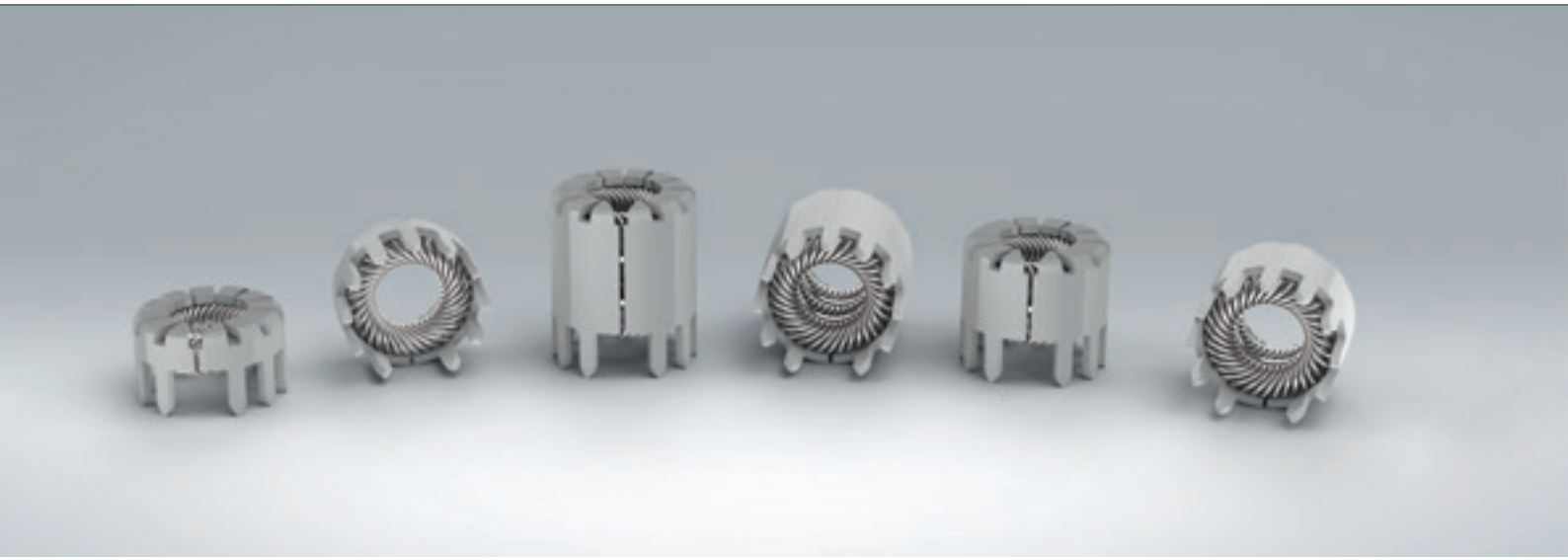


TECHNICAL DATA

A	B	C	D	E	Mass [g]	Matching base body	Part number
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

RoHS COMPLIANT

REACH COMPLIANT

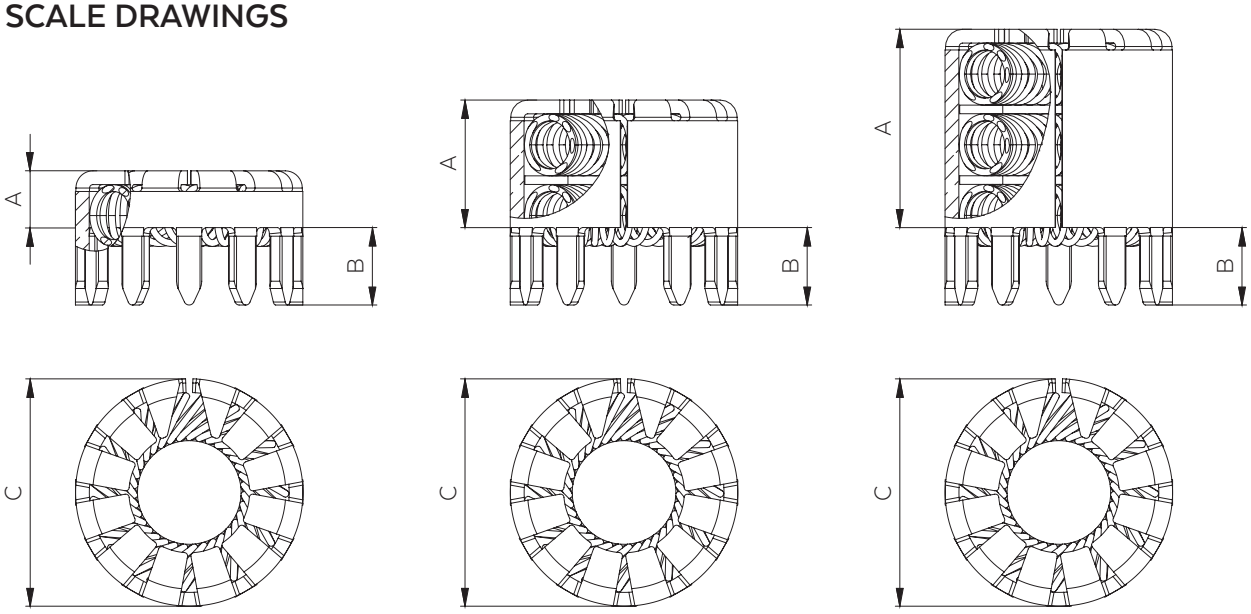
ELV END-OF-LIFE-VEHICLES

MATERIAL INFORMATION

Option	Part number
Tin*	409X00AA
Silver*	409X00AB

*Spiral spring/washer material

SCALE DRAWINGS



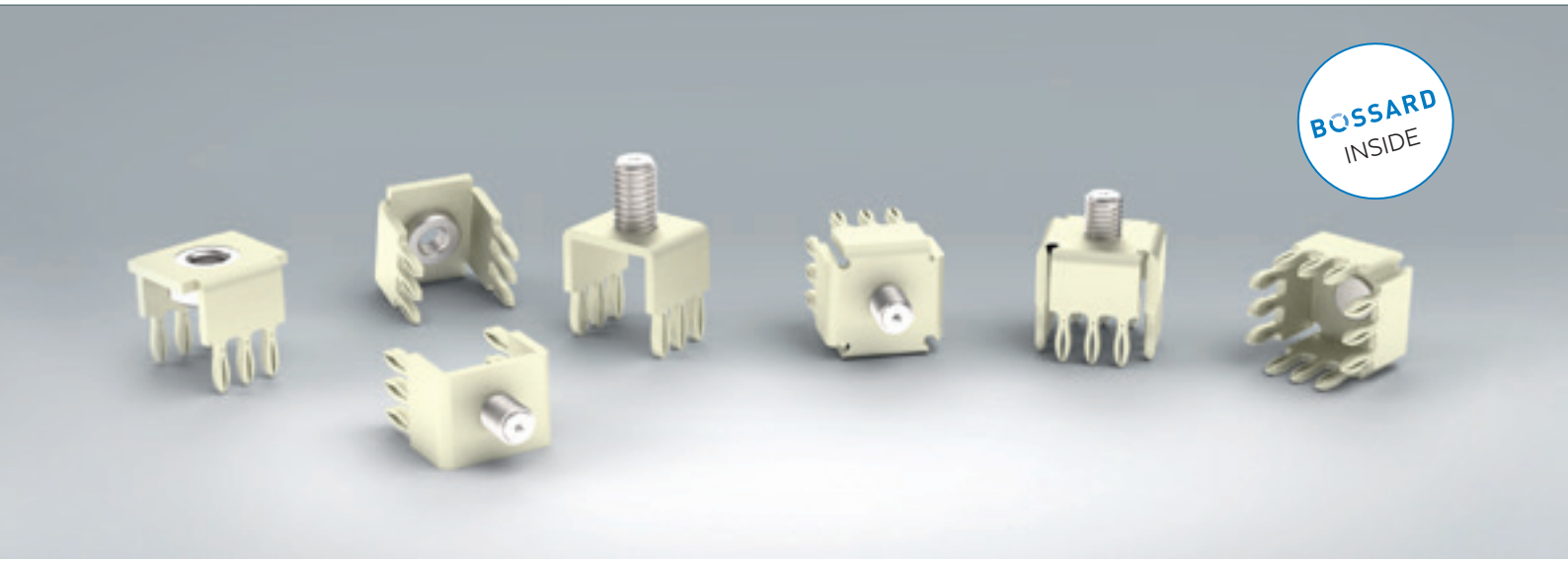
409100AX | 409200AX | 409300AX

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

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

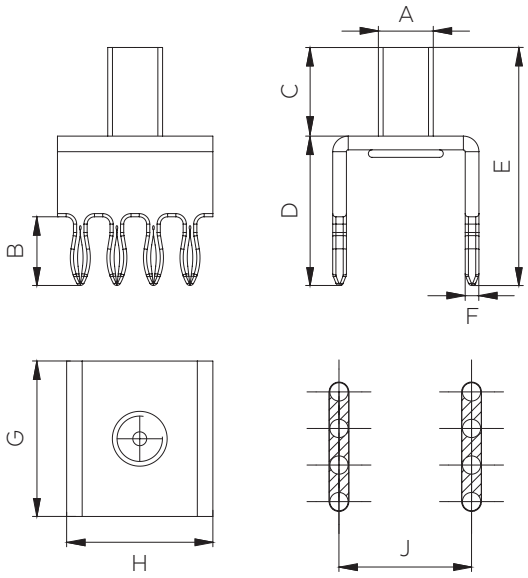
MATERIAL INFORMATION

Option	Part number
BlueBrass	16.1.00XX.BB

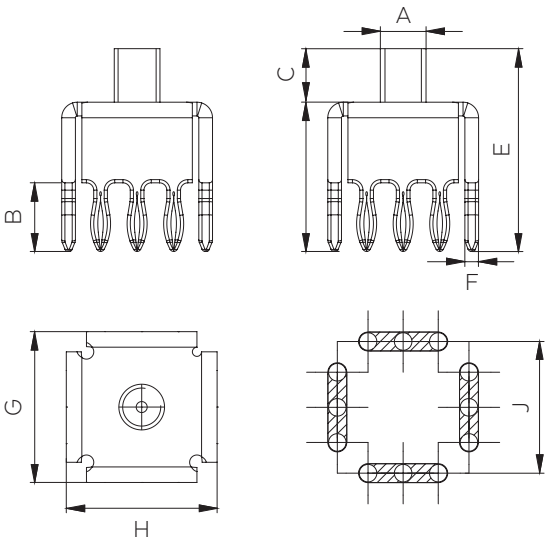
REACH RoHS COMPLIANT NEW VERSION

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



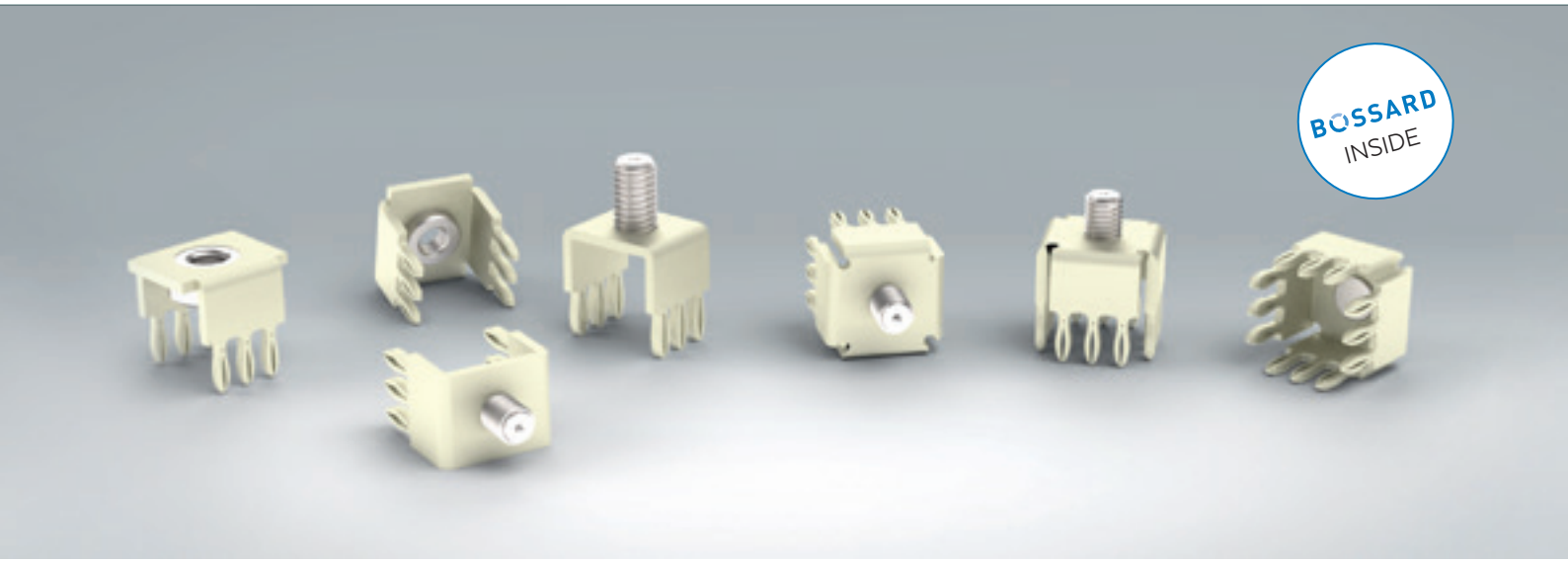
POWER TOWER STRONG

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

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

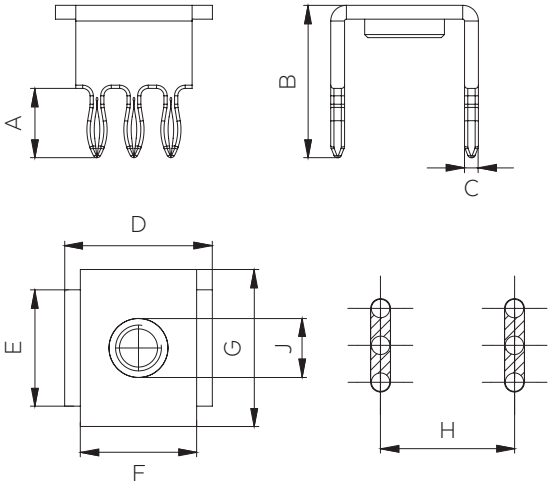
MATERIAL INFORMATION

Option	Part number
BlueBrass	16.2.00XX.BB

REACH RoHS COMPLIANT NEW VERSION

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

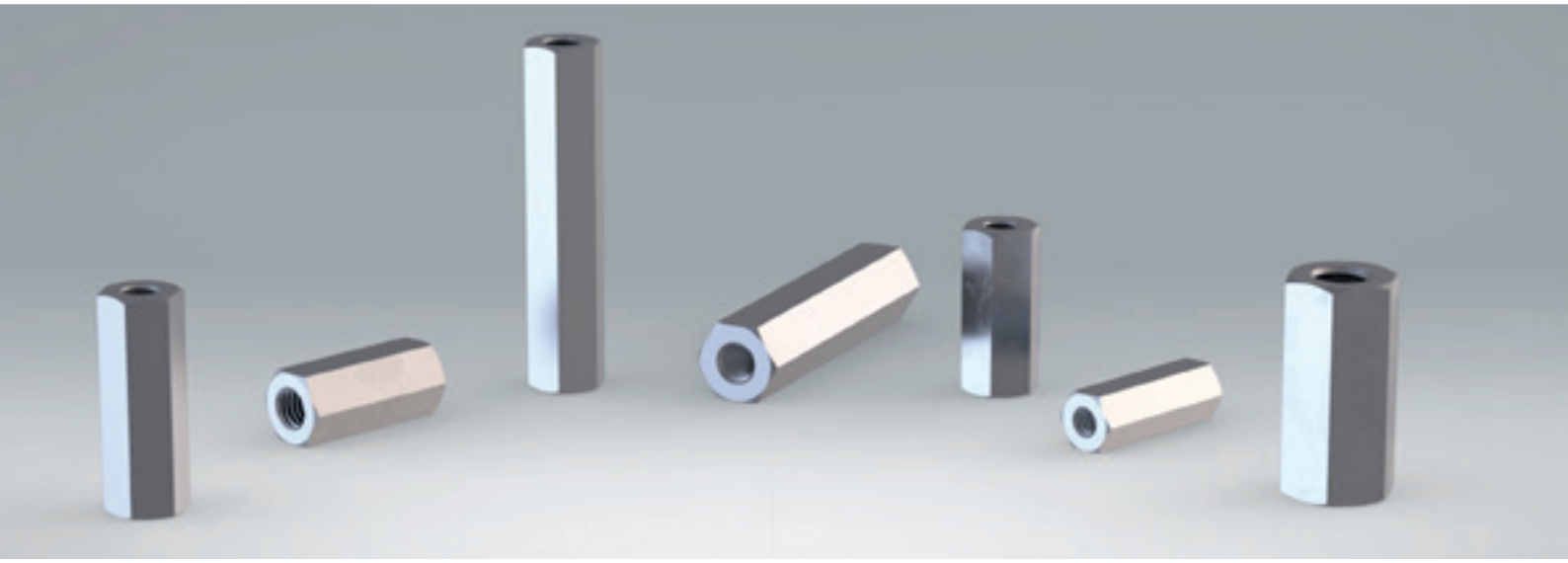


TECHNICAL DATA

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

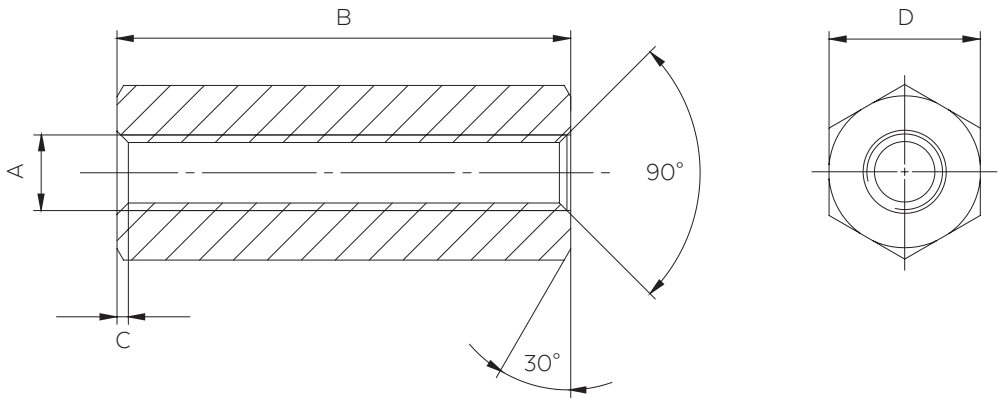
RoHS COMPLIANT

ELV END-OF-LIFE-VEHICLES

MATERIAL INFORMATION

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

SCALE DRAWINGS

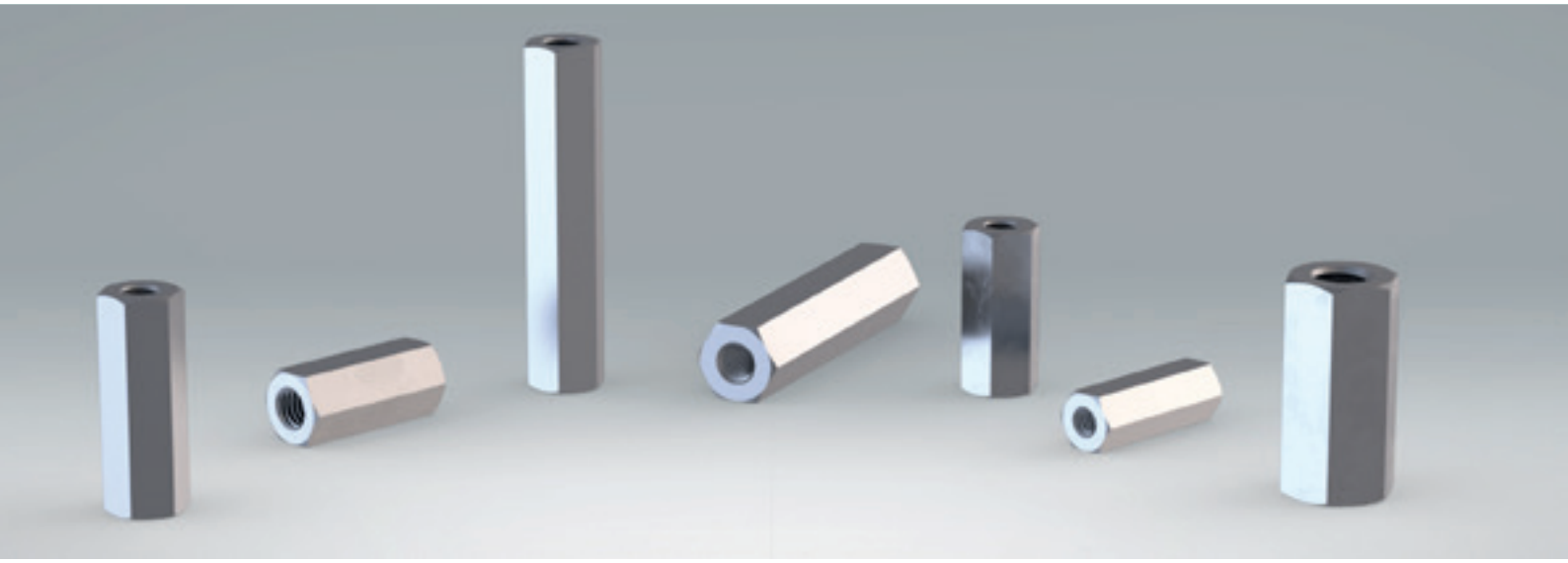


TECHNICAL DATA

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

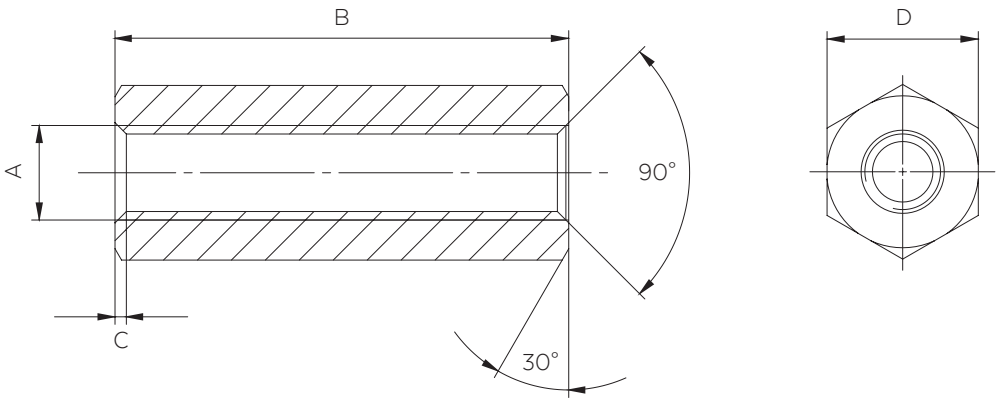
RoHS COMPLIANT

ELV END-OF-LIFE-VEHICLES

MATERIAL INFORMATION

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

SCALE DRAWINGS



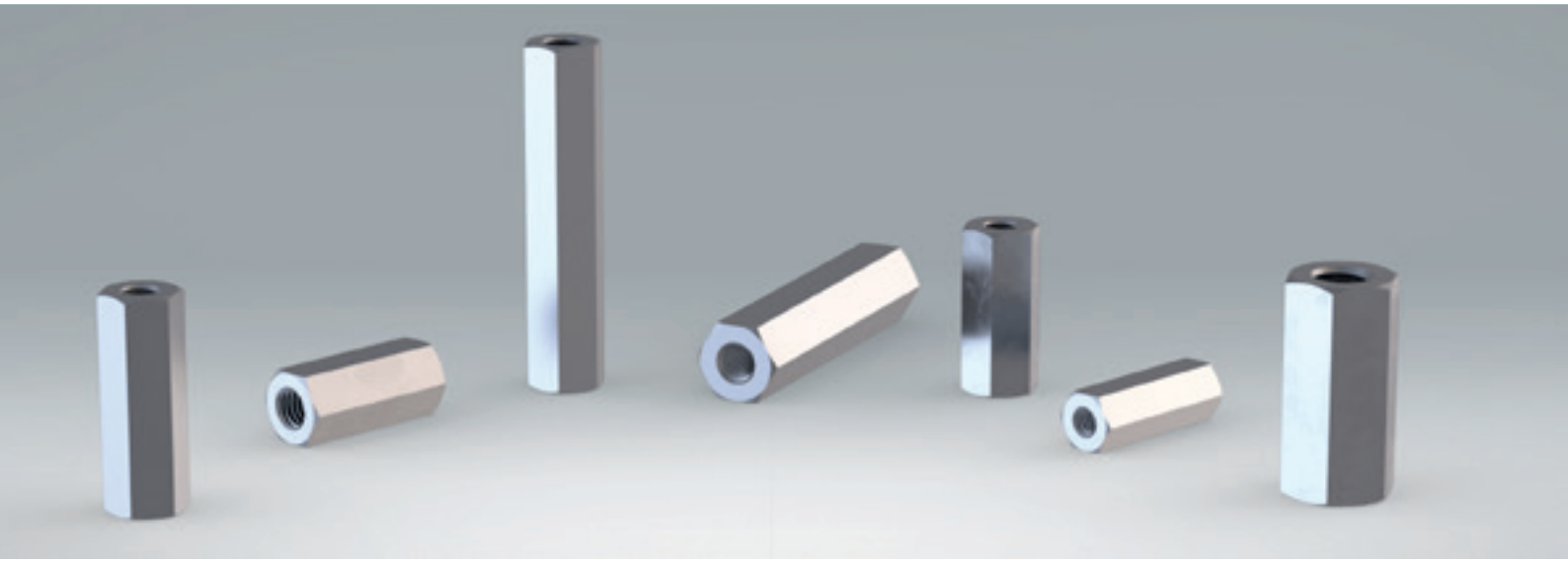
TECHNICAL DATA

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

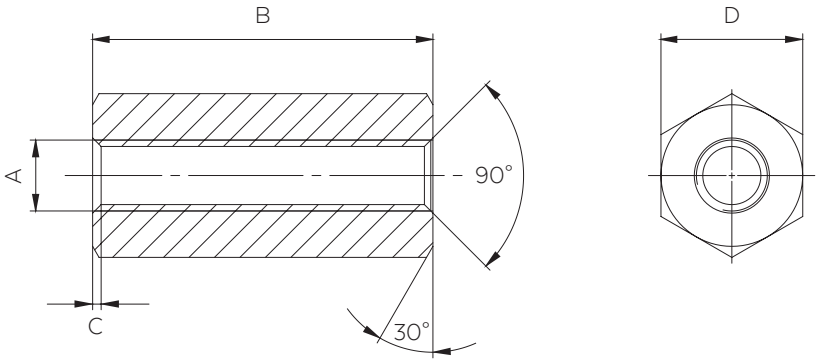
RoHS COMPLIANT

ELV END-OF-LIFE-VEHICLES

MATERIAL INFORMATION

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

SCALE DRAWINGS

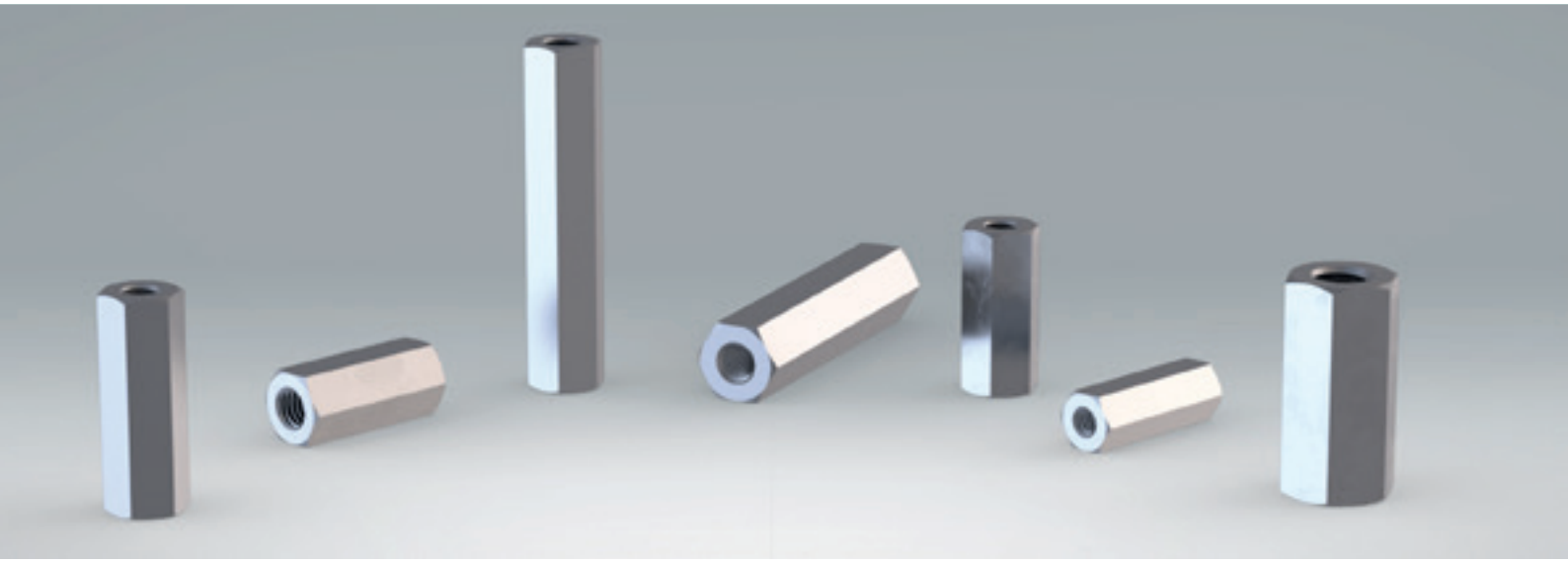


TECHNICAL DATA

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

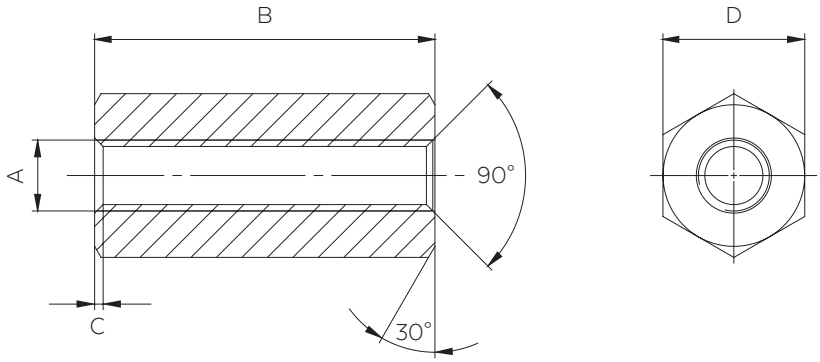
RoHS COMPLIANT

ELV END-OF-LIFE-VEHICLES

MATERIAL INFORMATION

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

SCALE DRAWINGS

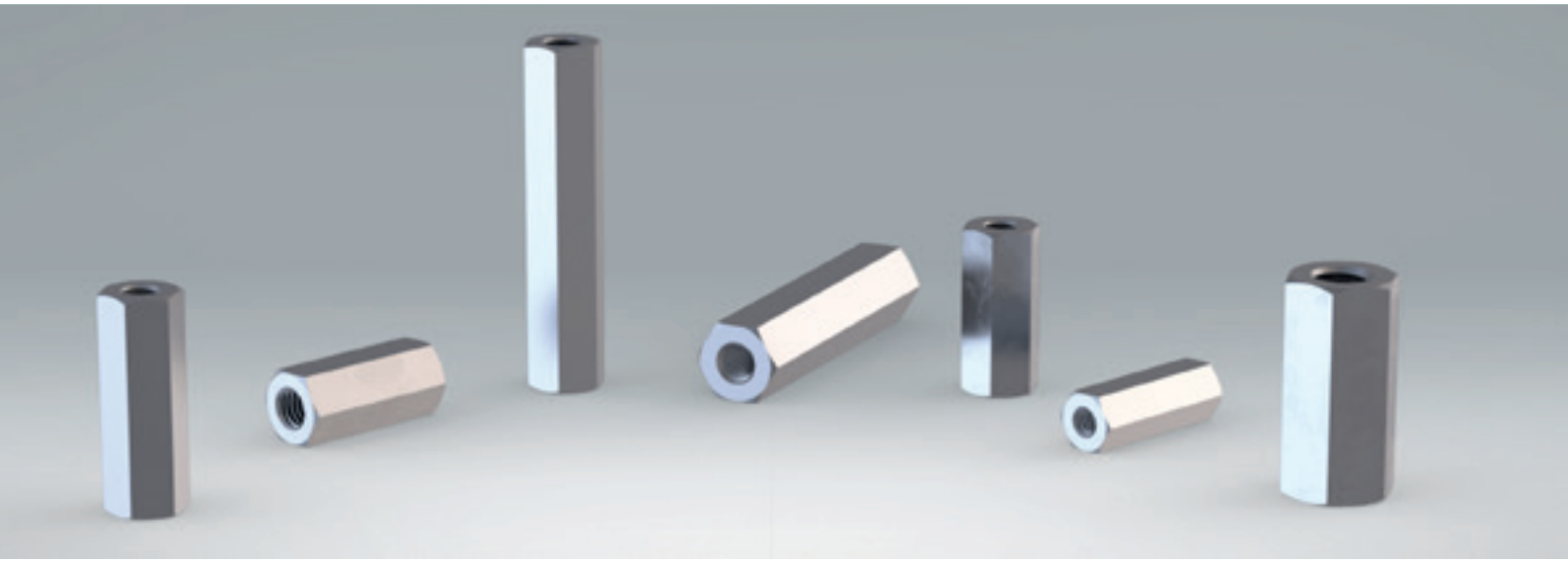


TECHNICAL DATA

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

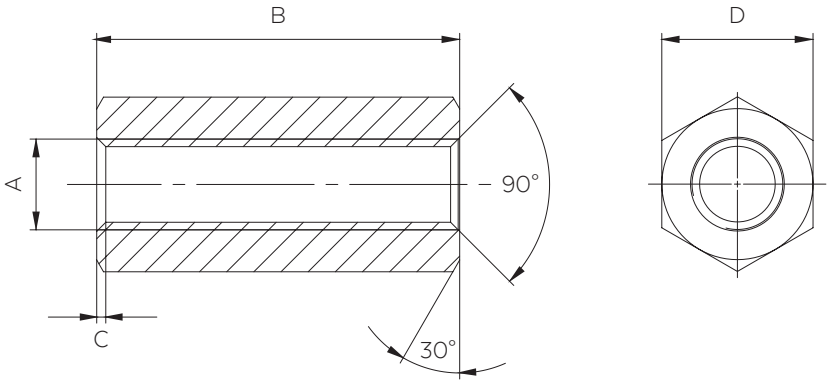
RoHS COMPLIANT

ELV END-OF-LIFE-VEHICLES

MATERIAL INFORMATION

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

SCALE DRAWINGS

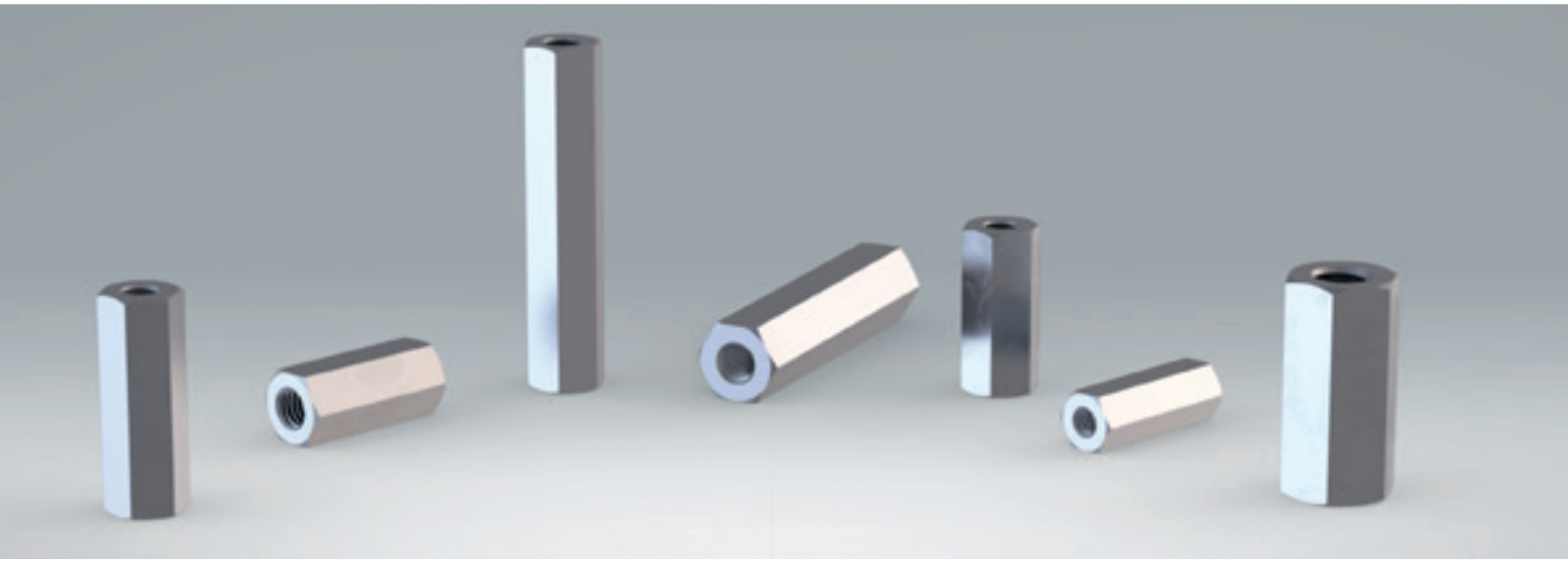


TECHNICAL DATA

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

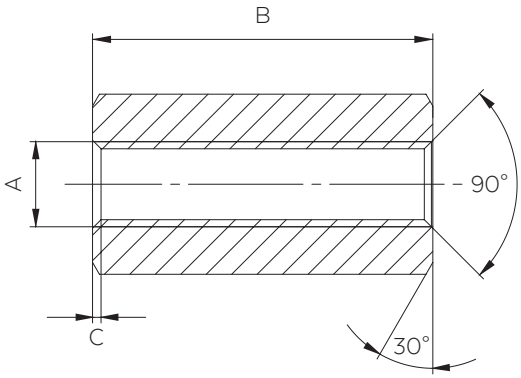
RoHS COMPLIANT

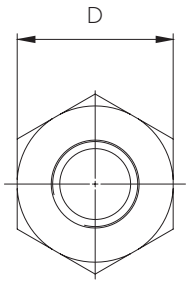
ELV END-OF-LIFE-VEHICLES

MATERIAL INFORMATION

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

SCALE DRAWINGS



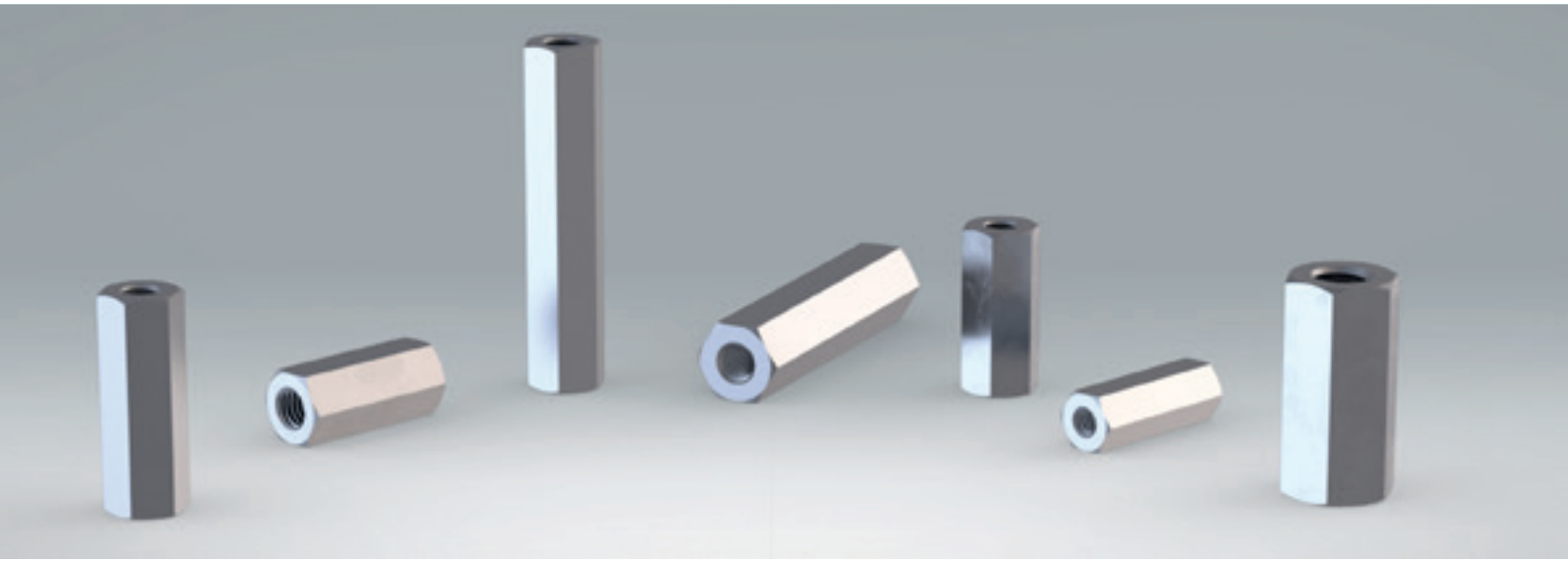


TECHNICAL DATA

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

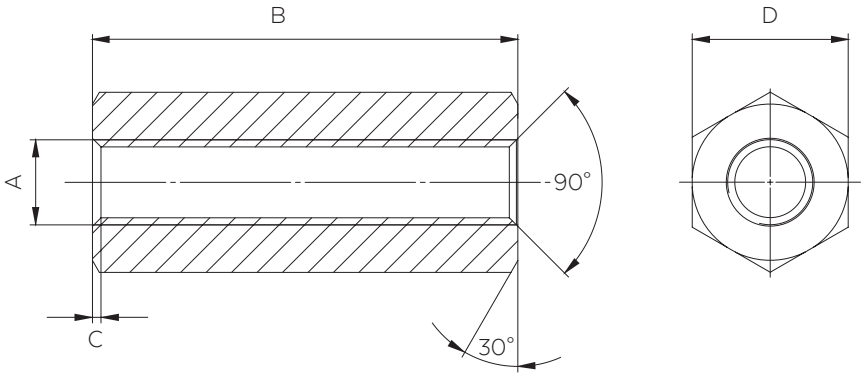
RoHS COMPLIANT

ELV END-OF-LIFE-VEHICLES

MATERIAL INFORMATION

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

SCALE DRAWINGS

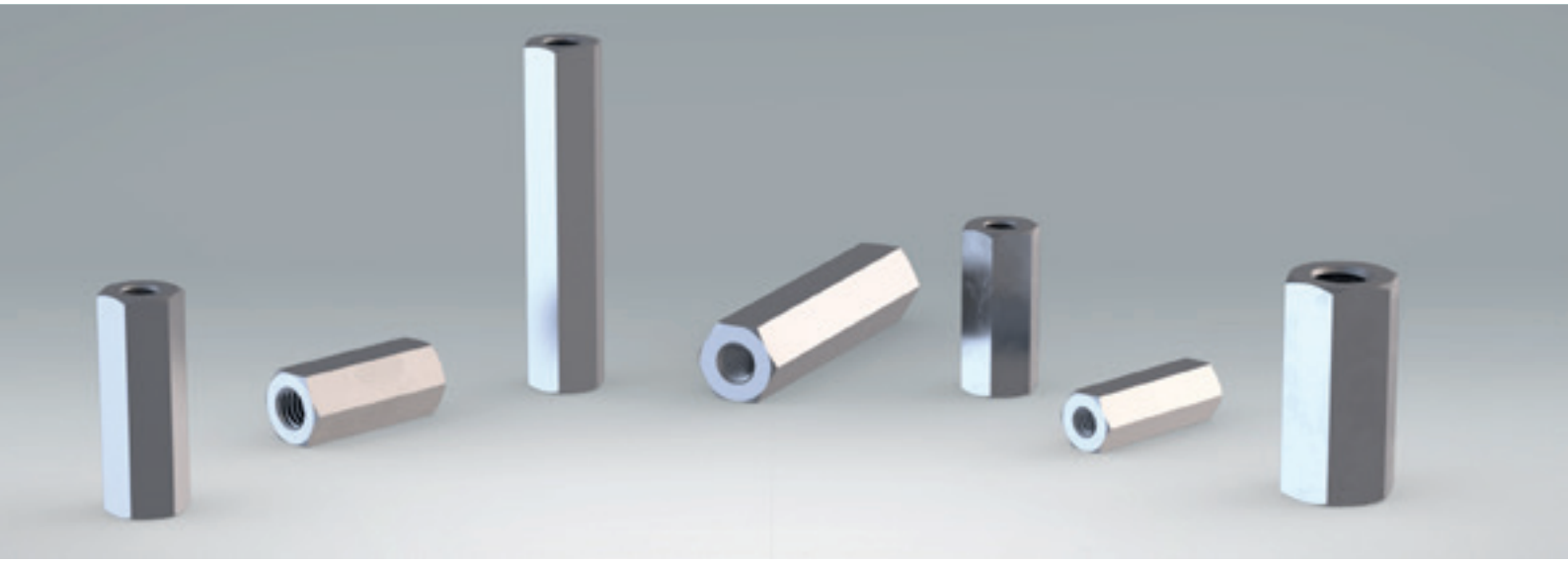


TECHNICAL DATA

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

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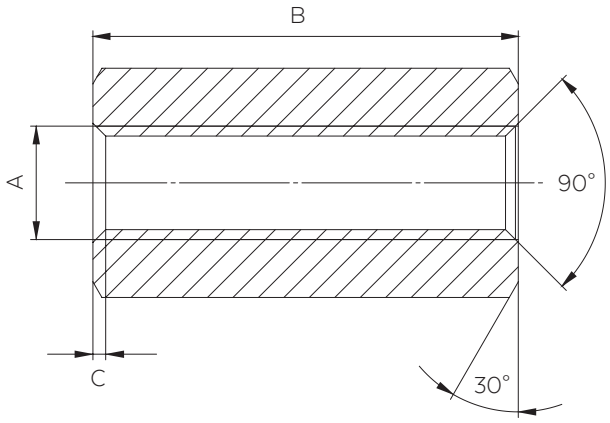
RoHS COMPLIANT

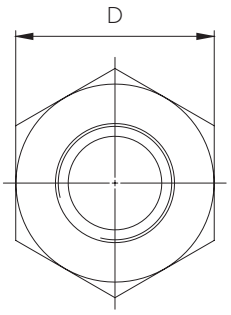
ELV END-OF-LIFE-VEHICLES

MATERIAL INFORMATION

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

SCALE DRAWINGS



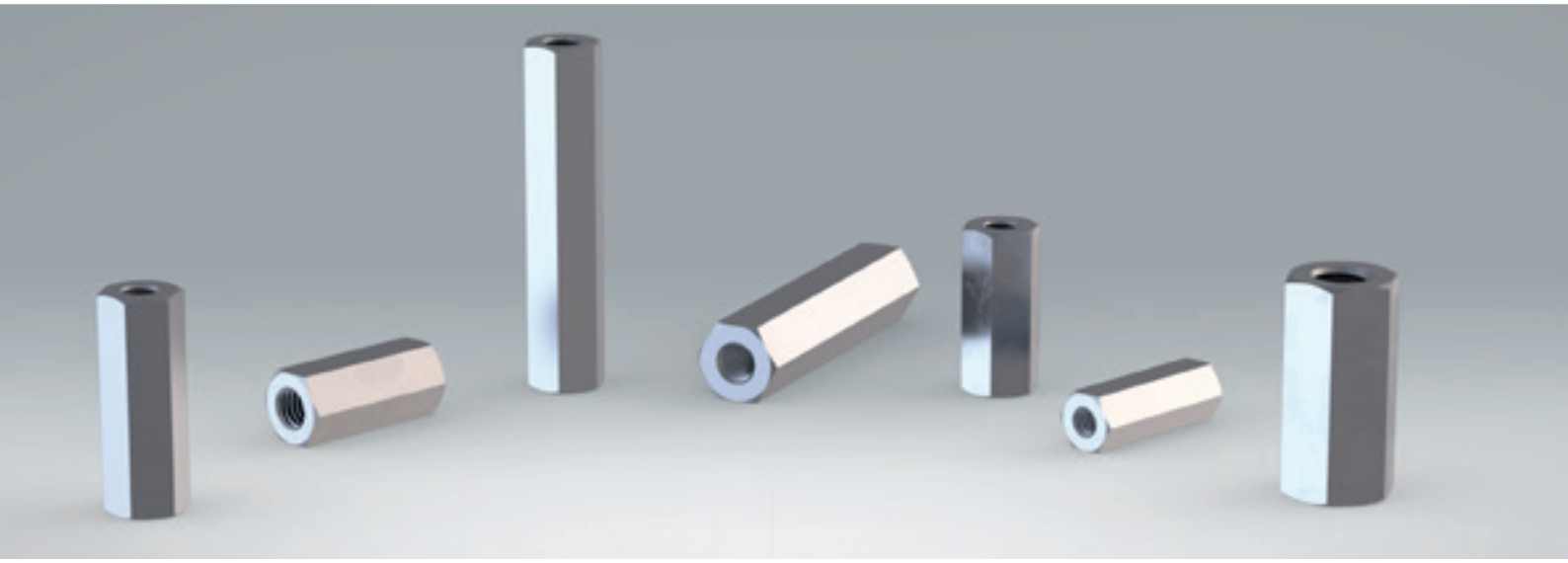


TECHNICAL DATA

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

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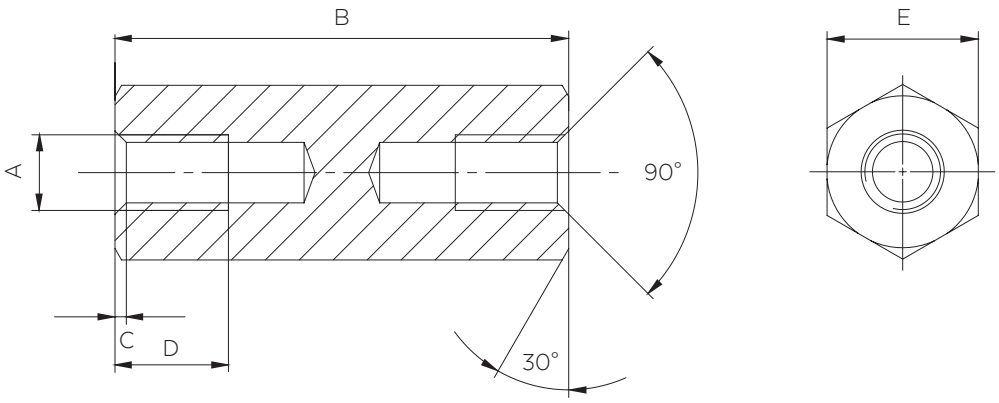
RoHS COMPLIANT

ELV END-OF-LIFE-VEHICLES

MATERIAL INFORMATION

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

SCALE DRAWINGS

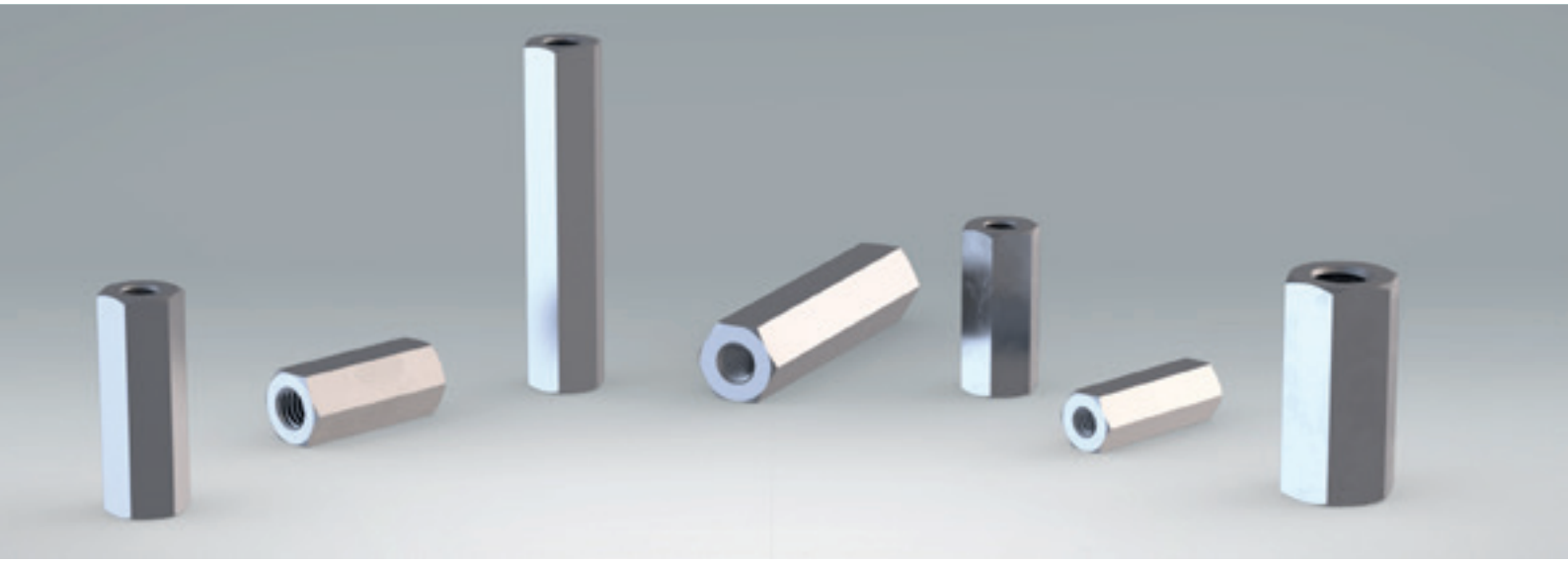


TECHNICAL DATA

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

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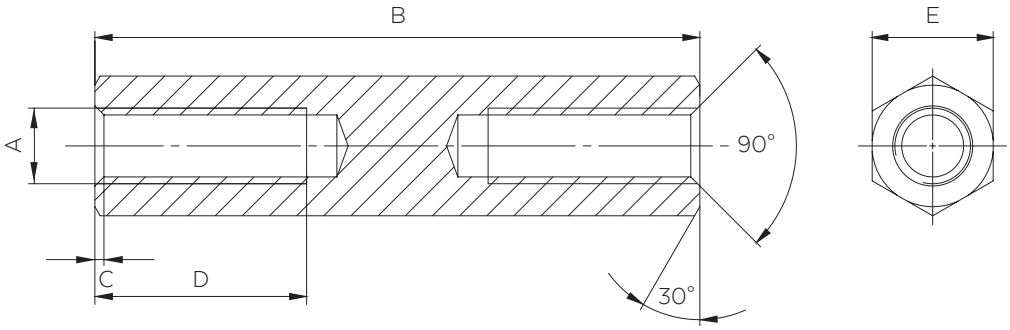
RoHS COMPLIANT

ELV END-OF-LIFE-VEHICLES

MATERIAL INFORMATION

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

SCALE DRAWINGS



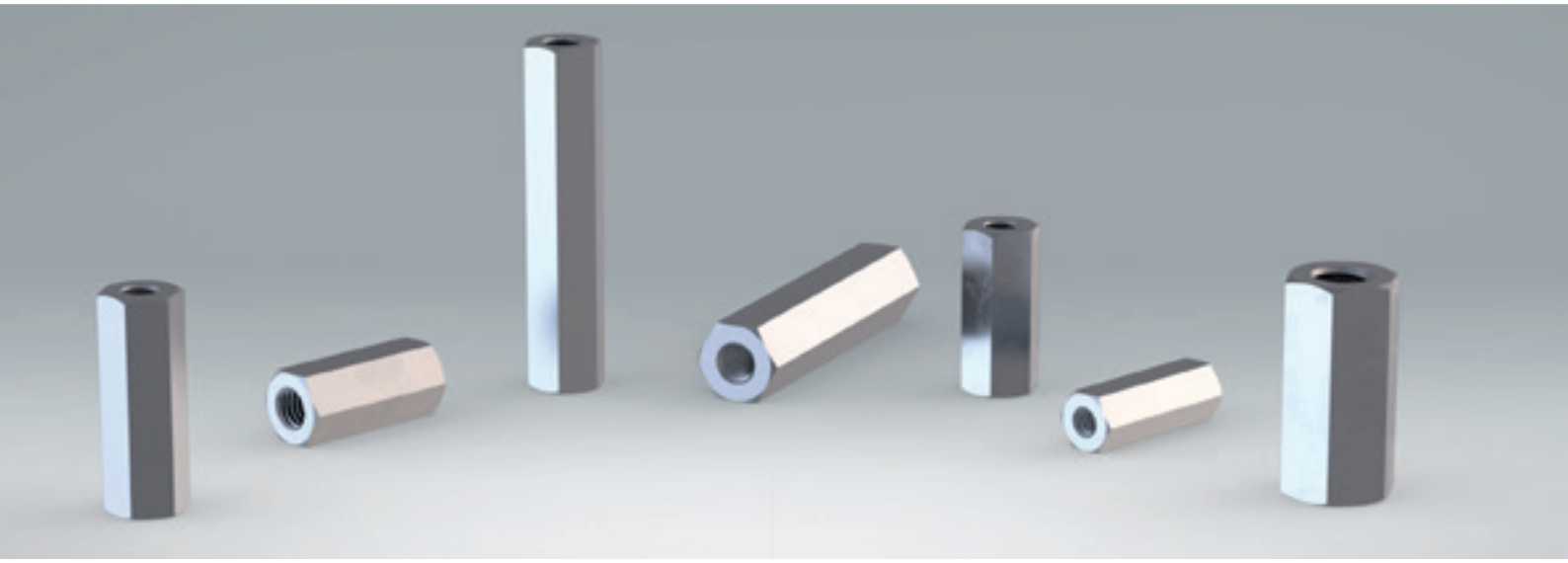
TECHNICAL DATA

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



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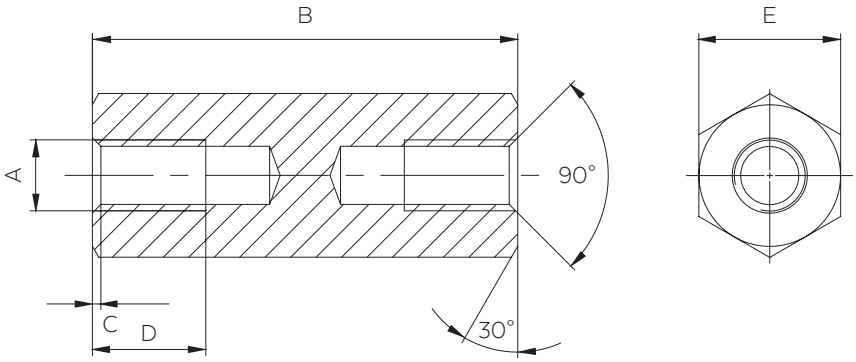
RoHS COMPLIANT

ELV END-OF-LIFE-VEHICLES

MATERIAL INFORMATION

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

SCALE DRAWINGS

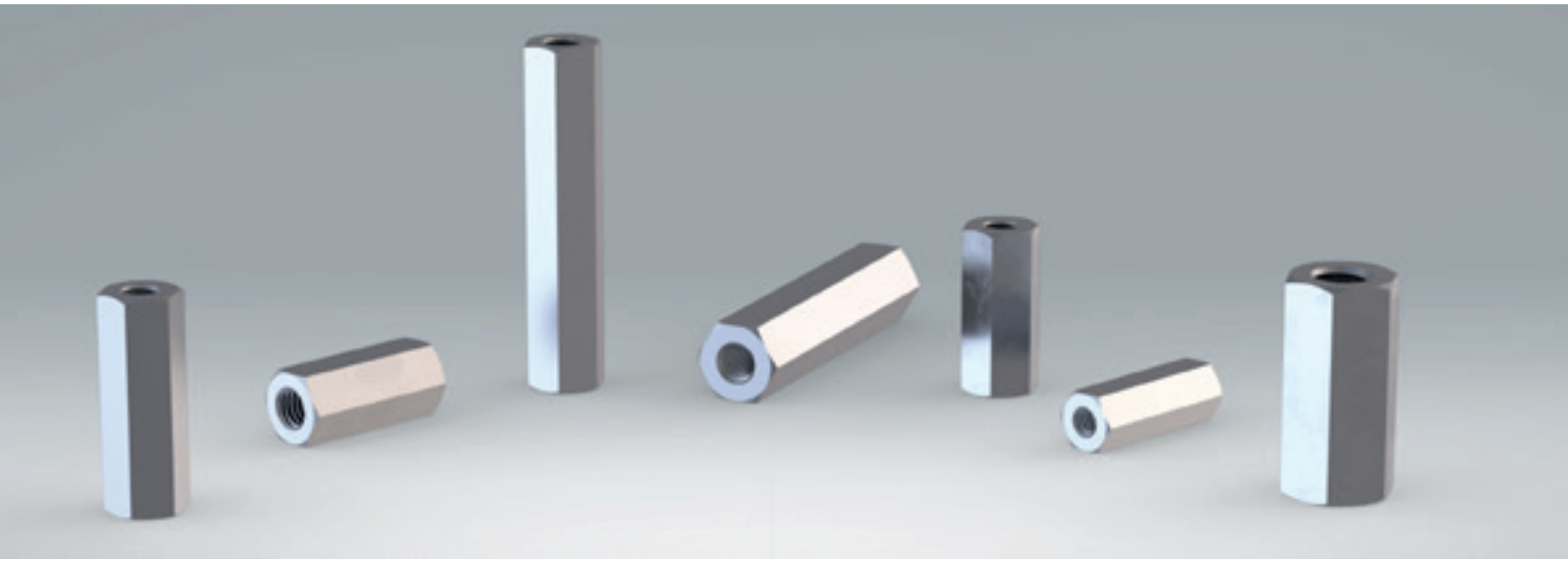


TECHNICAL DATA

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



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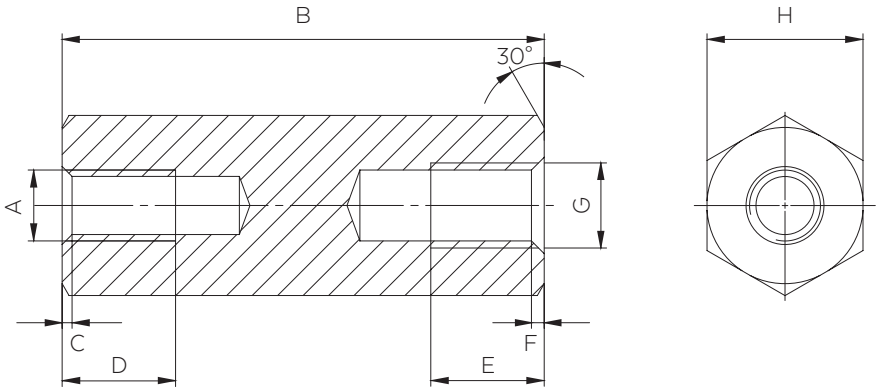
RoHS COMPLIANT

ELV END-OF-LIFE-VEHICLES

MATERIAL INFORMATION

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

SCALE DRAWINGS

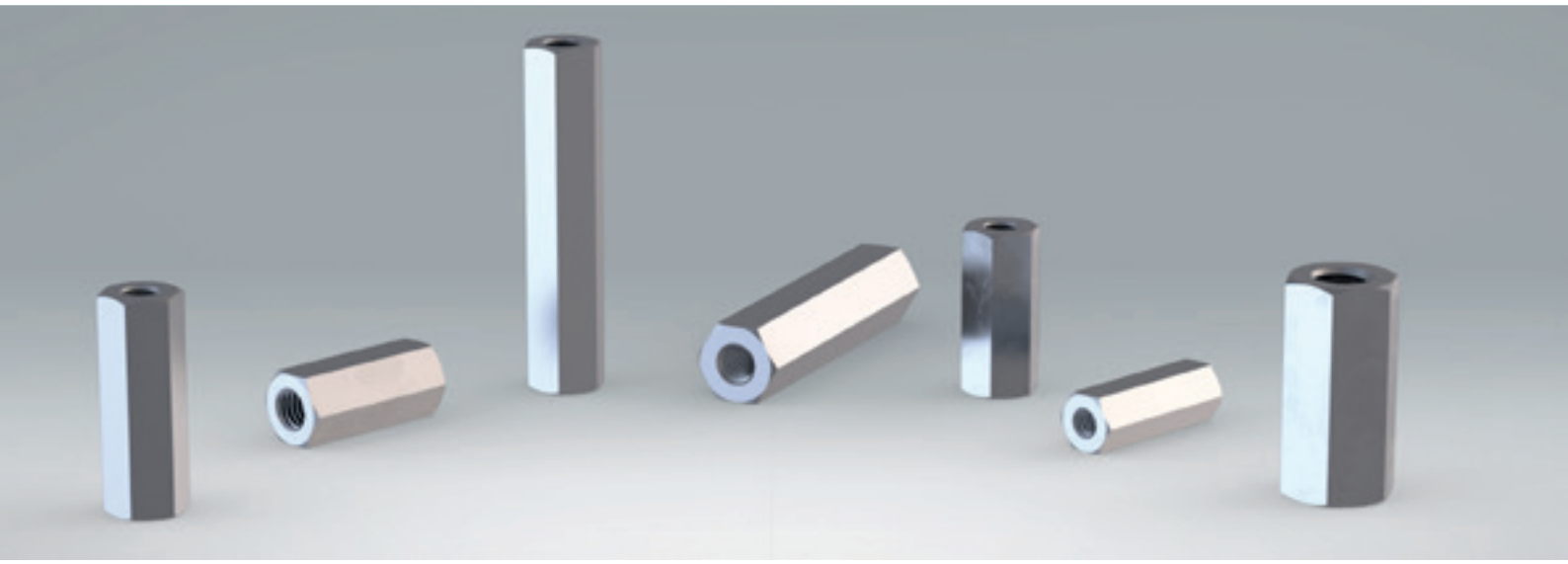


TECHNICAL DATA

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



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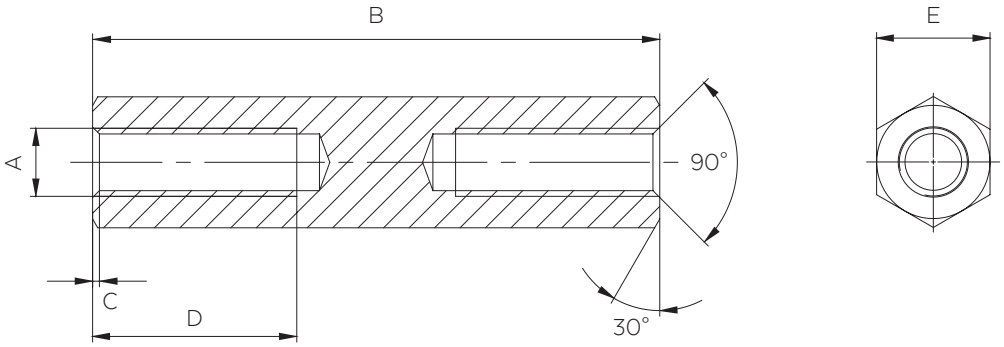
RoHS COMPLIANT

ELV END-OF-LIFE-VEHICLES

MATERIAL INFORMATION

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

SCALE DRAWINGS

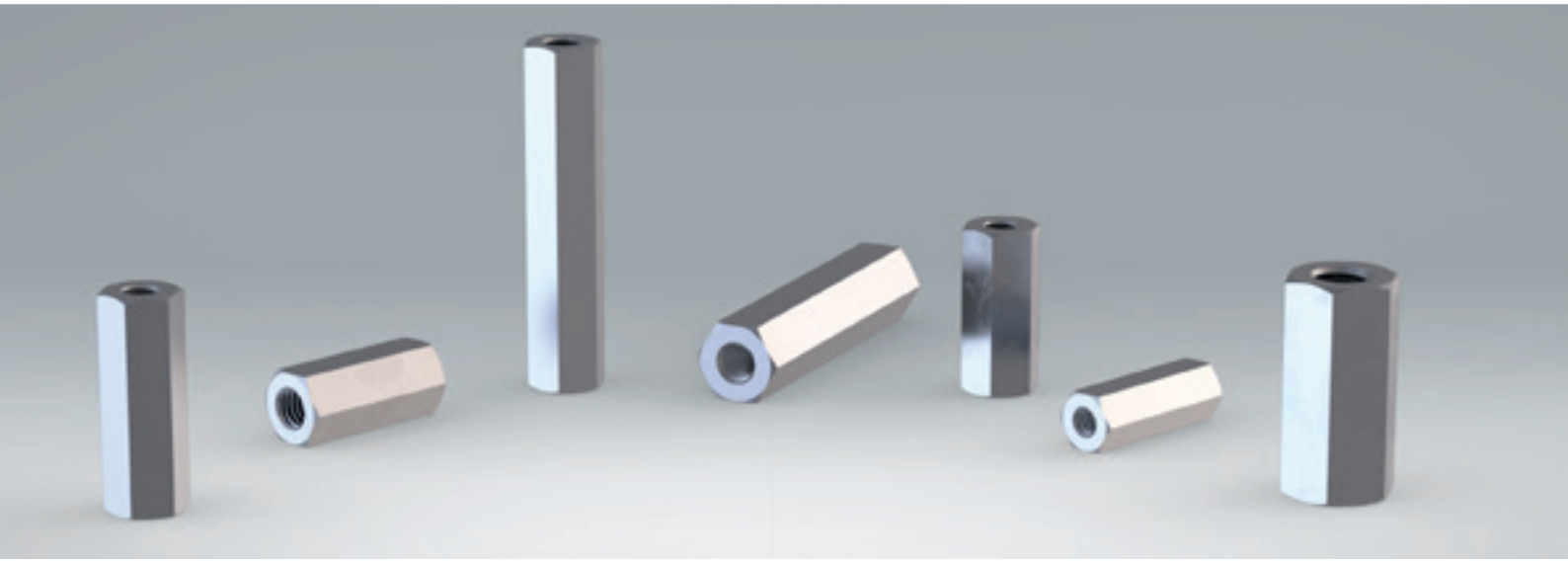


TECHNICAL DATA

A	B	C	D	E	Part number
M3	18	0.3	8	SW5	**06.1.0A01**
M3	19,1	0.3	8	SW5	**06.1.0A02**
M3	20	0.3	8	SW5	**06.1.0A03**
M3	22	0.3	10	SW5	**06.1.0A04**
M3	22,2	0.3	7	SW5	**06.1.0A05**
M3	25	0.3	8	SW5	**06.1.0A06**
M3	28	0.3	8	SW5	**06.1.0A07**
M3	30	0.3	8	SW5	**06.1.0A08**
M3	31,8	0.3	8	SW5	**06.1.0A09**
M3	38,1	0.3	8	SW5	**06.1.0A10**

Measurements B - D in mm

POWER SPACER
INTERNAL-INTERNAL, M3, THREAD BOTH SIDES



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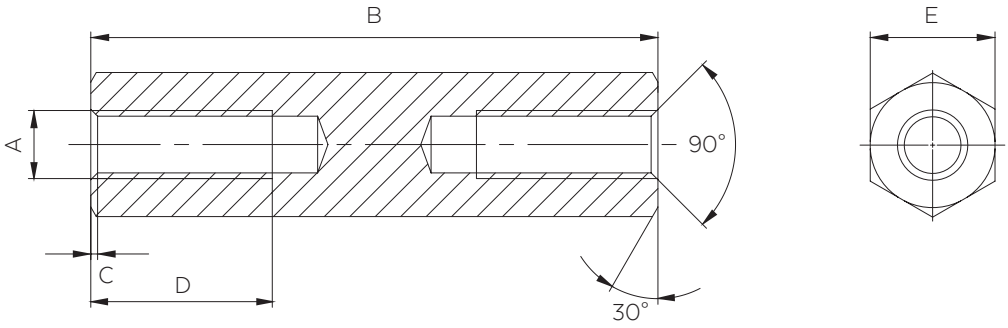
RoHS COMPLIANT

ELV END-OF-LIFE-VEHICLES

MATERIAL INFORMATION

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

SCALE DRAWINGS



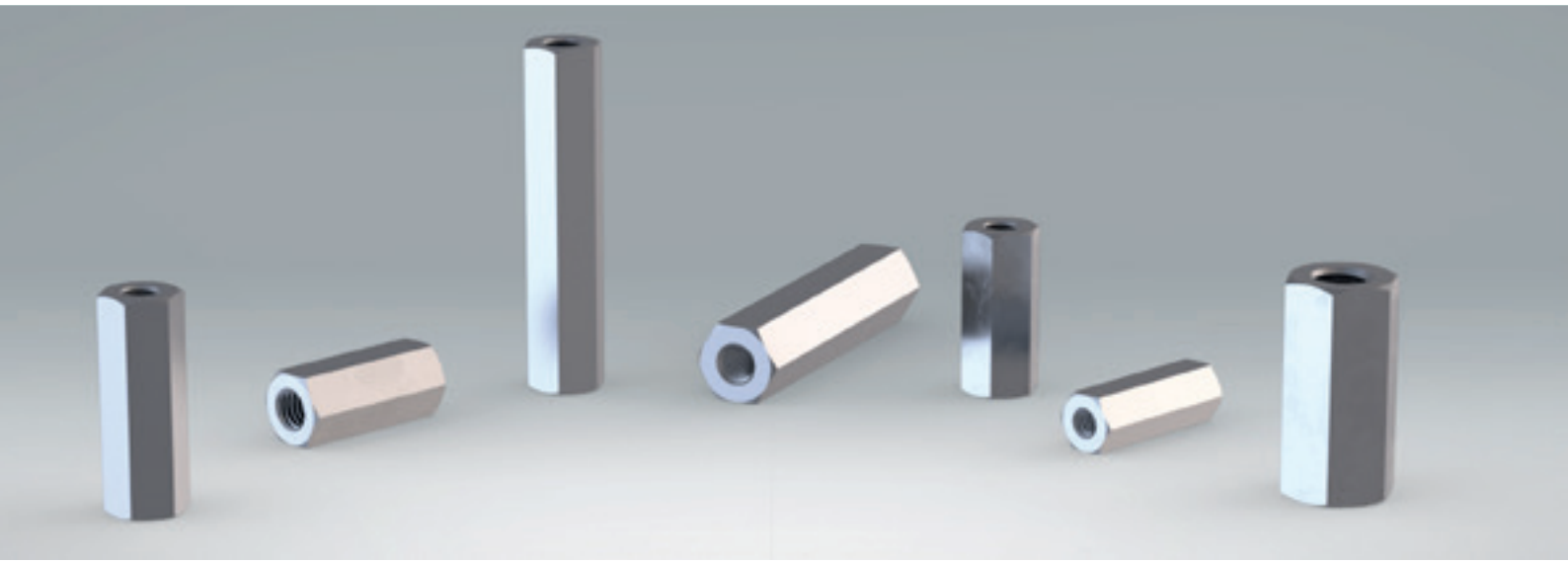
TECHNICAL DATA

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

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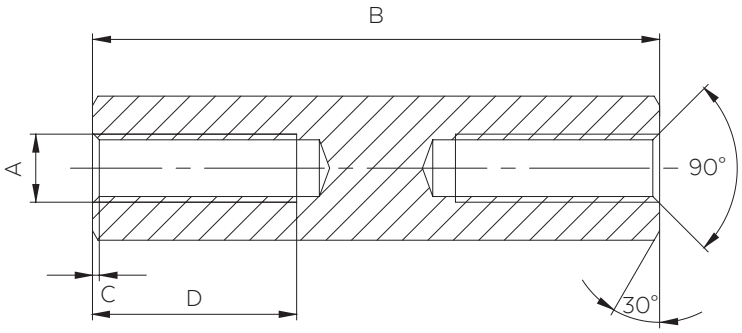
RoHS COMPLIANT

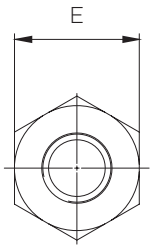
ELV END-OF-LIFE-VEHICLES

MATERIAL INFORMATION

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

SCALE DRAWINGS



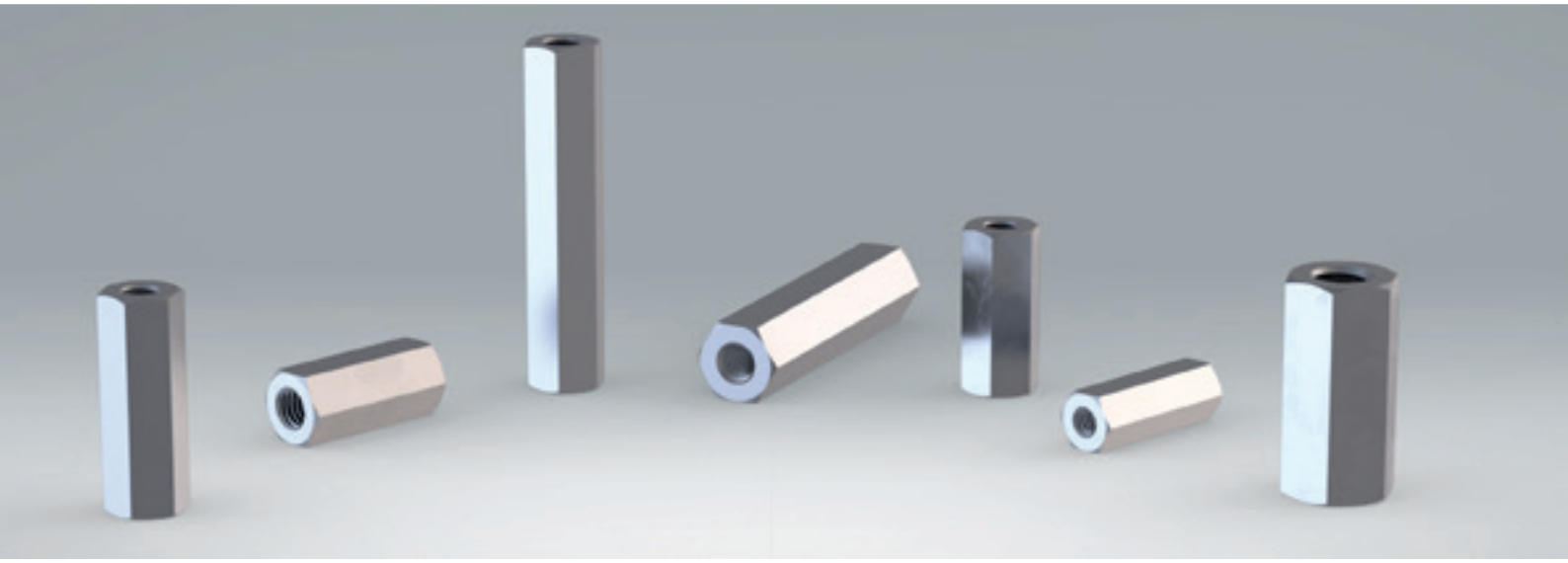


TECHNICAL DATA

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

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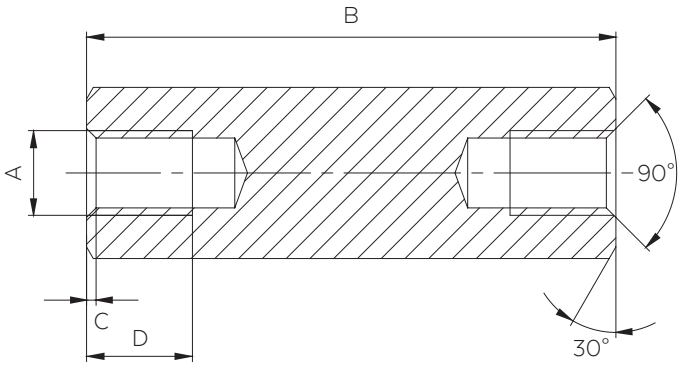
RoHS COMPLIANT

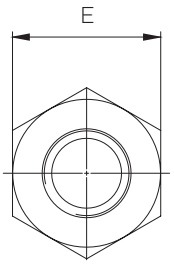
ELV END-OF-LIFE-VEHICLES

MATERIAL INFORMATION

Material	Surface	Part number
Brass CuZn39Pb3	nickel-plated (DIN 267 E1E gal. Ni 3)	06.1.0C0X

SCALE DRAWINGS



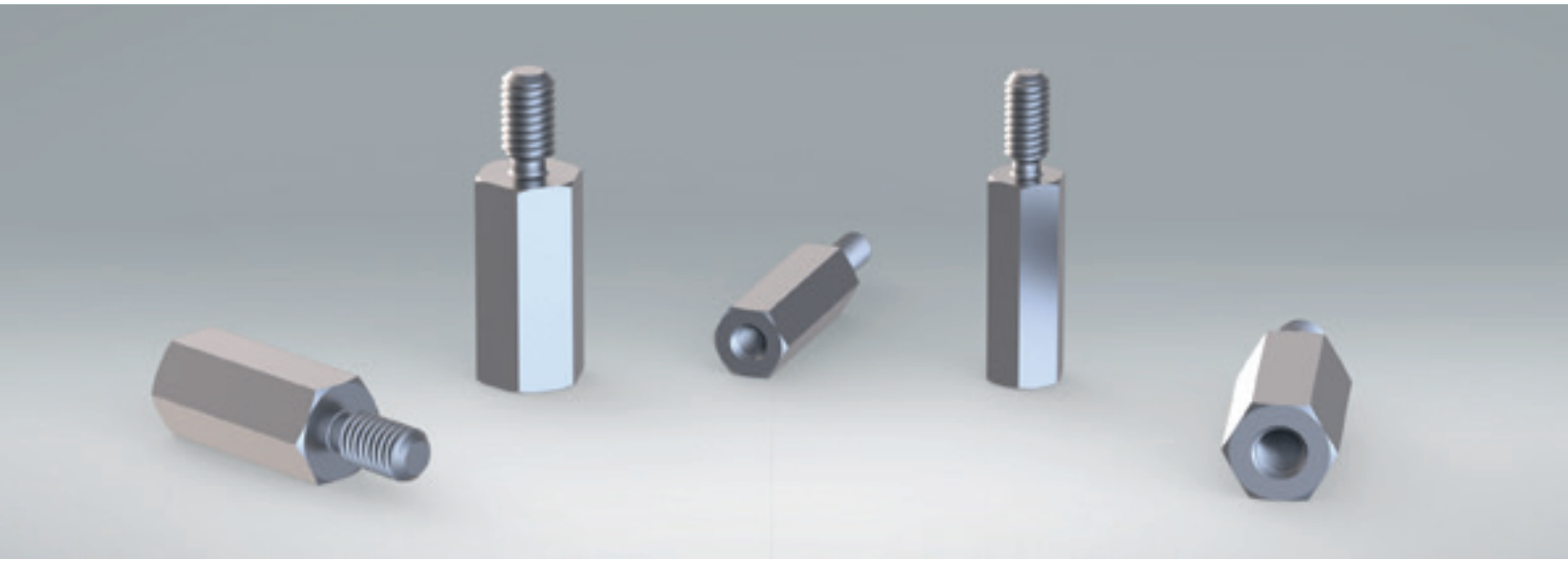


TECHNICAL DATA

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

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- RoHS compliant

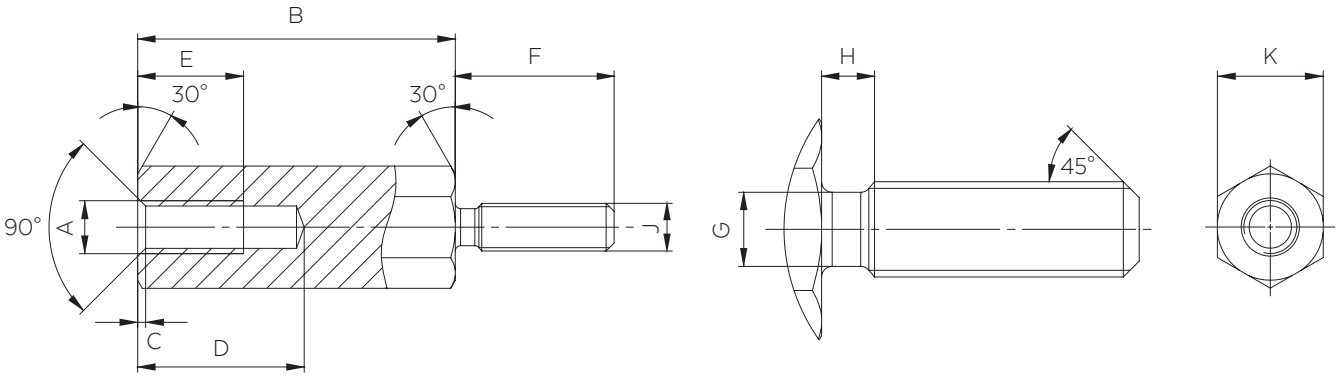
RoHS COMPLIANT

ELV END-OF-LIFE-VEHICLES

MATERIAL INFORMATION

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

SCALE DRAWINGS

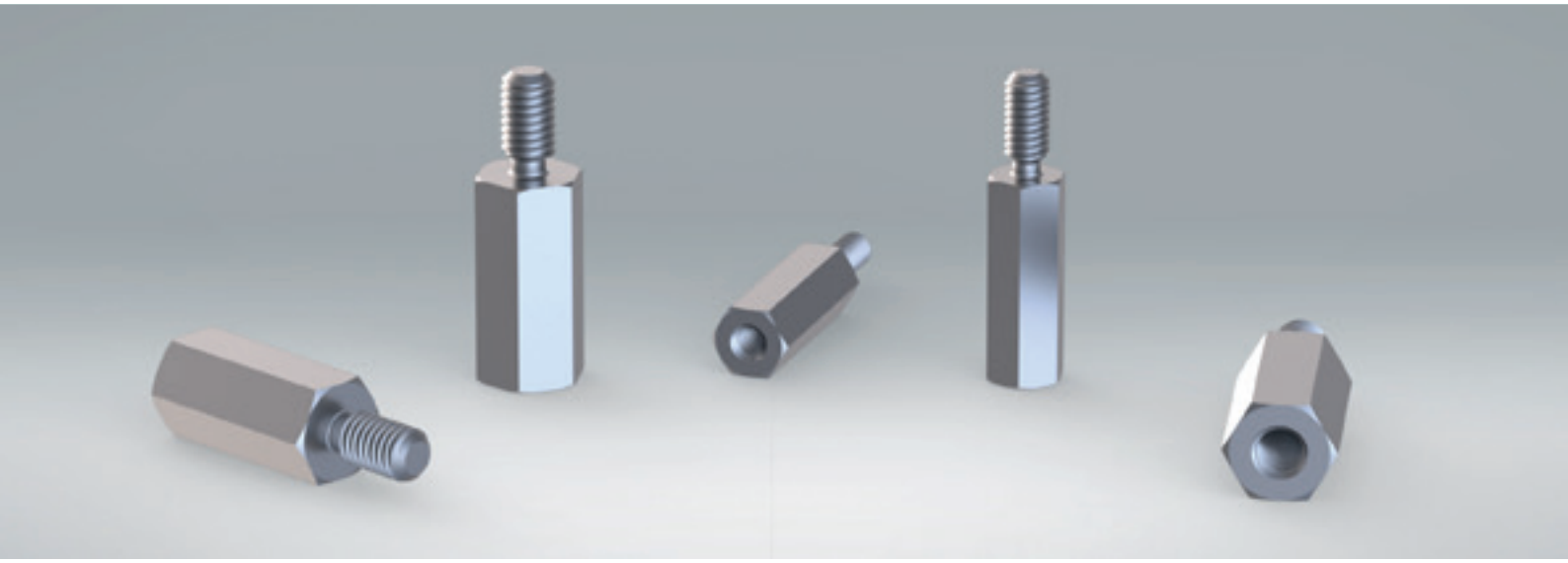


TECHNICAL DATA

A	B	C	D	E	F	G	H	J	K	Part number
M2	5	0.3	4.5	3.5	5	Ø 1.4	1	M2	SW5	**06.2.0001**
M2	5	0.3	4	2.8	6	Ø 1.4	1	M2	SW5	**06.2.0002**
M2	6.3	0.3	6	5	5	Ø 1.4	1	M2	SW5	**06.2.0003**
M2	7	0.3	6.5	5.1	6	Ø 1.4	1	M2	SW5	**06.2.0004**
M2	8	0.3	6.5	5	6	Ø 1.4	1	M2	SW5	**06.2.0005**
M2	10	0.3	8.5	7	6	Ø 1.4	1	M2	SW5	**06.2.0006**
M2	11	0.3	9	7	6	Ø 1.4	1	M2	SW5	**06.2.0007**
M2	12	0.3	9.5	7	6	Ø 1.4	1	M2	SW5	**06.2.0008**
M2	15	0.3	9	7	6	Ø 1.4	1	M2	SW5	**06.2.0009**
M2	16	0.3	9.5	7	6	Ø 1.4	1	M2	SW5	**06.2.0010**
M2	25	0.3	9.5	7	6	Ø 1.4	1	M2	SW5	**06.2.0011**
M2	30	0.3	9.5	7	6	Ø 1.4	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

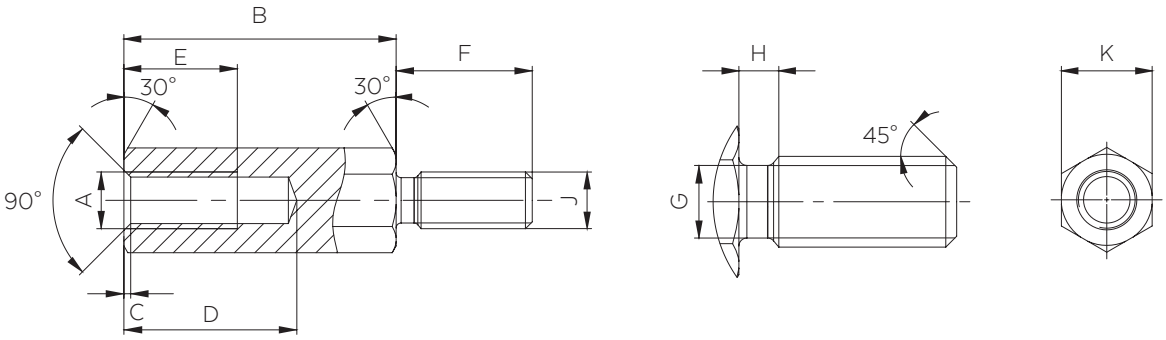
RoHS COMPLIANT

ELV END-OF-LIFE-VEHICLES

MATERIAL INFORMATION

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

SCALE DRAWINGS



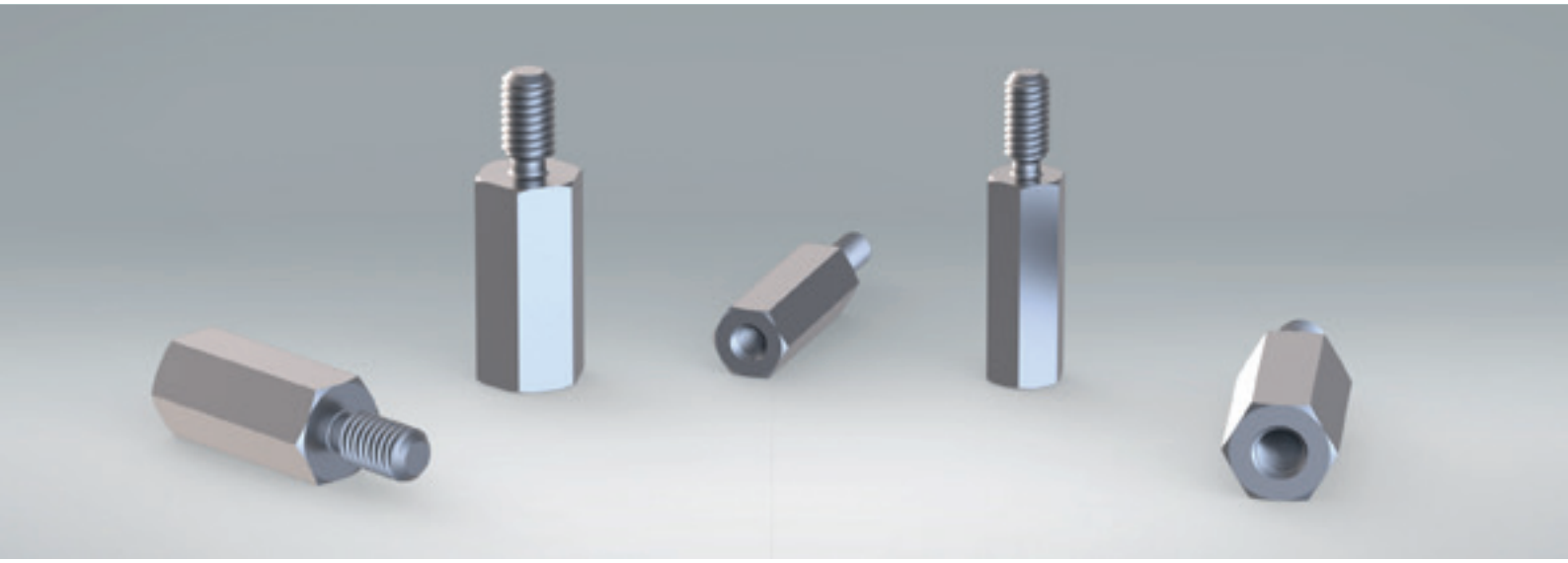
TECHNICAL DATA

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

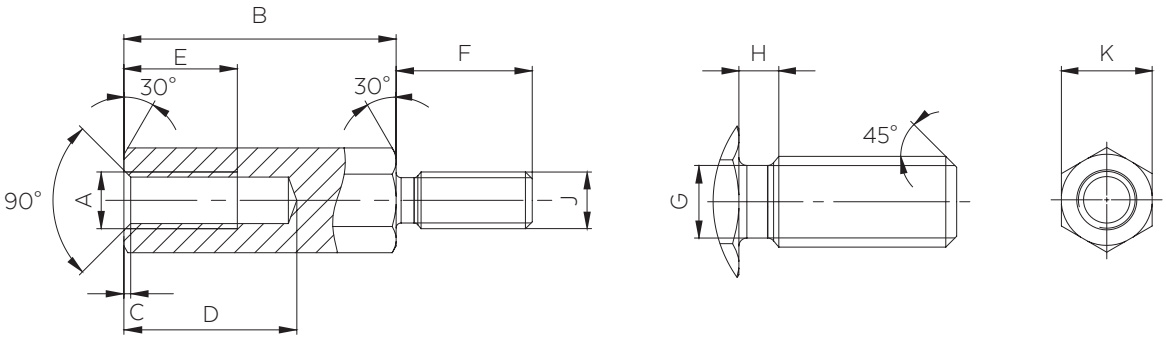
RoHS COMPLIANT

ELV END-OF-LIFE-VEHICLES

MATERIAL INFORMATION

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

SCALE DRAWINGS

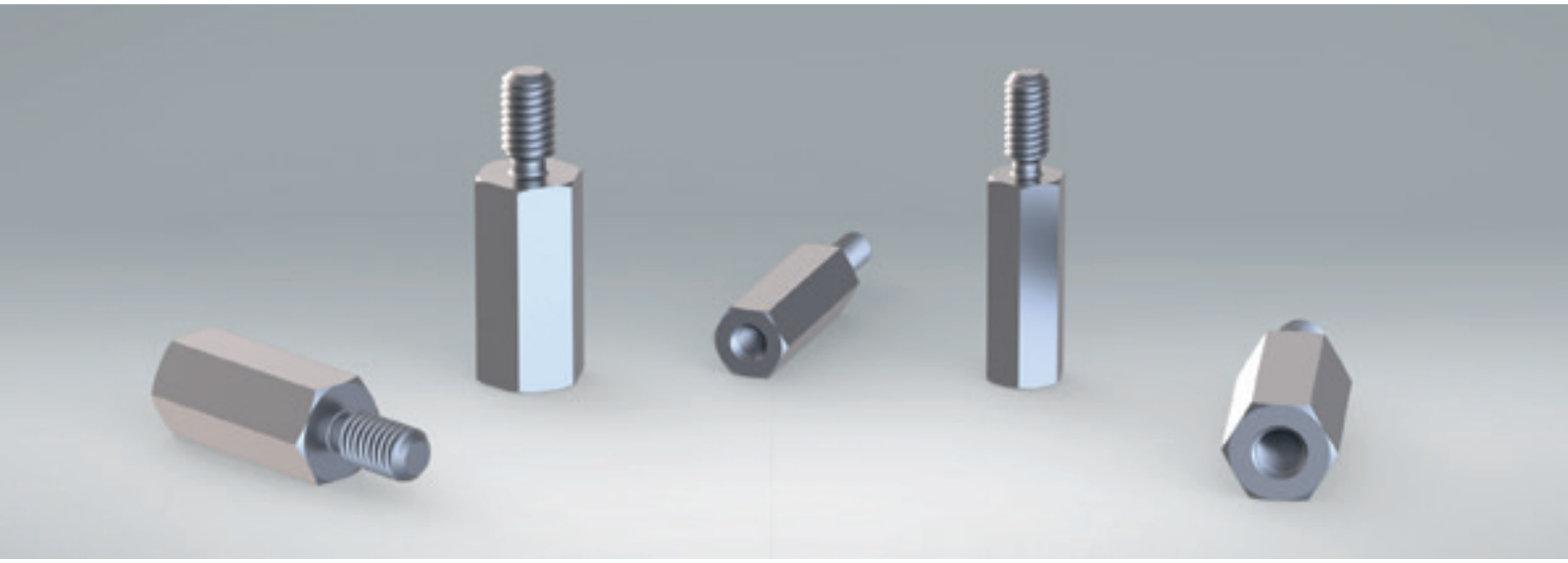


TECHNICAL DATA

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

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- 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

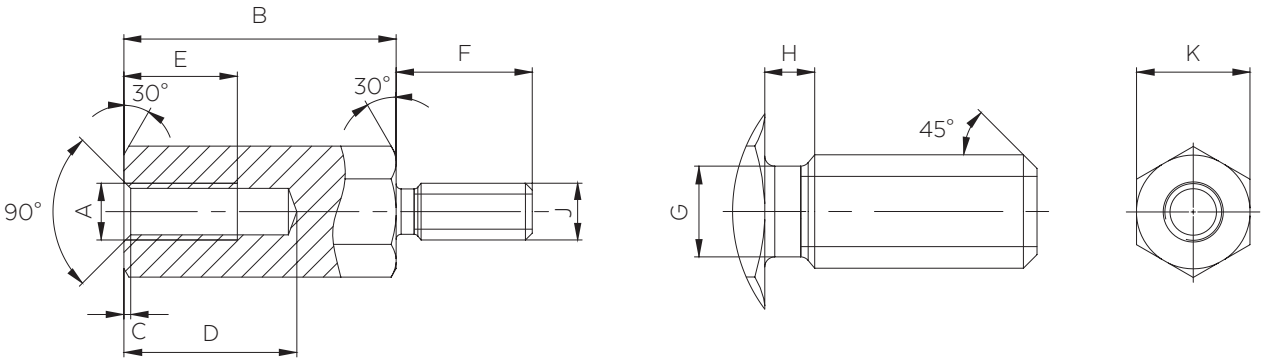
RoHS COMPLIANT

ELV END-OF-LIFE-VEHICLES

MATERIAL INFORMATION

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

SCALE DRAWINGS

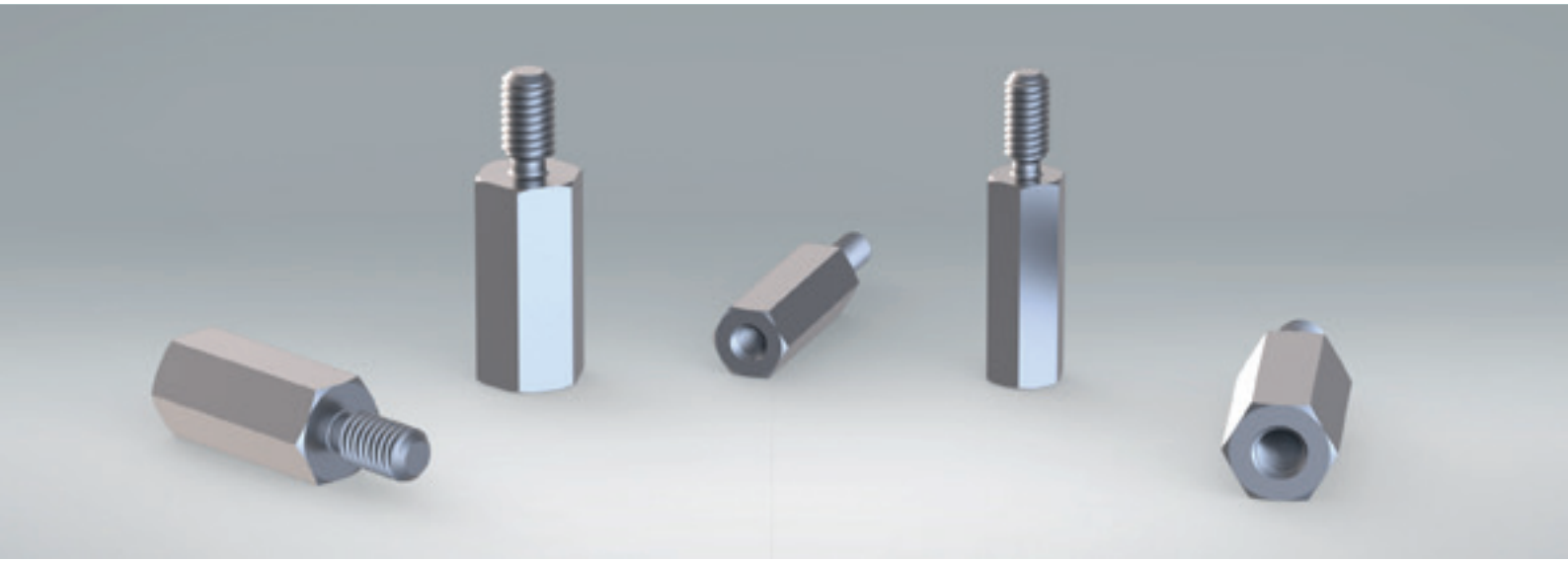


TECHNICAL DATA

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

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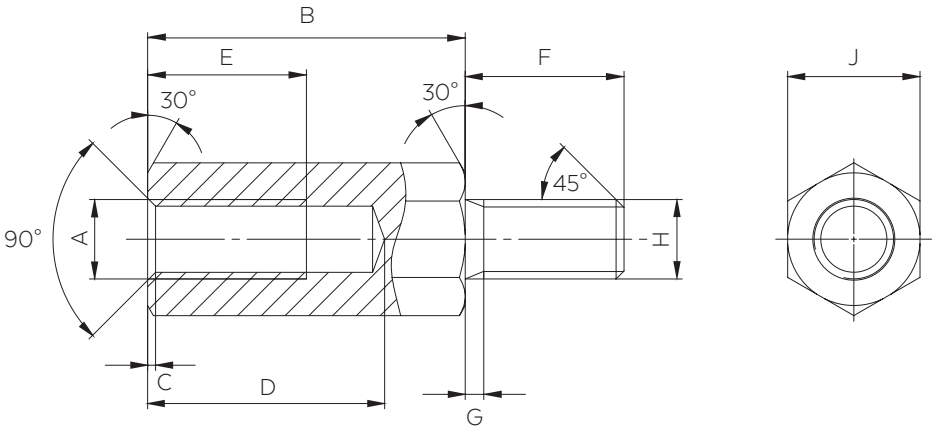
RoHS COMPLIANT

ELV END-OF-LIFE-VEHICLES

MATERIAL INFORMATION

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

SCALE DRAWINGS

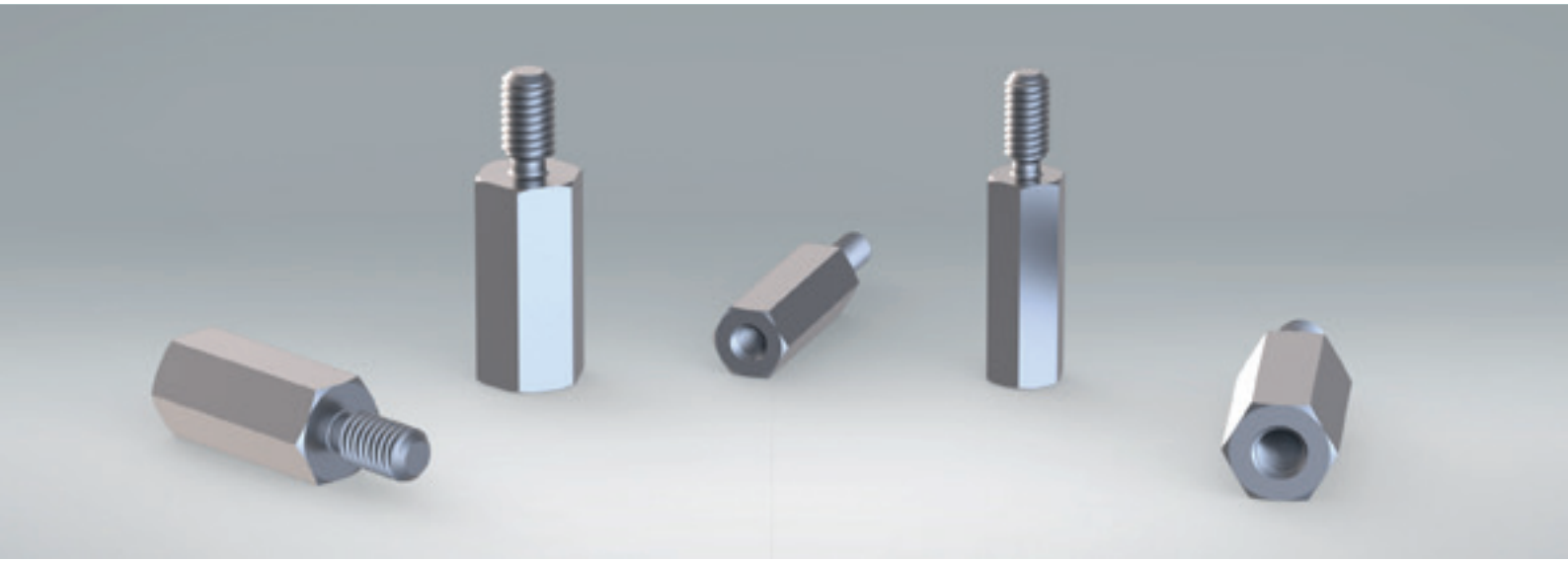


TECHNICAL DATA

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



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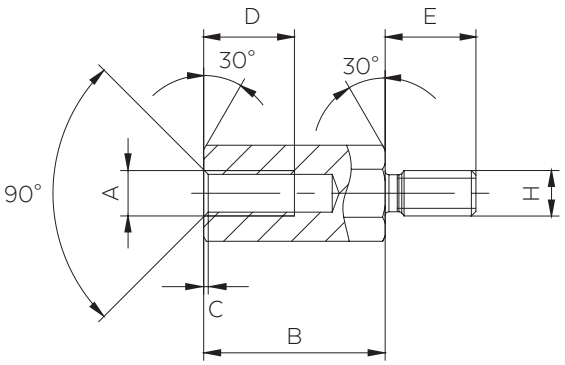
RoHS COMPLIANT

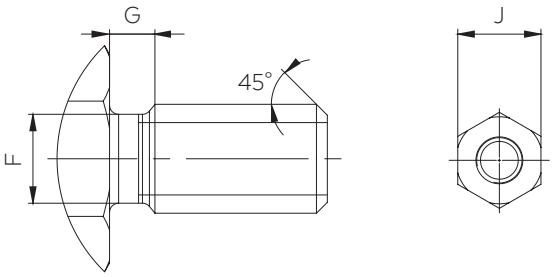
ELV END-OF-LIFE-VEHICLES

MATERIAL INFORMATION

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

SCALE DRAWINGS





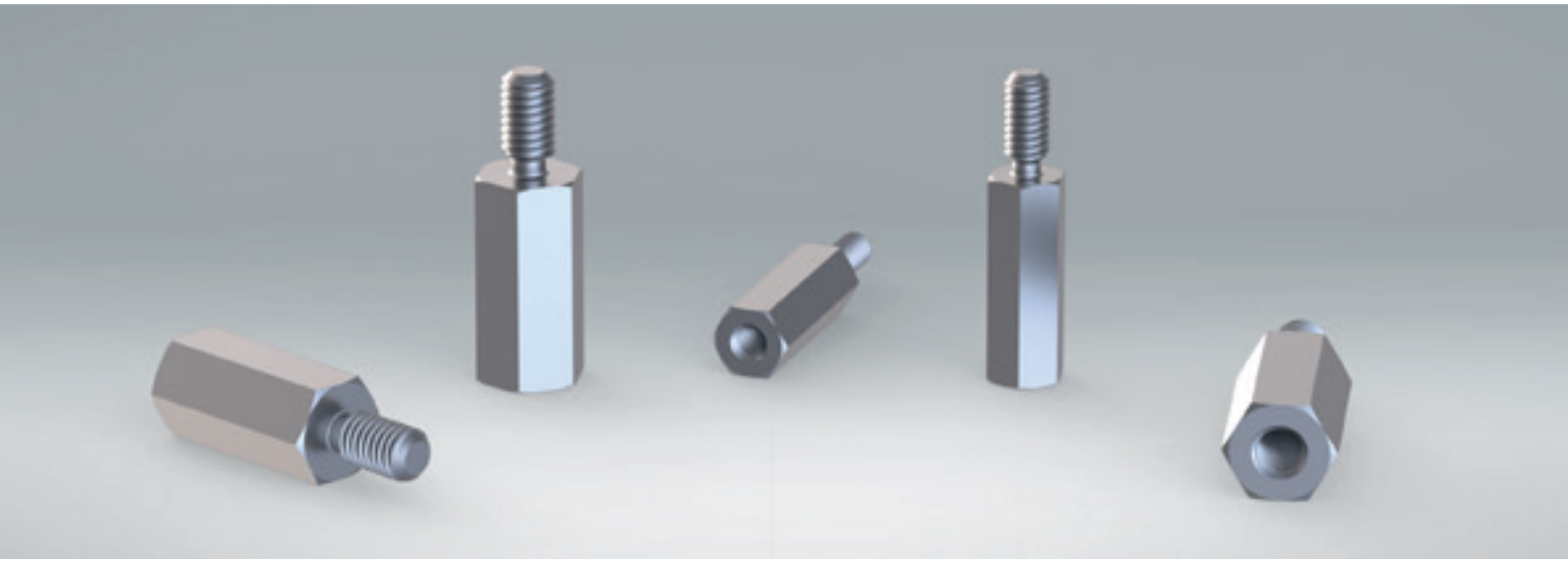
TECHNICAL DATA

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



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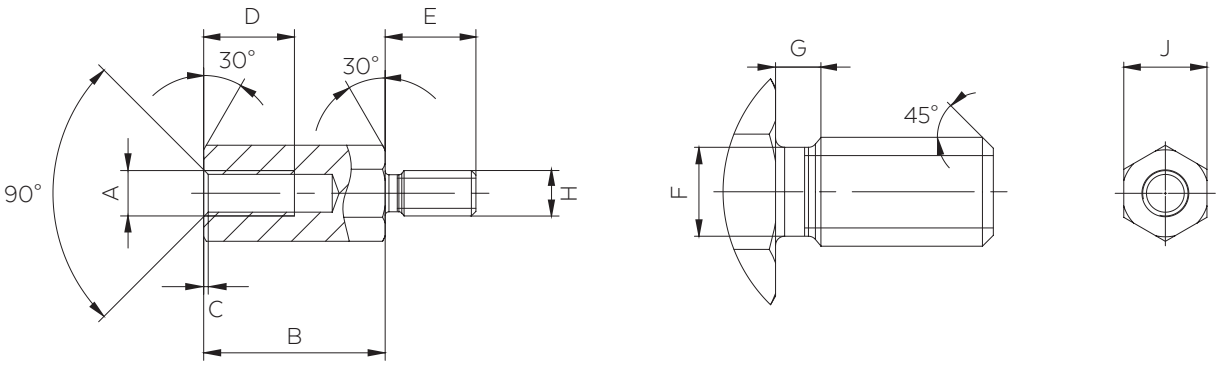
RoHS COMPLIANT

ELV END-OF-LIFE-VEHICLES

MATERIAL INFORMATION

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

SCALE DRAWINGS

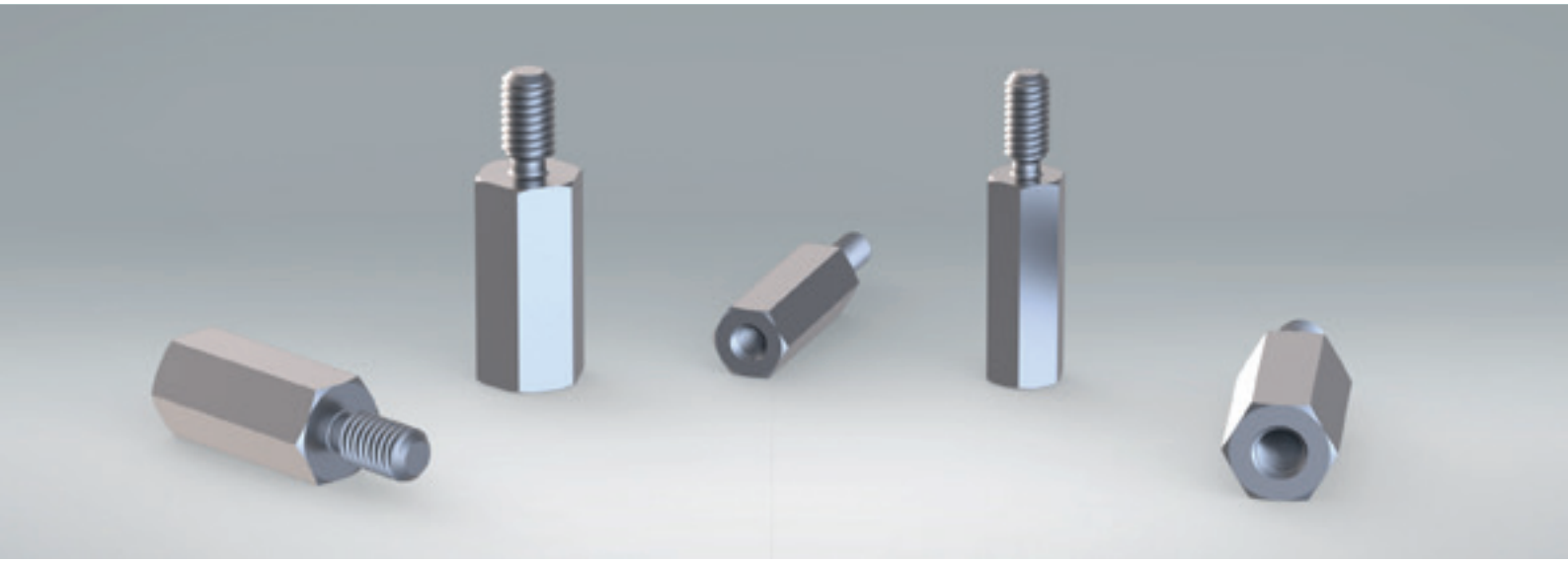


TECHNICAL DATA

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

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- Easy to use and highly versatile
- RoHS compliant

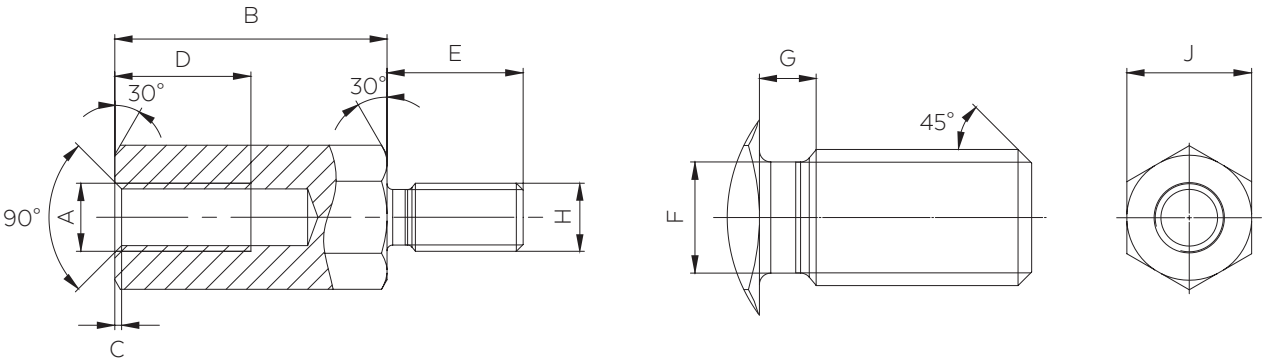
RoHS COMPLIANT

ELV END-OF-LIFE-VEHICLES

MATERIAL INFORMATION

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

SCALE DRAWINGS

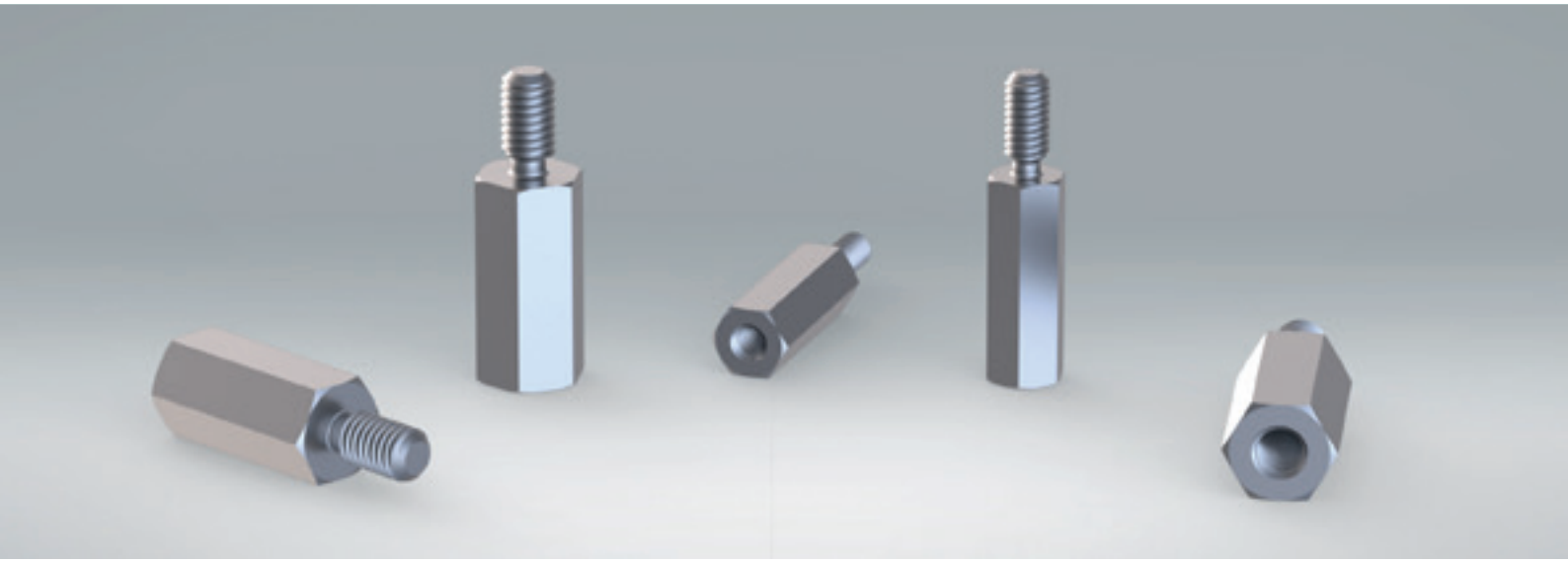


TECHNICAL DATA

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
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- Prevent mechanical contact between components
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- Easy to use and highly versatile
- RoHS compliant

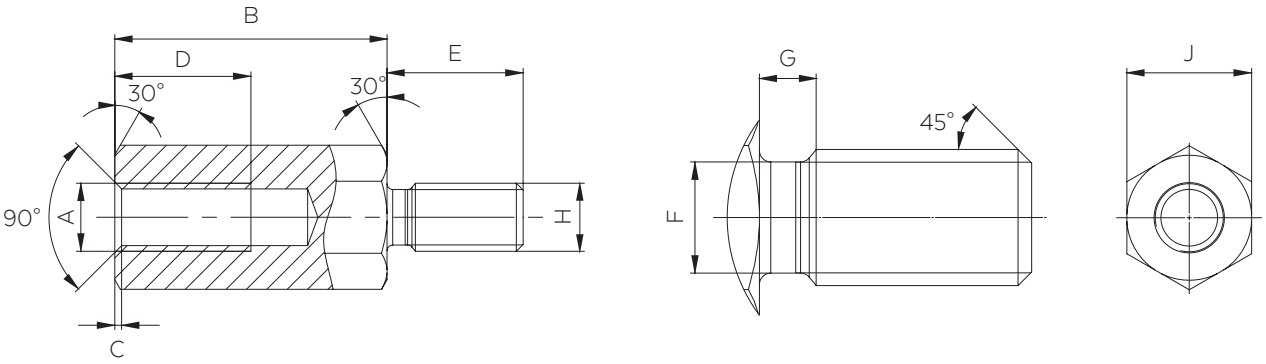
RoHS COMPLIANT

ELV END-OF-LIFE-VEHICLES

MATERIAL INFORMATION

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

SCALE DRAWINGS

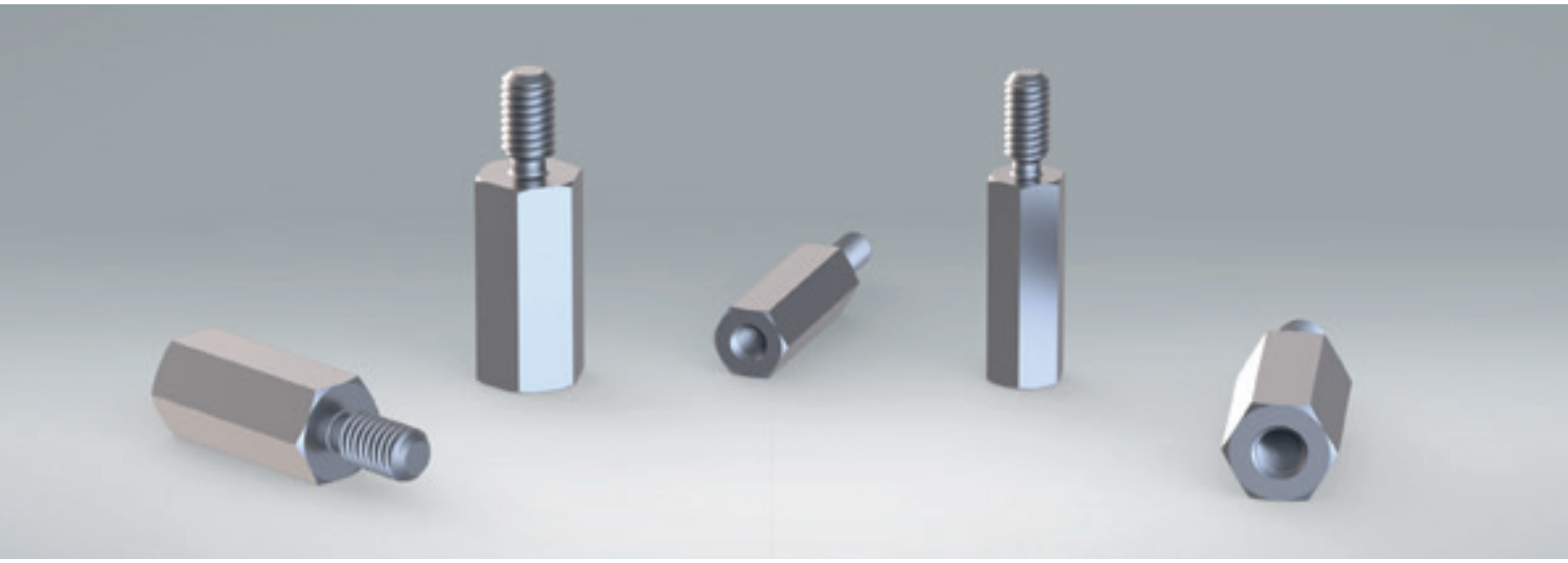


TECHNICAL DATA

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

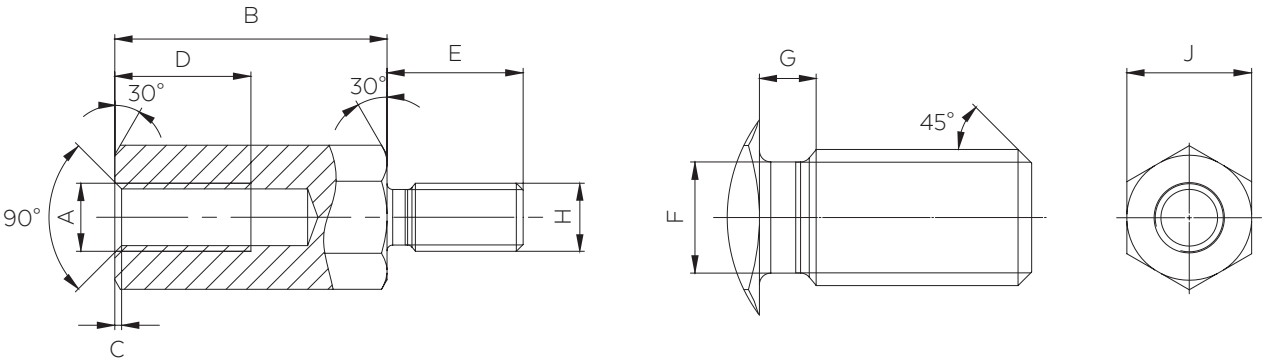
RoHS COMPLIANT

ELV END-OF-LIFE-VEHICLES

MATERIAL INFORMATION

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

SCALE DRAWINGS

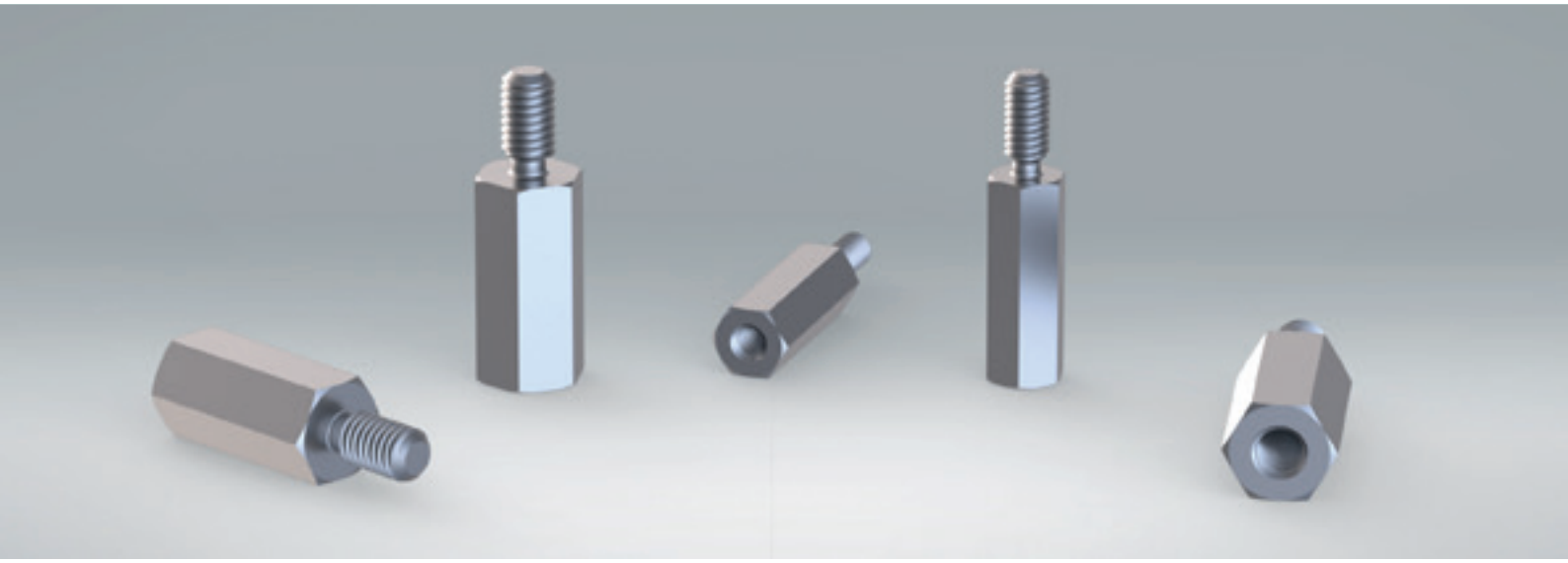


TECHNICAL DATA

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

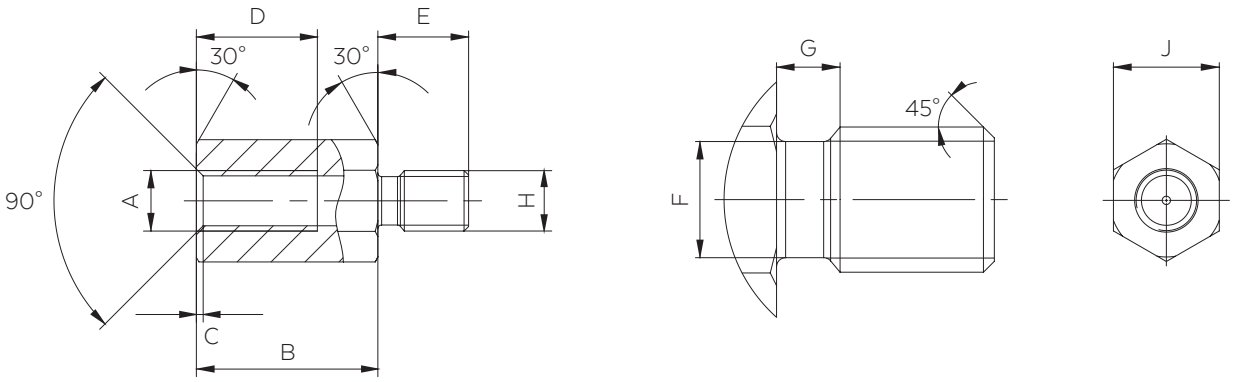
RoHS COMPLIANT

ELV END-OF-LIFE-VEHICLES

MATERIAL INFORMATION

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

SCALE DRAWINGS



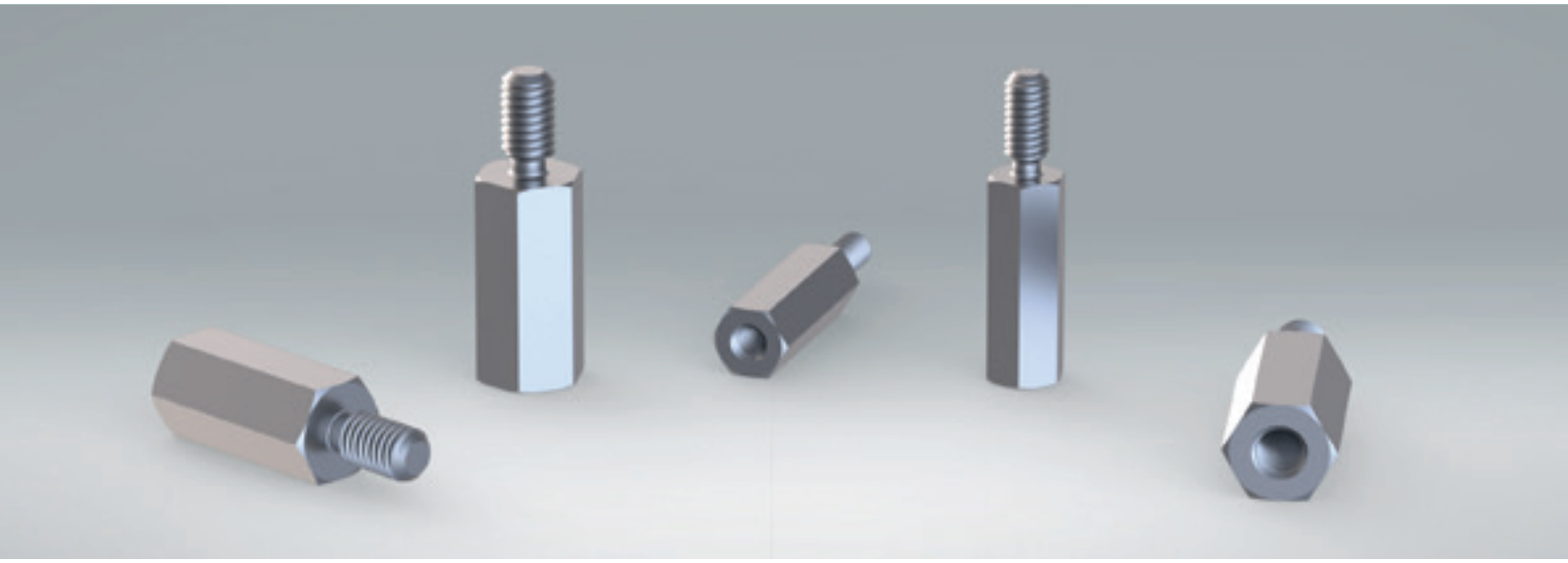
TECHNICAL DATA

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

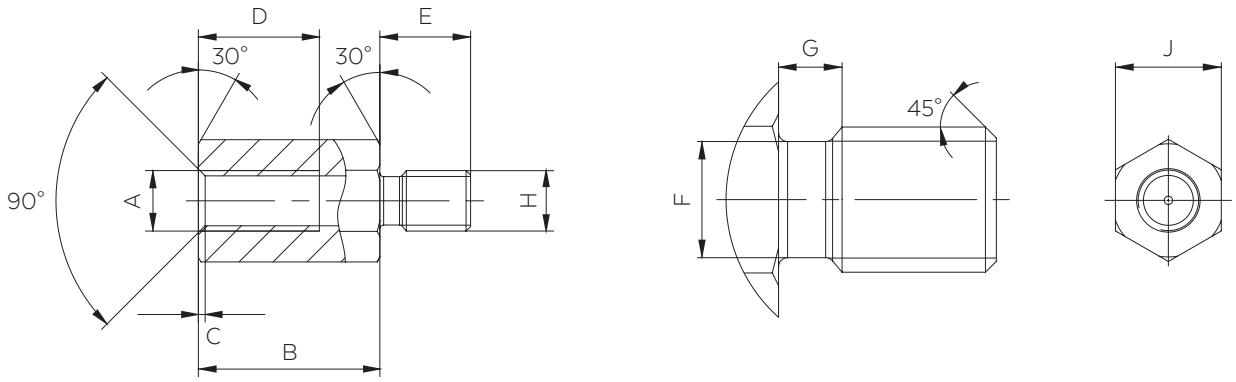
RoHS COMPLIANT

ELV END-OF-LIFE-VEHICLES

MATERIAL INFORMATION

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

SCALE DRAWINGS

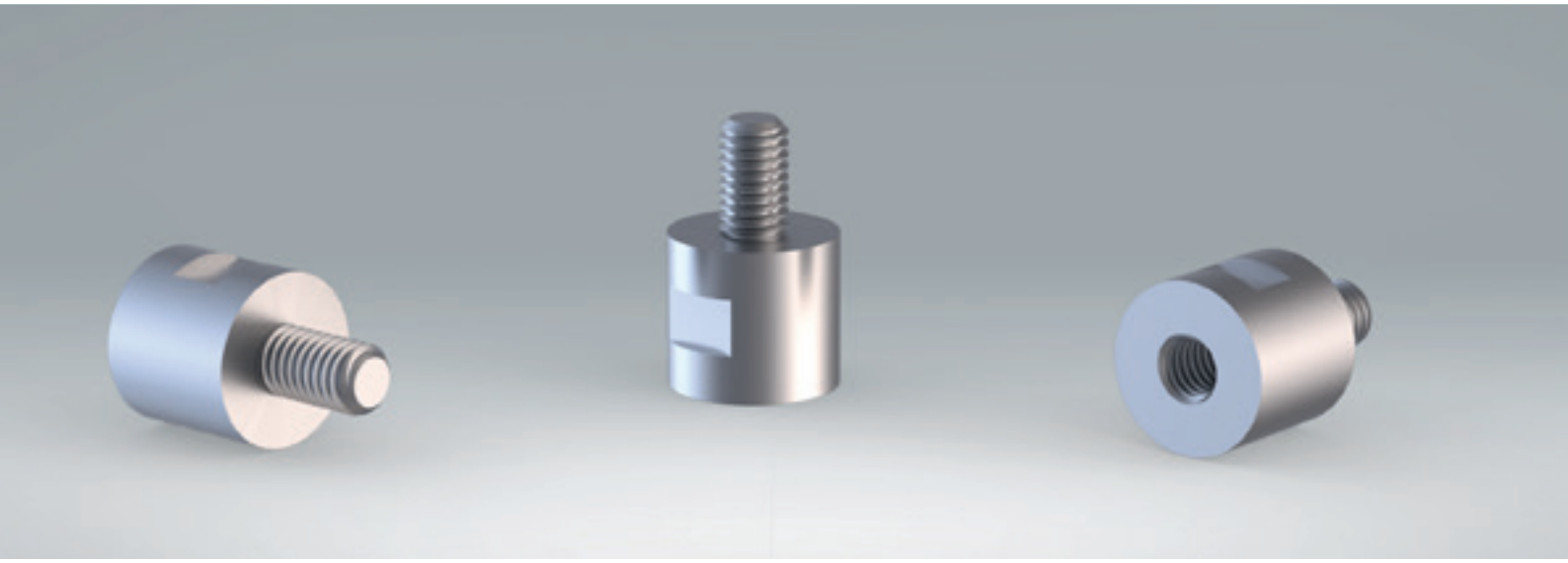


TECHNICAL DATA

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

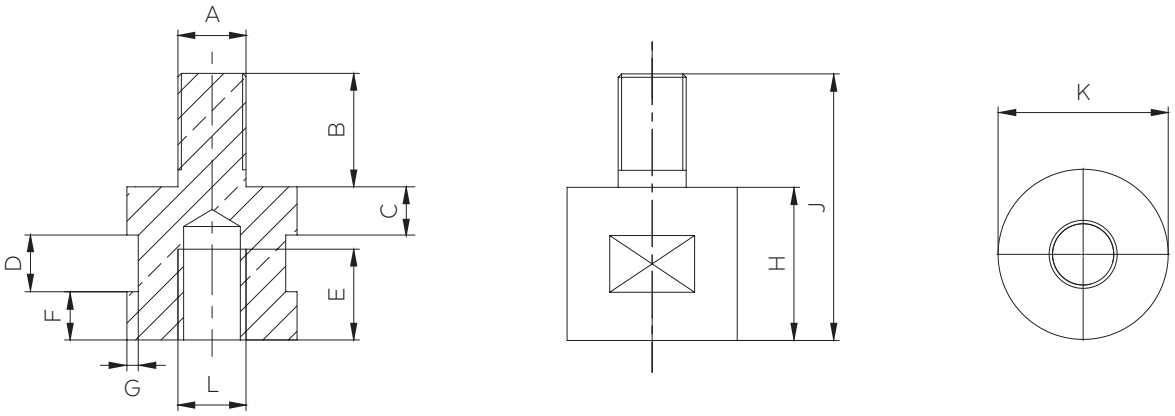
RoHS COMPLIANT

ELV END-OF-LIFE-VEHICLES

MATERIAL INFORMATION

Material	Surface	Part number
Brass CuZn39Pb3	verzinnt	06.7.0001

SCALE DRAWINGS

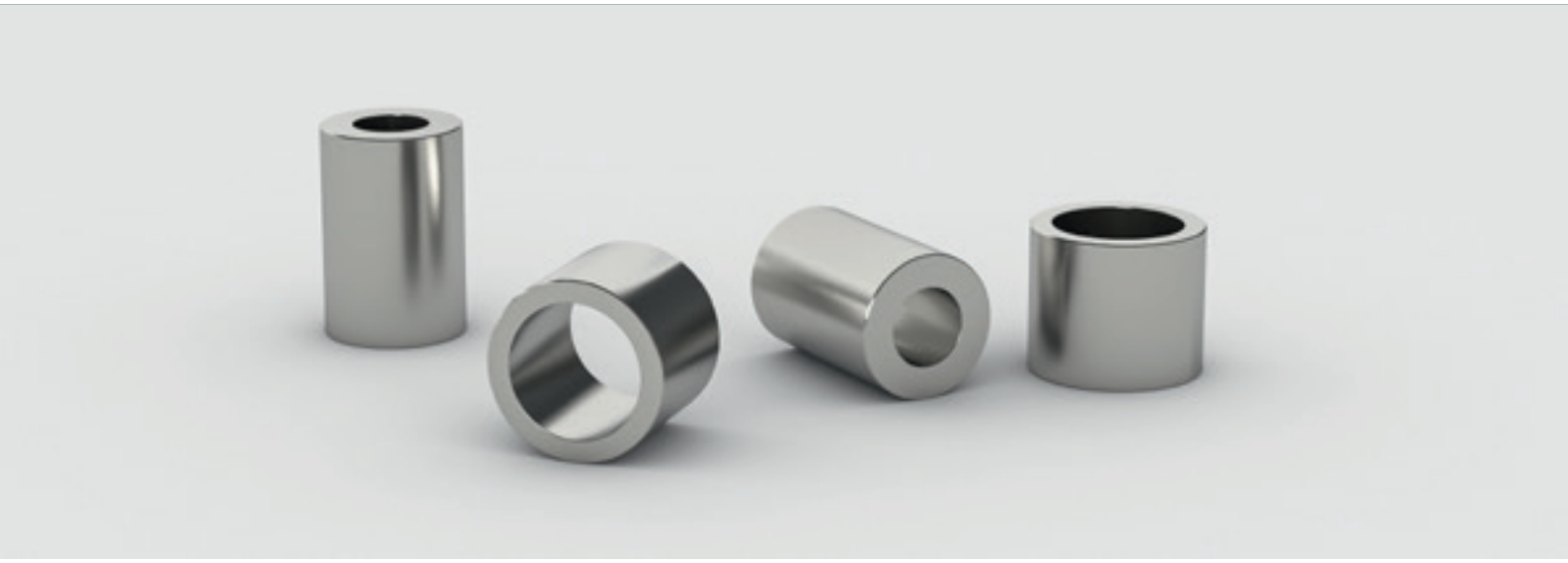


TECHNICAL DATA

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

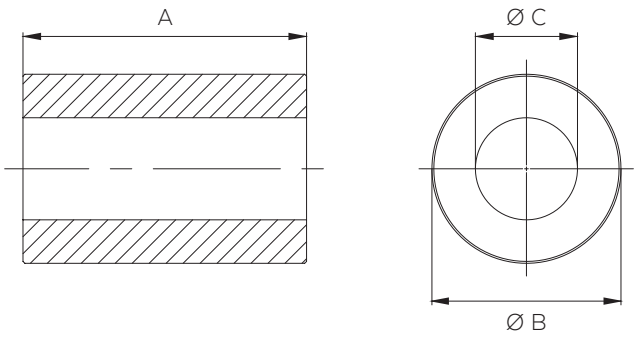
RoHS COMPLIANT

ELV END-OF-LIFE-VEHICLES

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

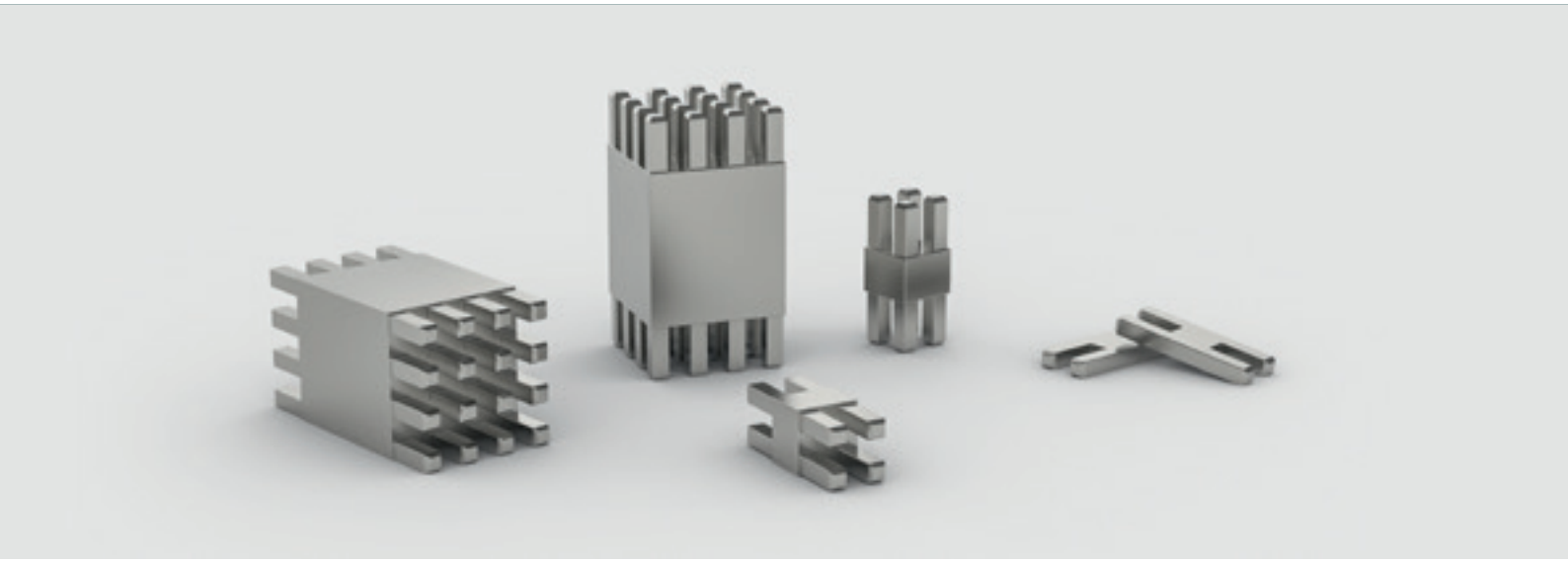


TECHNICAL DATA

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 BOTHS 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

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

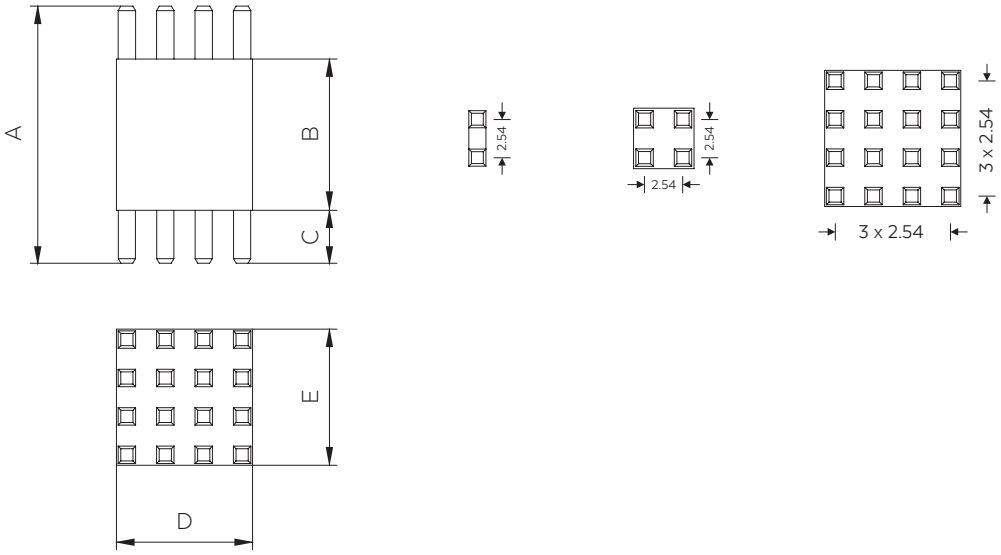
MATERIAL INFORMATION

Option	Part number
BlueBrass	06.6.000X.BB

REACH RoHS COMPLIANT NEW VERSION

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 betwenn individual components
- Durable, robust, vibration-resistant
- Easy and high-precision handling
- RoHS compliant

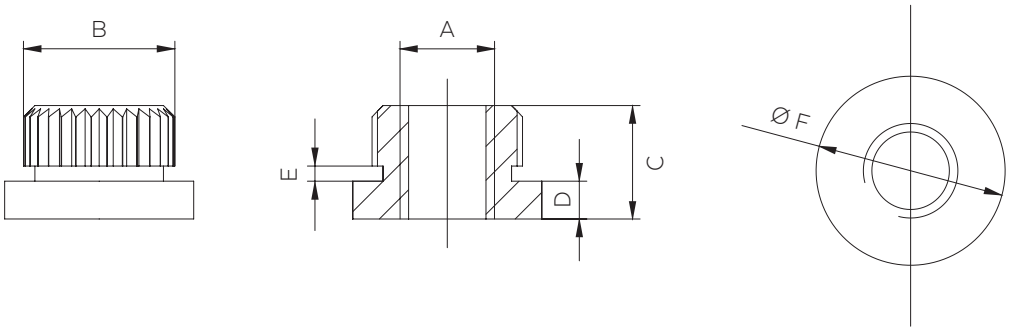
RoHS COMPLIANT

ELV END-OF-LIFE-VEHICLES

MATERIAL INFORMATION

Material	Surface	Part number
Steel X8CrNiS18-9	rustproof	06.5.0015

SCALE DRAWINGS

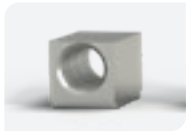


TECHNICAL DATA

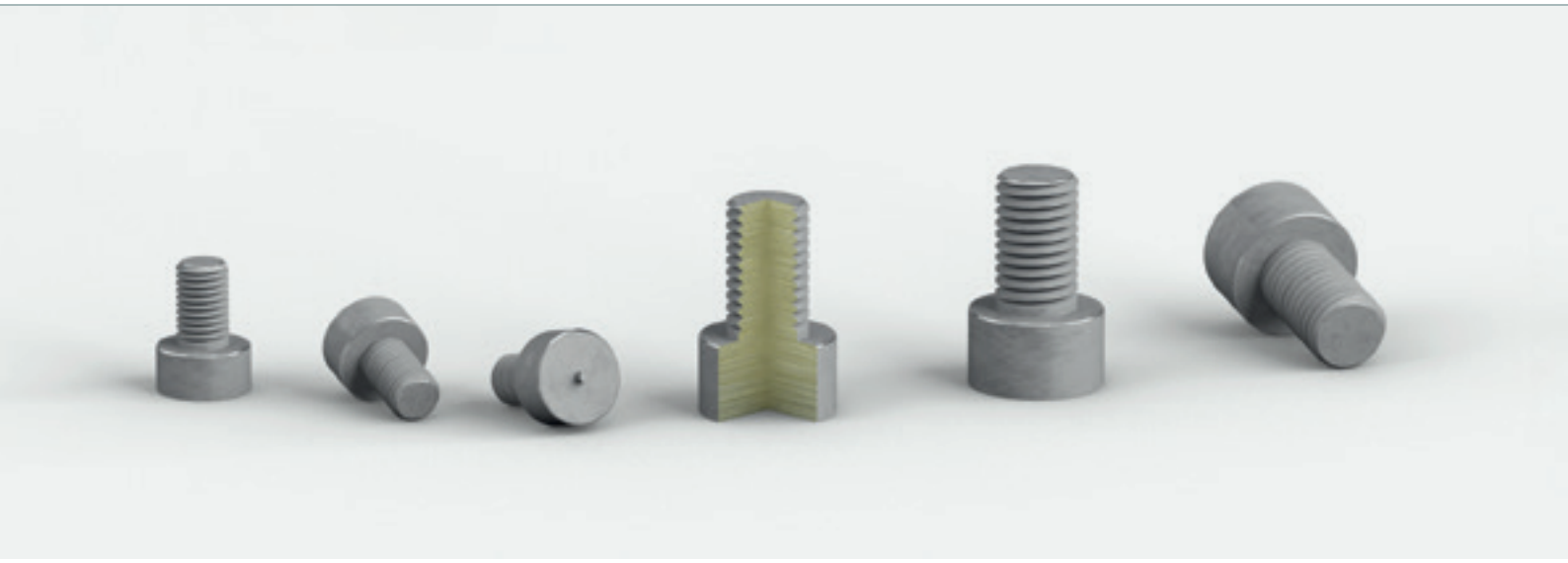
A	B	C	D	E	F	Execution	Part number
M2.5	4	3	1	0.4	5	Power Socket	**06.5.0015**

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

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

MATERIAL INFORMATION

Option	Part number
BlueBrass	01.6.00XX.BB

REACH RoHS COMPLIANT NEW VERSION

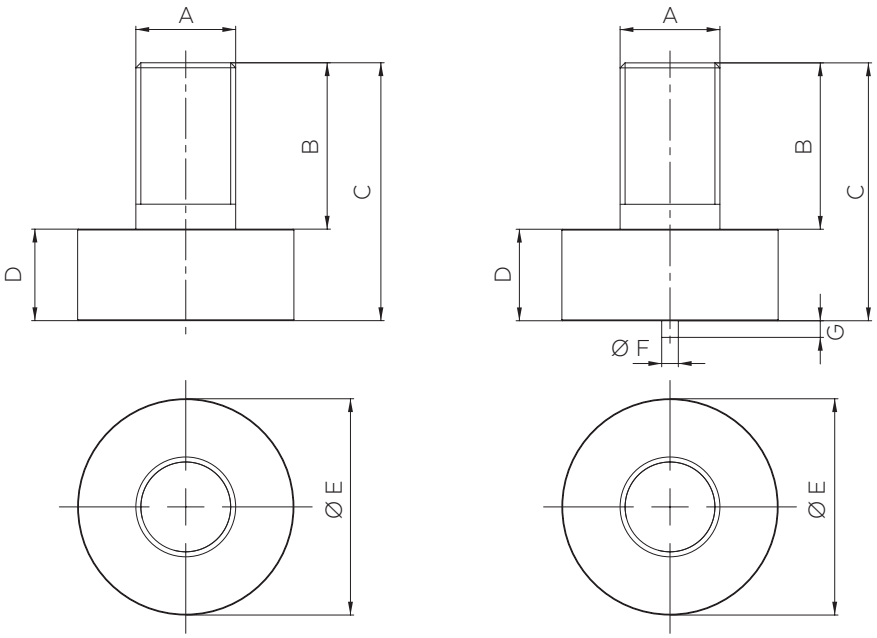
Our product series 01.6.00XX.BB meet all requirements of the which will come into force in the future REACH, RoHS and ELV regulations, just like the future tightened regulation the required lead-free.

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

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

MATERIAL INFORMATION

Option	Part number
BlueBrass	02.6.00XX.BB

REACH RoHS COMPLIANT NEW VERSION

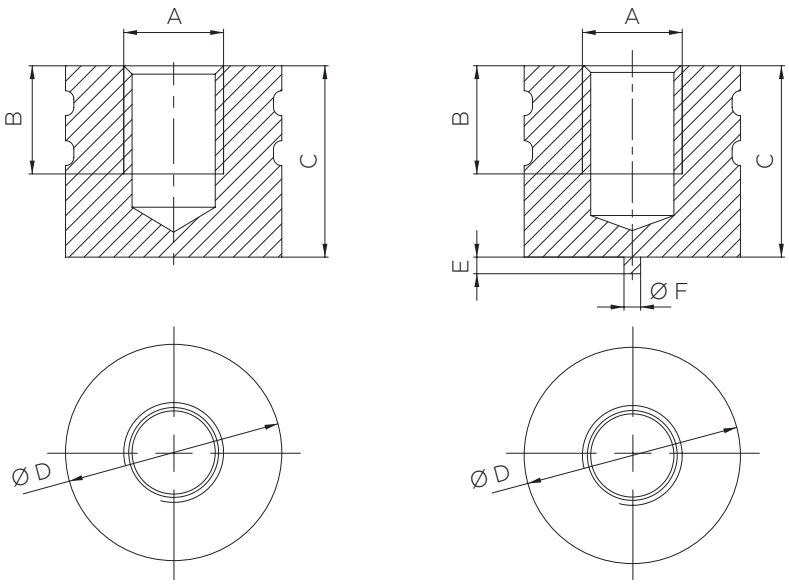
Our product series 02.6.00XX.BB meet all requirements of the which will come into force in the future REACH, RoHS and ELV regulations, just like the future tightened regulation the required lead-free.

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

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

MATERIAL INFORMATION

Option	Part number
BlueBrass	02.6.00XX.BB

REACH RoHS COMPLIANT NEW VERSION

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

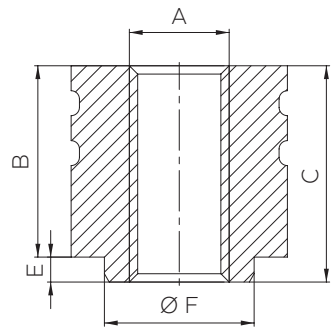
Option	Part number
Bulk	02.6.00XX
Taped	02.6.00XX.GU
Taped (BlueBrass)	02.6.00XX.BBGU
Taped with Kapton	02.6.00XX.GUDD*

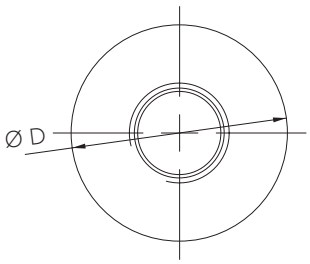
*DD = Diameter of Kapton pad

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



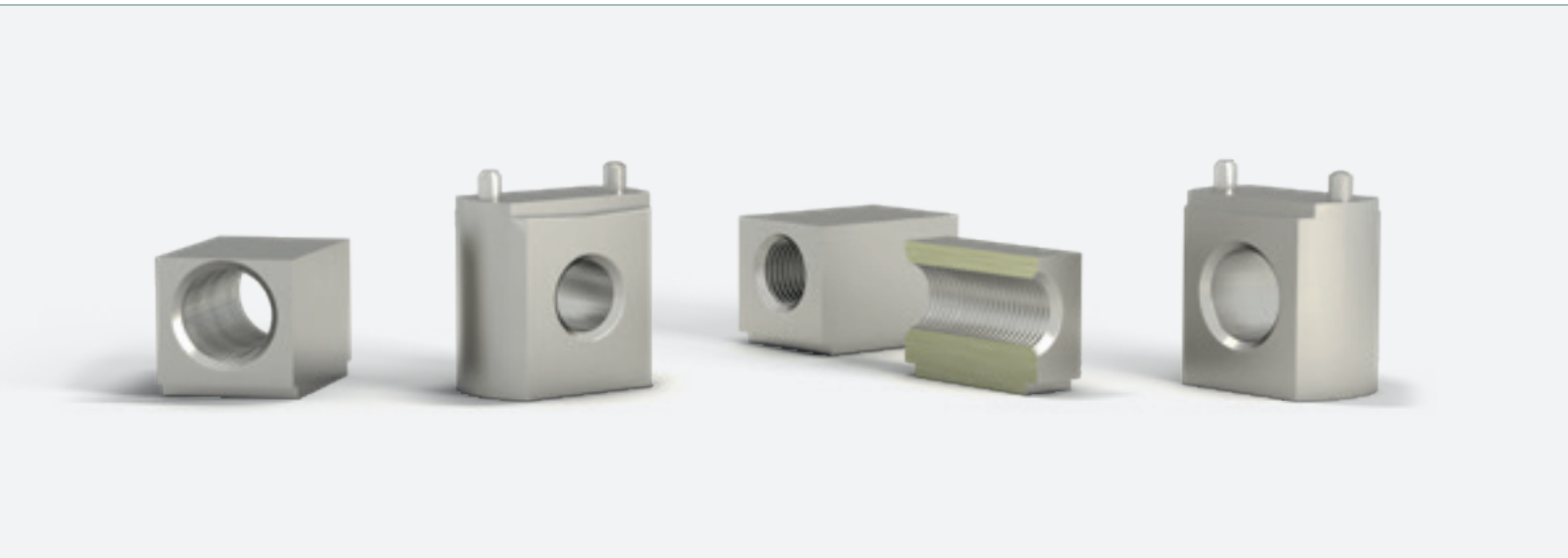


TECHNICAL DATA

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

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

MATERIAL INFORMATION

Option	Part number
BlueBrass	03.6.000X.BB

REACH RoHS COMPLIANT NEW VERSION

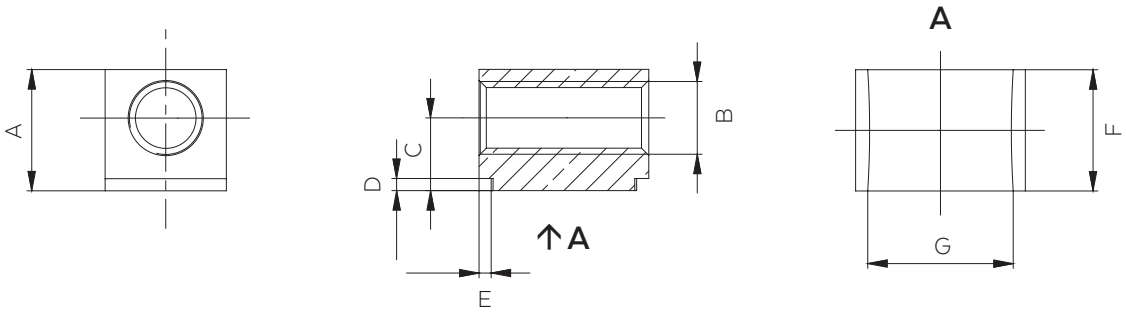
Our product series 03.6.000X.BB meet all requirements of the which will come into force in the future REACH, RoHS and ELV regulations, just like the future tightened regulation the required lead-free.

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

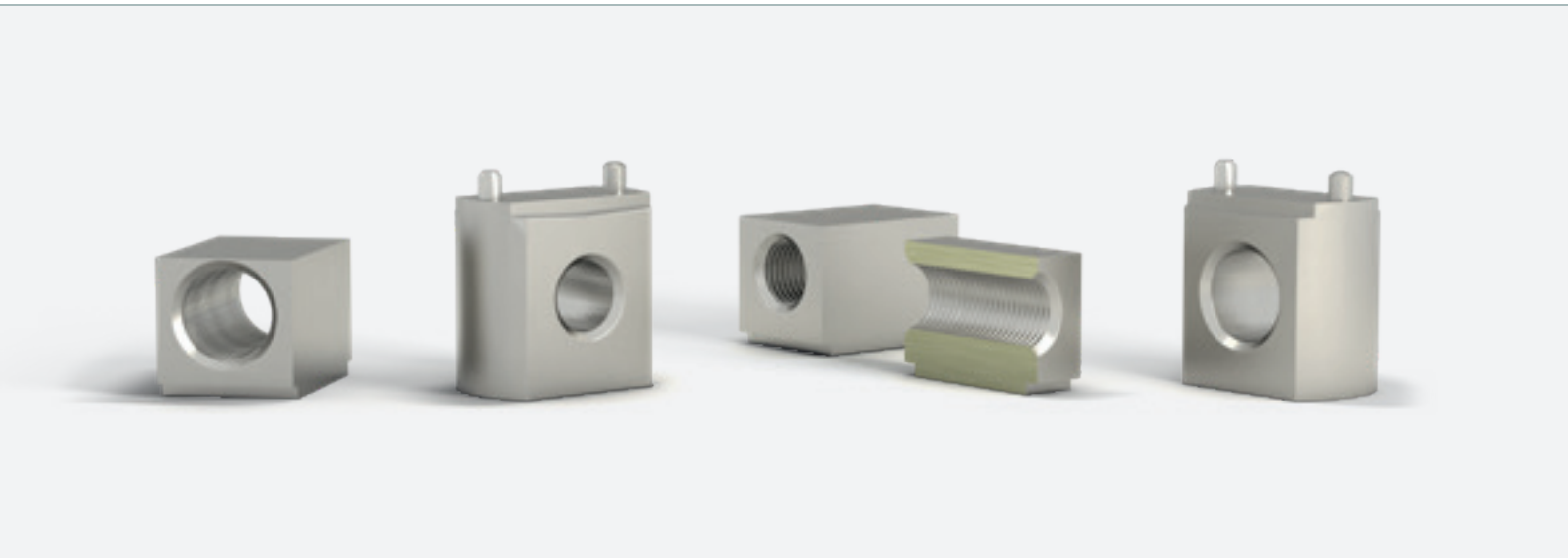


TECHNICAL DATA

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

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

MATERIAL INFORMATION

Option	Part number
BlueBrass	03.6.000X.BB

REACH RoHS COMPLIANT NEW VERSION

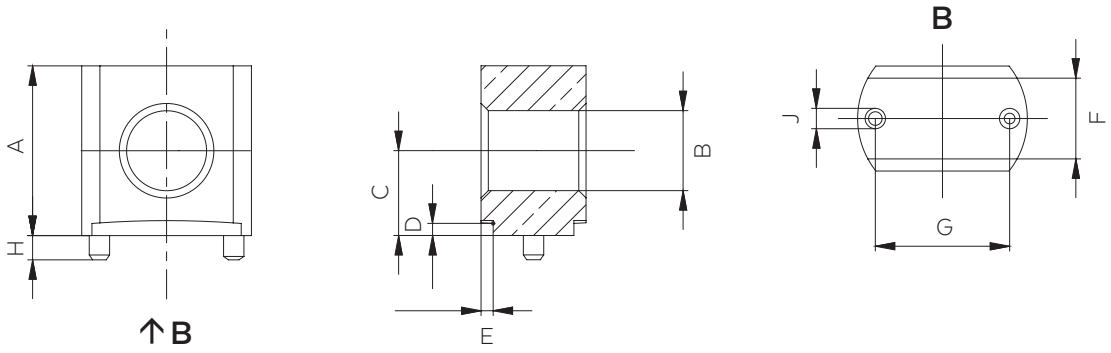
Our product series 03.6.000X.BB meet all requirements of the which will come into force in the future REACH, RoHS and ELV regulations, just like the future tightened regulation the required lead-free.

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

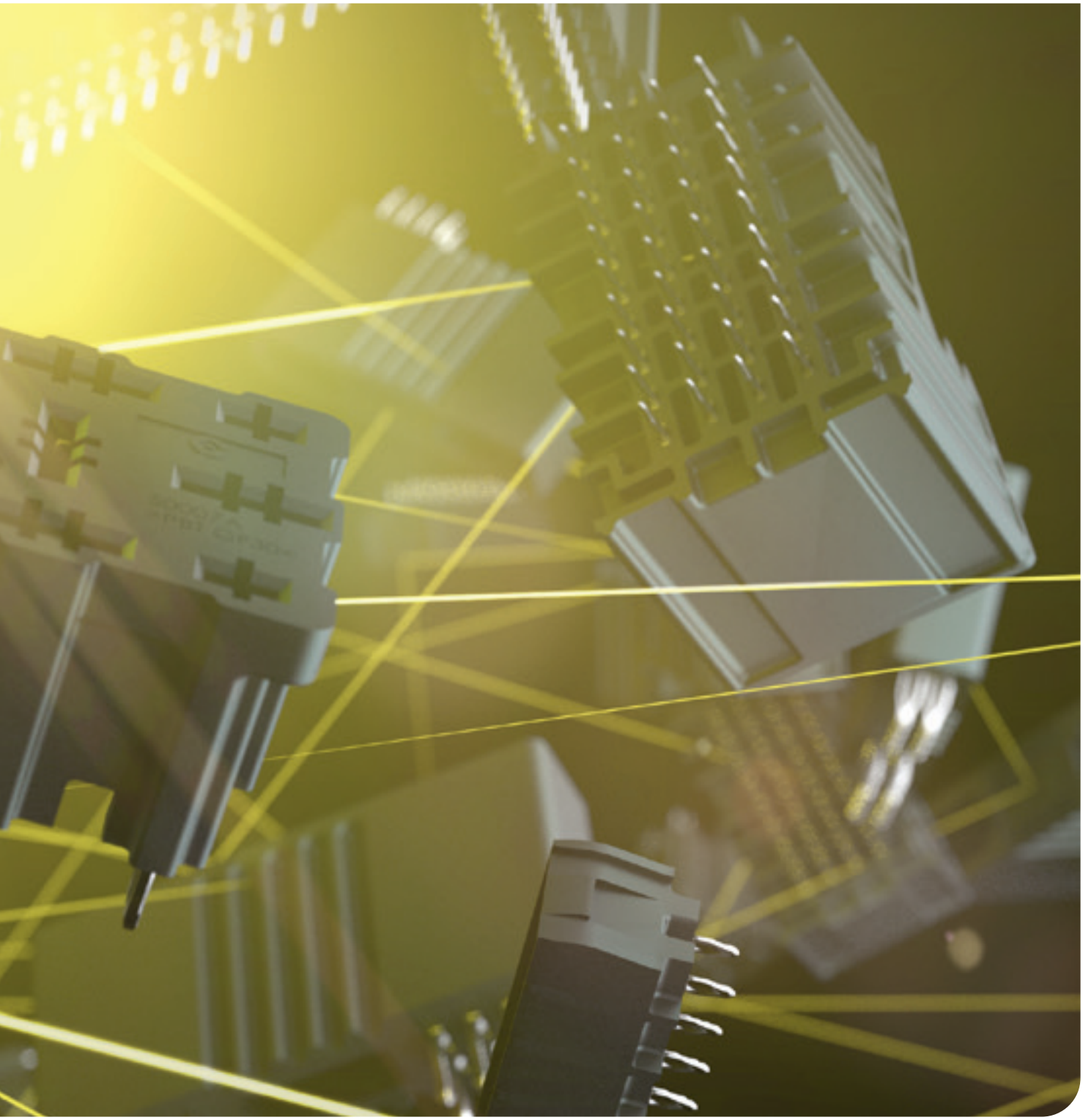


TECHNICAL DATA

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


FUSE HOLDERS
RELAY SOCKETS
PCB CONNECTORS
CONTACT ELEMENTS



PRODUCT OVERVIEW CONNECTORS

FUSE HOLDERS

Available in different versions.

↘ 1st Gen from page 164
↘ 2nd Gen from page 168
↘ 3rd Gen from page 206

RELAY SOCKETS

Available in different versions.

↘ 1st Gen from page 166
↘ 2nd Gen from page 180
↘ 3rd Gen from page 224

PCB CONNECTORS

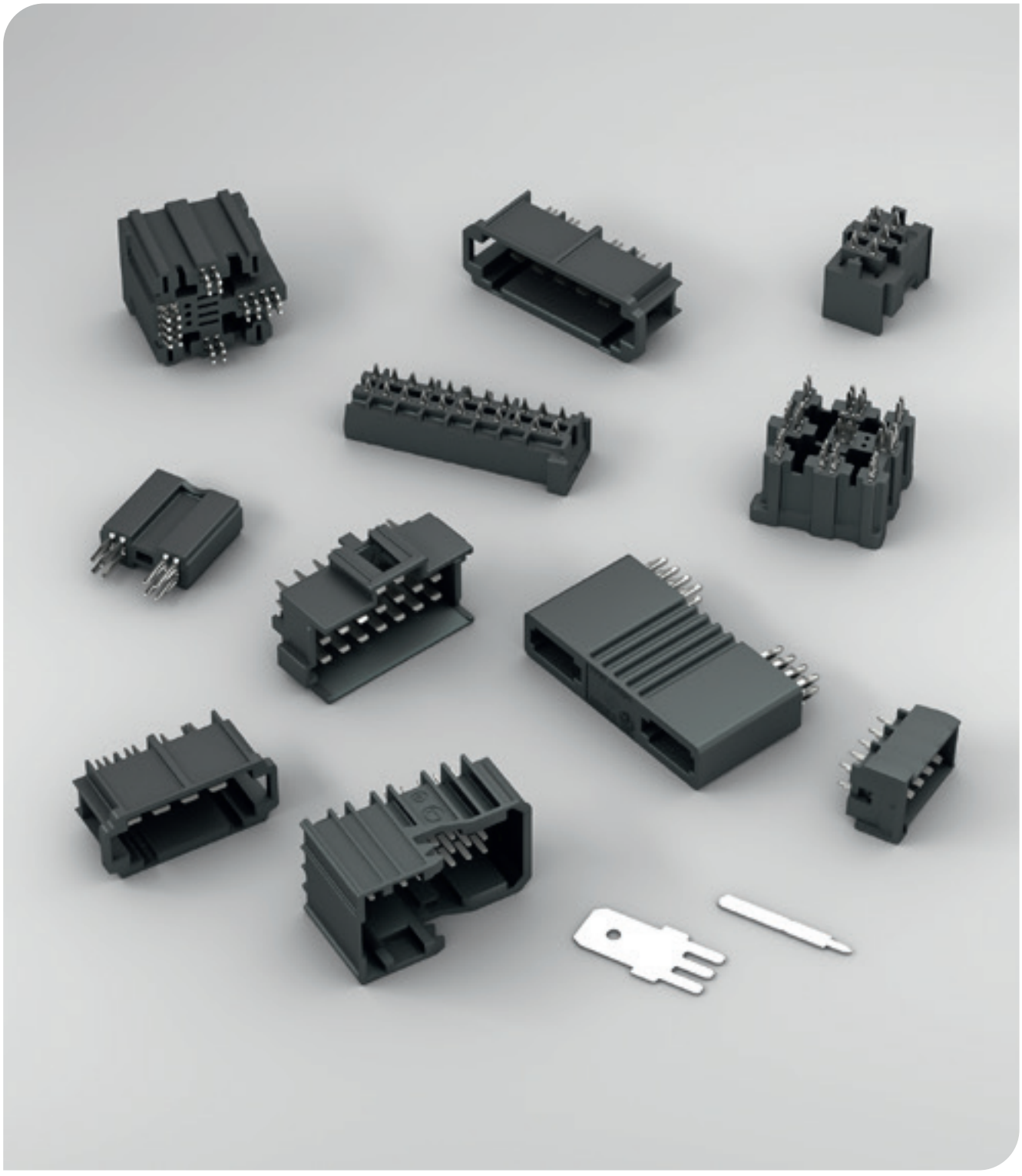
Available in different versions and colors.

↘ 2nd Gen from page 190
↘ 3rd Gen from page 240

CONTACT ELEMENTS

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

↘ 2nd Gen from page 204
↘ 3rd Gen from page 260



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 stabiliy 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

Desribes 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 compoents feature even more flexibiity 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

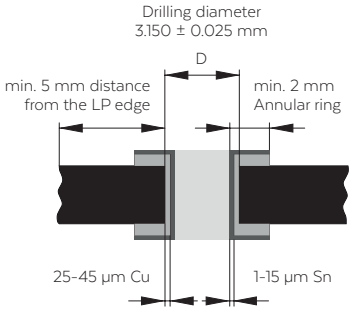
Final diameter, tin
1.475 ± 0.05 mm

Final diameter, HAL surface

1.450 ± 0.05 mm	
Cu – in hole:	min. 25 µm max. 80 µm
Annular ring:	min. 125 µm

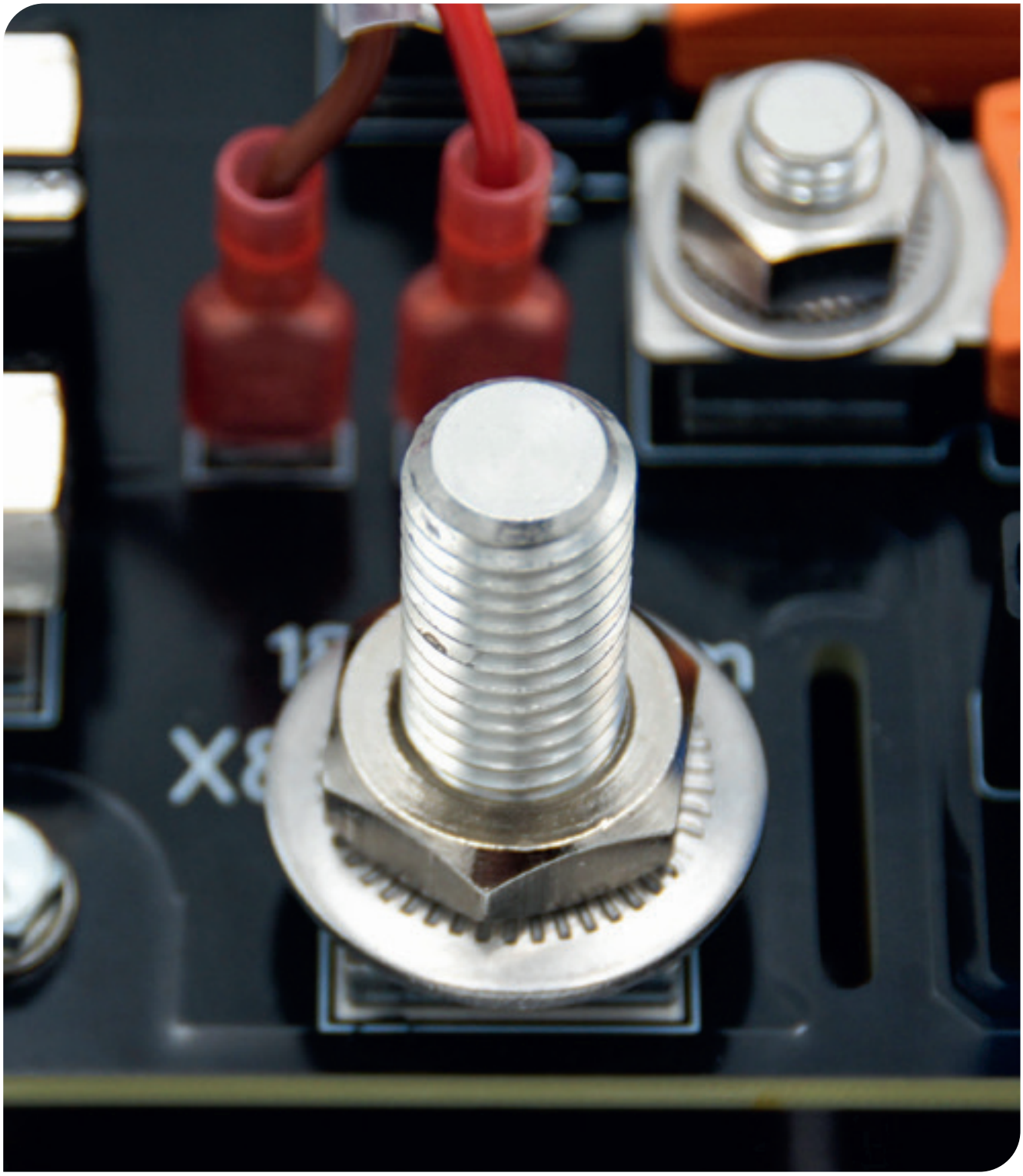
Final diameter, metal with min. Cu 25 µm (must not be smaller, even in parts). For HAL (covered edge) Ni/Au or tin; for circuit board thickness > 1.50 mm

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.



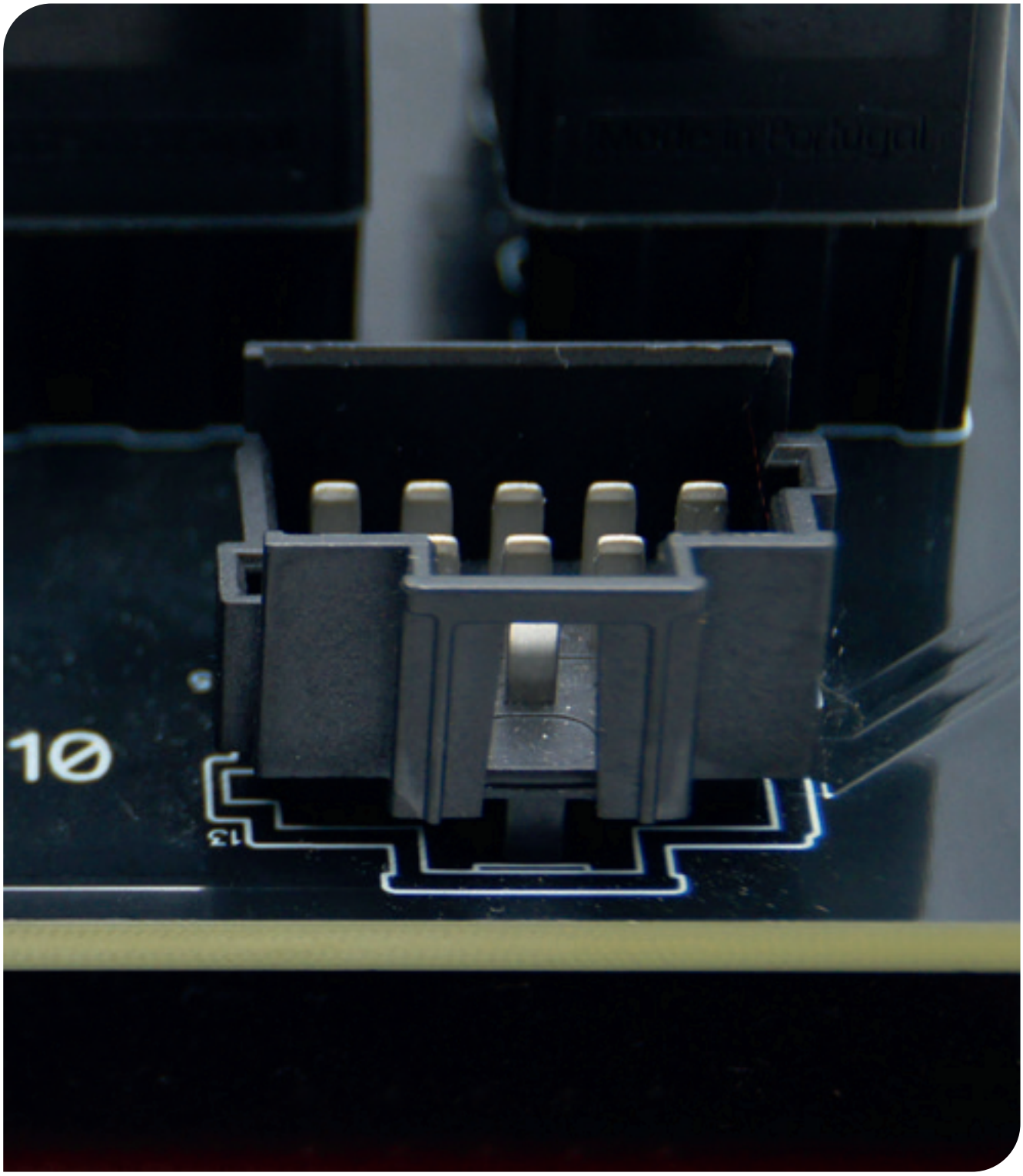
HOLE SPECIFICATIONS
CONNECTORS

PCB CONNECTOR, RELAY SOCKET AND FUSE HOLDER INFORMATION

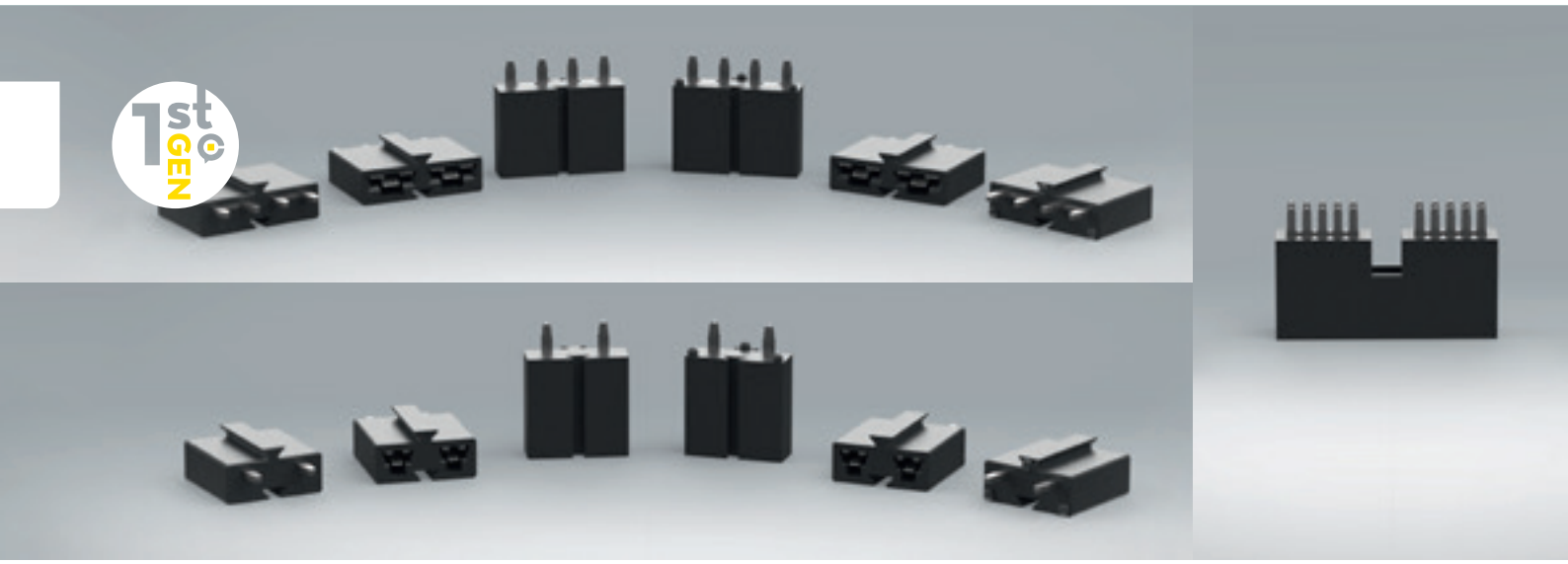
	Drilling diameter	Final diameter depending on PCB surface			Note
System parameters PCB-Pin (MTCON-component) [SPP]	-	X [Surface X]	Y [Surface Y]	Z [Surface Z]	-
Material PCB surface	-	Sn / OSP / Ni/Au	HAL / HAL lead-free	all common PCB surfaces	-
Los Angeles class (press-fit)	Ø 1.600 ± 0.025 mm	Ø 1.475 ± 0.05 mm	Ø 1.450 ± 0.05 mm	-	Please refer to chart on page 160
Denver class (press-fit)	Ø 1.200 ± 0.025 mm	Ø 1.100 ± 0.05 mm	Ø 1.080 ± 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 160
Las Vegas class (THT)	-	-	-	Ø 1.800 ± 0.05 mm	-
Dallas class (THT)	-	-	-	Ø 1.450 ± 0.05 mm	-
Miami class (THT)	-	-	-	Ø 1.20 ± 0.05 mm	-

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.


10
13

FUSE HOLDER
MINI, ATO, MAXI IN PRESS-FIT AND SOLDERING TECHNOLOGY



PRODUCT SPECIFICATION

- Fuse holder for all common fuses in Mini, ATO and Maxi design
- For voltage classes 12 Volt and 24 Volt
- Maximum current value: approx. 40 A (depending on layout and PCB design)
- Highest reliability under harsh environmental conditions (temperature changes, strong vibrations, etc.)
- In proven flexible press-fit technology (press-fit tools available on request)

RoHS COMPLIANT

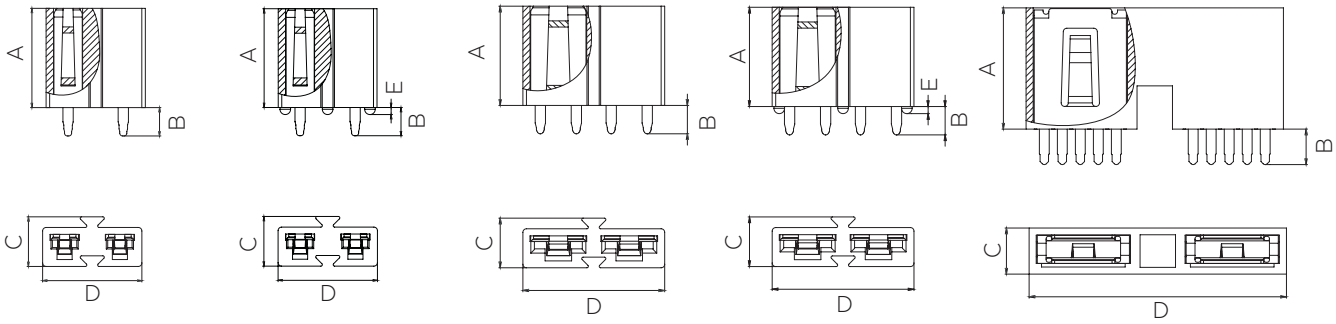
REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

COLOR VARIANTS

Color	Part Number
● Black	20121XABK

SCALE DRAWINGS



201125ABK | 201135ABKN | 201225ABK | 201235ABKN | 201325ABK

RATING

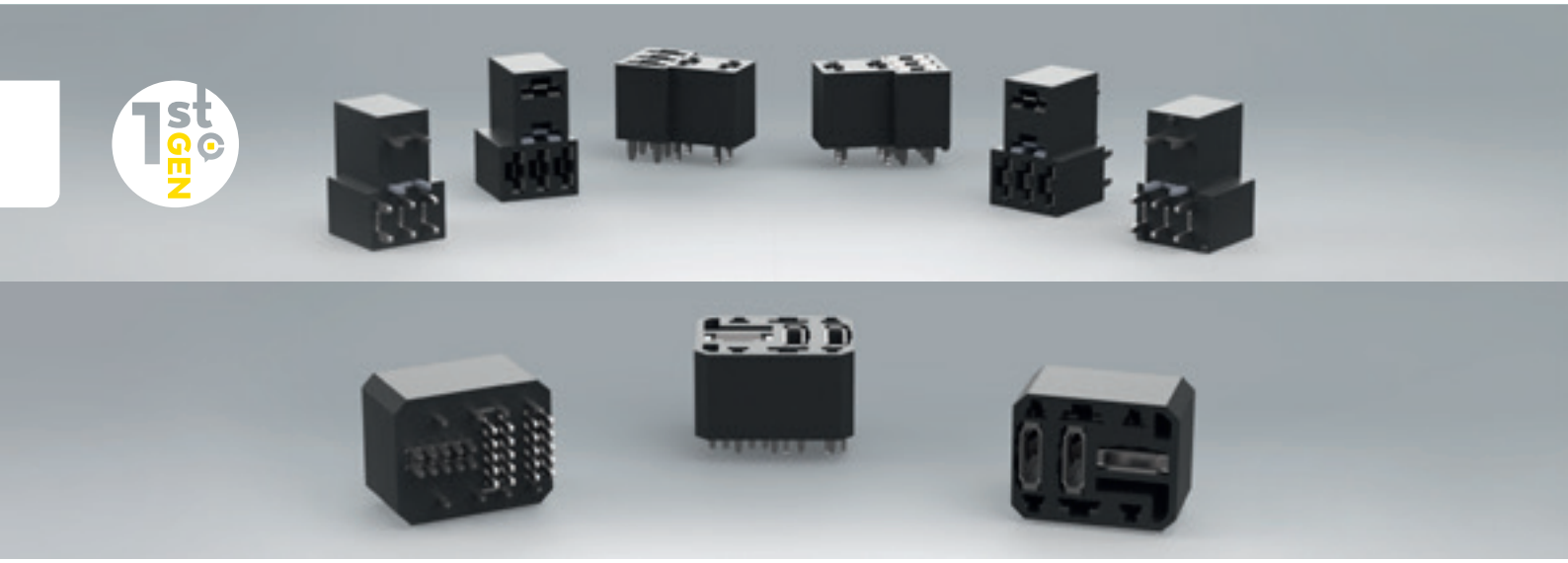
								Part number
●●●○○	●●●○○	●●●○○	●○○○○	●●●●○	●●●○○	●●●○○	●●●○○	201125ABK
●●●○○	●●●○○	●●●○○	●●●○○	●●●●○	●●●○○	●●●○○	●●●○○	201135ABKN
●●●○○	●●●○○	●●●○○	●○○○○	●●●●○	●●●○○	●●●○○	●●●○○	201225ABK
●●●○○	●●●○○	●●●○○	●●●○○	●●●●○	●●●○○	●●●○○	●●●○○	201235ABKN
●●●○○	●●●○○	●●●●●	●○○○○	●●●●○	●●●●○	●●●○○	●●●○○	201325ABK

TECHNICAL DATA

A	B	C	D	E	Dimensions	Processing	Part number
14	4	7	14		Mini	Press-Fit or THT	**201125ABK**
14	4	7	14	1	Mini	Soldering*	**201135ABKN**
14	4	7	20		ATO	Press-Fit or THT	**201225ABK**
14	4	7	20	1	ATO	Soldering*	**201235ABKN**
17,1	5	6.5	36.3		Maxi	Press-Fit or THT	**201325ABK**

Measurements A - E in mm
Soldering*: This version contains dimples (flux, etc.)

RELAYSOCKETS
MICRO, PRESS-FIT & SOLDERING TECHNOLOGY, MAXI IN PRESS-FIT TECHNOLOGY



PRODUCT SPECIFICATION

- Relay socket for all common relays in Micro & Maxi design
- For voltage classes 12 Volt and 24 Volt
- Maximum current value: approx. 30 A (depending on layout and PCB design)
- Highest reliability under harsh environmental conditions (temperature changes, strong vibrations, etc.)
- In proven flexible press-fit technology (press-fit tools available on request)

RoHS COMPLIANT

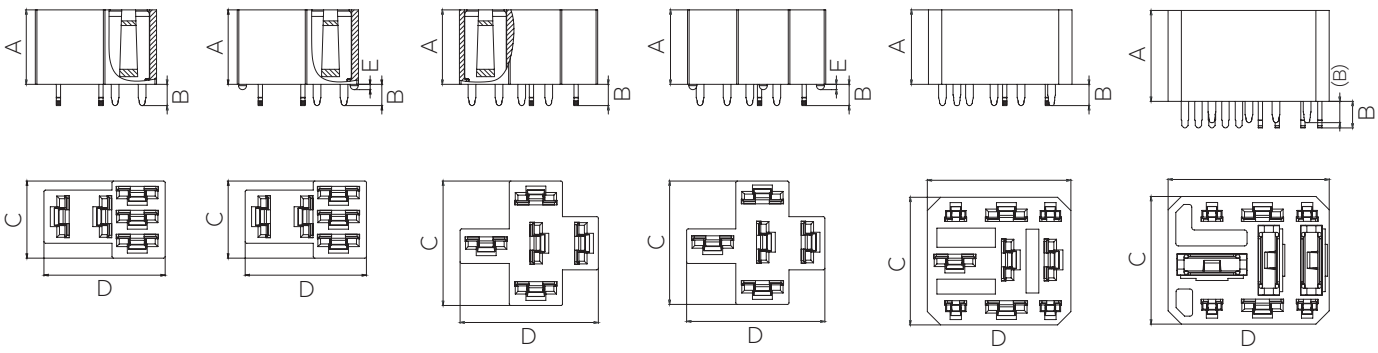
REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

COLOR VARIANTS

Color	Part Number
● Black	2001XXABK

SCALE DRAWINGS



200125ABK | 200135ABKN | 200325ABK | 200335ABKN | 200225ABK | 200425ABK

RATING

								Part number
●●●○○	●●●○○	●●●○○	●○○○○	●●●●○	●●●○○	●●●○○	●●●○○	200125ABK
●●●●○	●●●○○	●●●○○	●●●○○	●●●●○	●●●○○	●●●○○	●●●○○	200135ABKN
●●●○○	●●●○○	●●●○○	●○○○○	●●●●○	●●●○○	●●●○○	●●●○○	200225ABK
●●●○○	●●●○○	●●●○○	●●●○○	●●●●○	●●●○○	●●●○○	●●●○○	200325ABK
●●●○○	●●●○○	●●●○○	●○○○○	●●●●○	●●●○○	●●●○○	●●●○○	200335ABKN
●●●●○	●●●○○	●●●○○	●●●○○	●●●●○	●●●○○	●●●○○	●●●○○	200425ABK

TECHNICAL DATA

A	B	C	D	E	Dimensions	Processing	Part number
14	4	14.5	22.8		Micro	Press-Fit or THT	**200125ABK**
14	4	14.5	22.8	1	Micro	Soldering*	**200135ABKN**
14	4	23.4	26		Mini (5-pin)	Press-Fit or THT	**200325ABK**
14	3	23.2	26	1	Mini (5-pin)	Soldering*	**200335ABKN**
14	4	27	24		Mini (9-pin)	Press-Fit or THT	**200225ABK**
17,1	5 (und 4)	30.3	24		Maxi	Press-Fit or THT	**200425ABK**

Measurements A – E in mm
Soldering*: This version contains dimples (flux, etc.)

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

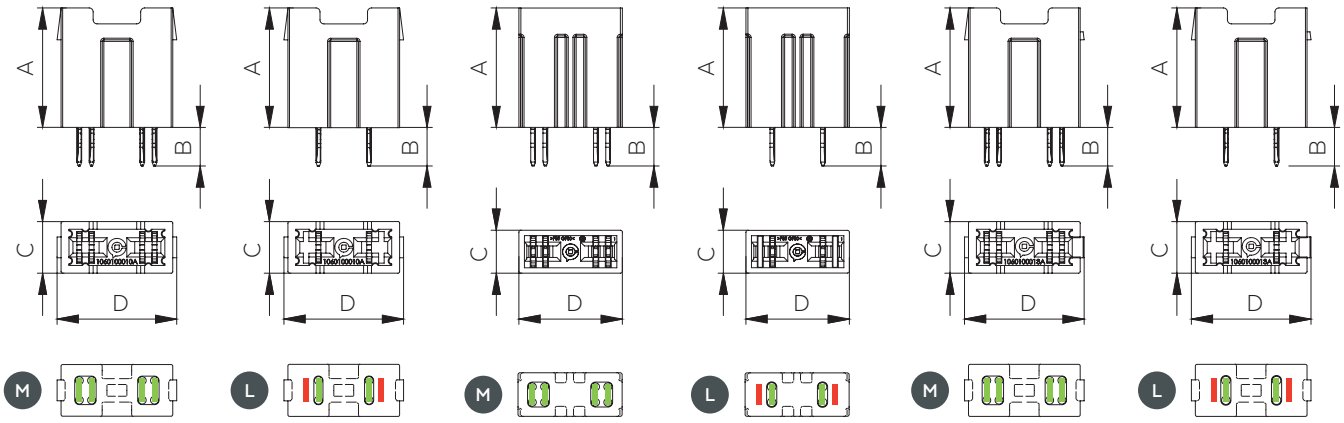
COLOR VARIANTS

Color	Part number
● Black	20111XABK

ASSEMBLY

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

SCALE DRAWINGS



201110A | 201111A | 201115A | 201116A | 201117A | 201118A

RATING

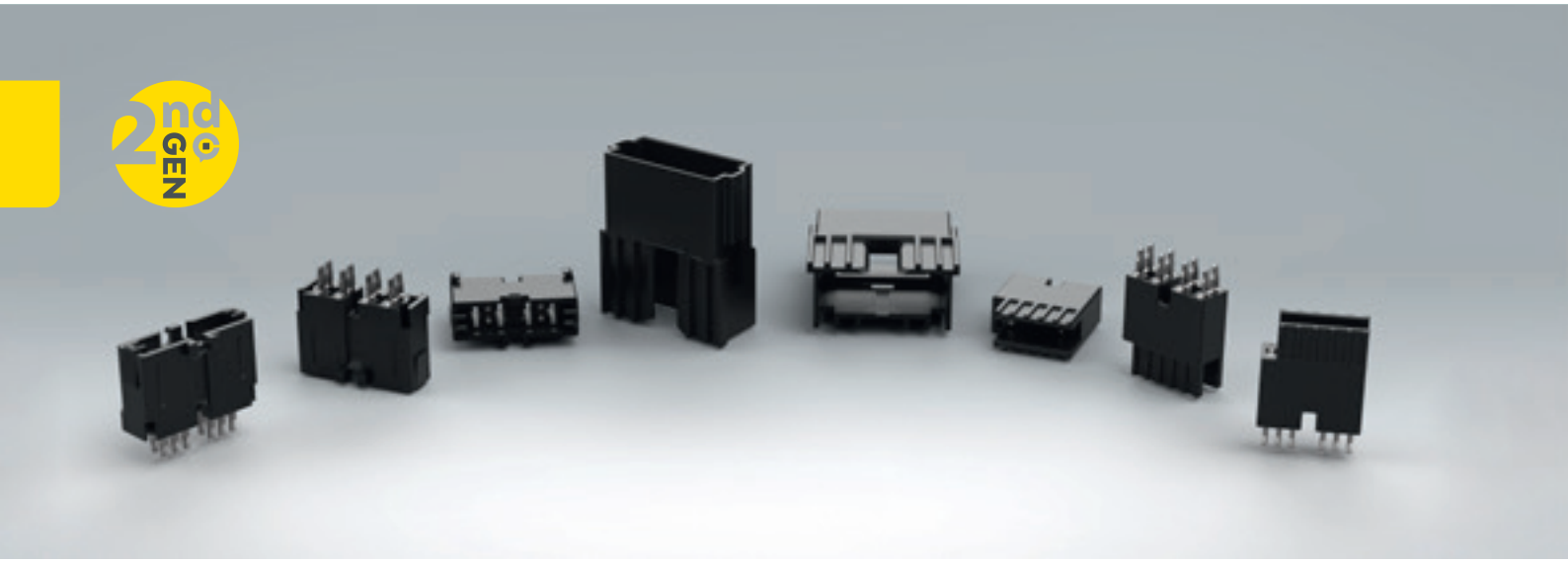
								Part number
●●●●○	●●●○○	●●●●○	●●●○○	●●●●●	●●●○○	●●●●●	●●●●○	201110A
●●○○○	●●○○○	●●○○○	●○○○○	●●●●●	●●●●○	●●●●●	●●●●●	201111A
●●●●○	●●●○○	●●●●○	●●●●●	●●●●●	●●●○○	●●●●●	●●●●○	201115A
●●○○○	●●○○○	●●○○○	●○○○○	●●●●●	●●●●○	●●●●●	●●●●●	201116A
●●●●○	●●●○○	●●●●○	●●●○○	●●●●●	●●●○○	●●●●●	●●●●○	201117A
●●○○○	●●○○○	●●○○○	●○○○○	●●●●●	●●●●○	●●●●●	●●●●●	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

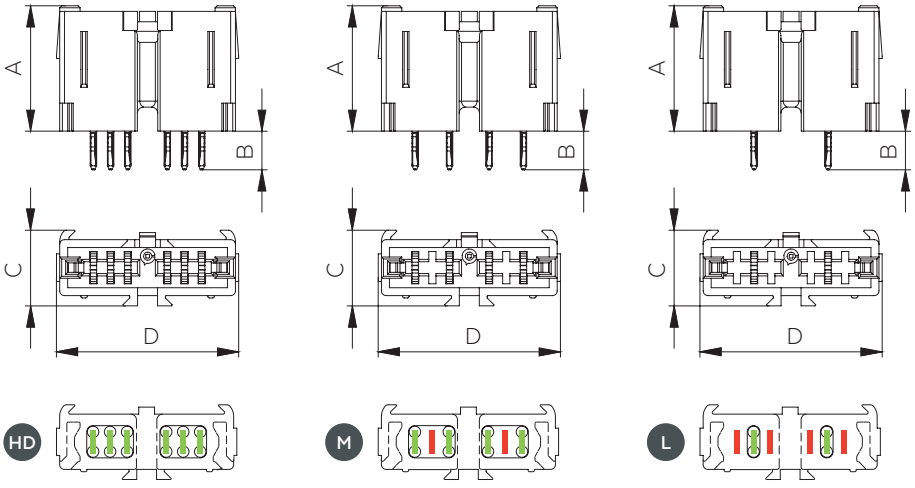
COLOR VARIANTS

Color	Part number
● Black	20121XABK

ASSEMBLY

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

SCALE DRAWINGS



201210A | 201211A | 201212A

RATING

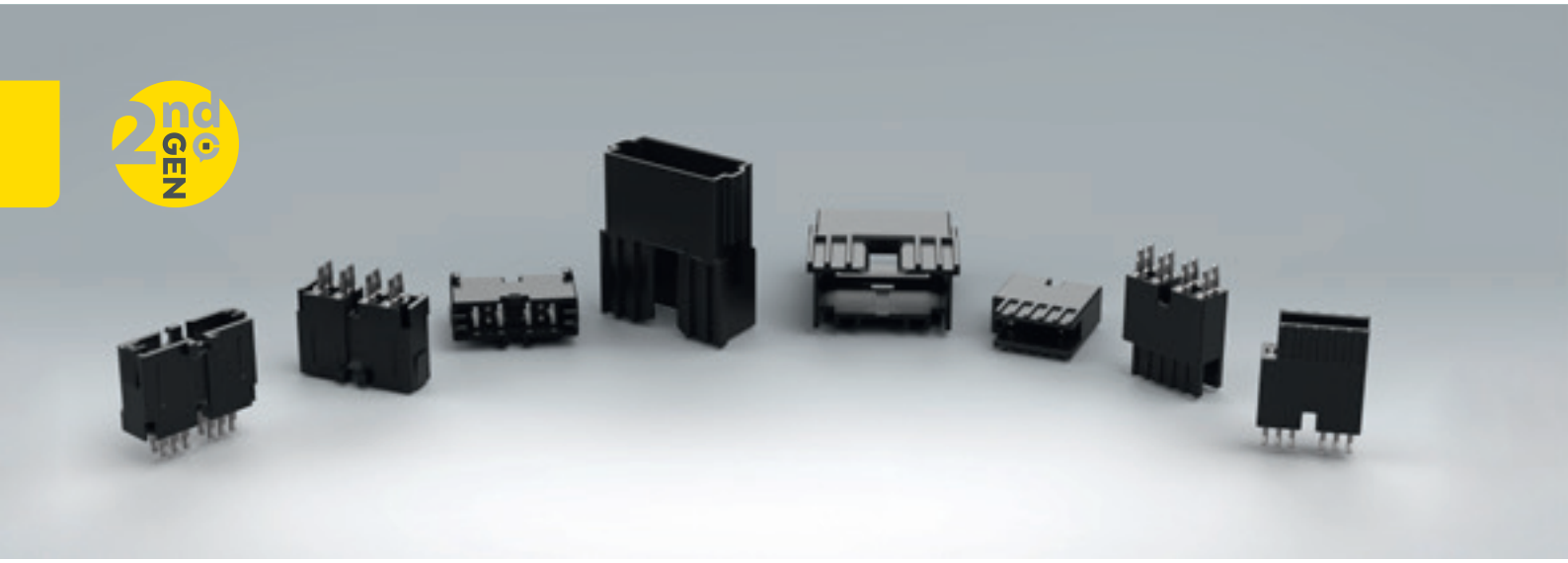
								Part number
●●●●●	●●●●●	●●●●●	●●●○○	●●●●●	●●○○○	●●●●●	●●●○○	201210A
●●●●○	●●●○○	●●●●○	●○○○○	●●●●●	●●●○○	●●●●●	●●●●○	201211A
●●○○○	●●○○○	●●○○○	●○○○○	●●●●●	●●●●○	●●●●●	●●●●●	201212A

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

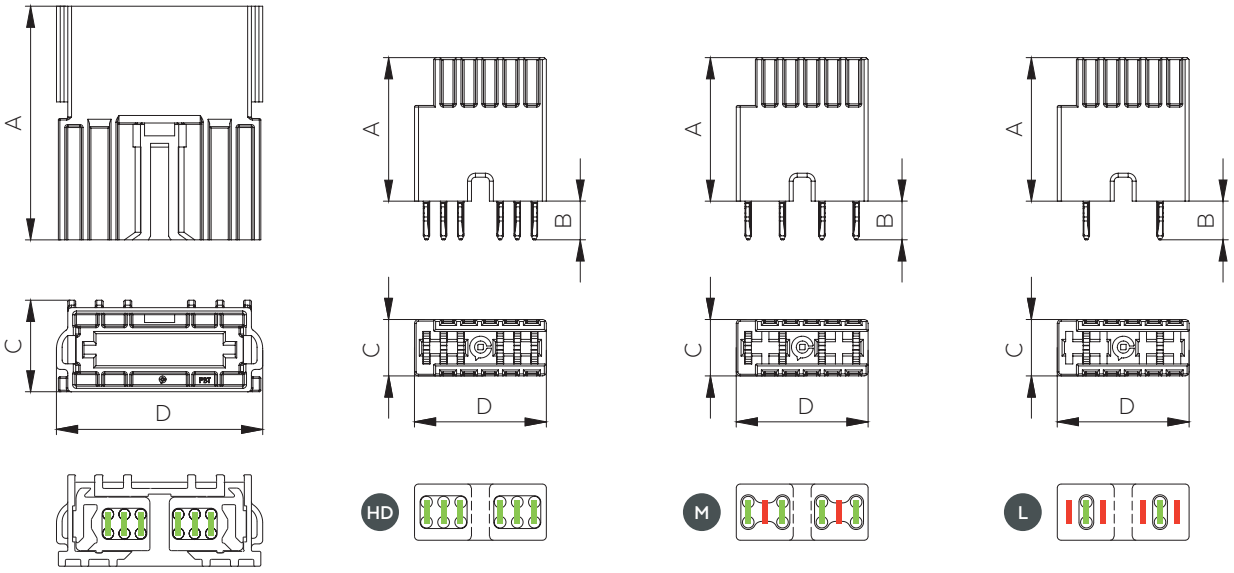
COLOR VARIANTS

Color	Part number
● Black	29900XABK

ASSEMBLY

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

SCALE DRAWINGS



299001A | 299002A | 299003A | 299004A

RATING

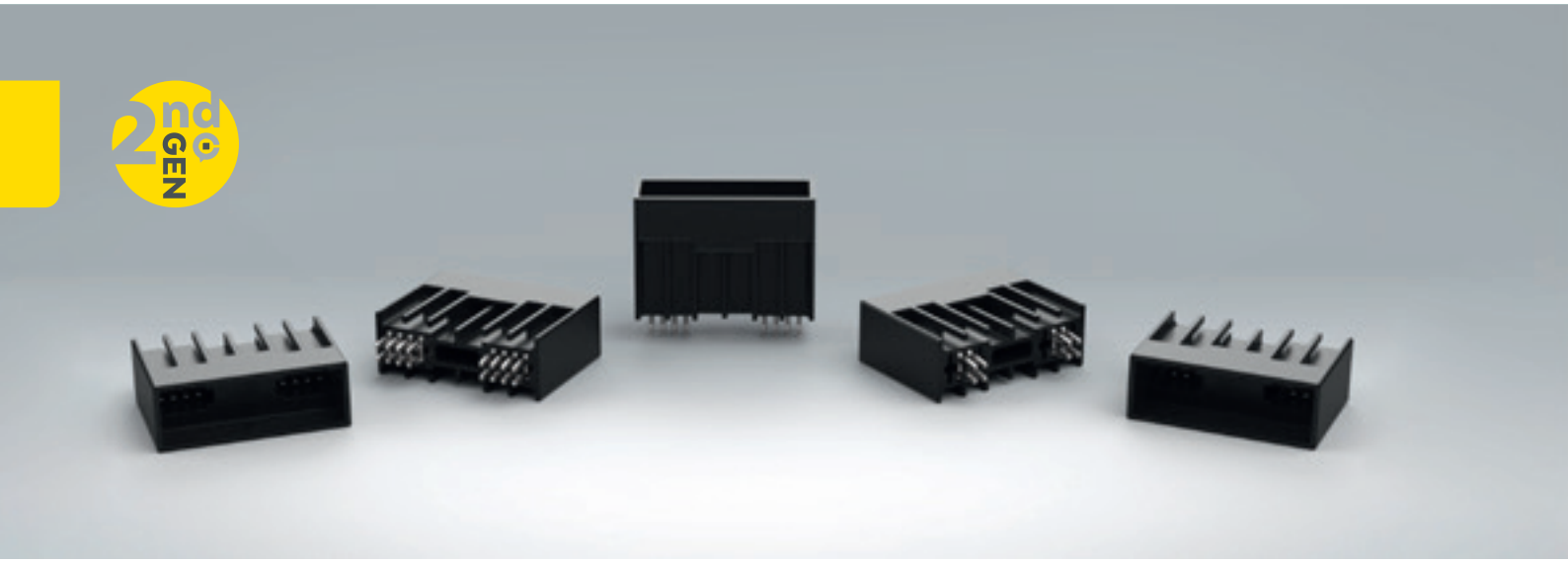
								Part number
●●●●●	●●●●●	●●●●●	●●●○○	●●●●●	●●○○○	●●●●●	●●●○○	299002A
●●●●○	●●●○○	●●●●○	●○○○○	●●●●●	●●●○○	●●●●●	●●●●○	299003A
●●○○○	●●○○○	●●○○○	●○○○○	●●●●●	●●●●○	●●●●●	●●●●●	299004A

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)

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

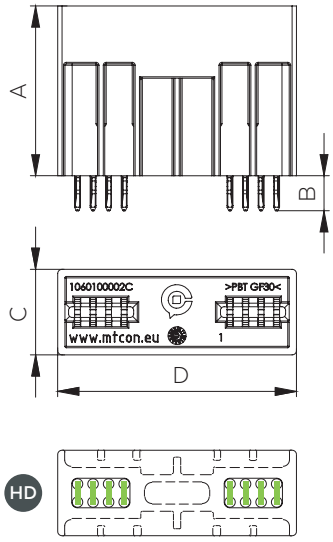
COLOR VARIANTS

Color	Part number
● Black	20131XABK

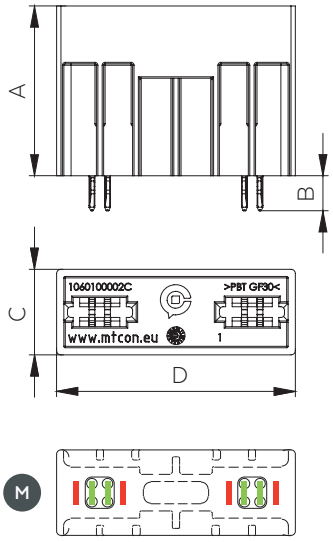
ASSEMBLY

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

SCALE DRAWINGS



201310A



201311A

RATING

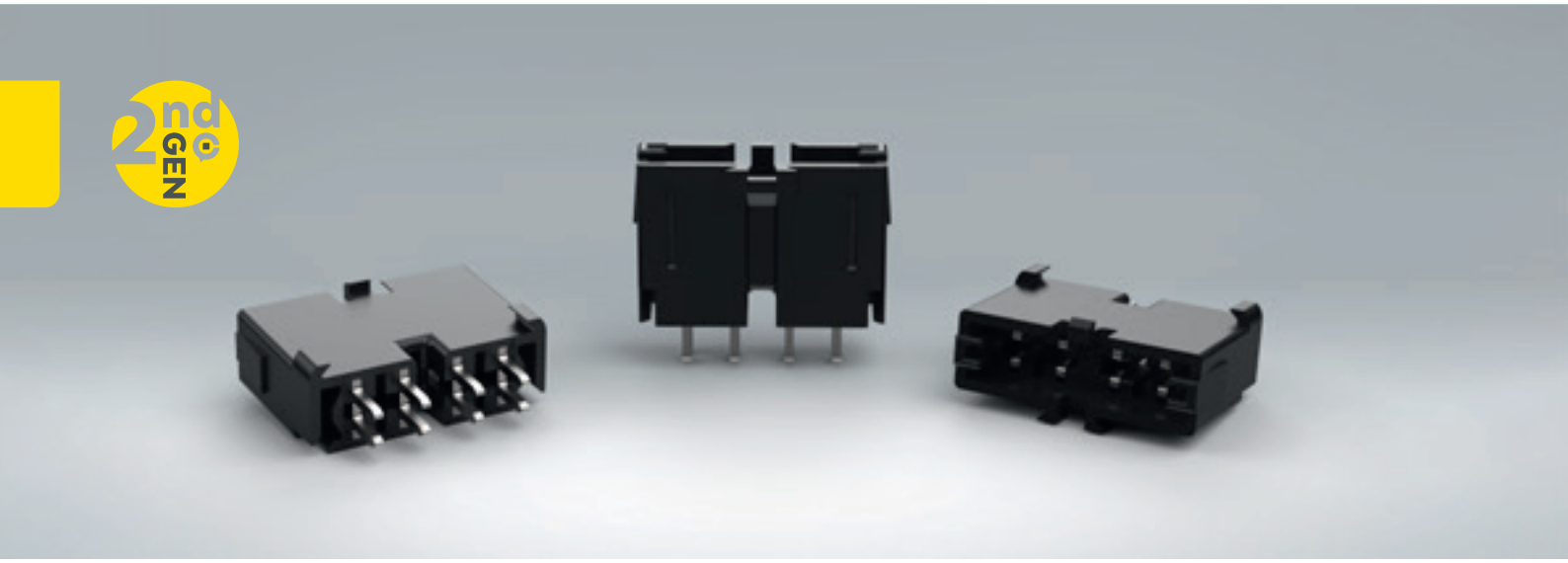
								Part number
●●●●●	●●●●●	●●●●●	●●●○○	●●●●●	●●○○○	●●●●●	●●●○○	201310A
●●●○○	●●●○○	●●●○○	●○○○○	●●●●●	●●●●○	●●●●●	●●●●○	201311A

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

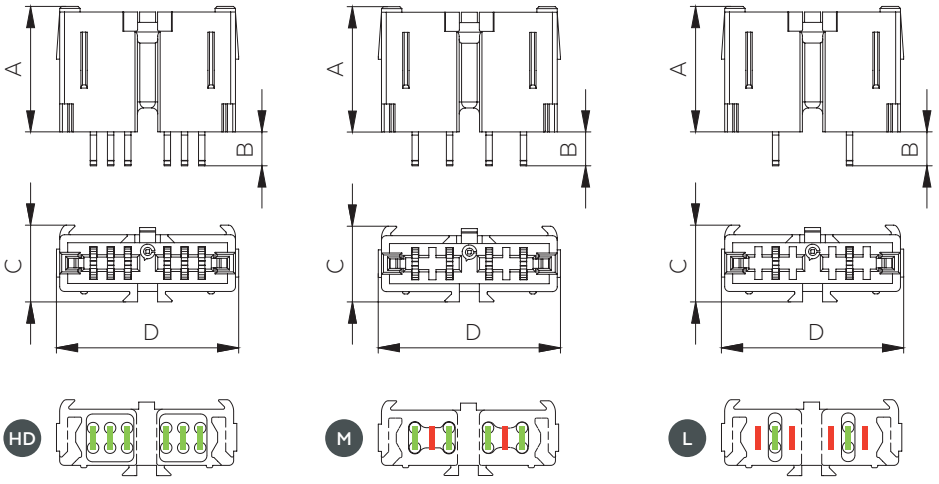
COLOR VARIANTS

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

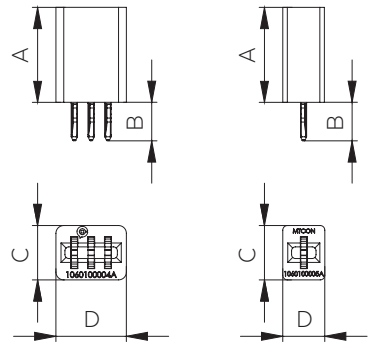
COLOR VARIANTS

Color	Part number
● Black	29905XABK

ASSEMBLY

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

SCALE DRAWINGS



HD

L

299050A

299051A

RATING

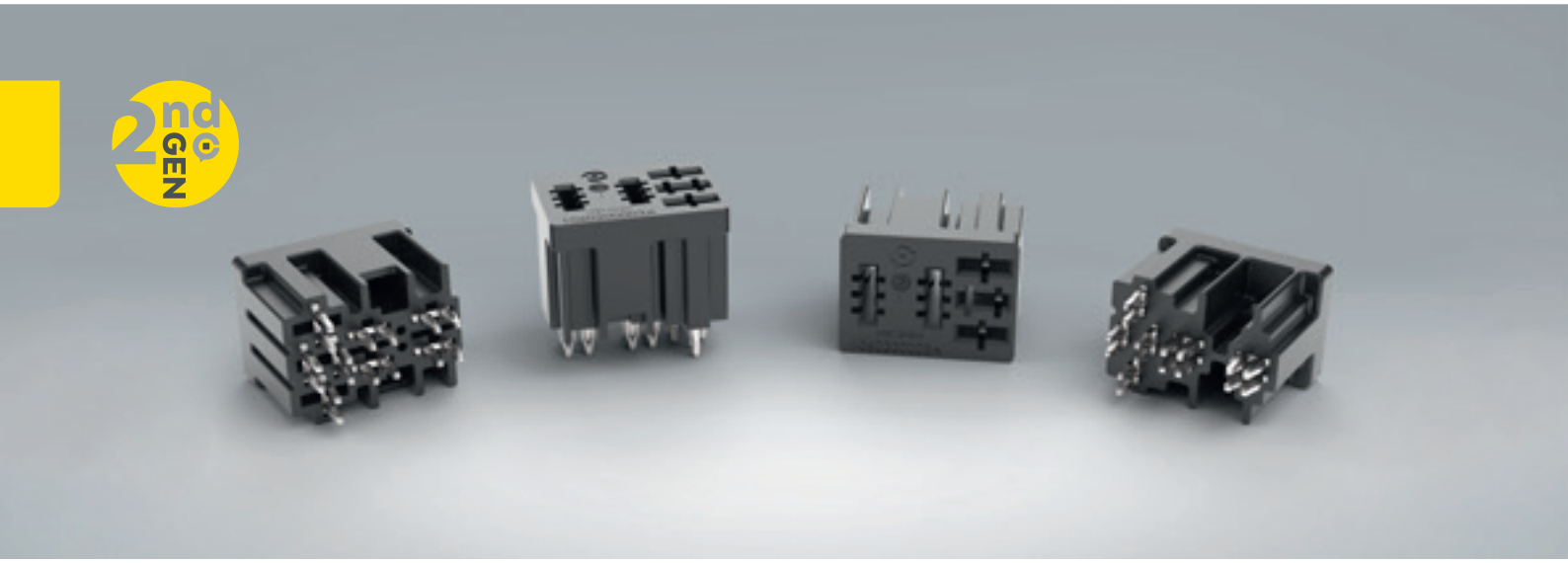
								Part number
●●●●●	●●●●●	●●●●●	●●●○○	●●●●●	●●○○○	●●●●●	●●●○○	299050A
●●○○○	●●○○○	●●○○○	●●●○○	●●●●●	●●●●○	●●●●●	●●●●●	299051A

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)

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

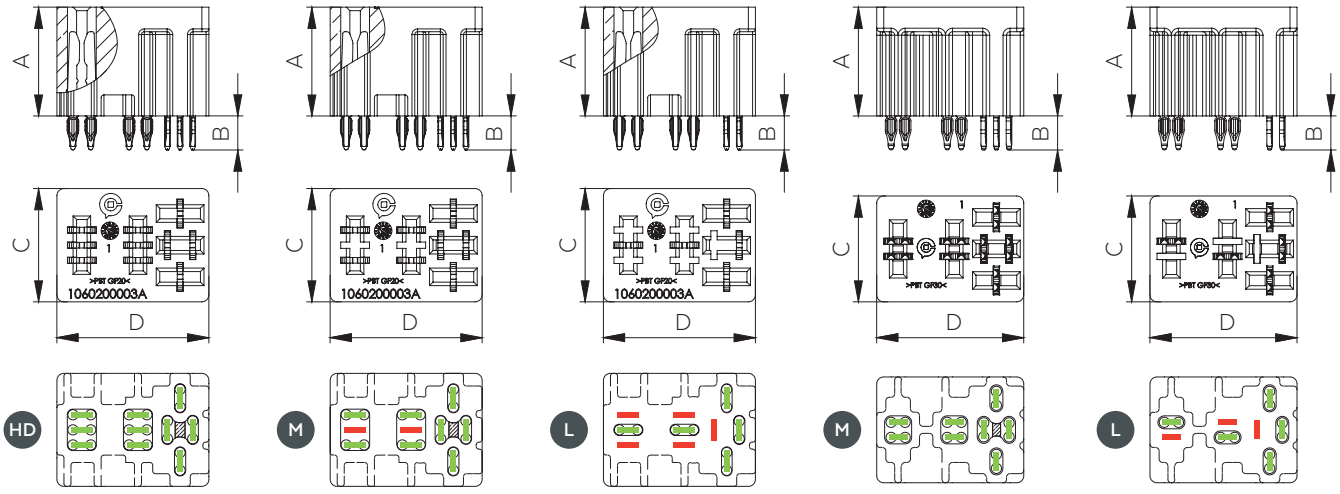
COLOR VARIANTS

Color	Part number
● Black	2001XXABK

ASSEMBLY

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

SCALE DRAWINGS



200110A | 200111A | 200112A | 200120A | 200121A

RATING

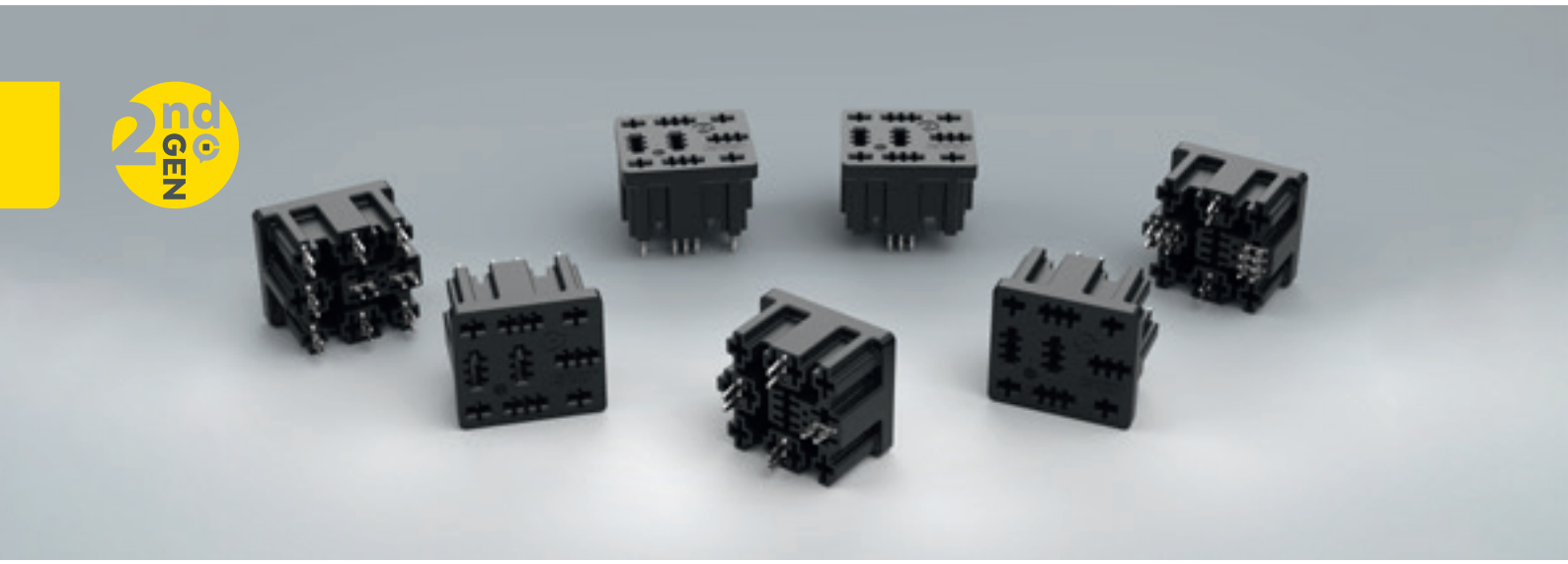
								Part number
●●●●●	●●●●●	●●●●●	●●●○○	●●●●●	●●○○○	●●●●●	●●●○○	200110A
●●●●○	●●●●○	●●●●○	●○○○○	●●●●●	●●●○○	●●●●●	●●●●○	200111A
●●○○○	●●○○○	●●○○○	●○○○○	●●●●●	●●●●○	●●●●●	●●●●●	200112A
●●●●○	●●●●○	●●●●○	●●●○○	●●●●●	●●●○○	●●●●●	●●●●○	200120A
●●○○○	●●○○○	●●○○○	●○○○○	●●●●●	●●●●○	●●●●●	●●●●●	200121A

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

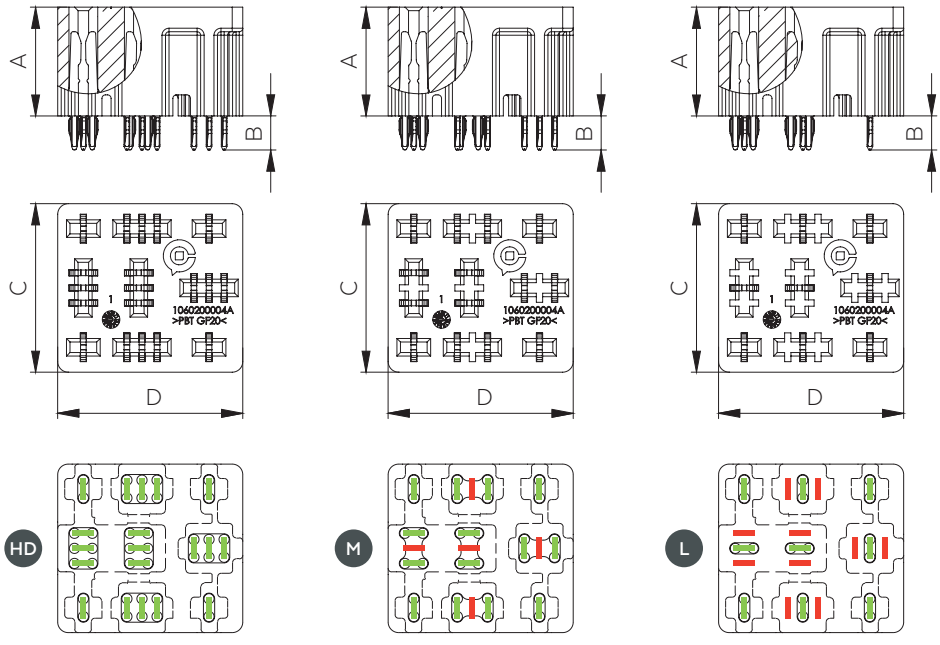
COLOR VARIANTS

Color	Part number
● Black	20021XABK

ASSEMBLY

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

SCALE DRAWINGS



200210A 200211A 200212A

RATING

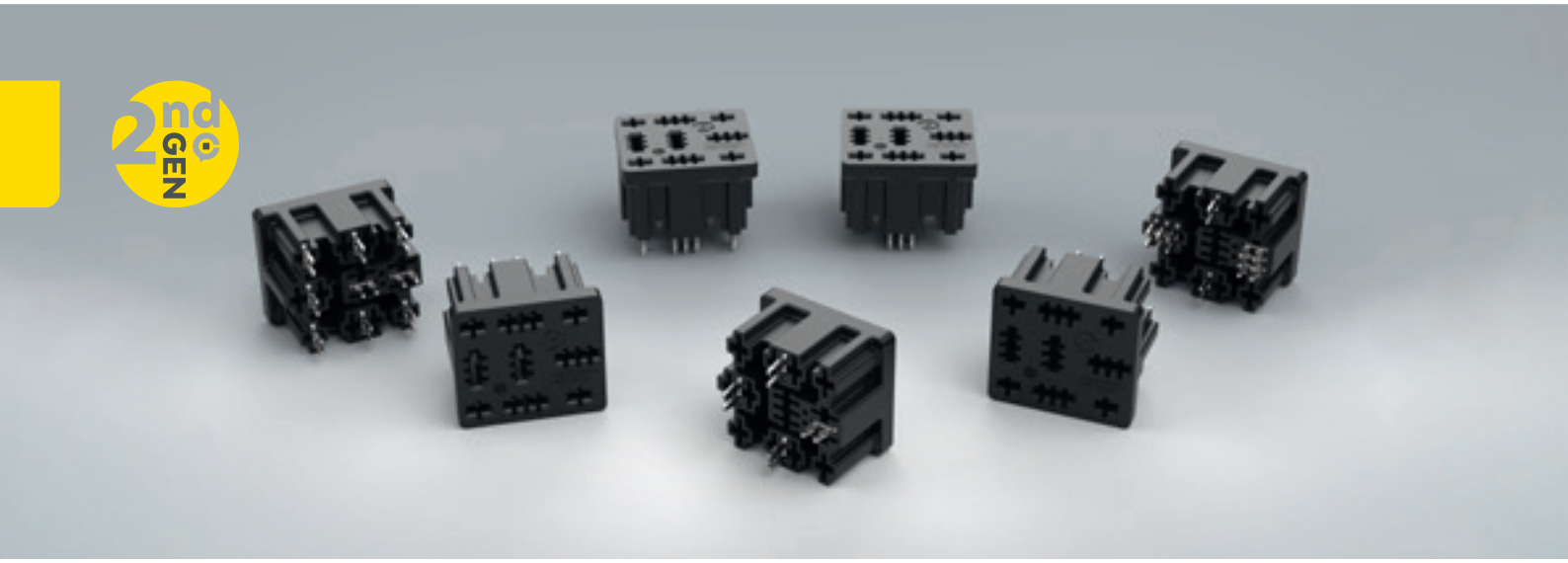
								Part number
●●●●●	●●●●●	●●●●●	●●●○○	●●●●●	●●○○○	●●●●●	●●●○○	200210A
●●●●○	●●●●○	●●●●○	●○○○○	●●●●●	●●●○○	●●●●●	●●●●○	200211A
●●○○○	●●○○○	●●○○○	●○○○○	●●●●●	●●●●○	●●●●●	●●●●●	200212A

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)

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

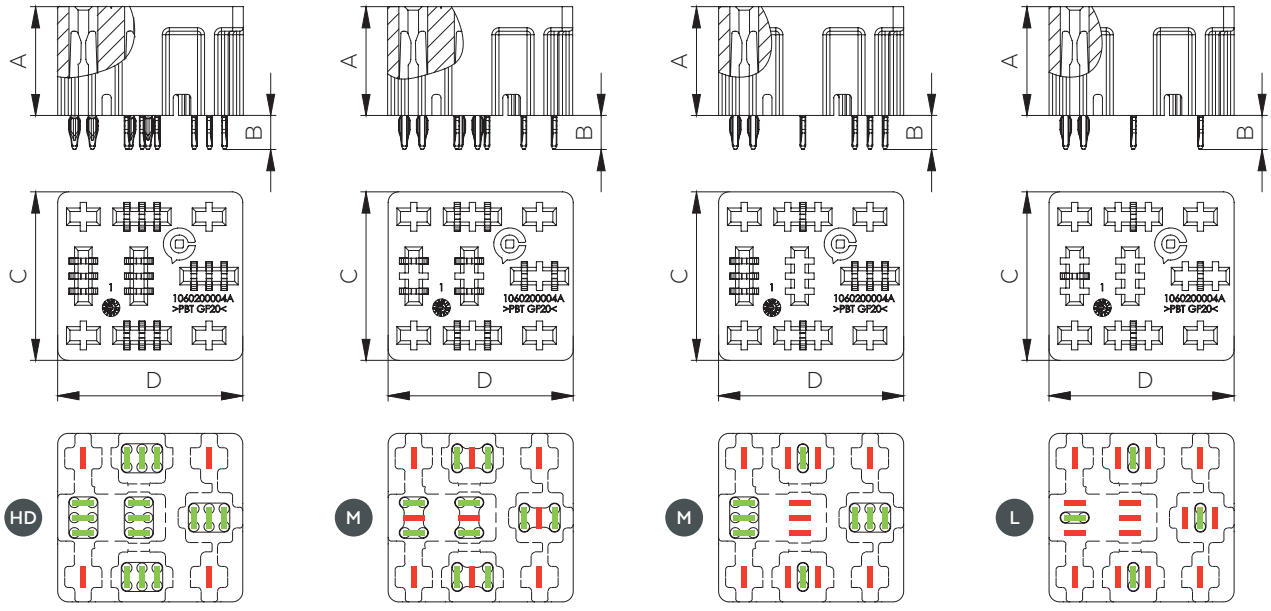
COLOR VARIANTS

Color	Part number
● Black	20031XABK

ASSEMBLY

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

SCALE DRAWINGS



200310A | 200311A | 200312A | 200313A

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)

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

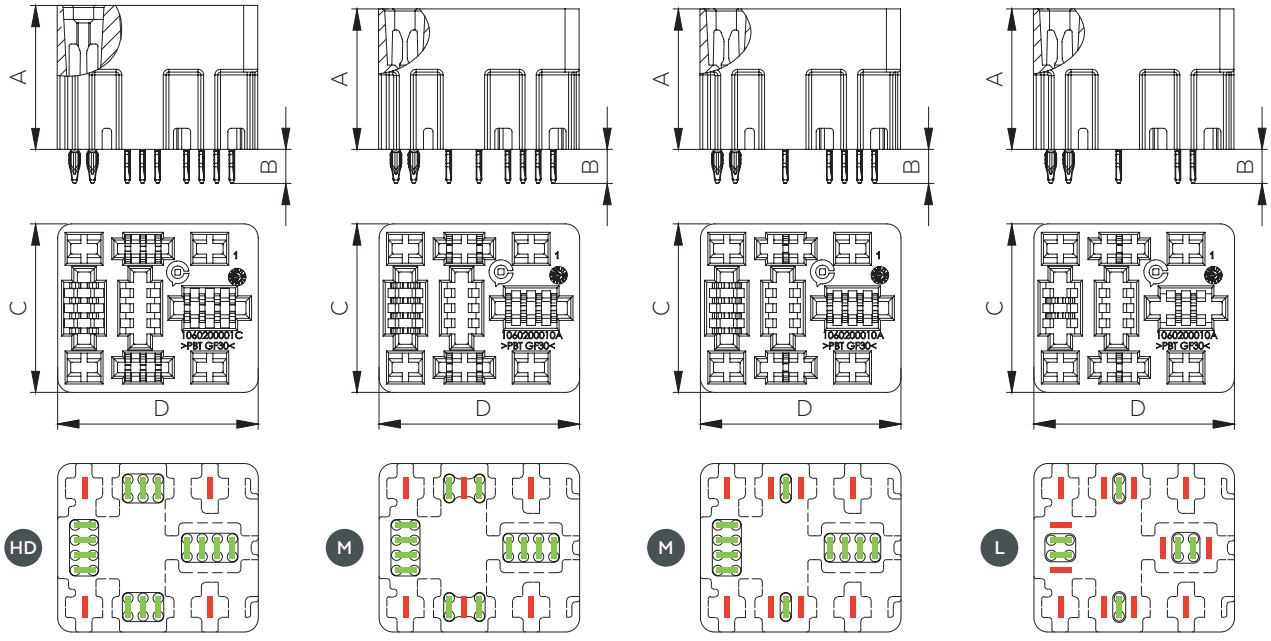
COLOR VARIANTS

Color	Part number
● Black	20041XABK

ASSEMBLY

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

SCALE DRAWINGS



200410A | 200411A | 200412A | 200413A

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)

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

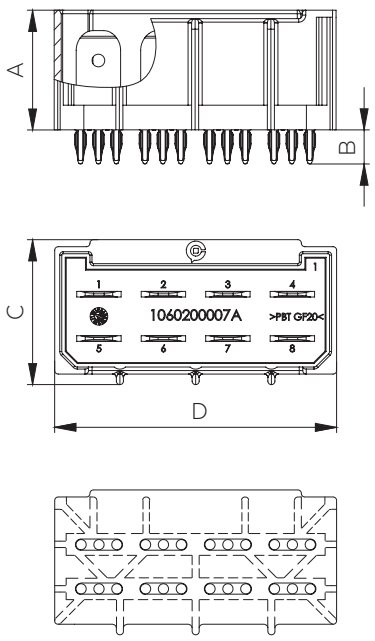
COLOR VARIANTS

Color	Part number
● Black	200511ABK

ASSEMBLY

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

SCALE DRAWINGS



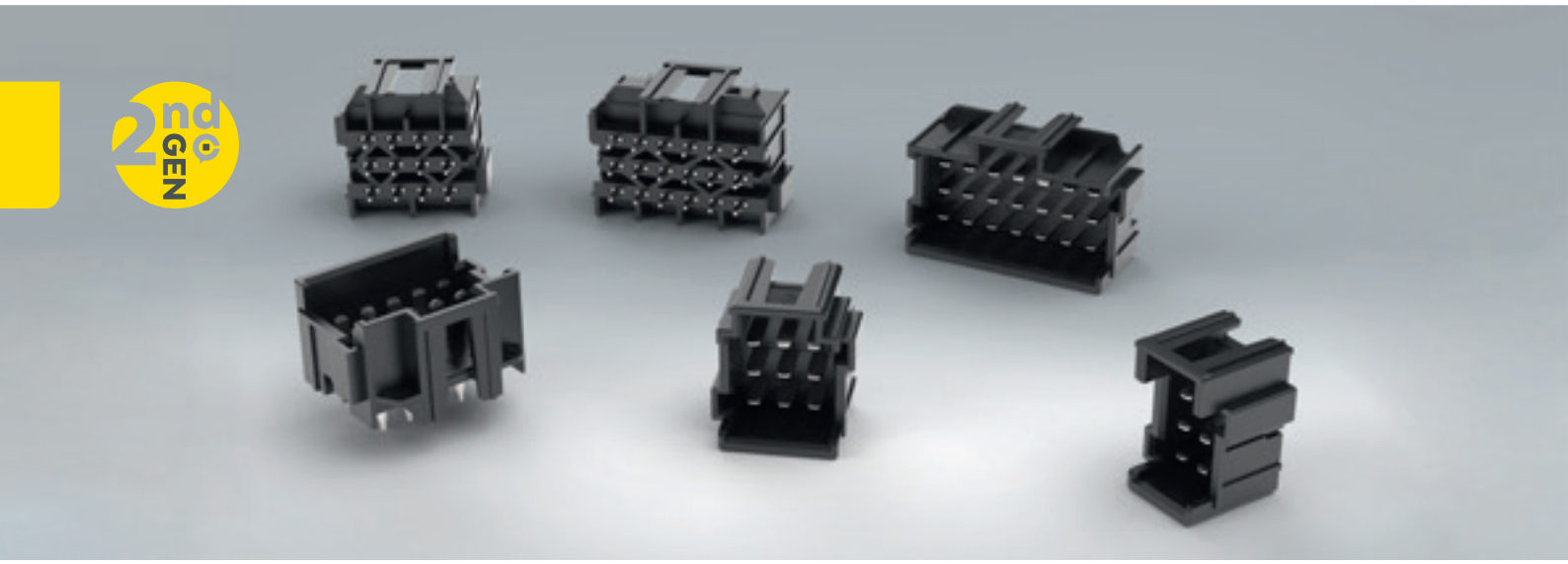
20051XA

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)

RoHS COMPLIANT

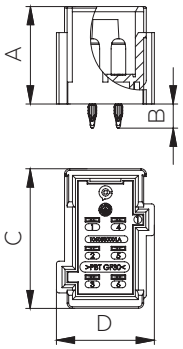
REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

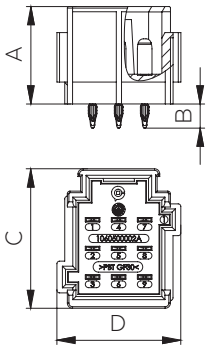
COLOR VARIANTS

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

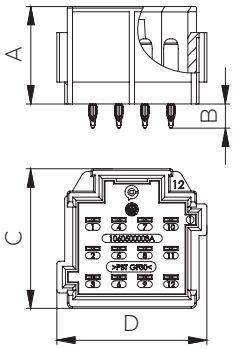
SCALE DRAWINGS



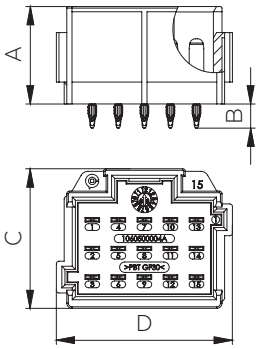
6-PIN



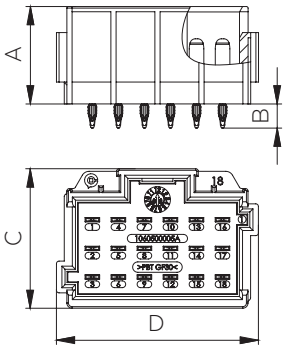
9-PIN



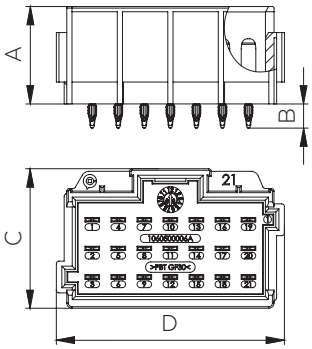
12-PIN



15-PIN



18-PIN



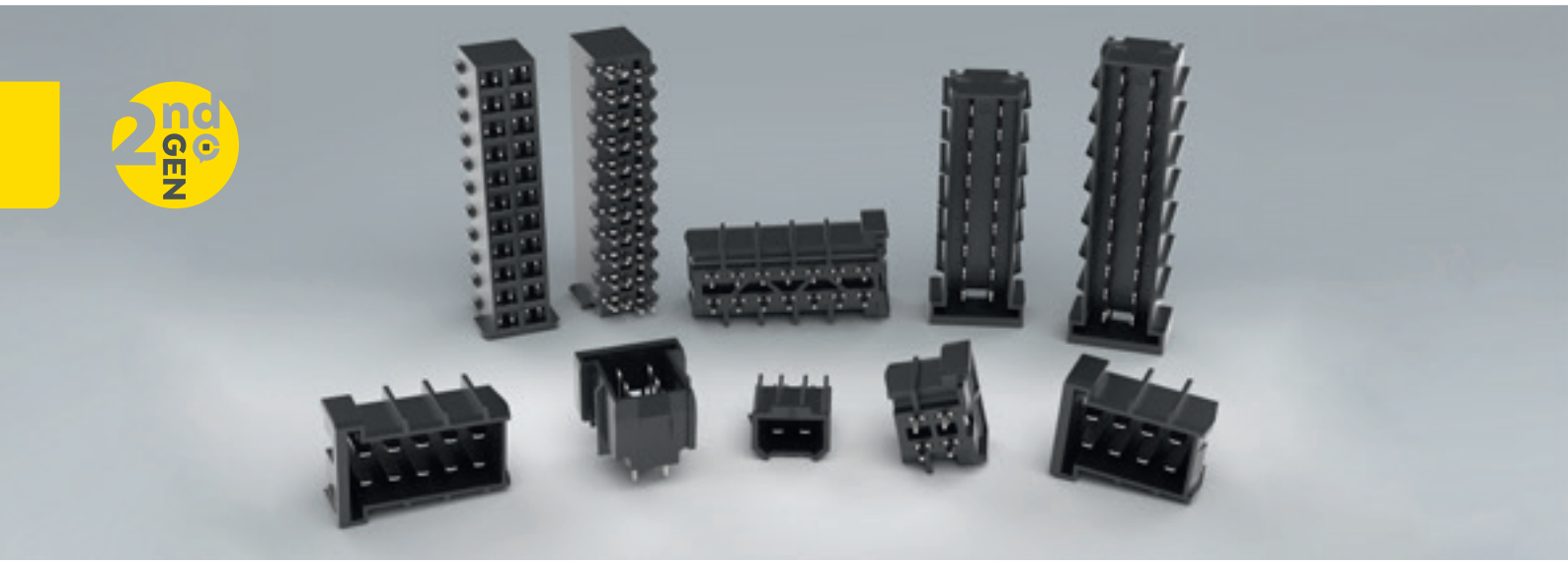
21-PIN

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

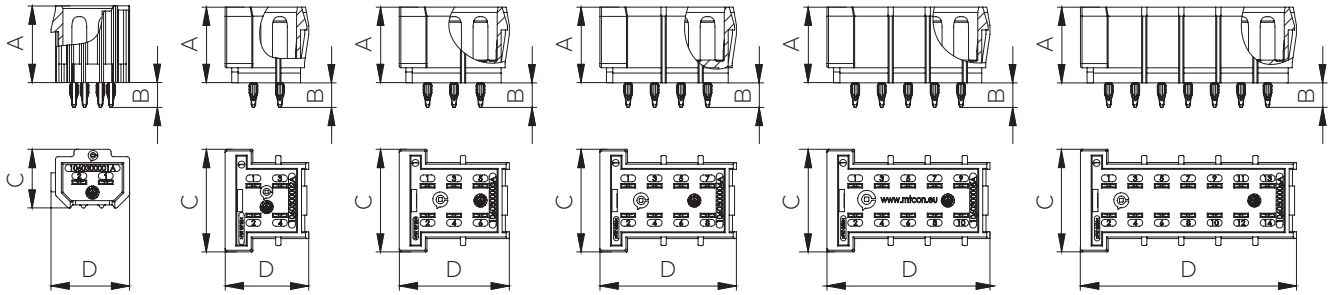
REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

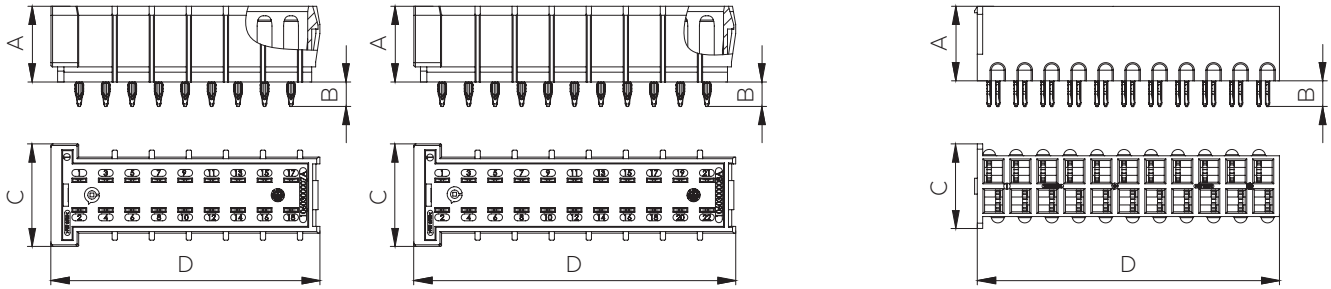
COLOR VARIANTS

Color	Part number
Black	40XX10ABK
Green	405110AGN
White	405110AWH

SCALE DRAWINGS



2-PIN 4-PIN 6-PIN 8-PIN 10-PIN 14-PIN



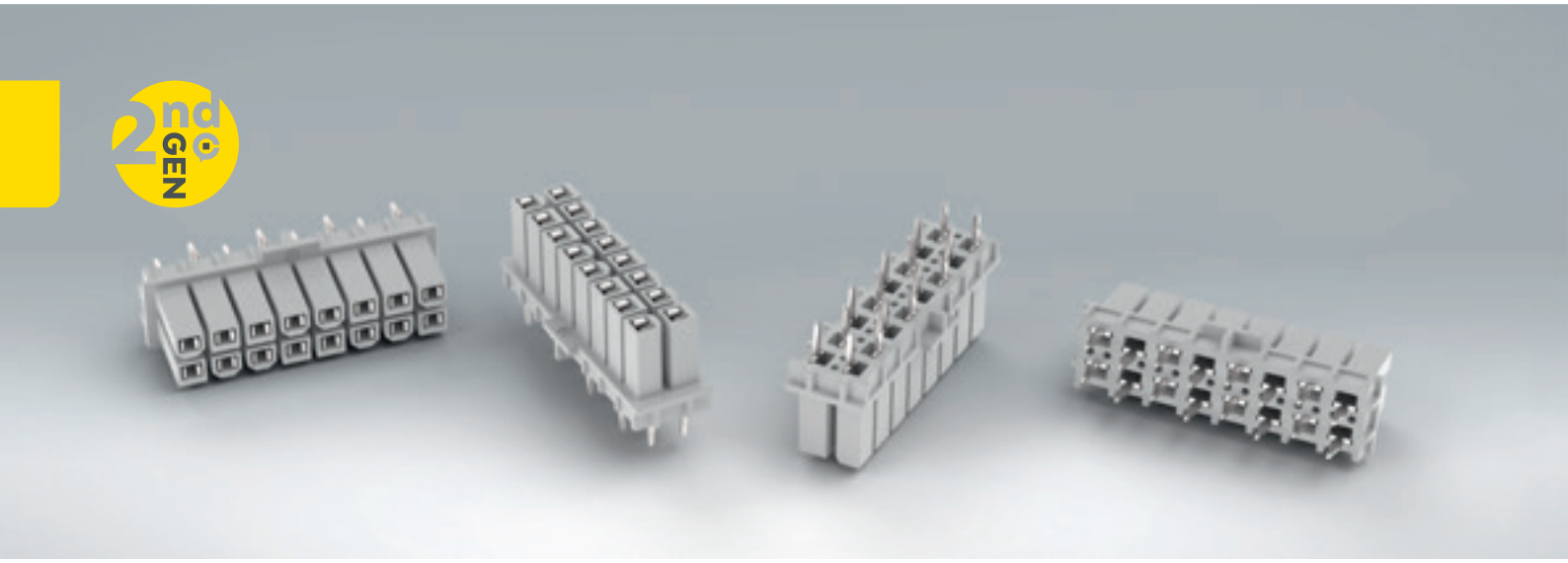
18-PIN 22-PIN 22-PIN (FEMALE)

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

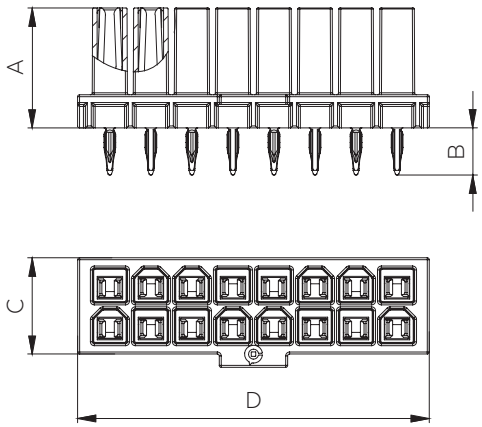
REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

COLOR VARIANTS

Color	Part number
White	408610AWH

SCALE DRAWINGS



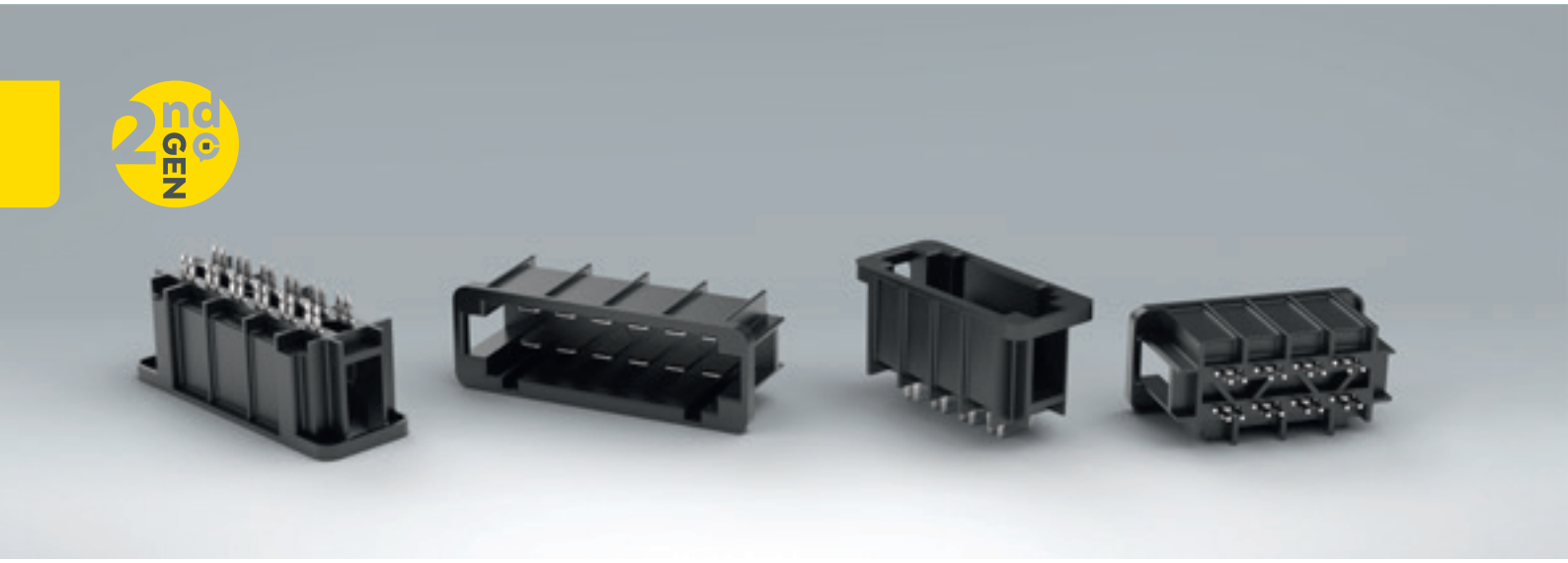
16-PIN

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)

RoHS COMPLIANT

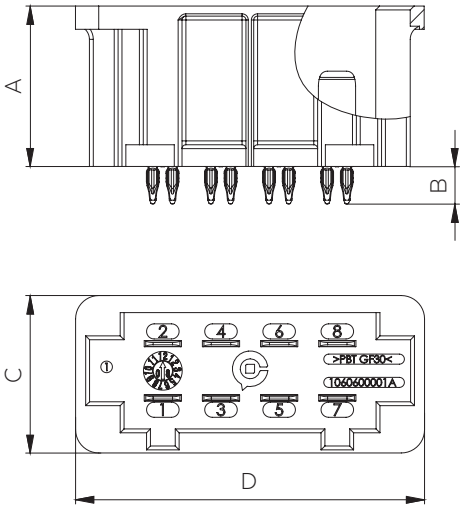
REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

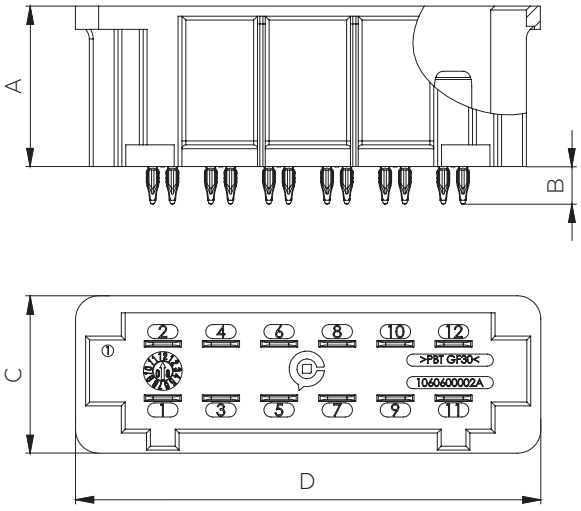
COLOR VARIANTS

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

SCALE DRAWINGS



8-PIN



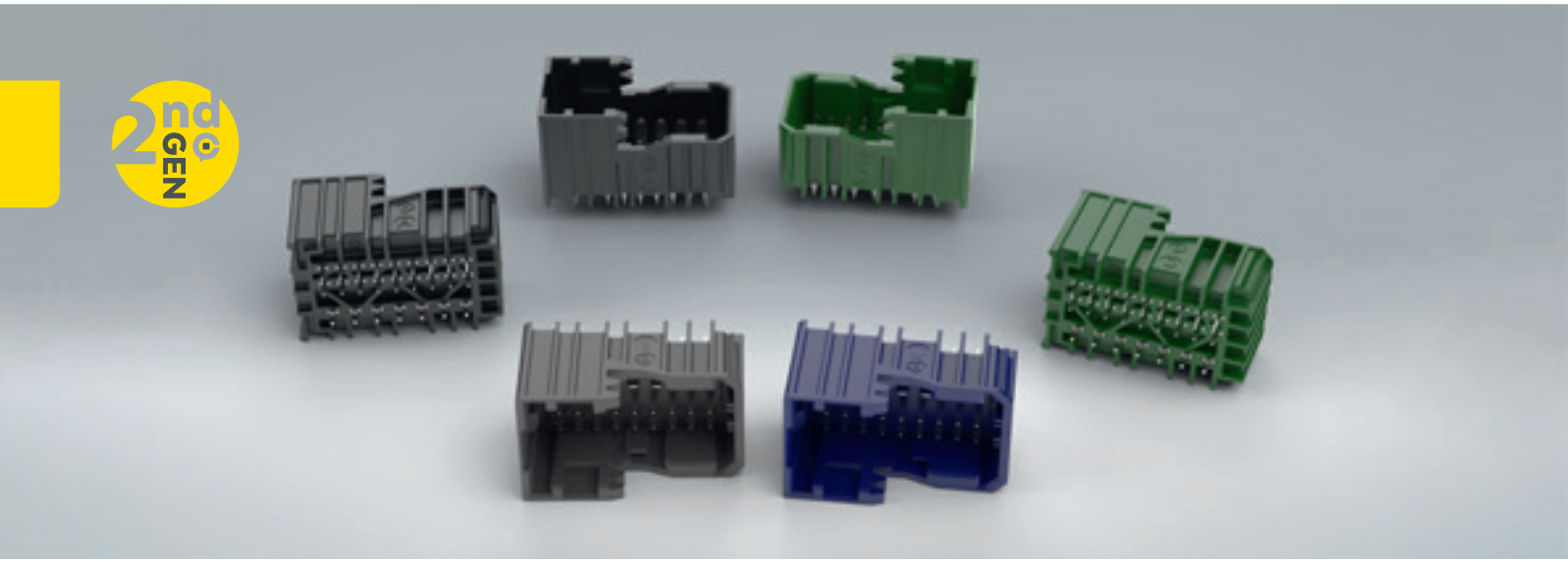
12-PIN

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

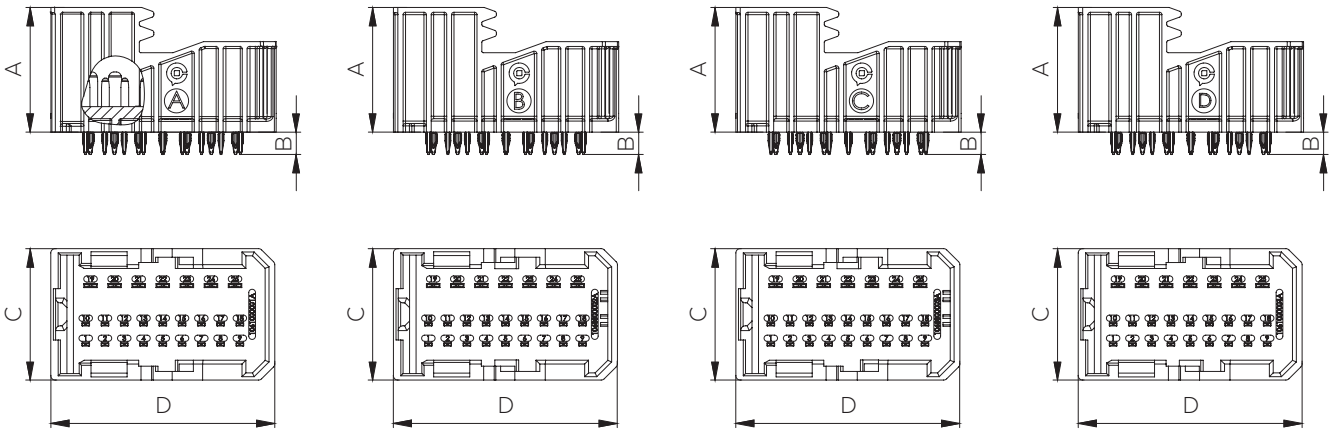
REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

COLOR VARIANTS

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

SCALE DRAWINGS



COD-A
25-PIN

COD-B
25-PIN

COD-C
25-PIN

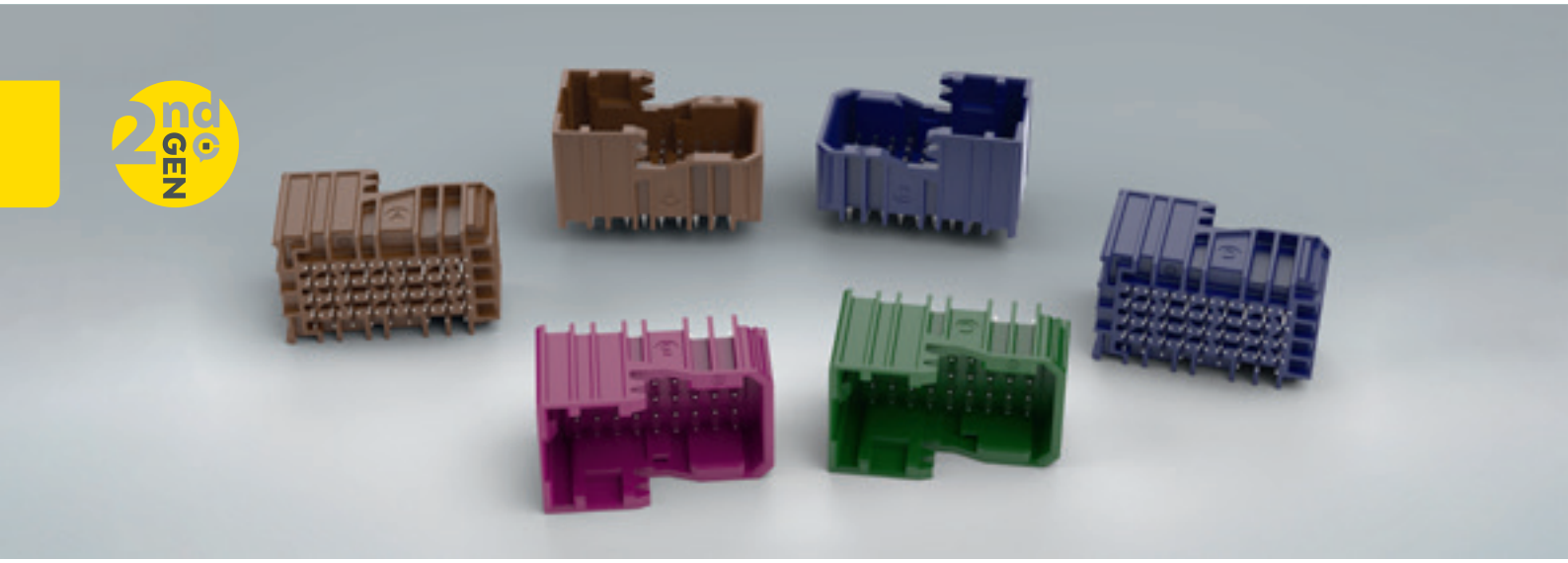
COD-D
25-PIN

TECHNICAL DATA

A	B	C	D	Dimensions	Part number
25.9	4.65	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)

RoHS COMPLIANT

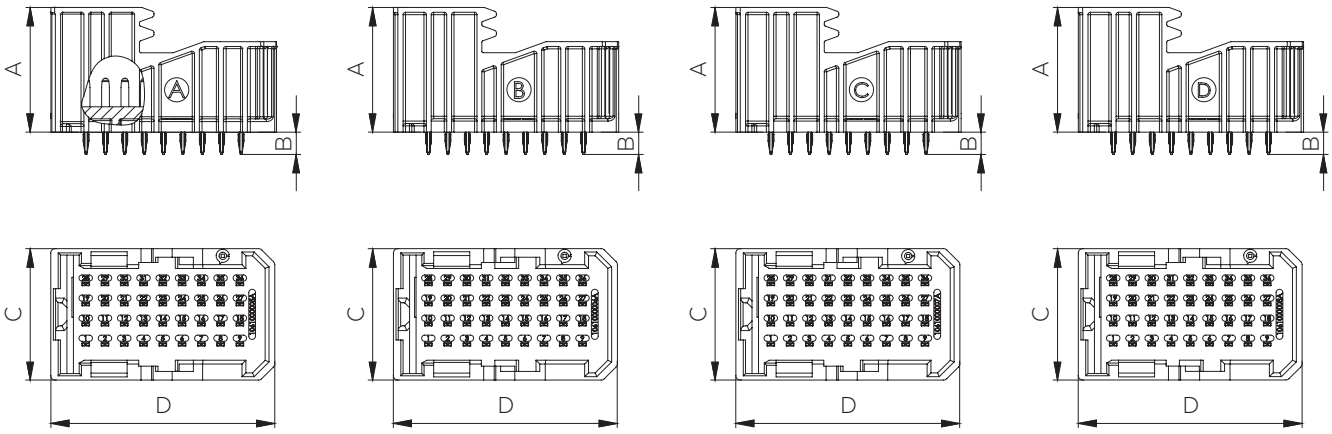
REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

COLOR VARIANTS

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

SCALE DRAWINGS



COD-A
36-PIN

COD-B
36-PIN

COD-C
36-PIN

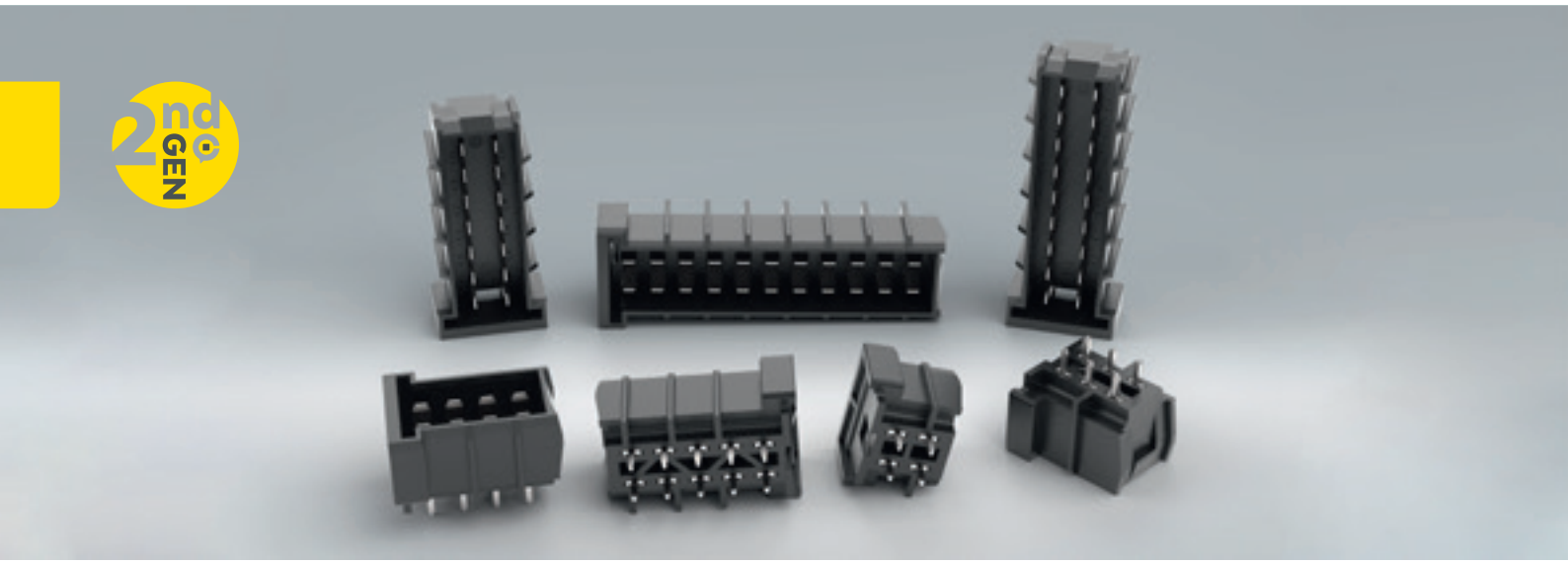
COD-D
36-PIN

TECHNICAL DATA

A	B	C	D	Dimensions	Part number
25.9	4.65	27.5	46.5	36-pin	**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

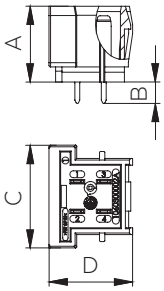
REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

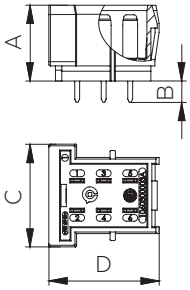
COLOR VARIANTS

Color	Part number
Black	405X31ABK
Green	405131AGN
White	405131AWH

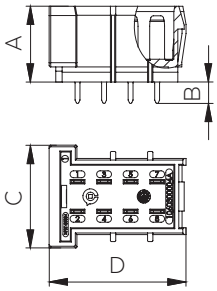
SCALE DRAWINGS



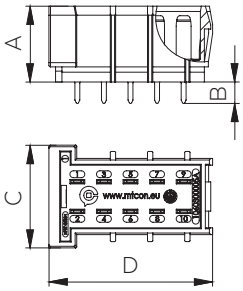
4-PIN



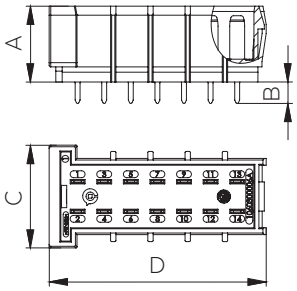
6-PIN



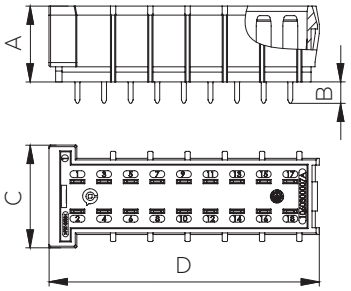
8-PIN



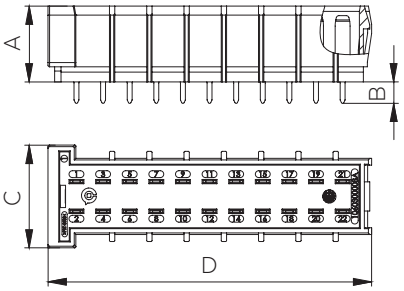
10-PIN



14-PIN



18-PIN



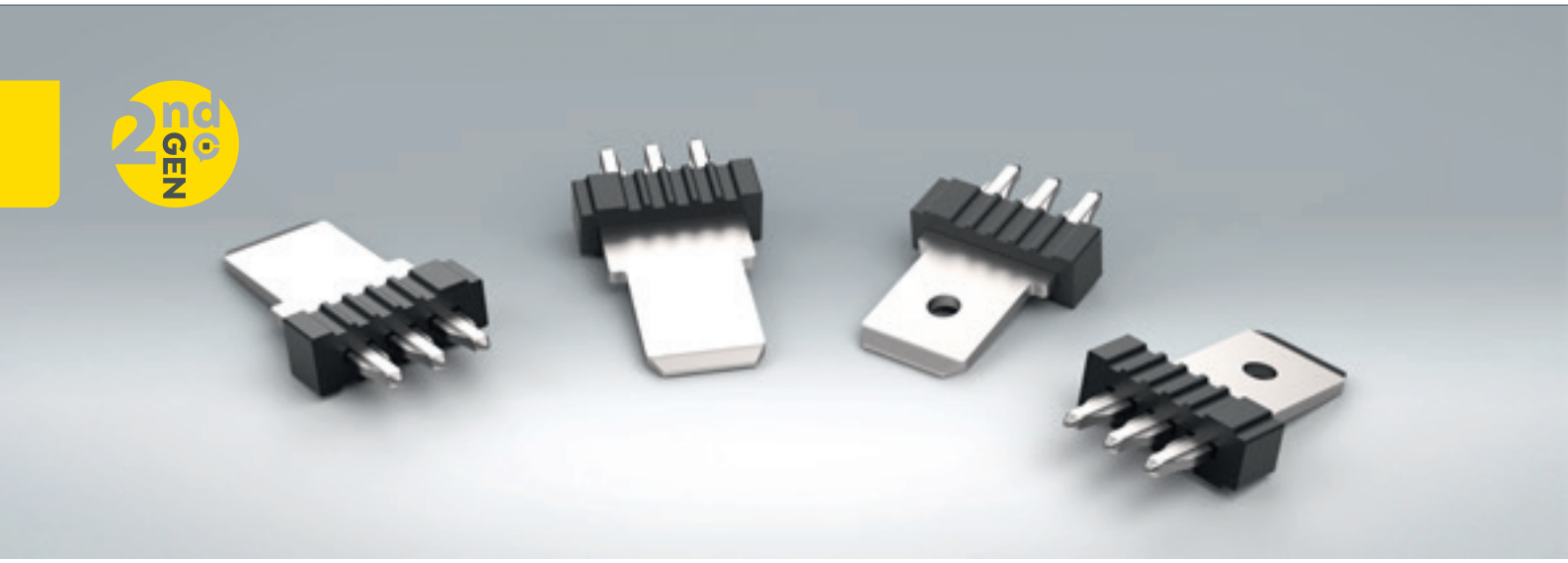
22-PIN

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

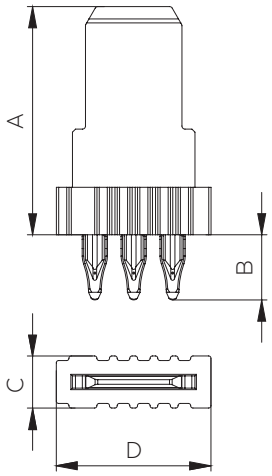
- In modern press-fit and soldering technology (THT)
- Standard components/catalog goods
- Customer specific designs possible regarding:
  shape, size, material, surface and much more

RoHS COMPLIANT

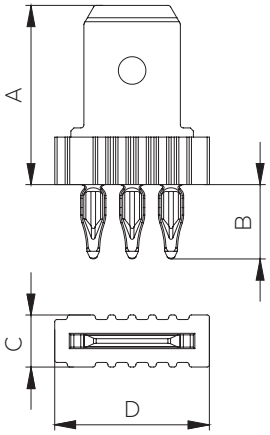
REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

SCALE DRAWINGS



404110A



404111A

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)

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

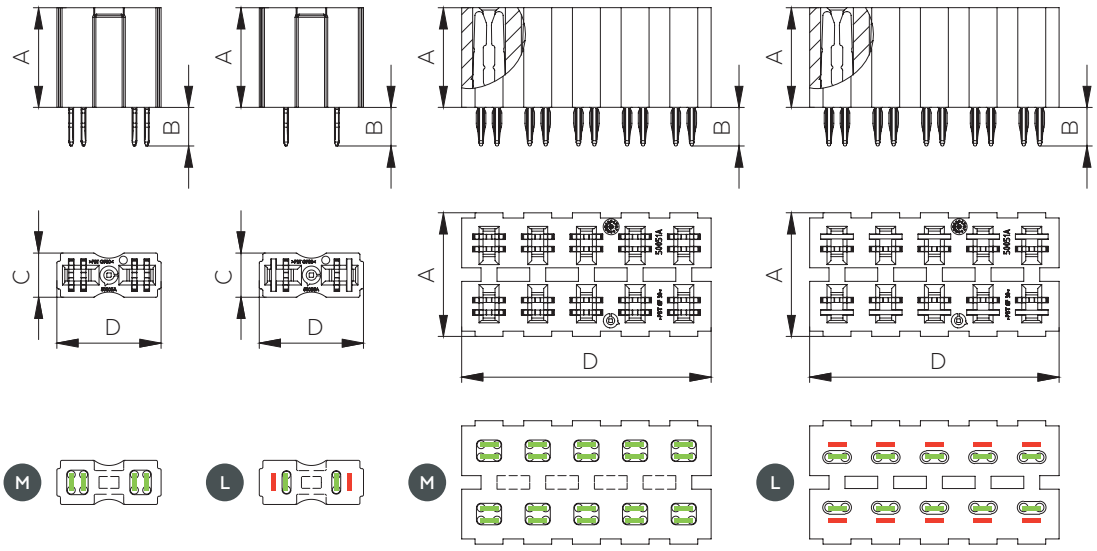
COLOR VARIANTS

Color	Part number
● Black	20110XABK

ASSEMBLY

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

SCALE DRAWINGS



201100A 201101A 201105A 201107A

RATING

								Part number
●●●●○	●●●○○	●●●●○	●●●●●	●●●●●	●●●●○	●●●○○	●●●●○	201100A
●●○○○	●●○○○	●●○○○	●○○○○	●●●●●	●●●●●	●●●○○	●●●●●	201101A
●●●●○	●●●○○	●●●●○	●●●●●	●●●●●	●●●●○	●●●○○	●●●●○	201105A
●●○○○	●●○○○	●●○○○	●○○○○	●●●●●	●●●●●	●●●○○	●●●●●	201107A

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)

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

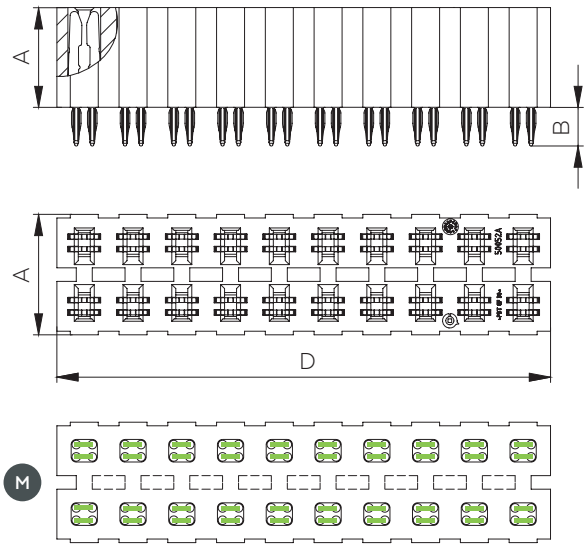
COLOR VARIANTS

Color	Part number
● Black	20110XABK

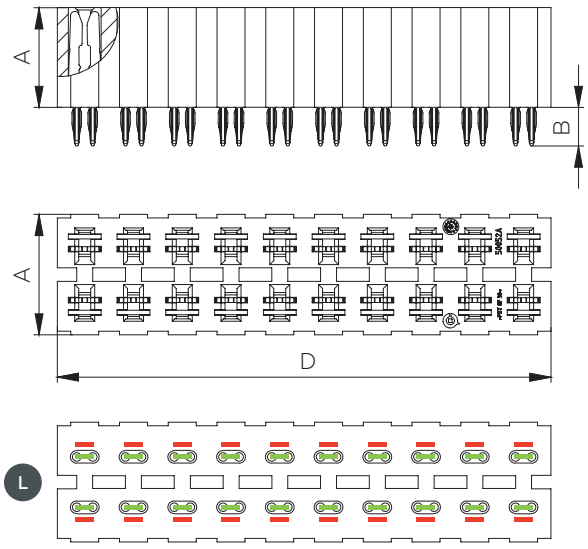
ASSEMBLY

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

SCALE DRAWINGS



201106A



201108A

RATING

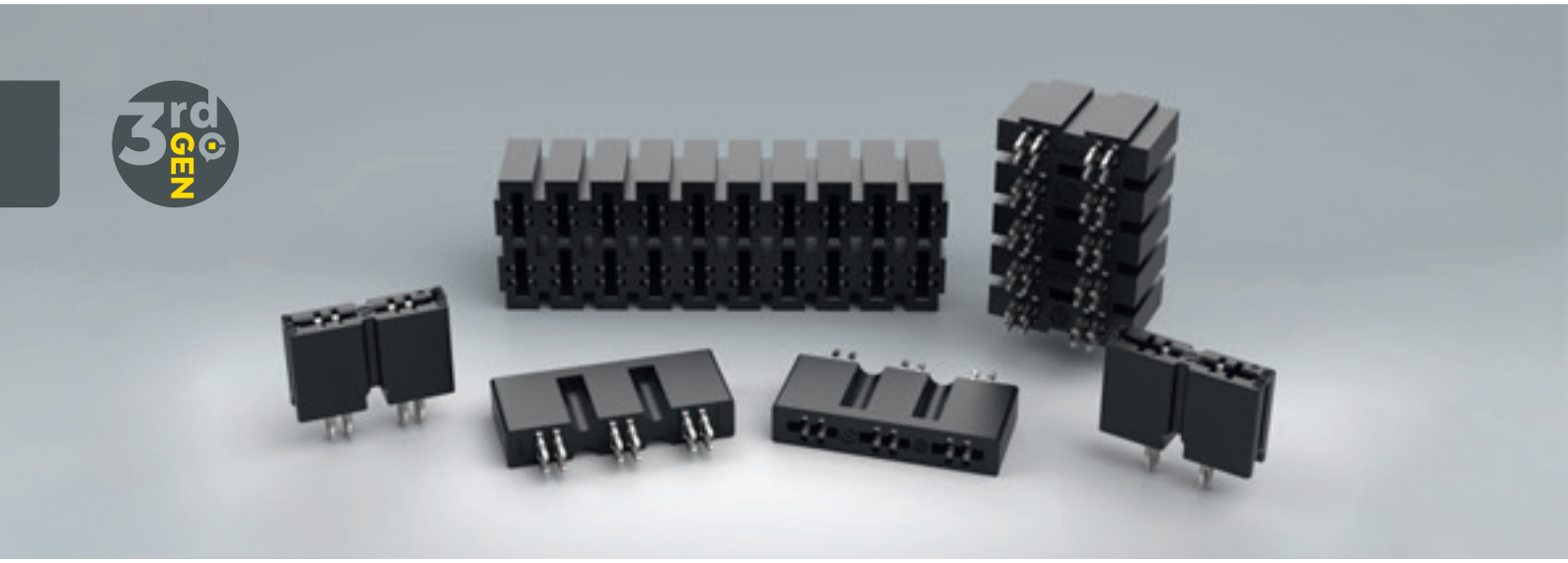
								Part number
●●●●○	●●●○○	●●●●○	●●●●●	●●●●●	●●●●○	●●●○○	●●●●○	201106A
●●○○○	●●○○○	●●○○○	●○○○○	●●●●●	●●●●●	●●●○○	●●●●●	201108A

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)

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

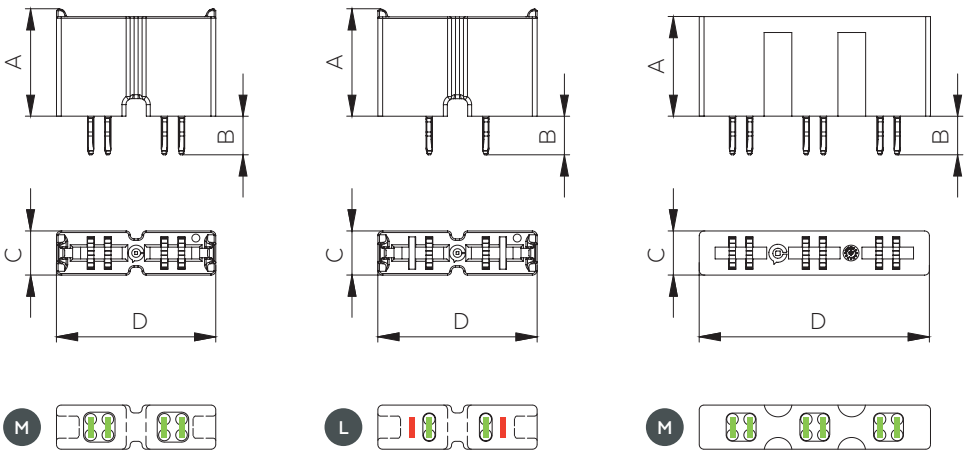
COLOR VARIANTS

Color	Part number
● Black	20120XABK

ASSEMBLY

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

SCALE DRAWINGS



201200A | 201202A | 201201A

RATING

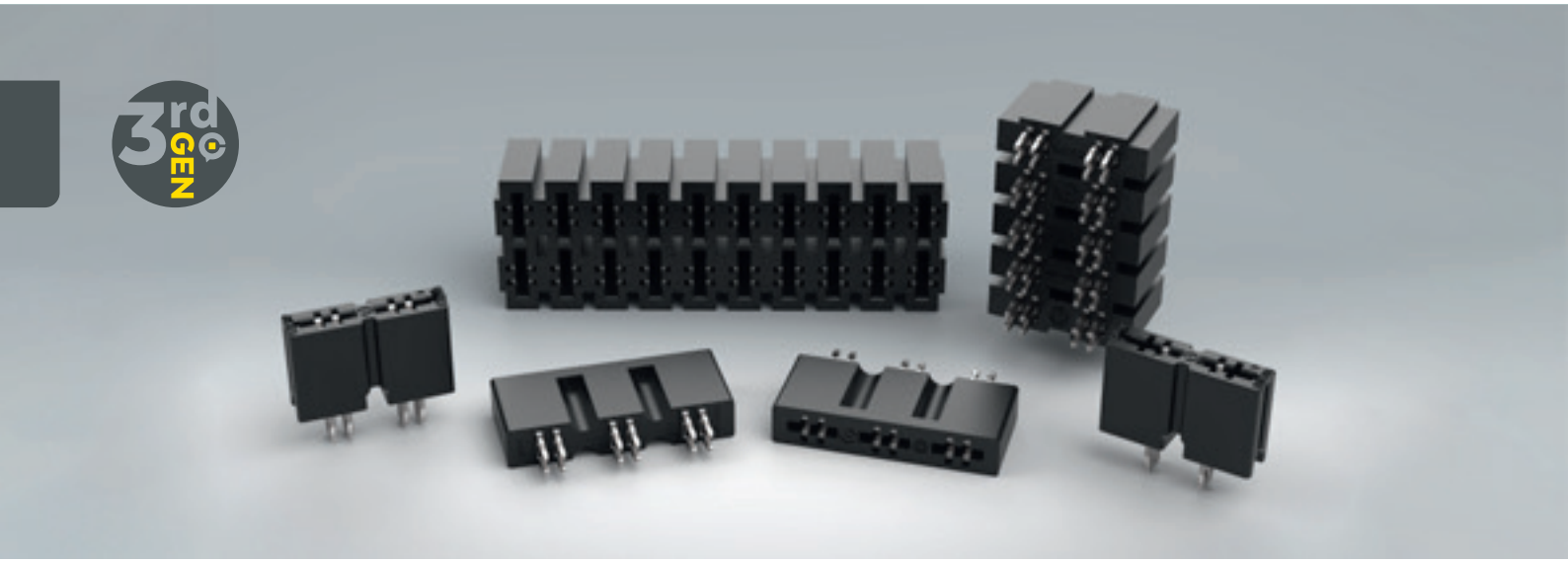
								Part number
●●●●○	●●●○○	●●●●○	●●●●●	●●●●●	●●●●○	●●●○○	●●●●○	201200A
●●○○○	●●○○○	●●○○○	●○○○○	●●●●●	●●●●●	●●●○○	●●●●●	201202A
●●●●○	●●●○○	●●●●○	●●●●●	●●●●●	●●●●○	●●●○○	●●●●○	201201A

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)

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

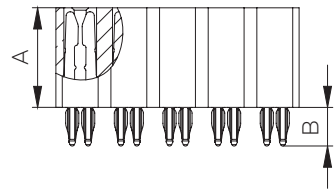
COLOR VARIANTS

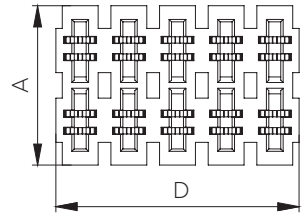
Color	Part number
● Black	20120XABK

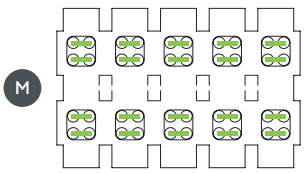
ASSEMBLY

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

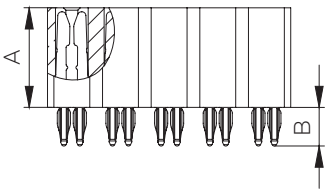
SCALE DRAWINGS

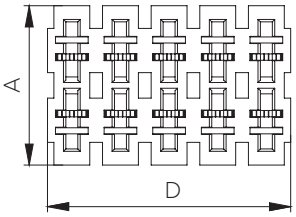


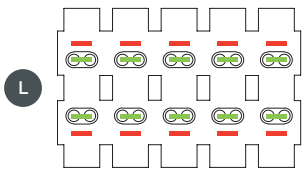




201205A







201207A

RATING

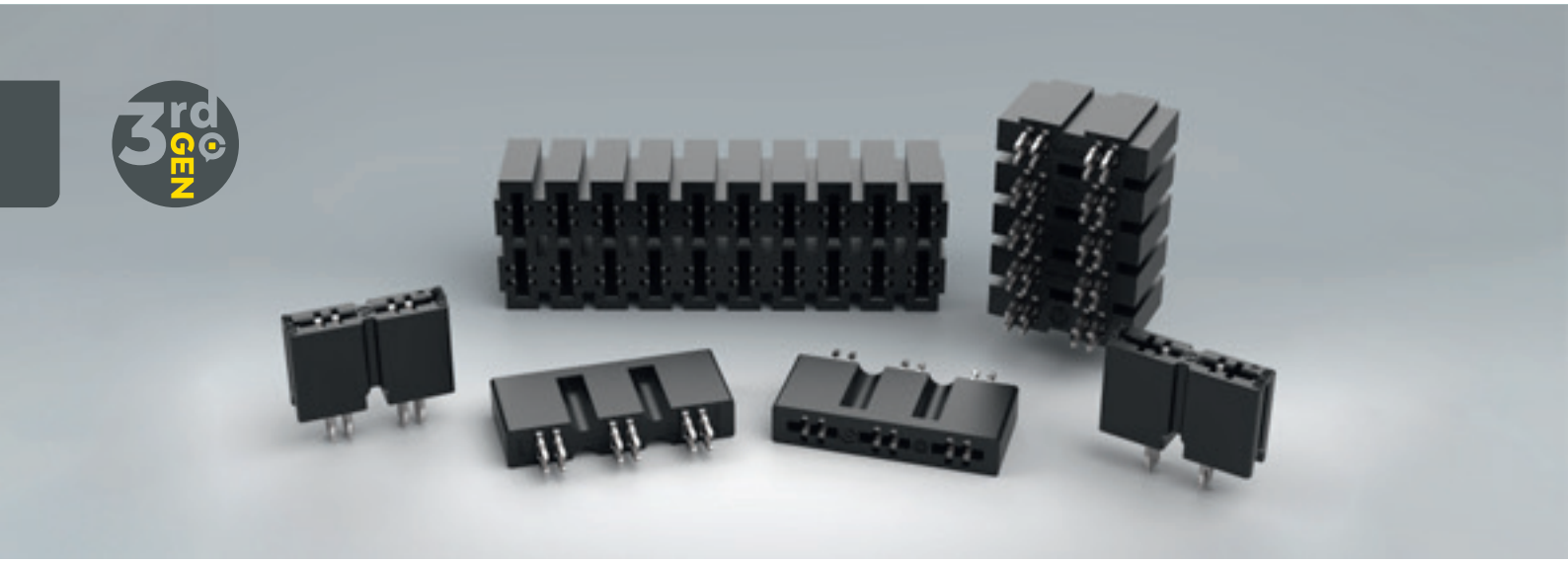
								Part number
●●●●○	●●●○○	●●●●○	●●●●●	●●●●●	●●●●○	●●●○○	●●●●○	201205A
●●○○○	●●○○○	●●○○○	●○○○○	●●●●●	●●●●●	●●●○○	●●●●●	201207A

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

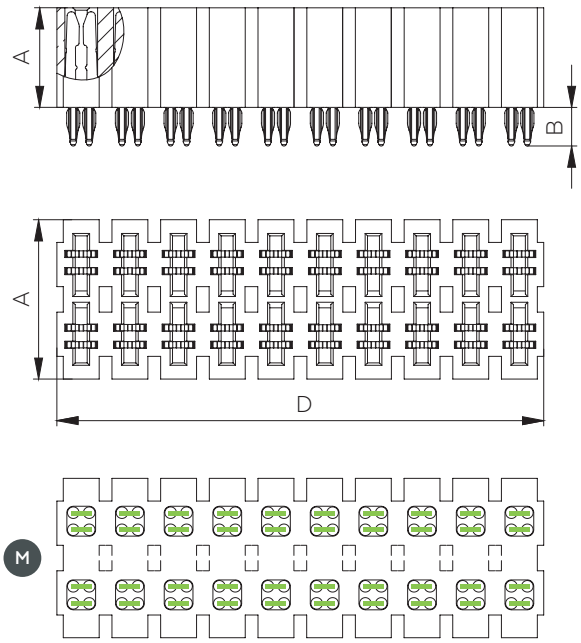
COLOR VARIANTS

Color	Part number
● Black	20120XABK

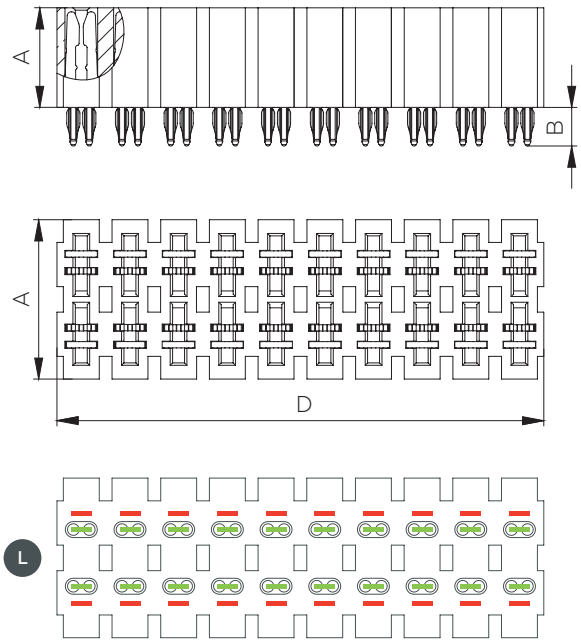
ASSEMBLY

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

SCALE DRAWINGS



201206A



201208A

RATING

								Part number
●●●●○	●●●○○	●●●●○	●●●●●	●●●●●	●●●●○	●●●○○	●●●●○	201206A
●●○○○	●●○○○	●●○○○	●○○○○	●●●●●	●●●●●	●●●○○	●●●●●	201208A

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)

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

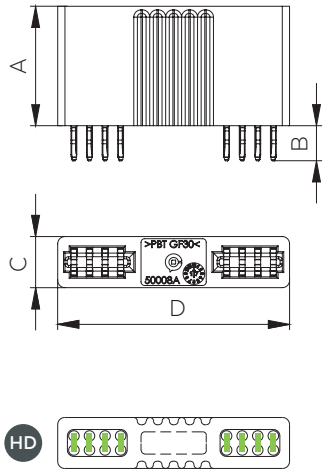
COLOR VARIANTS

Color	Part number
● Black	20130XABK

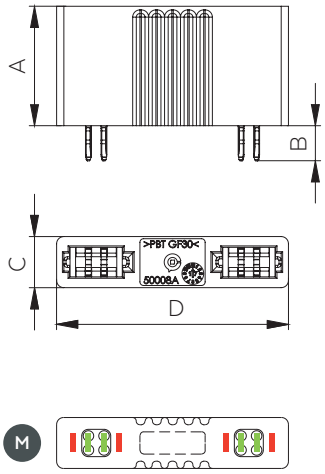
ASSEMBLY

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

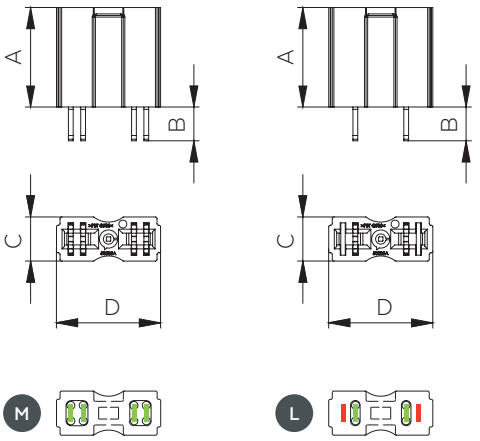
COLOR VARIANTS

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

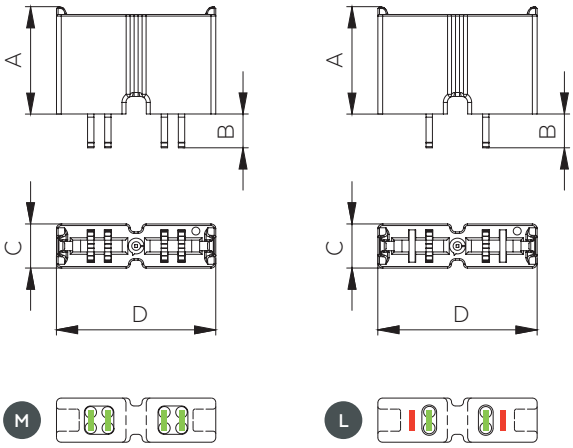
COLOR VARIANTS

Color	Part number
● Black	20123XABK

ASSEMBLY

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

SCALE DRAWINGS



201230A 201231A

RATING

								Part number
●●●●○	●●●○○	●●●●○	●●●●●	●●●●●	●●●●○	●●●○○	●●●●○	201230A
●●○○○	●●○○○	●●○○○	●○○○○	●●●●●	●●●●●	●●●○○	●●●●●	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

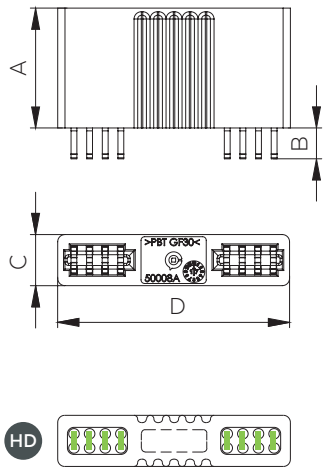
COLOR VARIANTS

Color	Part number
● Black	20133XABK

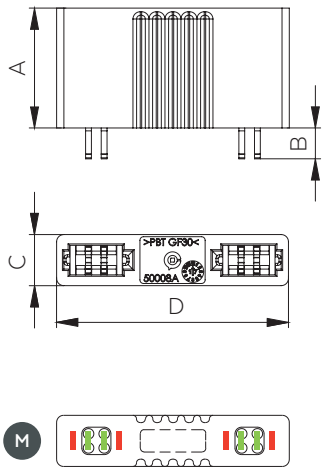
ASSEMBLY

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)

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

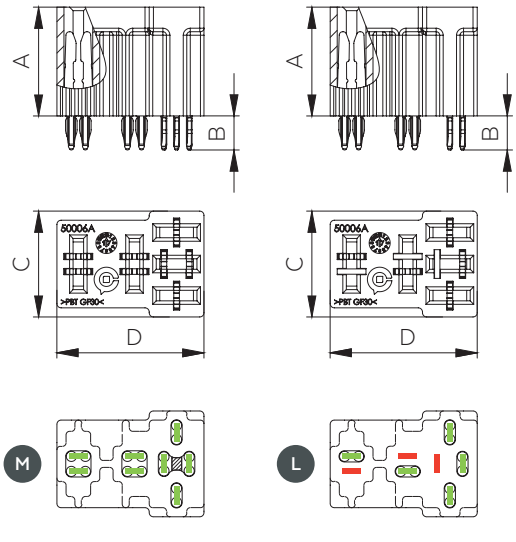
COLOR VARIANTS

Color	Part number
● Black	20010XABK

ASSEMBLY

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

SCALE DRAWINGS



200100A 200101A

RATING

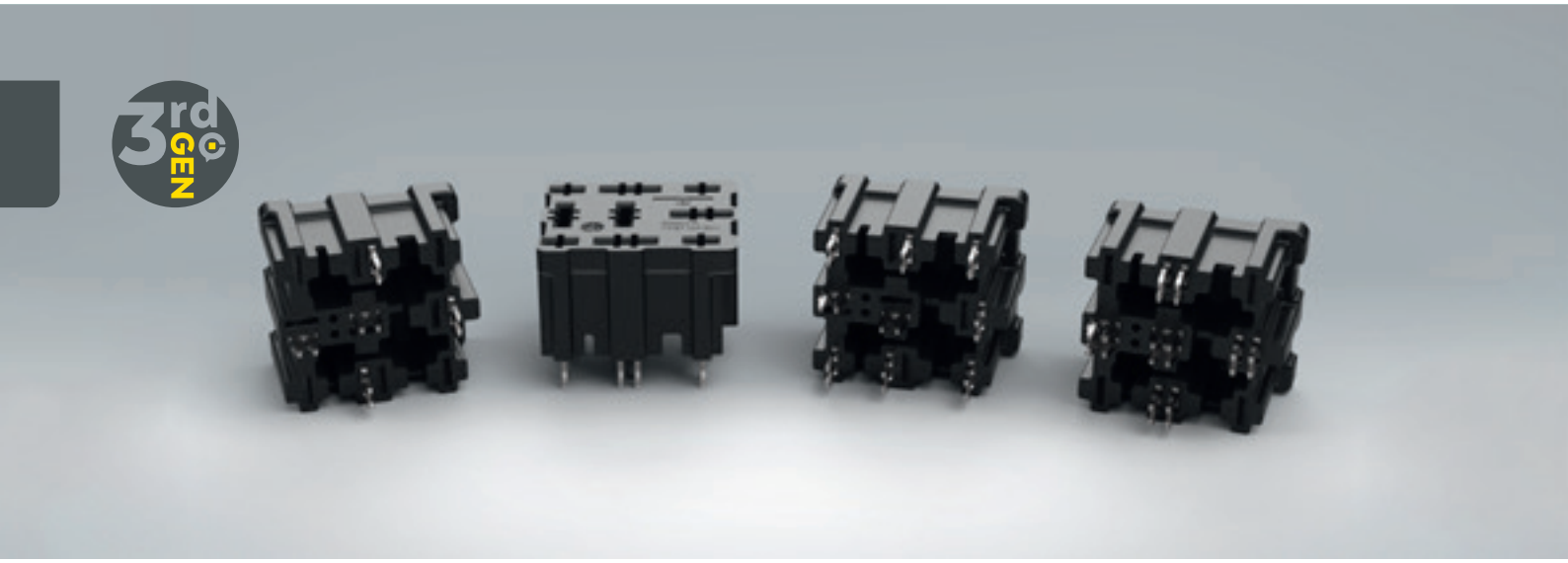
								Part number
●●●●○	●●●●○	●●●●○	●●●●●	●●●●●	●●●●○	●●●○○	●●●●○	200100A
●●○○○	●●○○○	●●○○○	●○○○○	●●●●●	●●●●●	●●●○○	●●●●●	200101A

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)

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

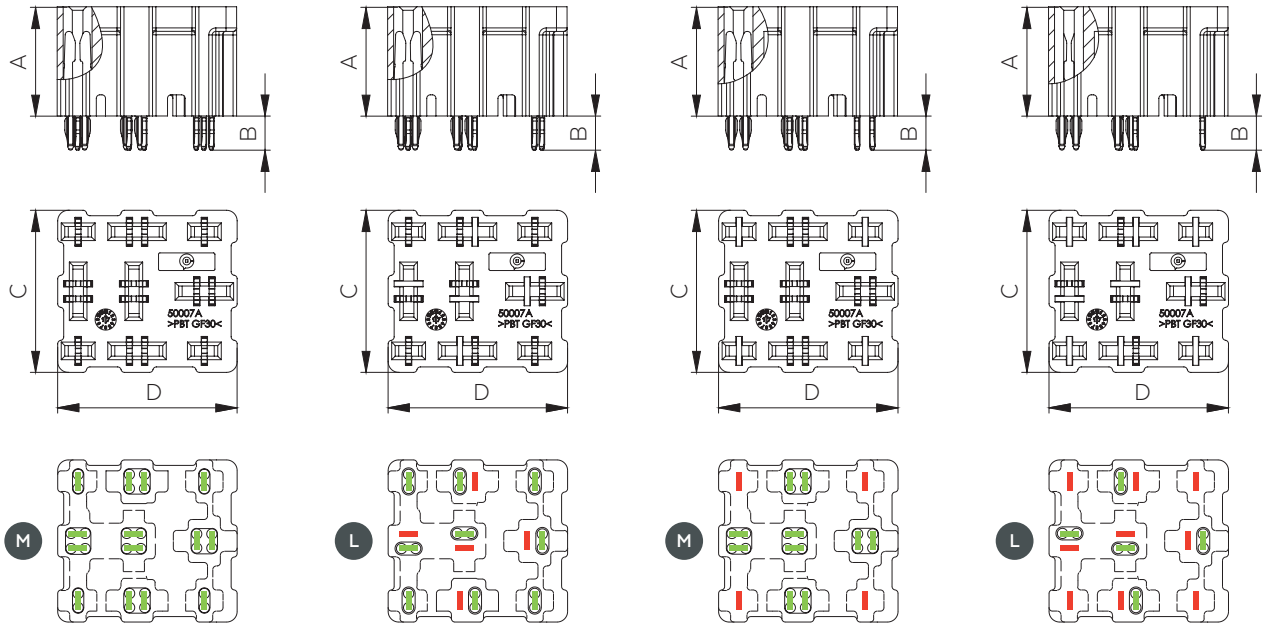
COLOR VARIANTS

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)

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

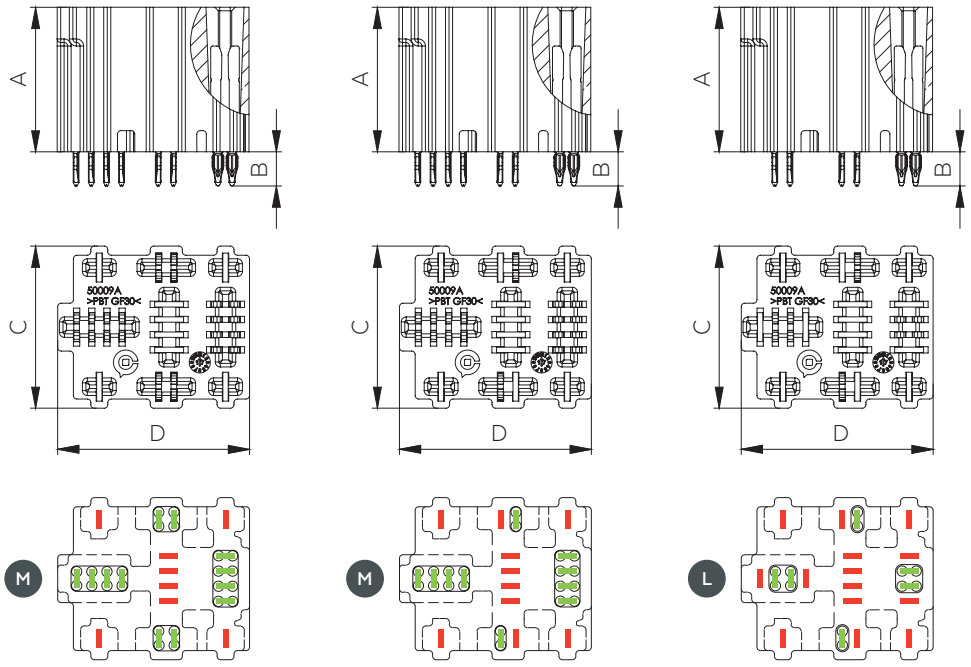
COLOR VARIANTS

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)

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

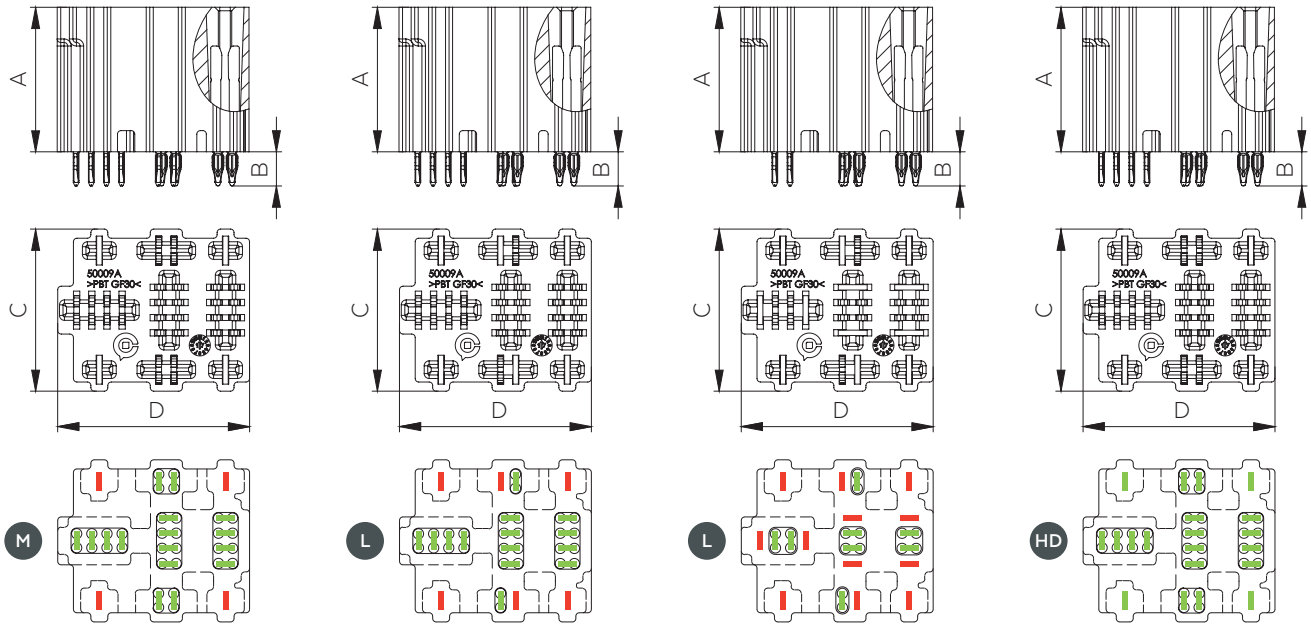
COLOR VARIANTS

Color	Part number
● Black	20050XABK

ASSEMBLY

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

SCALE DRAWINGS



200500A 200501A 200502A 200503A

RATING

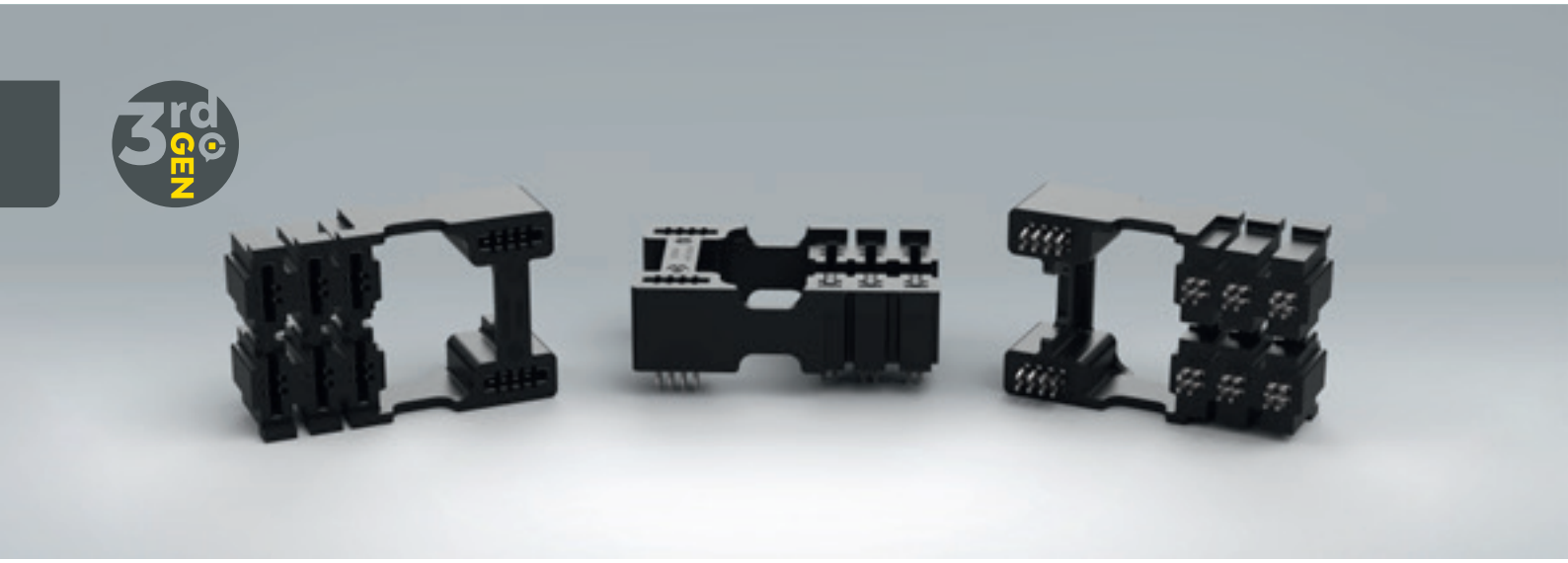
								Part number
●●●●○	●●●●○	●●●●○	●●●●●	●●●●●	●●●●○	●●○○○	●●●●○	200500A
●●●●○	●●●○○	●●●●○	○○○○○	●●●●●	●●●●○	●●●○○	●●●●○	200501A
●●○○○	●●○○○	●●○○○	○○○○○	●●●●●	●●●●●	●●●○○	●●●●●	200502A
●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●○○○	●●●○○	●●○○○	200503A

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**

Maßangaben 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)

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

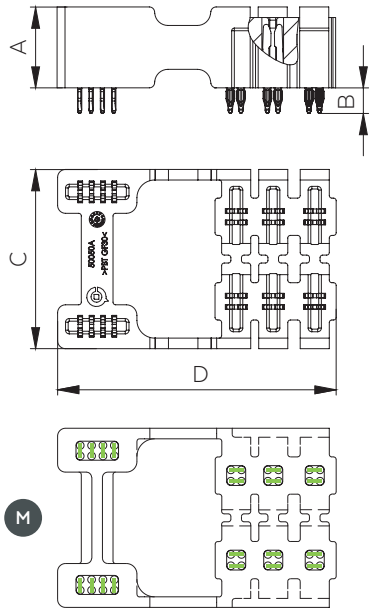
COLOR VARIANTS

Color	Part number
● Black	200517ABKX

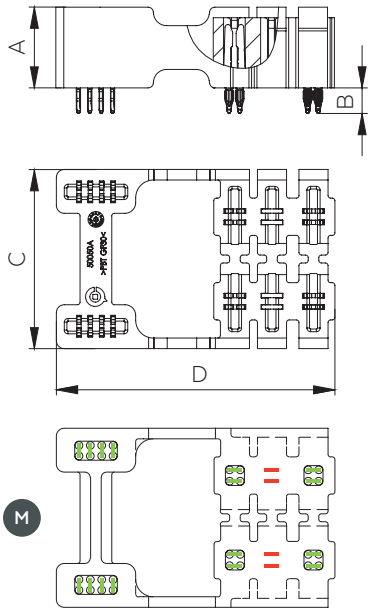
ASSEMBLY

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

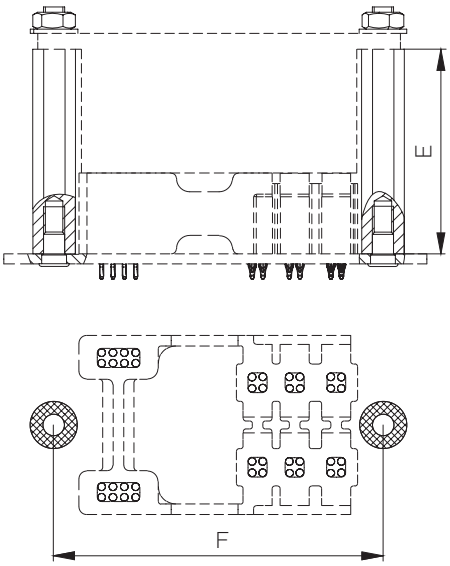
SCALE DRAWINGS



200517ABKA



200517ABKB



200517AKIT

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

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

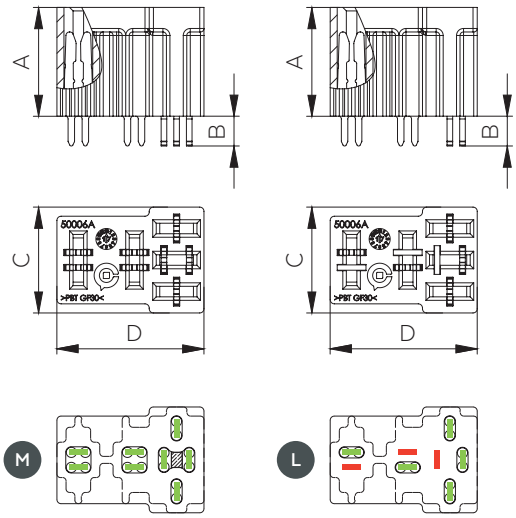
COLOR VARIANTS

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

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

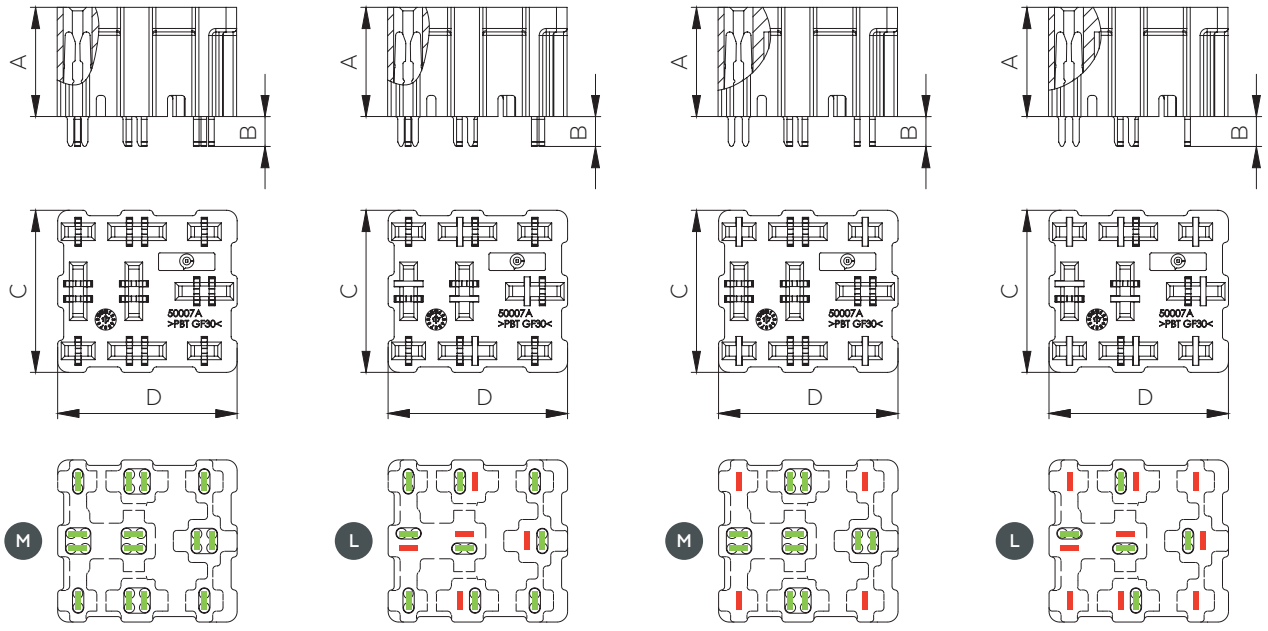
COLOR VARIANTS

Color	Part number
● Black	200X3XABK

ASSEMBLY

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

SCALE DRAWINGS



200230A | 200231A | 200330A | 200331A

RATING

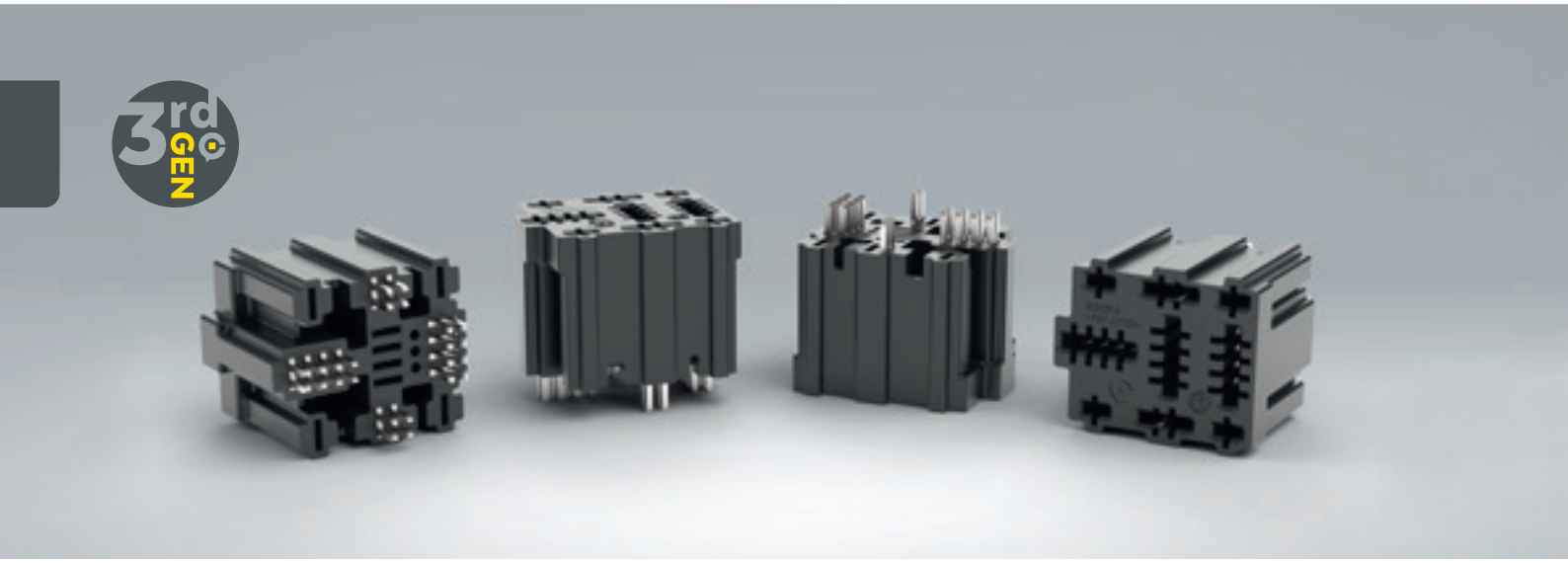
								Part number
●●●●○	●●●●○	●●●●○	●●●●●	●●●●●	●●●●○	●●●○○	●●●●○	200230A
●●●○○	●●●○○	●●○○○	●○○○○	●●●●●	●●●●●	●●●○○	●●●●●	200231A
●●●●○	●●●●○	●●●●○	●●●●●	●●●●●	●●●●○	●●●○○	●●●●○	200330A
●●○○○	●●○○○	●●○○○	●○○○○	●●●●●	●●●●●	●●●○○	●●●●●	200331A

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

RoHS COMPLIANT

REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

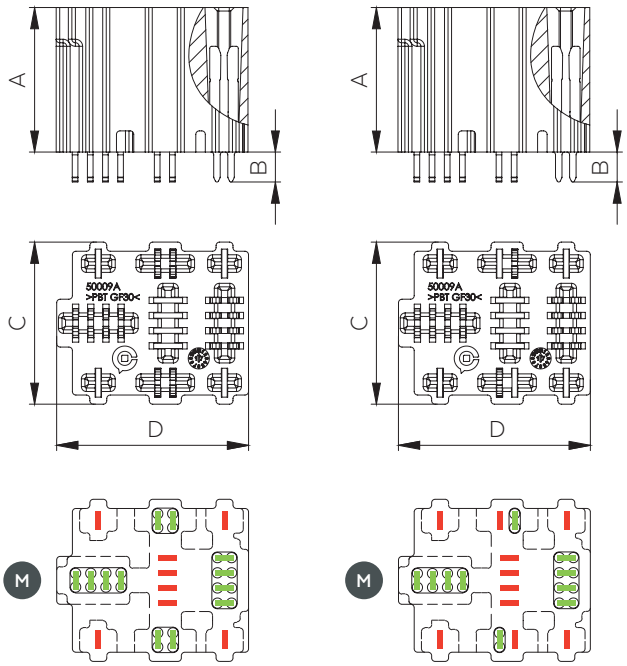
COLOR VARIANTS

Color	Part number
● Black	20043XABK

ASSEMBLY

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

SCALE DRAWINGS



200430A 200431A

RATING

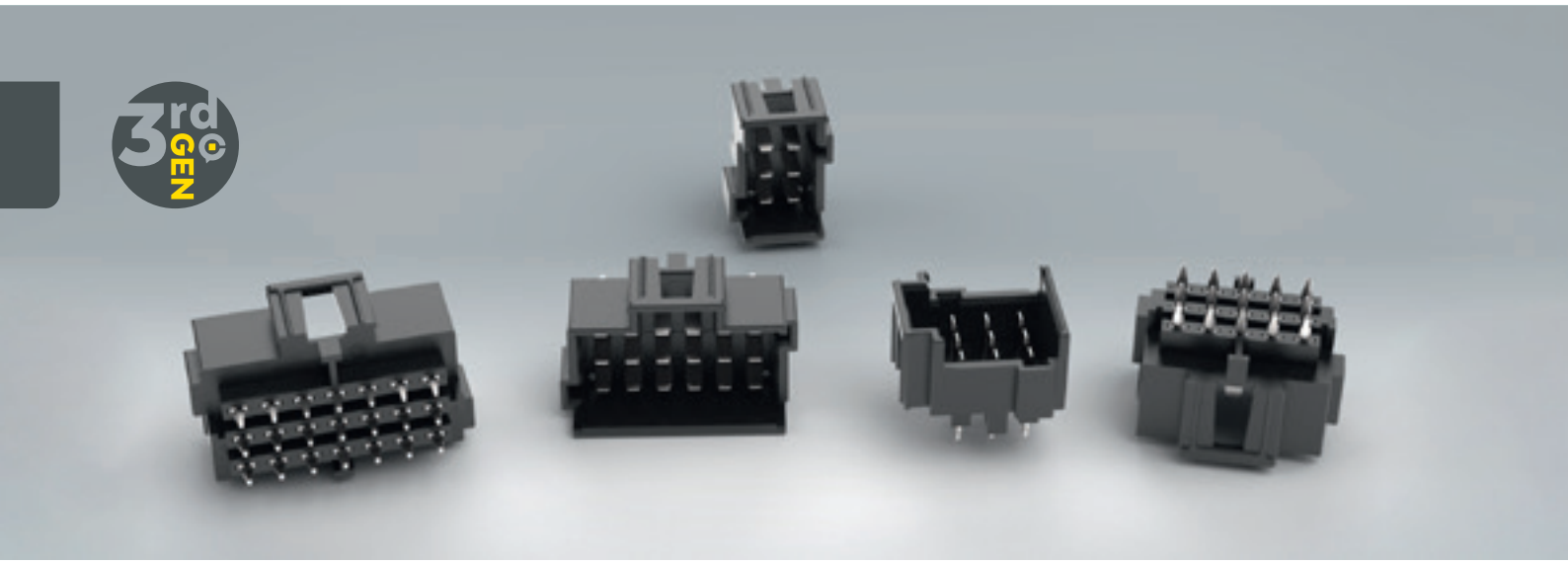
								Part number
●●●●○	●●●●○	●●●●○	●●●●●	●●●●●	●●●●○	●●●○○	●●●●○	200430A
●●●●○	●●●○○	●●●●○	●○○○○	●●●●●	●●●●○	●●●○○	●●●●○	200431A

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)

RoHS COMPLIANT

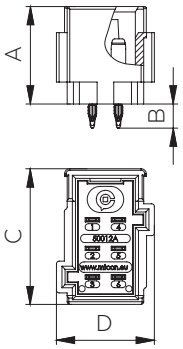
REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

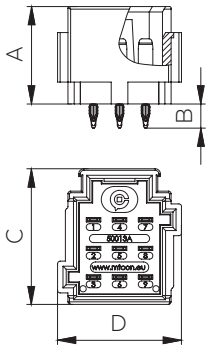
COLOR VARIANTS

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

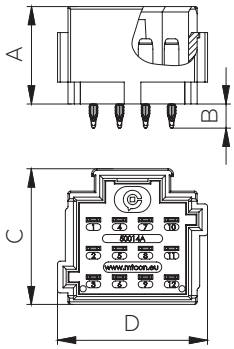
MASSZEICHNUNGEN



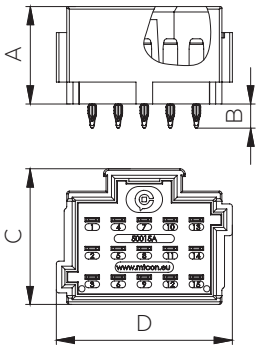
6-PIN



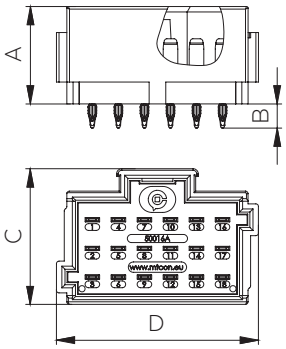
9-PIN



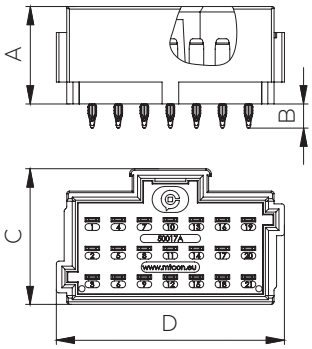
12-PIN



15-PIN



18-PIN



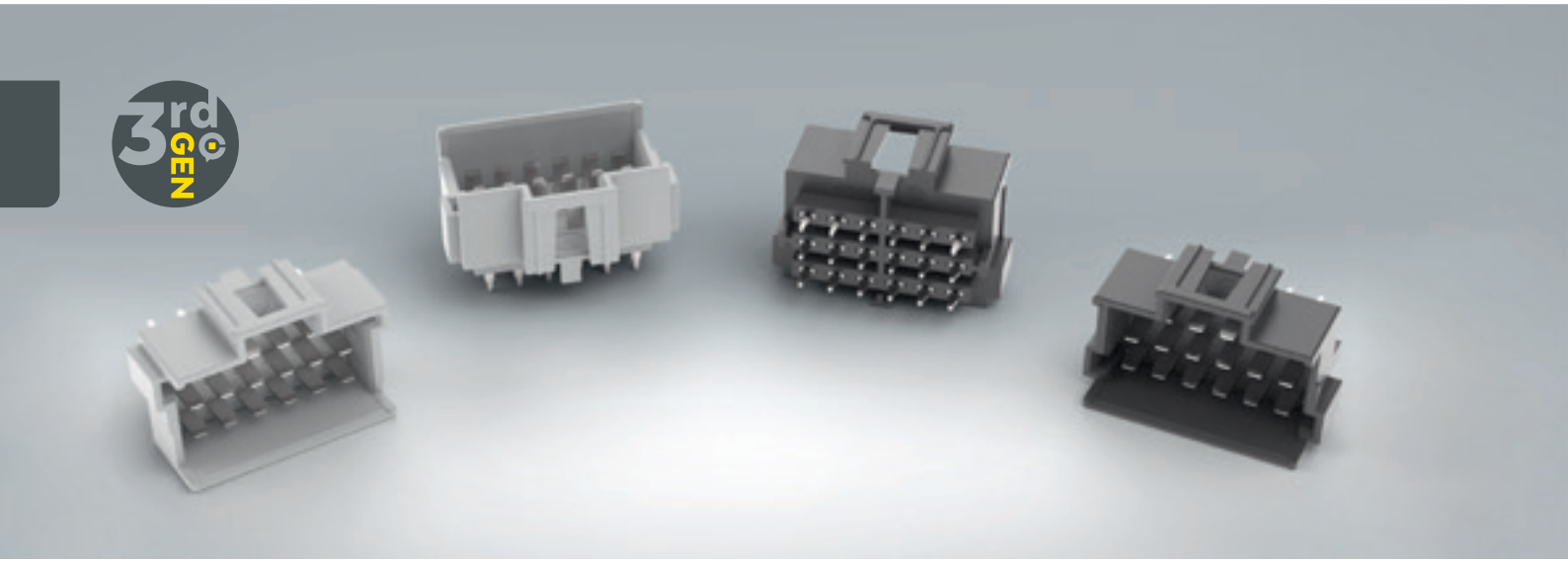
21-PIN

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)

RoHS COMPLIANT

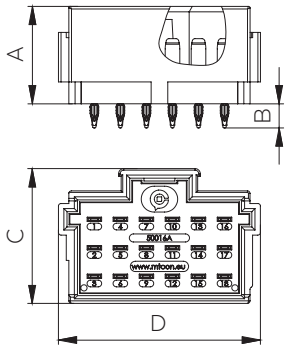
REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

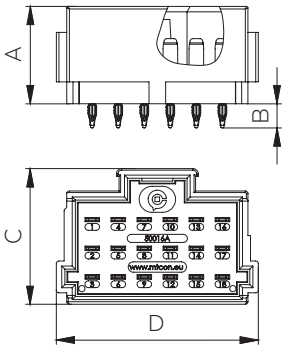
COLOR VARIANTS

Color	Part number
White	400501AWHB
Grey	400502AGYC

SCALE DRAWINGS



18-PIN (COD-B)



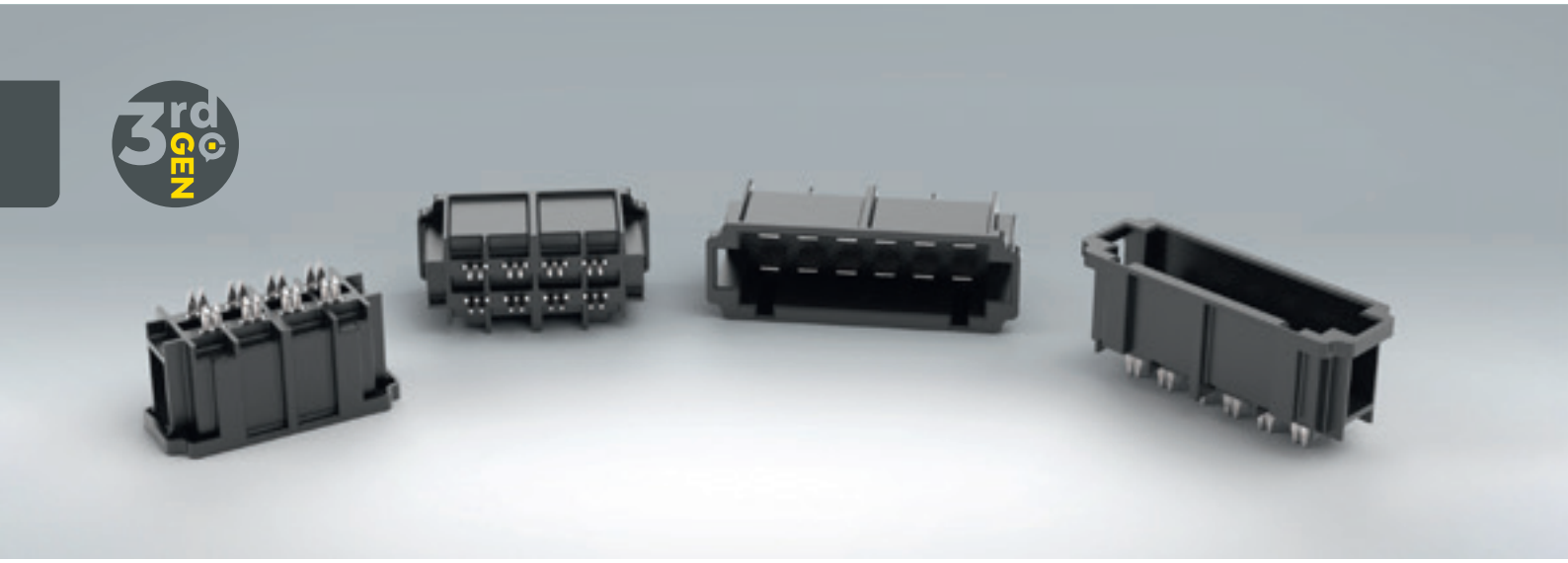
18-PIN (COD-C)

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)

RoHS COMPLIANT

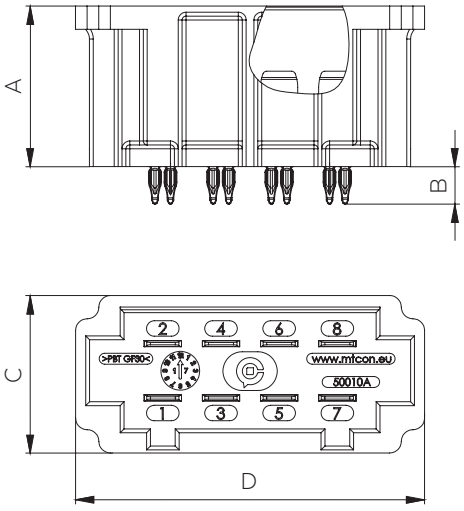
REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

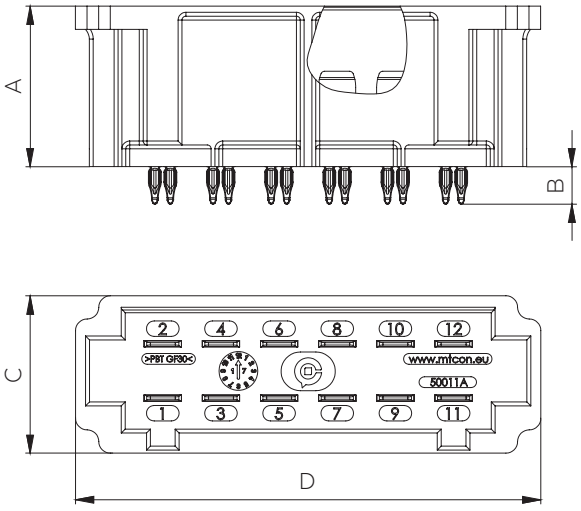
COLOR VARIANTS

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

SCALE DRAWINGS



8-PIN



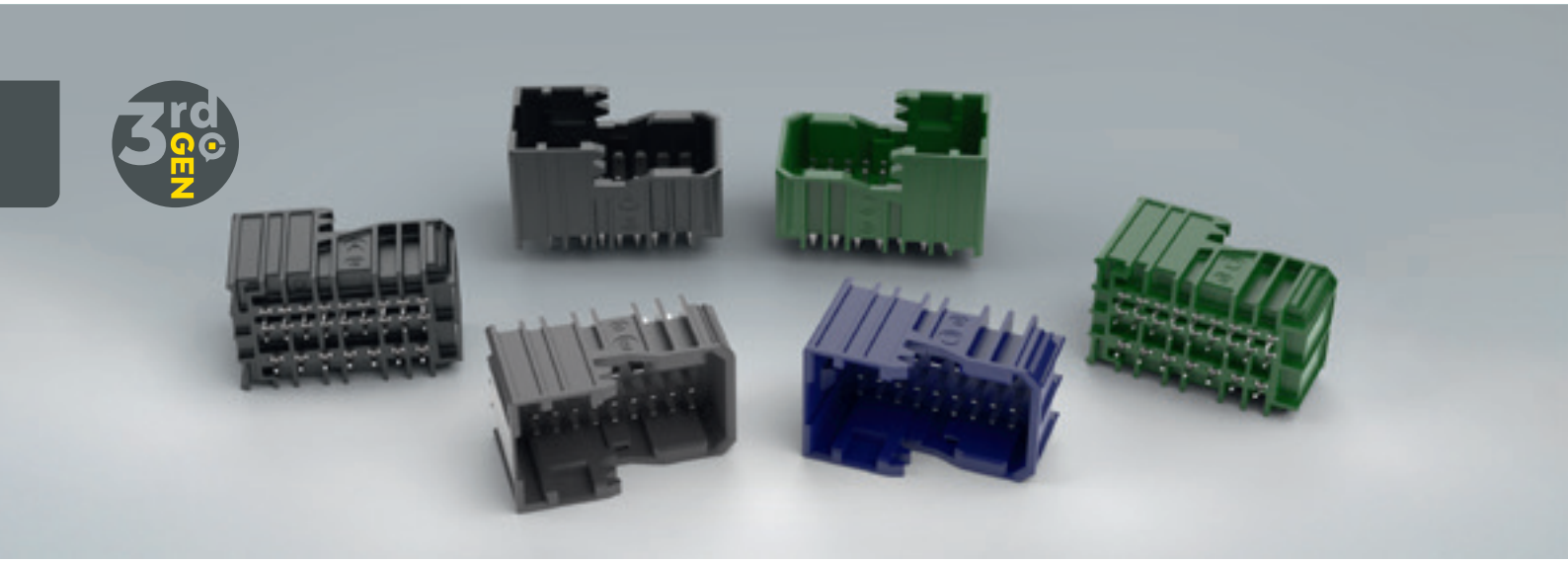
12-PIN

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)

RoHS COMPLIANT

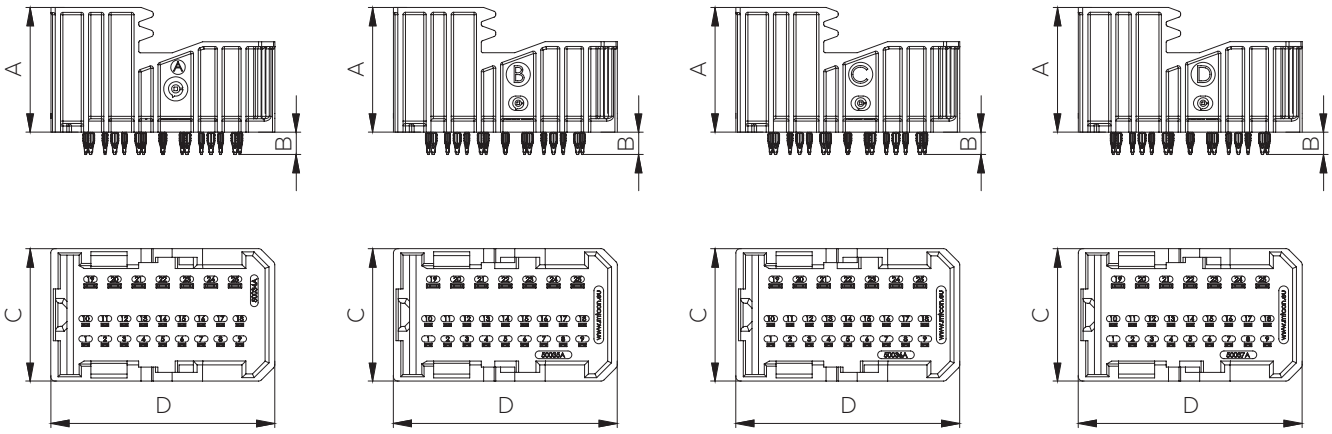
REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

COLOR VARIANTS

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

SCALE DRAWINGS



COD-A
25-PIN

COD-B
25-PIN

COD-C
25-PIN

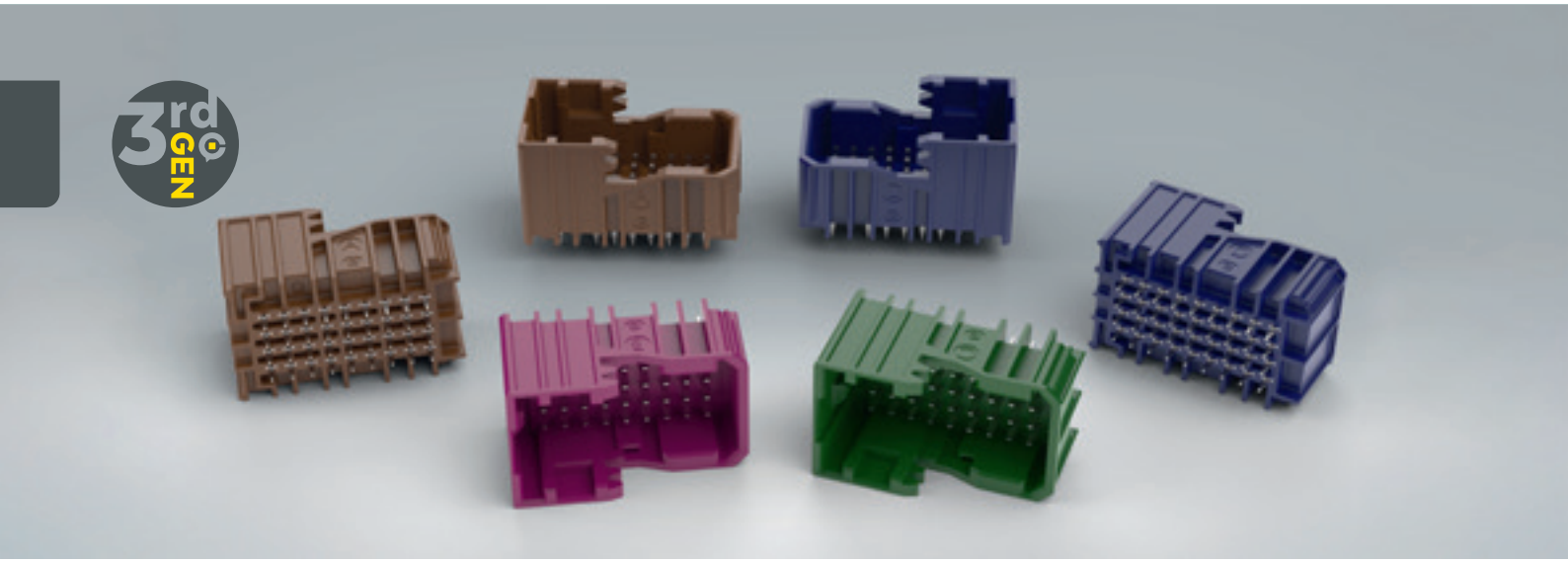
COD-D
25-PIN

TECHNICAL DATA

A	B	C	D	Dimensions	Part number
25.9	4.65	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)

RoHS COMPLIANT

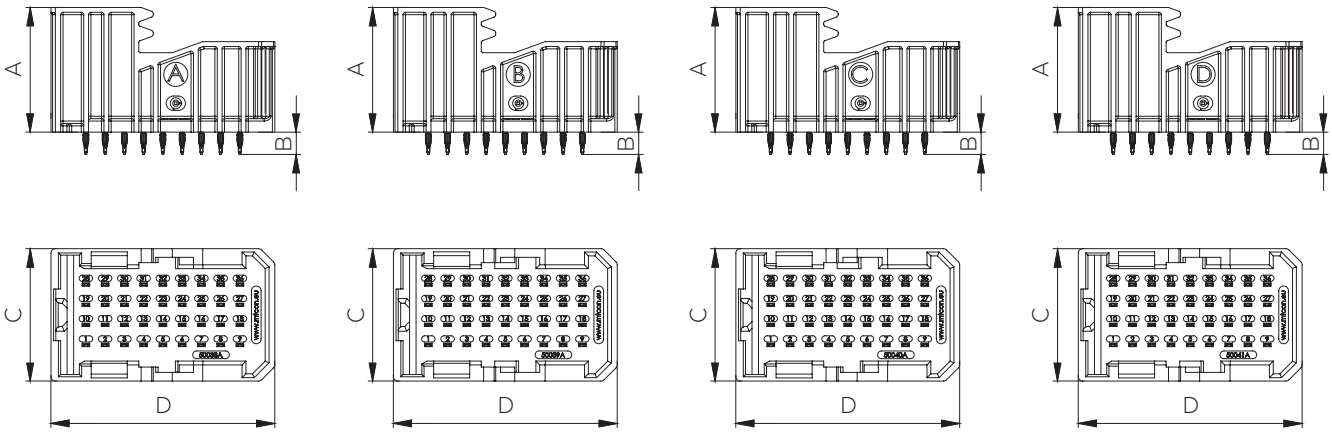
REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

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

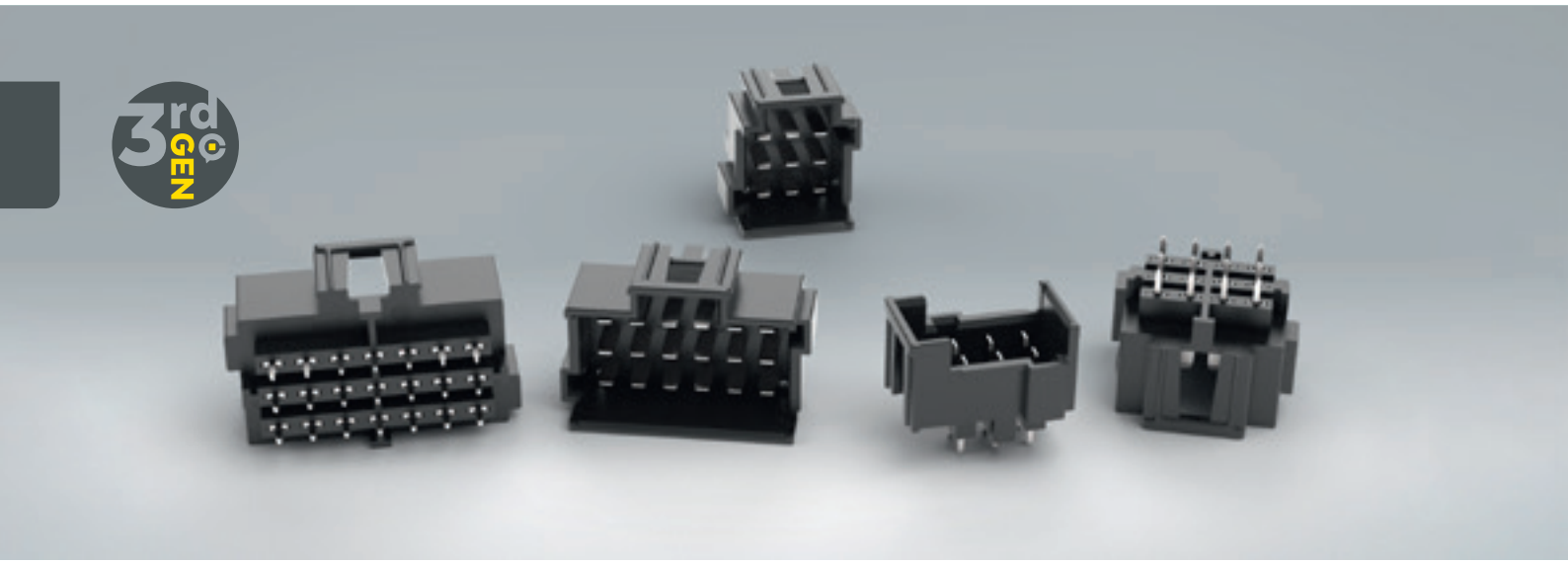
COD-D
36-PIN

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

RoHS COMPLIANT

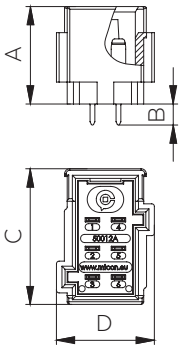
REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

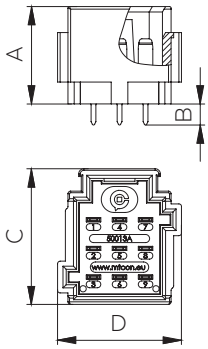
COLOR VARIANTS

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

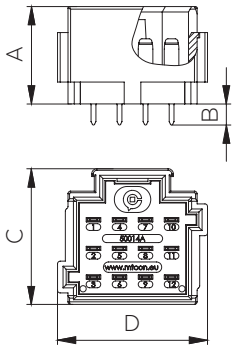
SCALE DRAWINGS



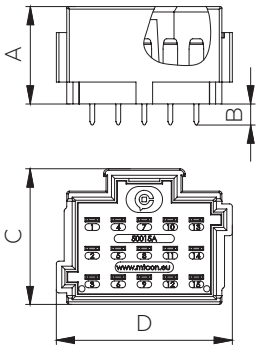
6-PIN



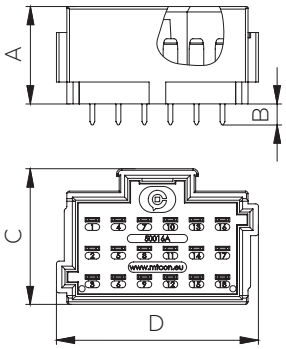
9-PIN



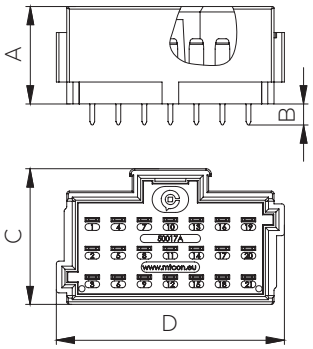
12-PIN



15-PIN



18-PIN



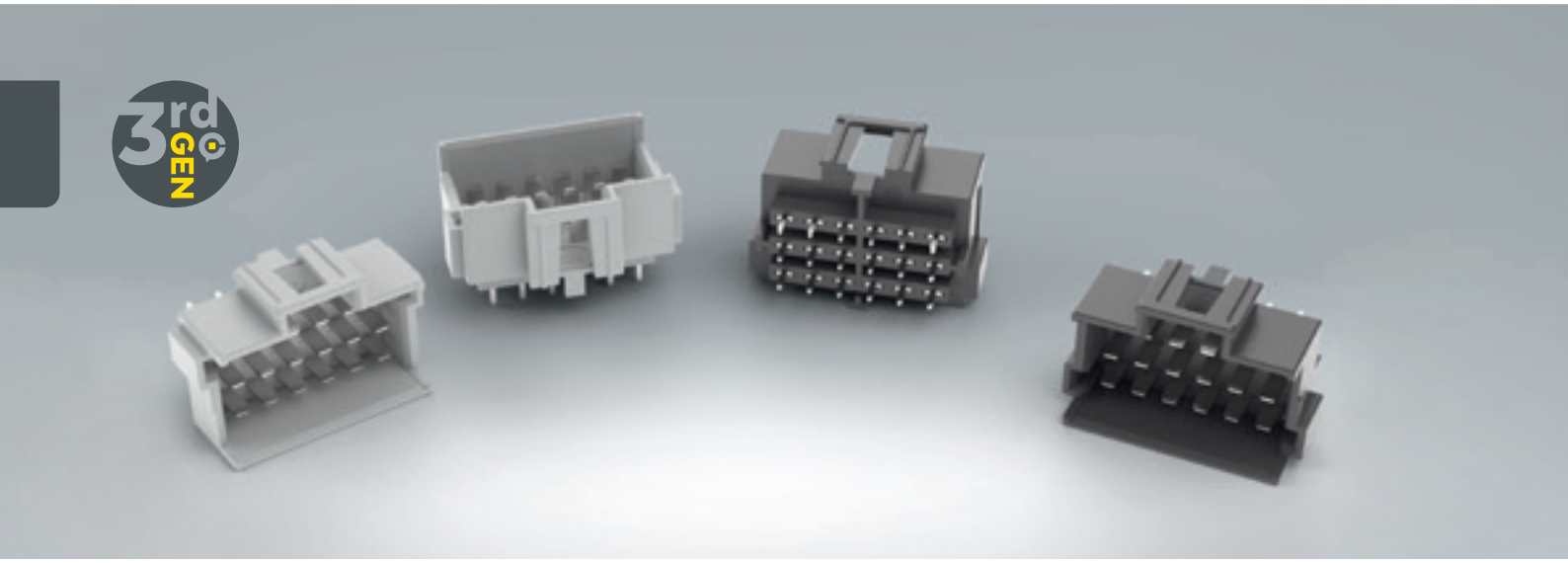
21-PIN

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

RoHS COMPLIANT

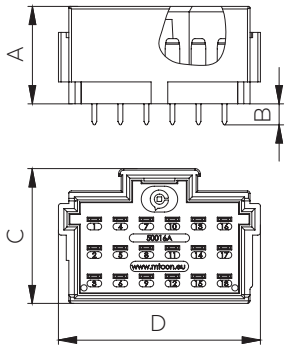
REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

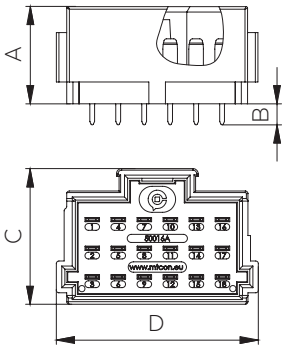
COLOR VARIANTS

Color	Part number
White	400531AWHB
Grey	400532AGYC

SCALE DRAWINGS



18-PIN (COD-B)



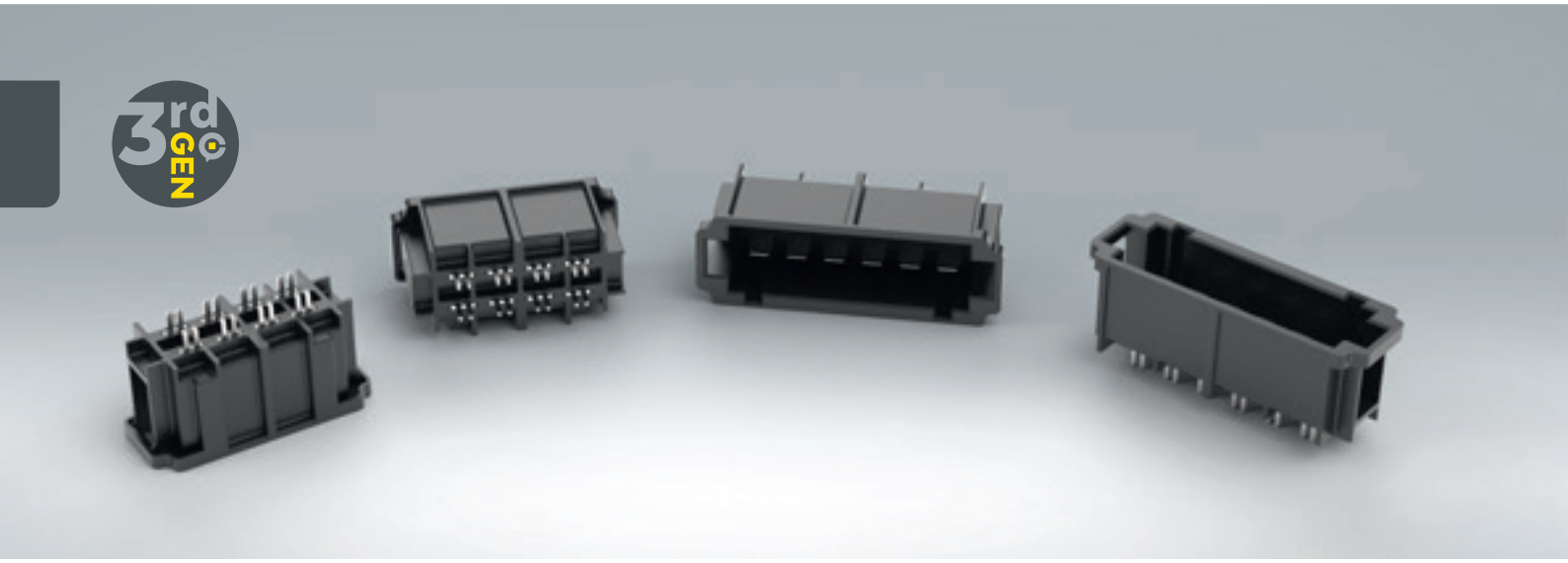
18-PIN (COD-C)

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

RoHS COMPLIANT

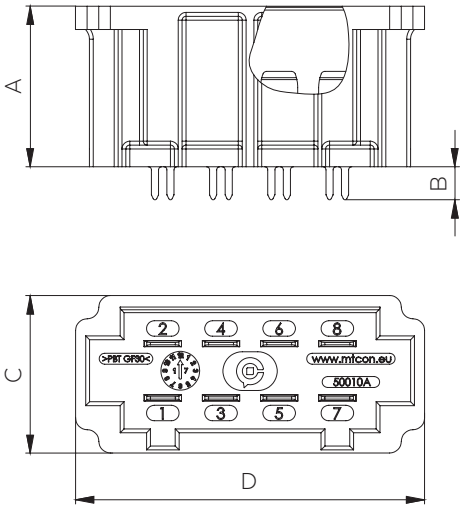
REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

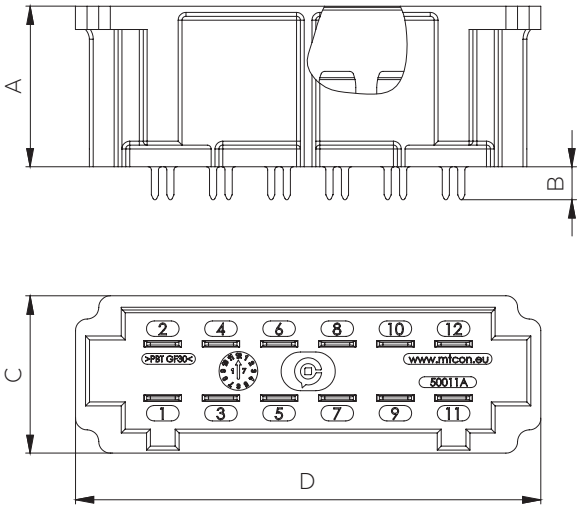
COLOR VARIANTS

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

SCALE DRAWINGS



8-PIN



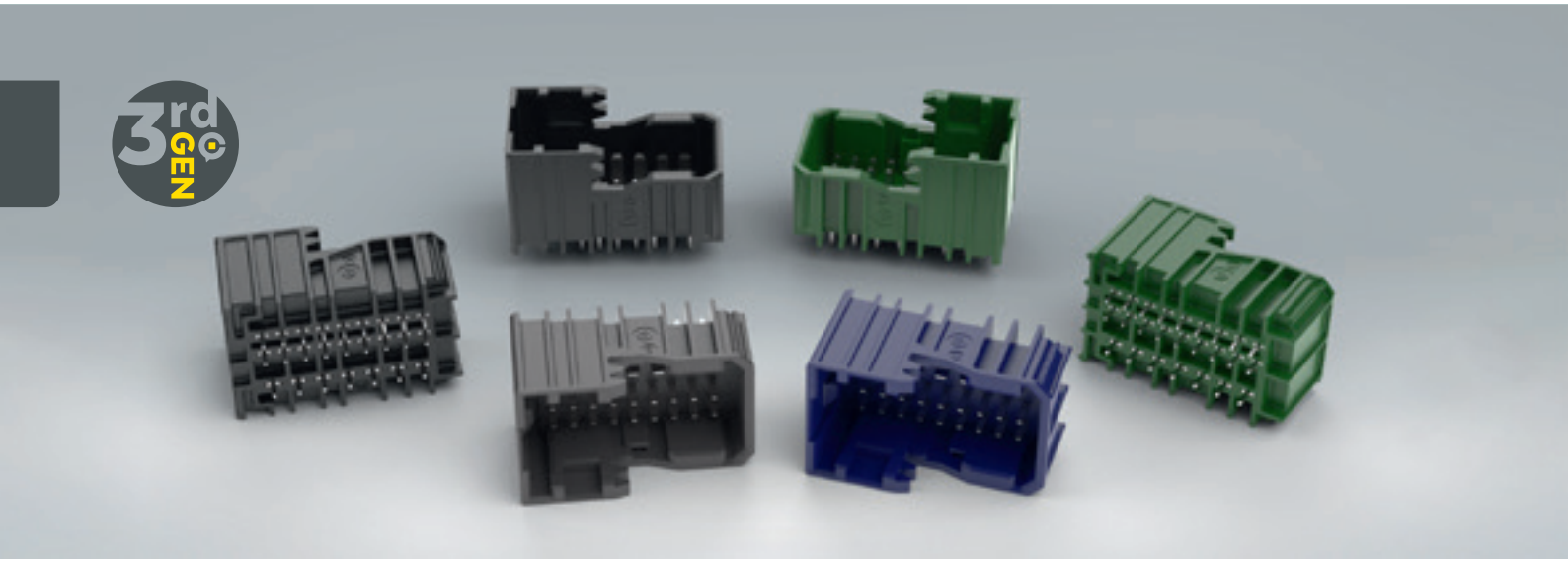
12-PIN

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

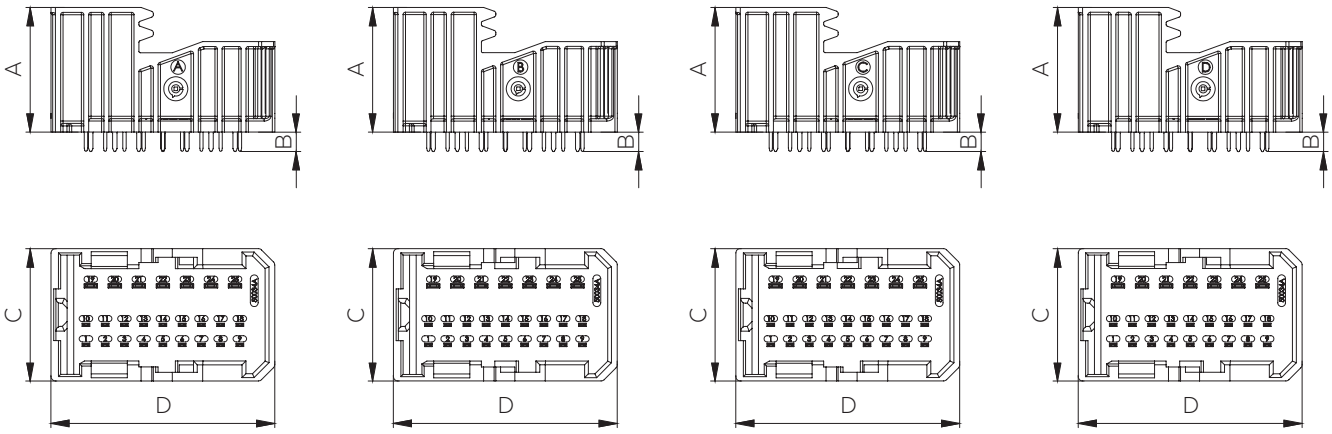
REACH COMPLIANT

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

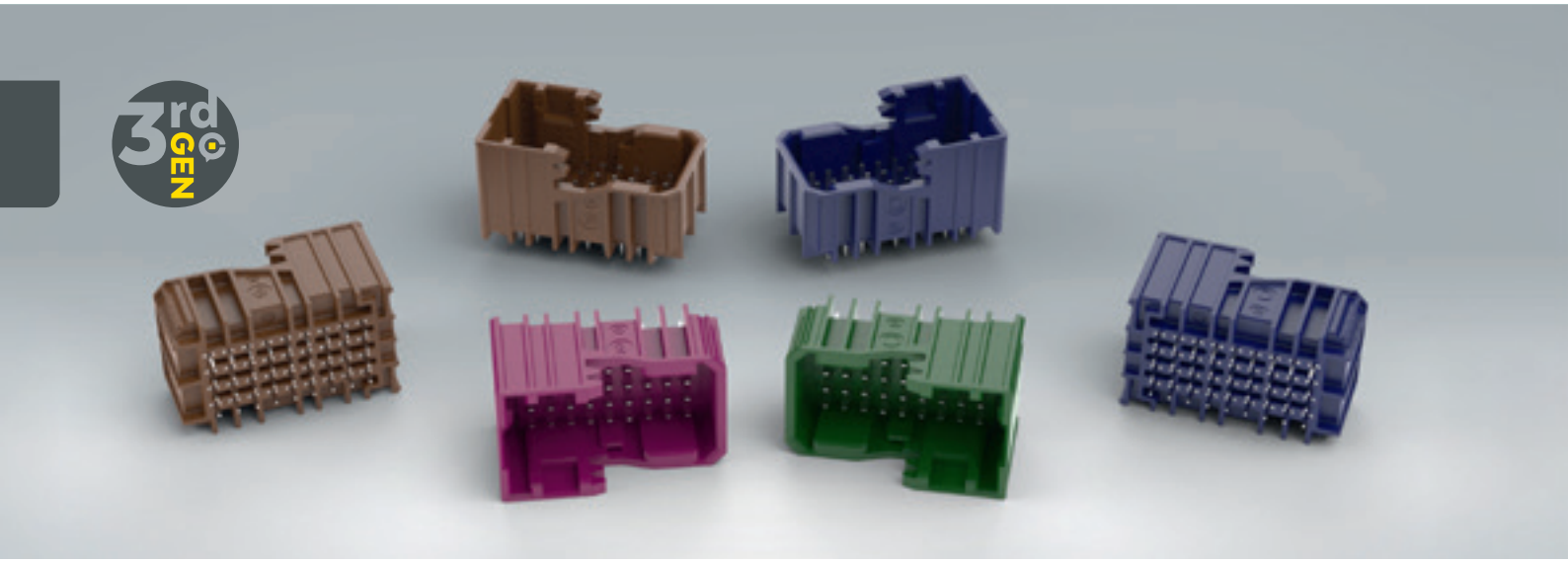
COD-D
25-PIN

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

RoHS COMPLIANT

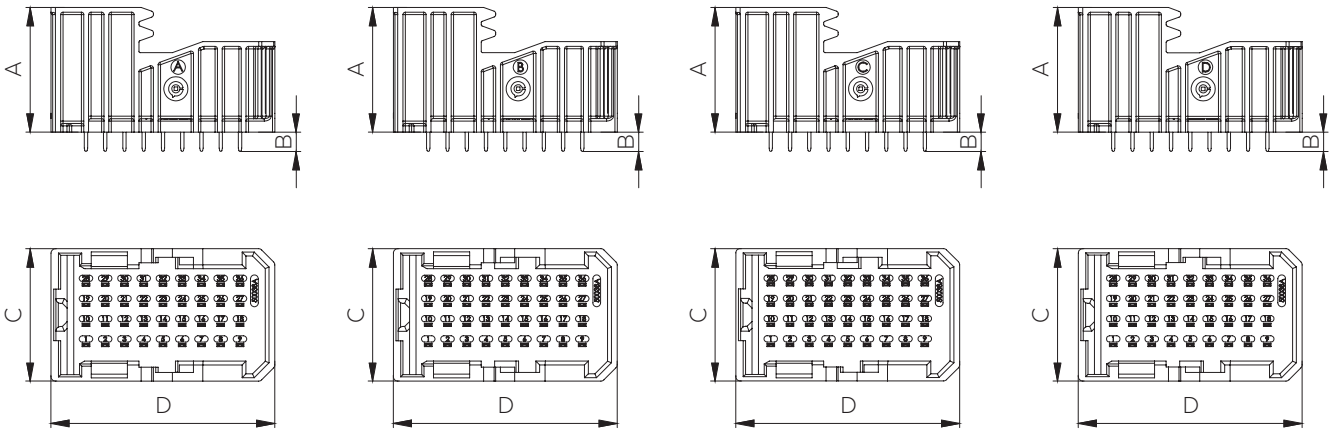
REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

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

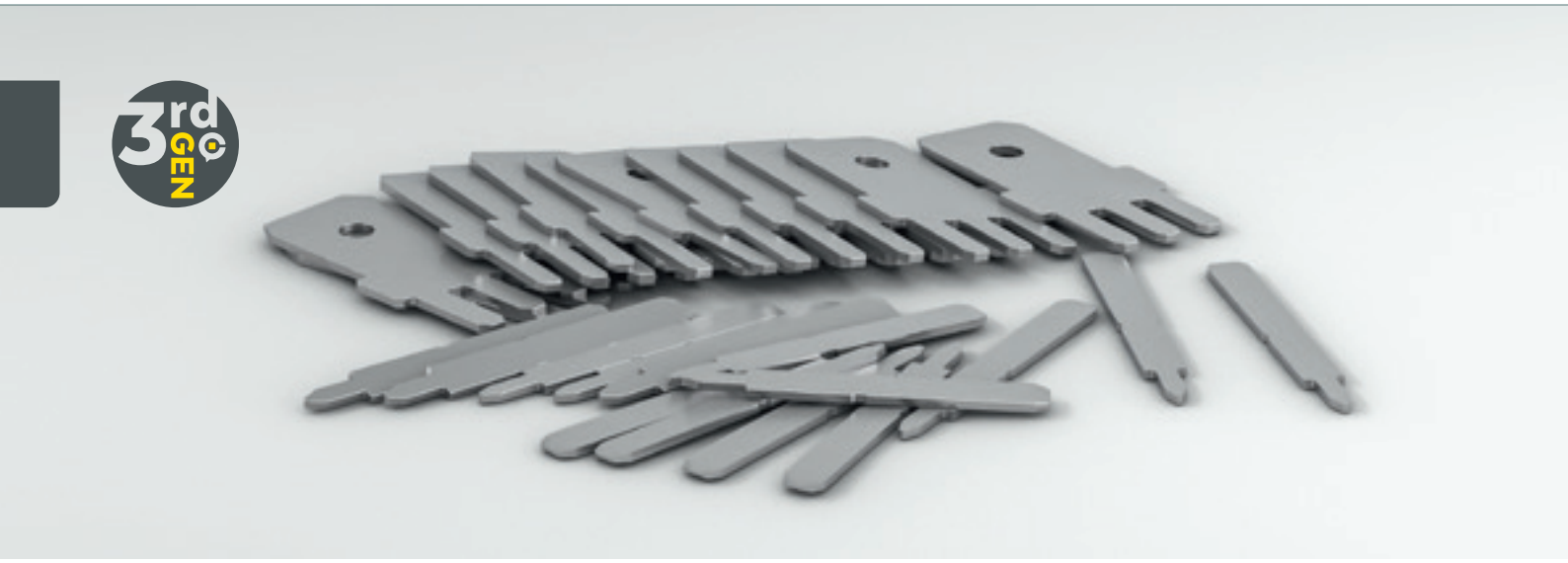
COD-D
36-PIN

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

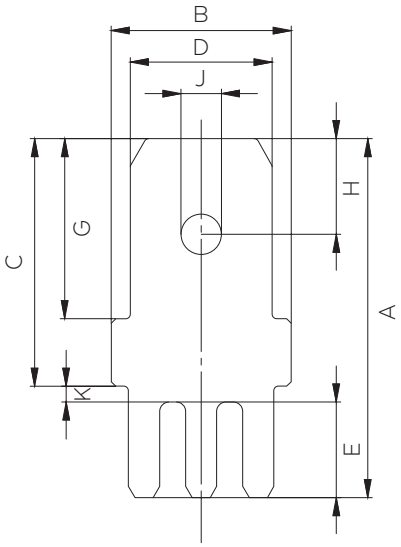
- Modern press-fit and soldering technology (THT)
- Standard components/catalog products
- Customer-specific designs (shape, size, material, surface etc.) available on demand

RoHS COMPLIANT

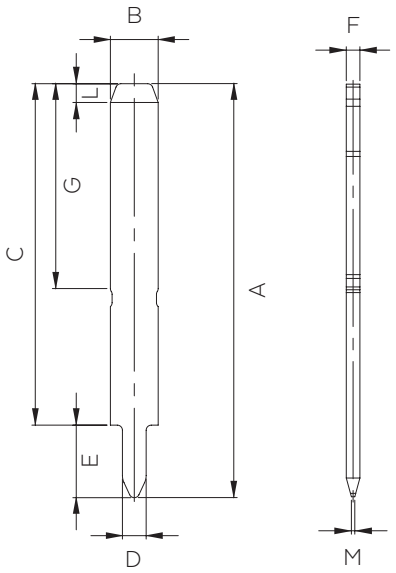
REACH COMPLIANT

ELV END-OF-LIFE-VEHICLES

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	Ø 1.8	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. Wirtschafsingenieur), 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 consutancy 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 techology).

SEND US YOUR NON-BINDING INQUIRY

WHITE PAPER
HIGH VOLTAGE

DESIGN OF HIGH VOLTAGE ELECTRONICS BOARDS FOR AUTOMOTIVE APPLICATIONS

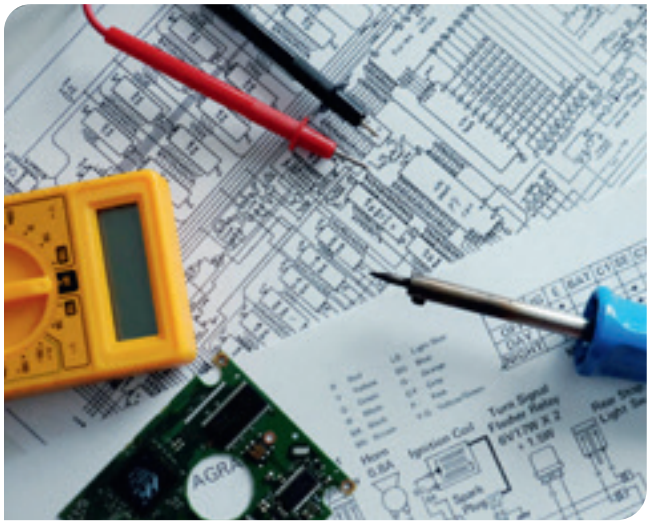
Motors and implements of next generation electric vehicles require a reliable power supply. High power management distribution puts considerable stress on the electronic boards. This white paper discusses design, components, structure, and implementation of high-performance/high voltage electronic boards,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

Automotive circuit boards must be extremely robust, durable, and reliable. This ist 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 assistence 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 MTCON'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

Central technology black box H2 vehicle

High-voltage battery pack

MTCON CIRCUIT BOARD EXPERTISE

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

INDEX OF PART NUMBERS
POWER2PCB

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POWER2PCB

INDEX OF PART NUMBERS
POWER2PCB

WE LOOK
FORWARD TO
HEARING FROM YOU!

INDEX OF PART NUMBERS
CONNECTORS

PCB-PARTNERS
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www.ksg.de

NOTES
YOUR COMMENTS

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MTCONNECTIVITY

2021-003-EN \ This catalog supersedes all previous versions.

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