MESS- UND REGELTECHNIK
MEASUREMENT AND CONTROL TECHNOLOGY

SEV 04 ATEX 0124 X
SEV 04 ATEX 0159 X
SCS 090

Seit über 60 Jahren Innovativ Kompetent Präzis

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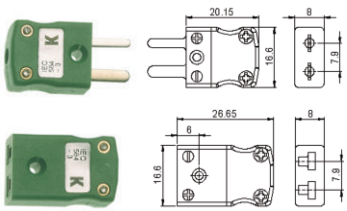
Connectors for thermocouples and accessories



- Designed and manufactured under strict ISO EN 9000:2000 disciplines
- Full compliance to IEC & CENELEC specifications
- ANSI, DIN, JIS colour coding available on request
- Contacts made from thermocouple material or copper
- Calibration type J, K, T, N, E, R/S, B
- Terminal cable clamping plates
- Polarised pins guarantee correct polarity
- Compatibility with other makes of connectors
- Connections with 3 pin versions available
- Wide range of accessories
- Custom labelling on request
- RoHS-compliant, DecaBDE-free

STANDARD CONNECTORS

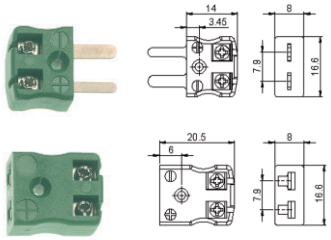
Miniature plugs and sockets
Types J, K, T, N, E, R/S, B + Copper



TYPE	PLUG	SOCKET
J	IM-J-M	IM-J-F
K	IM-K-M	IM-K-F
T	IM-T-M	IM-T-F
N	IM-N-M	IM-N-F
E	IM-E-M	IM-E-F
R/S	IM-R/S-M	IM-R/S-F
B	IM-B-M	IM-B-F
Copper	IM-CU-M	IM-CU-F

- Range of miniature thermocouple connectors with flat pins having terminal and contact material to suit the thermocouple type
- Socket ideal for general purpose use
- All contacts are polarized to ensure correct connection
- Connectors will accept thermocouple cable up to 4mm diameter
- Cable clamps available for securing cable to plugs and sockets
- Uncompensated copper connectors also available
- Maximum continuous operating temperature 220 °C
- Wide range of accessories available

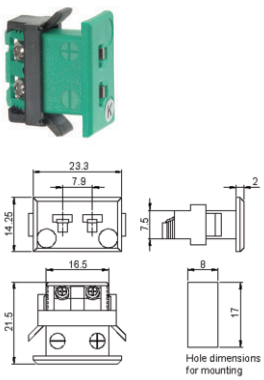
Miniature quick wire plugs and sockets
Types J, K, T, N, E, R/S, B + Copper



TYPE	PLUG	SOCKET
J	IM-J-MQ	IM-J-FQ
K	IM-K-MQ	IM-K-FQ
T	IM-T-MQ	IM-T-FQ
N	IM-N-MQ	IM-N-FQ
E	IM-E-MQ	IM-E-FQ
R/S	IM-R/S-MQ	IM-R/S-FQ
B	IM-B-MQ	IM-B-FQ
Copper	IM-CU-MQ	IM-CU-FQ

- These quick connect versions allow rapid termination
- Quick, easy «jab-in» connection, just push in wire and tighten screw
- Will accept wide range of wire sizes
- Maximum continuous operating temperature 220 °C
- Compatible with the other miniature plugs and sockets

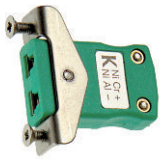
Miniature rectangular panel mounting fascia sockets
Types J, K, T, N, E, R/S, B + Copper



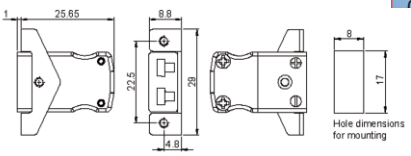
TYPE	SOCKET
J	IM-J-FF
K	IM-K-FF
T	IM-T-FF
N	IM-N-FF
E	IM-E-FF
R/S	IM-R/S-FF
B	IM-B-FF
Copper	IM-CU-FF

- Easy mounting with plastic clip
- Maximum continuous operating temperature 120 °C
- Fits on miniature plug

Miniature panel sockets with mounting bracket
Types J, K, T, N, E, R/S, B + Copper



TYPE	SOCKET
J	IM-J-SSPF
K	IM-K-SSPF
T	IM-T-SSPF
N	IM-N-SSPF
E	IM-E-SSPF
R/S	IM-R/S-SSPF
B	IM-B-SSPF
Copper	IM-CU-SSPF

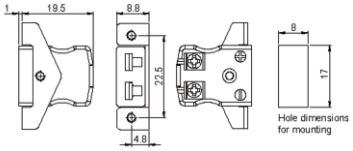


- Miniature socket fitted with stainless steel bracket
- Fully enclosed terminals with cable port seal
- Quick simple fixing to panel
- Maximum continuous operating temperature 220 °C

Miniature quick wire panel socket with mounting bracket
Types J, K, T, N, E, R/S, B + Copper

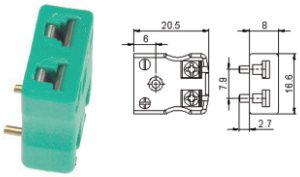


TYPE	SOCKET
J	IM-J-SSPFQ
K	IM-K-SSPFQ
T	IM-T-SSPFQ
N	IM-N-SSPFQ
E	IM-E-SSPFQ
R/S	IM-R/S-SSPFQ
B	IM-B-SSPFQ
Copper	IM-CU-SSPFQ



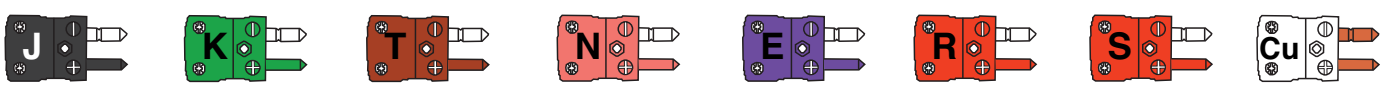
- Miniature socket with quick wire facility – fitted with stainless steel mounting bracket
- Quick, easy «jab-in» connection, just push in wire and tighten screw
- These quick connect versions allow rapid termination
- Maximum continuous operating temperature 220 °C

Miniature PCB mounting sockets
Types K, T + Copper



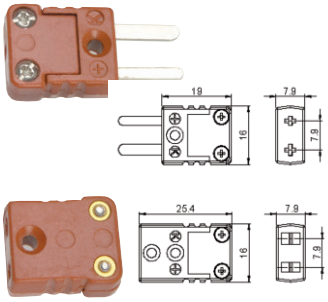
TYPE	SOCKET
K	IM-K-PCB
T	IM-T-PCB
Copper	IM-CU-PCB

- Versatile, high quality, circuit board mounting miniature socket
- Specially designed for PCBs
- Solid pins for direct PCB mounting
- Compatible with flow soldering assembly
- Maximum continuous operating temperature 220 °C



STANDARD CONNECTORS

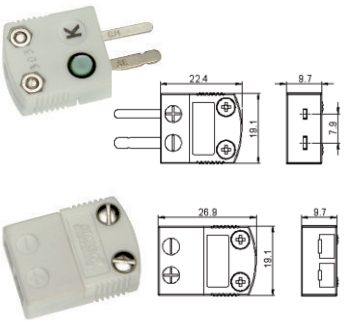
Standard high temperature, plastic plugs and sockets



TYPE	PLUG	SOCKET
J	IM-J-M-HTP	IM-J-F-HTP
K	IM-K-M-HTP	IM-K-F-HTP
R/S	IM-R/S-M-HTP	IM-R/S-F-HTP
B	IM-B-M-HTP	IM-B-F-HTP

- All plugs and connectors with type identification on the body
- High temperature polyester bodies for use up to 425 °C
- All contacts are polarised to ensure correct connection
- For R/S and B compensating alloys limit the maximum usable temperature to 260 °C

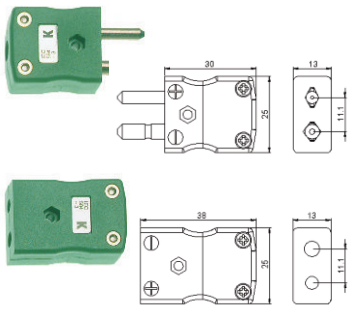
Standard very high temperature, ceramic plugs and sockets



TYPE	PLUG	SOCKET
J	IM-J-M-HTC	IM-J-F-HTC
K	IM-K-M-HTC	IM-K-F-HTC
N	IM-N-M-HTC	IM-N-F-HTC
R/S	IM-R/S-M-HTC	IM-R/S-F-HTC
B	IM-B-M-HTC	IM-B-F-HTC

- Heavy duty ceramic body for use up to 650 °C
- All connectors supplied coloured white with coloured dot on body
- For types R/S and B compensating alloys limit the maximum usable temperature to 260 °C

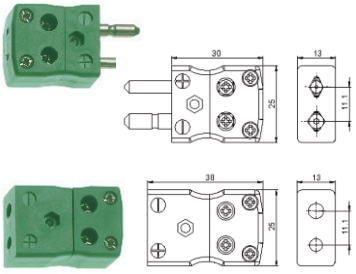
Standard plugs and sockets Types J, K, T, N, E, R/S, B + Copper



TYPE	PLUG	SOCKET
J	IS-J-M	IS-J-F
K	IS-K-M	IS-K-F
T	IS-T-M	IS-T-F
N	IS-N-M	IS-N-F
E	IS-E-M	IS-E-F
R/S	IS-R/S-M	IS-R/S-F
B	IS-B-M	IS-B-F
Copper	IS-CU-M	IS-CU-F

- A range of standard sized connectors with round pins to suit the thermocouple type being used
- Uncompensated copper connector
- Intended for use in more industrial applications
- For cables of up to 4 mm in diameter
- Cable clamps available for securing cable
- Maximum continuous operating temperature 220 °C
- Wide range of accessories available

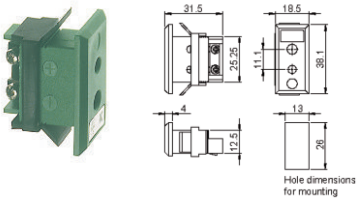
Standard quick wire plugs and sockets Types J, K, T, N, E, R/S, B + Copper



TYPE	PLUG	SOCKET
J	IS-J-MQ	IS-J-FQ
K	IS-K-MQ	IS-K-FQ
T	IS-T-MQ	IS-T-FQ
N	IS-N-MQ	IS-N-FQ
E	IS-E-MQ	IS-E-FQ
R/S	IS-R/S-MQ	IS-R/S-FQ
B	IS-B-MQ	IS-B-FQ
Copper	IS-CU-MQ	IS-CU-FQ

- These quick connect versions allow rapid termination
- Quick easy «jab-in» connection, just push in wire and tighten screw
- Suits wide range of wire sizes
- Maximum continuous operating temperature 220 °C
- Compatible with other standard plug connections

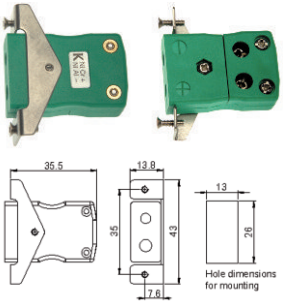
Standard rectangular panel mounting fascia sockets Types J, K, T, N, E, R/S, B + Copper



TYPE	SOCKET
J	IS-J-FF
K	IS-K-FF
T	IS-T-FF
N	IS-N-FF
E	IS-E-FF
R/S	IS-R/S-FF
B	IS-B-FF
Copper	IS-CU-FF

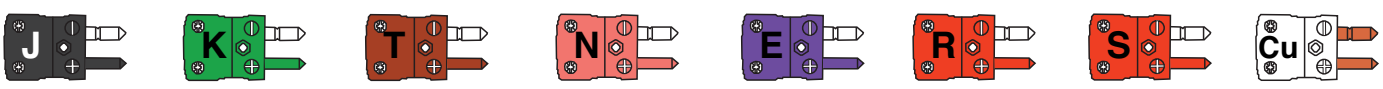
- Easy mounting with plastic clip
- Maximum continuous operating temperature 120 °C
- Fits on standard plug

Standard panel or quick wire socket with mounting bracket Typ J, K, T, N, E, R/S, B + Copper



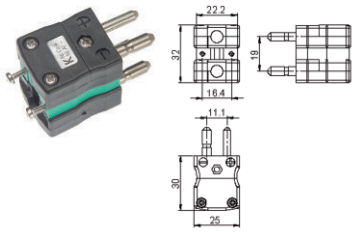
TYPE	SOCKET	SOCKET (Quick Wire)
J	IS-J-SSPF	IS-J-SSPFQ
K	IS-K-SSPF	IS-K-SSPFQ
T	IS-T-SSPF	IS-T-SSPFQ
N	IS-N-SSPF	IS-N-SSPFQ
E	IS-E-SSPF	IS-E-SSPFQ
R/S	IS-R/S-SSPF	IS-R/S-SSPFQ
B	IS-B-SSPF	IS-B-SSPFQ
Copper	IS-CU-SSPF	IS-CU-SSPFQ

- Standard quick wire sockets fitted with stainless steel bracket
- Maximum continuous operating temperature 220 °C
- Choice of normal design or design for fast connection
- Normal design with closed connector side, cable input with sealing ring
- Quick wiring with open contacts

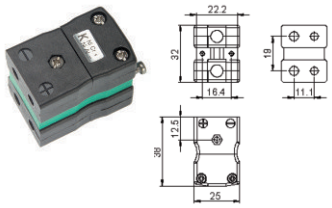


STANDARD CONNECTORS

Standard duplex plugs and sockets Types J, K, T, N, E, R/S, B + Copper

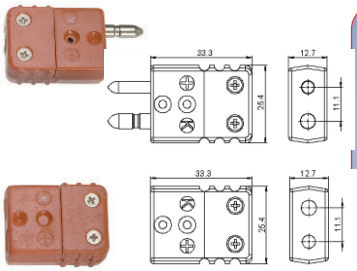


TYPE	PLUG	SOCKET
J	IS-J-MD	IS-J-FD
K	IS-K-MD	IS-K-FD
T	IS-T-MD	IS-T-FD
N	IS-N-MD	IS-N-FD
E	IS-E-MD	IS-E-FD
R/S	IS-R/S-MD	IS-R/S-FD
B	IS-B-MD	IS-B-FD
Copper	IS-CU-MD	IS-CU-FD



- Duplex (Two channel) connectors using thermocouple material contacts and pins
- Plugs fitted with solid thermocouple pins
- Bodies supplied coloured black with spacer in DIN EN 60584 thermocouple colour coding
- Maximum continuous operating temperature 220 °C
- Wide range of accessories available

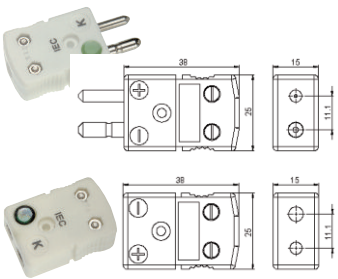
Standard high temperature plastic plugs and sockets Types J, K, T, N, E, R/S, B + Copper



TYPE	PLUG	SOCKET
J	IS-J-M-HTP	IS-J-F-HTP
K	IS-K-M-HTP	IS-K-F-HTP
T	IS-T-M-HTP	IS-T-F-HTP
N	IS-N-M-HTP	IS-N-F-HTP
E	IS-E-M-HTP	IS-E-F-HTP
R/S	IS-R/S-M-HTP	IS-R/S-F-HTP
B	IS-B-M-HTP	IS-B-F-HTP
Copper	IS-CU-M-HTP	IS-CU-F-HTP

- All plugs and connectors with type identification on the body
- High temperature polyester bodies for use up to 425 °C
- All contacts are polarised to ensure correct connection
- For R/S and B compensating alloys limit the maximum usable temperature to 260 °C

Standard very high temperature ceramic plugs and sockets Types J, K, T, N, E, R/S, B + Copper



TYPE	PLUG	SOCKET
J	IS-J-M-HTC	IS-J-F-HTC
K	IS-K-M-HTC	IS-K-F-HTC
T	IS-T-M-HTC	IS-T-F-HTC
N	IS-N-M-HTC	IS-N-F-HTC
E	IS-E-M-HTC	IS-E-F-HTC
R/S	IS-R/S-M-HTC	IS-R/S-F-HTC
B	IS-B-M-HTC	IS-B-F-HTC
Copper	IS-CU-M-HTC	IS-CU-F-HTC

- Heavy duty ceramic body for use up to 650 °C
- All connectors supplied coloured white with coloured dot on body
- For types R/S and B compensating alloys limit the maximum usable temperature to 260 °C

CONNECTOR ACCESSORIES

Plug and socket crimp on brass probe supports, miniature and standard

Miniature from stock



SW 5 x 4 mm, unbored	FMTC-INSERT	
SW 5 x 4 mm, 1,5 mm bored	FMTC-INSERT	D = 1,5
SW 5 x 14 mm, 1,5 mm bored	FMTC-INSERT L	D = 1,5

- Other dimensions on request

Plug and socket braze on brass probe supports, standard

available from stock



SW 8 x 8 mm, unbored	FSTC-INSERT	D = 1
SW 8 x 8 mm, Bore 1,5 mm	FSTC-INSERT	D = 1,5
SW 8 x 8 mm, Bore 2,0 mm	FSTC-INSERT	D = 2
SW 8 x 8 mm, Bore 3,0 mm	FSTC-INSERT	D = 3
SW 8 x 8 mm, Bore 5,0 mm	FSTC-INSERT	D = 5
SW 8 x 8 mm, Bore 6,0 mm	FSTC-INSERT	D = 6
SW 8 x 20 mm, unbored	FSTC-INSERT	L = 20

- Other dimensions on request

Plug and socket compression cable clamp, standard



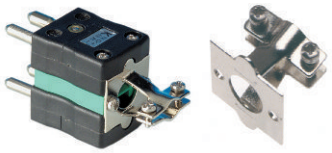
up to max. 5 mm cable diameter	FSTC-CL

Plug and socket external cable clamps, miniature and standard



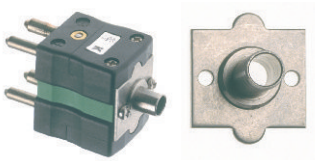
	FMTC-EXCL
from 5 mm cable diameter	FSTC-EXCL

Plug and socket external cable clamps, duplex

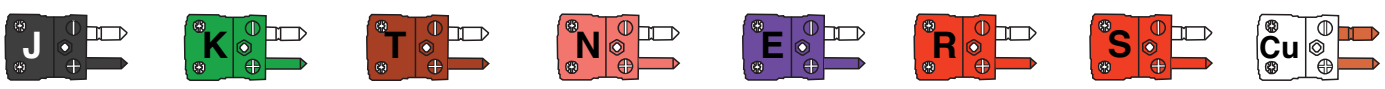


up to max. 5 mm cable diameter	FSTC-D-ADP-CL
from 5 mm cable diameter	FSTC-D-ADP-EXCL

Plug and socket braze on probe support, duplex



ø = 3,2 mm	FSTC-D-ADP-32
ø = 4,8 mm	FSTC-D-ADP-48
ø = 6,4 mm	FSTC-D-ADP-64



CONNECTOR ACCESSORIES

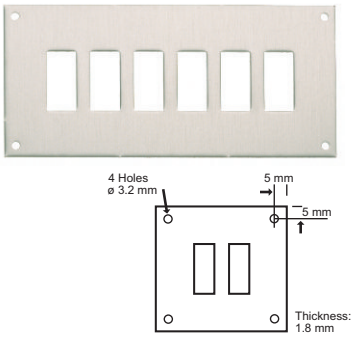
Plug and socket cable strain relief washer, miniature and standard

Material: Silicone rubber



Miniature	
up to approx. 3 mm cable diameter	FMTC-SRW
Standard	
to about 3 mm cable diameter	FSTC-SRW

Panels for miniature fascia sockets

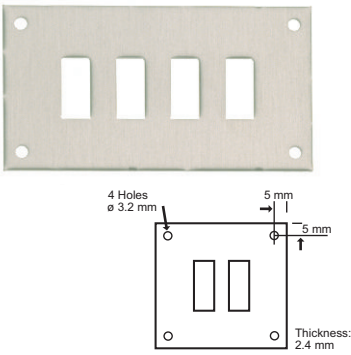


1 connector	FMP-01
2 connectors	FMP-02
3 connectors	FMP-03
4 connectors	FMP-04
5 connectors	FMP-05
6 connectors	FMP-06
8 connectors	FMP-08
10 connectors	FMP-10
12 connectors	FMP-12
16 connectors	FMP-16
18 connectors	FMP-18
20 connectors	FMP-20
24 connectors	FMP-24

Formula for dimension

Length	N x 15 + 25 mm, (N = Number of ways per row)
Height	45 mm (single row), 75 mm (Double row)
	Up to 12 ways in a single row
	16 to 24 ways in two rows
Designations	FMP-01 ... FMP-24

Panels for standard fascia sockets

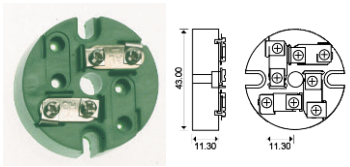


1 connector	FSP-01
2 connectors	FSP-02
3 connectors	FSP-03
4 connectors	FSP-04
5 connectors	FSP-05
6 connectors	FSP-06
8 connectors	FSP-08
10 connectors	FSP-10
12 connectors	FSP-12
16 connectors	FSP-16
18 connectors	FSP-18
20 connectors	FSP-20
24 connectors	FSP-24

Formula for dimension

Length	N x 19 + 31 mm, (N = Number of ways per row)
Height	66 mm (single row), 111 mm (Double row)
	Up to 12 ways in a single row
	16 to 24 ways in two rows
Designations	FSP-01 ... FSP-24

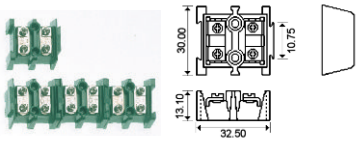
Terminal blocks for in-head Types J, K, T, R/S + Copper



TYPE	SIMPLEX	DUPLEX
J	HT-051-J	HT-051-JD
K	HT-051-K	HT-051-KD
T	HT-051-T	HT-051-TD
R/S	HT-051-R/S	HT-051-R/SD
Copper	HT-051-CU	HT-051-CUD

- Colour-coded base as per DIN EN 60584
- Connections made from thermocouple material
- Maximum continuous operating temperature 220 °C
- Available as Simplex or Duplex

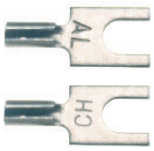
Barrier terminal blocks Types J, K, T, R/S + Copper

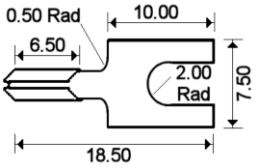


TYPE	
J	CA-501-J
K	CA-501-K
T	CA-501-T
R/S	CA-501-R/S
Copper	CA-501-CU

- Colour-coded terminals as per DIN EN 60584
- Supplied in single interlocking pairs
- Connections in thermocouple material
- Maximum continuous operating temperature 220°C

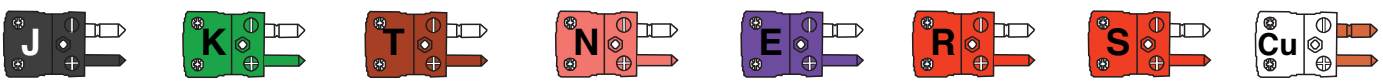
Thermocouple spade terminals Types J, K, T, R/S + Copper





TYPE	POSITIVE (+)	NEGATIVE (-)
J	TST-IR	TST-CO
K	TST-CH	TST-AL
T	TST-CP	TST-CO
R/S	TST-11	TST-11
Copper	TST-CP	TST-CP

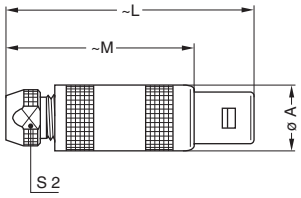
- Contacts made of thermocouple material
- The thermocouple material is impregnated
- For wire diameters of 0.5 mm ... 1.0 mm
- For strands of 0,2 mm² ... 0,65 mm²

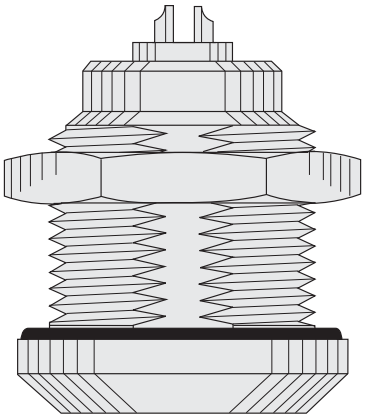


COMPONENTS

LEMO Straight plugs



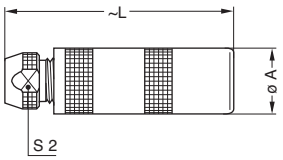


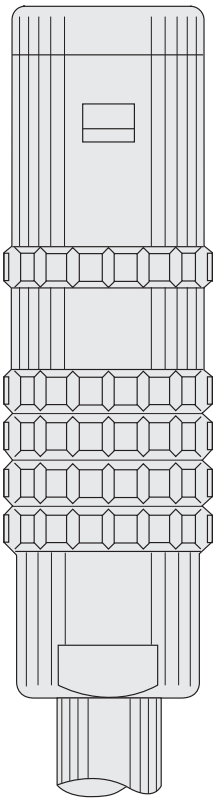


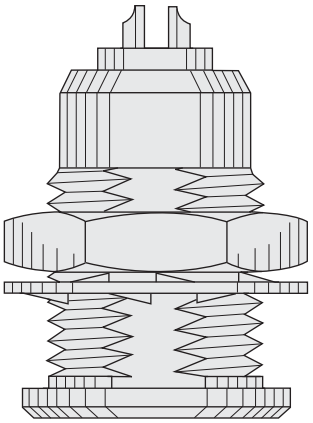
Dimensions in mm					
Size	A	C	L	M	S2
00	6,4	3,2	26,0	18,0	4,5
0S	9,0	4,2	34,5	24,5	6,5
1S	12,0	6,2	42,5	31,5	8,5
2S	14,8	8,5	52,0	40,0	11,0

LEMO Free sockets





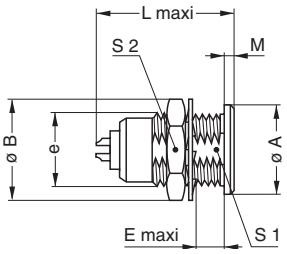


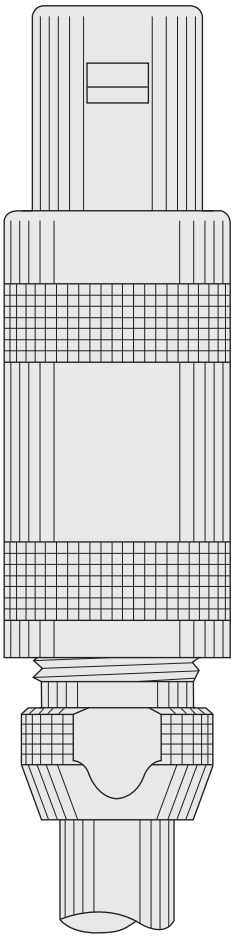


Dimensions in mm				
Size	A	C	L	S2
00	6,4	3,2	24,5	4,5
0S	8,9	4,2	33,5	6,5
1S	11,9	6,2	40,5	8,5
2S	14,8	8,5	50,0	11,0

LEMO Fixed plugs



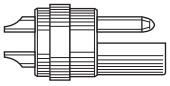




Dimensions in mm								
Size	A	B	e	E	L	M	S1	S2
00	8	10,3	M 7 x 0,5	5,5	–	1,0	6,3	9
0S	10	12,5	M 9 x 0,6	7,0	17,5	1,2	8,2	11
1S	14	16,0	M 12 x 1,0	7,5	21,5	1,5	10,5	14
2S	18	19,5	M 15 x 1,0	8,5	24,0	1,8	13,5	17

Contacts



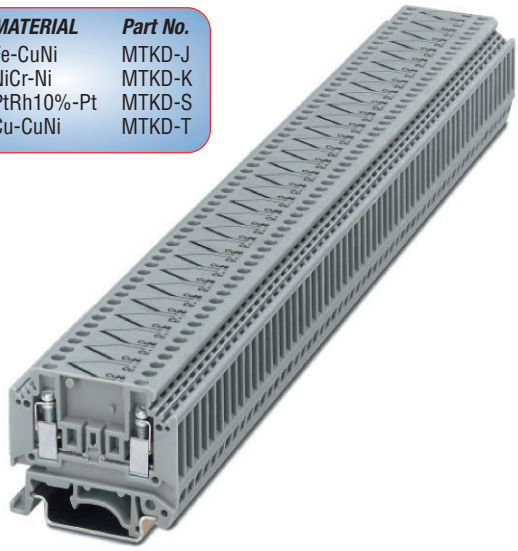


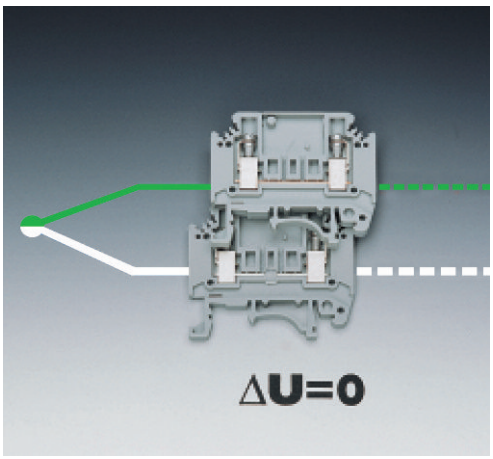
- Gold-plated brass contacts
- Other designs on request

Thermocouple terminal blocks for DIN rail

In the thermocouple terminal blocks, the transmission material is made of the same material as the compensating lines. This ensures that no thermoelectric voltage occurs at the thermocouple/ terminal/compensating line connection points.

TYPE	MATERIAL	Part No.
J	Fe-CuNi	MTKD-J
K	NiCr-Ni	MTKD-K
S	PtRh10%-Pt	MTKD-S
T	Cu-CuNi	MTKD-T





Materials and colour codes

Standardised materials and colour codes for compensating cable

Standard	Type			Materials for the compensating cable and thermocouple cable		Colour code		
						Core insulation		Sheath
	Typ	+Pol	–Pol	+Pol	–Pol	+Pol	–Pol	
DIN EN 60584	E	NiCr	CuNi	NiCr	CuNi	violet	white	violet
	J	Fe	CuNi	Fe	CuNi	black	white	black
	K	NiCr	Ni	NiCr	Ni	green	white	green
	N	NiCrSi	NiSi	NiCrSi	Ni	pink	white	pink
	T	Cu	CuNi	Cu	CuNi	brown	white	brown
	R	PtRh 13%	Pt	SoPtRh	SoPt	orange	white	orange
	S	PtRh 10%	Pt	SoPtRh	SoPt	orange	white	orange
	B	PtRh 30%	PtRh 6%	SoPtRh	SoPt	grey	white	grey
ANSI (USA)	T	TP (Cu)	TN (CuNi)	TPY (Cu)	TNX (CuNi)	blue	red	blue
	J	JP (Fe)	JN (CuNi)	JPX (Fe)	JNX (CuNi)	white	red	black
	E	EP (NiCr)	EN (CuNi)	EPX (NiCr)	ENX (CuNi)	violet	red	violet
	K	KP (NiCr)	KN (Ni)	EPX (NiCr)	KNX (Ni)	yellow	red	yellow
	R/S	SP/RP (PtRh)	SN/RN (Pt)	SPX (Cu)	SNX (CuNi)	black	red	green
	B	BP (Pt 30% Rh)	BN (Pt 6% Rh)	BPX (Cu)	BNX (Cu)	grey	red	grey

MESS- UND REGELTECHNIK
MEASUREMENT AND CONTROL TECHNOLOGY

SEV 04 ATEX 0124 X
SEV 04 ATEX 0159 X
SCS 090

Seit über 60 Jahren Innovativ Kompetent Präzis

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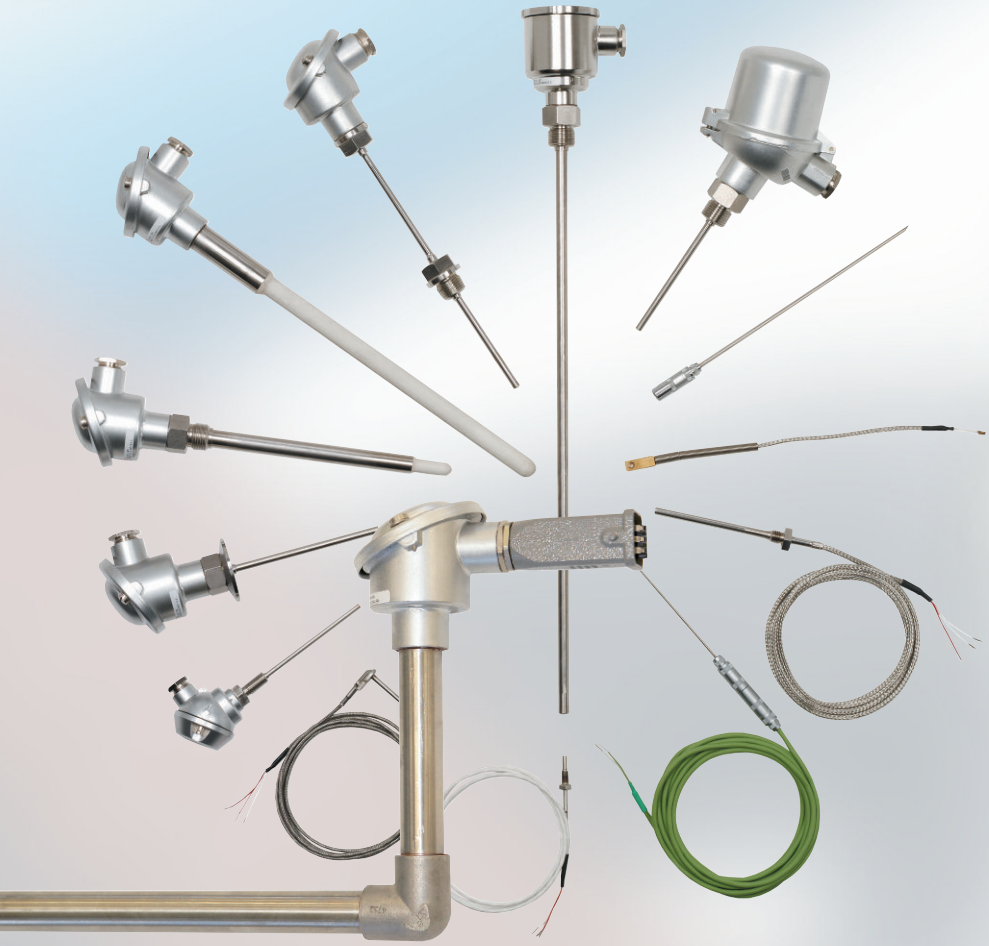
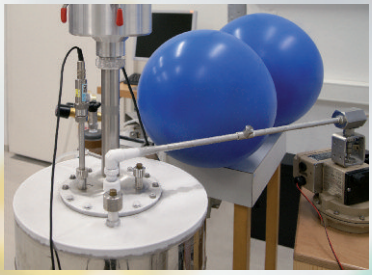
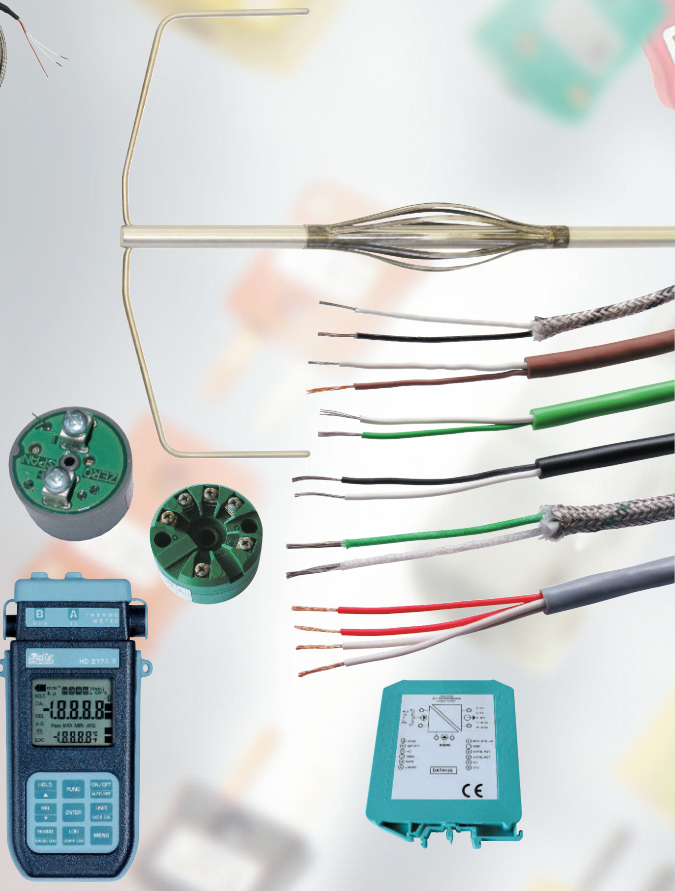






Agentur Pfründer Flawil / e - 467 – 09.07.2014



Reliability
The sensors manufactured by us are subjected to a final practice-based test. The included test log provides information about the measurement characteristics of the sensors.

Expertise
Our sales staff are not just salespeople. In our compact organisation, they are directly involved in your project solution. This is the only way to find the best solution for you. Our size is your advantage!

Availability
With framework agreements in place, we are able to deliver you your product within 24 hours. Our large and extensive warehouse enables us to produce your special sensors in the blink of an eye.

Support
After-sales support is our most important commitment to our customers and includes consultation, practical support and perfect service.

Certificates

SCS 090	Swiss Calibration Service; calibration lab, Swiss primary laboratory «Temperature»
SEV 12 ATEX 4153	Electrosuisse; ATEX sensor production
SEV 04 ATEX 0124 X	Electrosuisse; ATEX sensors
SEV 04 ATEX 0159 X	Electrosuisse; capillary tube thermostats and limiters

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