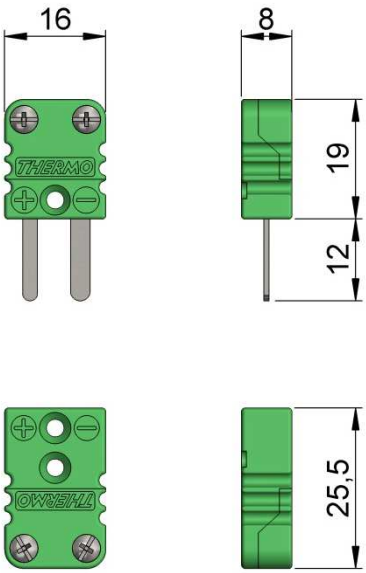
The following schedule gives an overview about the articles in this catalogue.
For simplifications reasons, thermocouple Connectors are shown in type K. All available types can be found in the technical features.

Bezeichnung	Bauform	Datasheet	Revision
Connectors, up to 220°C	Mini	S – 010	01 – 05/01
Connectors, 3-pole, up to 220°C	Mini	S – 013	01 – 05/01
Connectors, up to 220°C	Std	S – 020	01 – 05/01
Connectors with quick wiring, up to 220°C	Std	S – 021	01 – 10/01
Connectors, 3-pole, up to 220°C	Std	S – 023	01 – 05/01
Connectors, up to 450°C	Std	S – 027	01 – 05/01
Connectors, up to 220°C	Mikro	S – 060	01 – 04/08
Wire clamp bracket	Mini / Std	S – 090	01 – 05/01
Bend protection	Mini / Std	S – 091	03 – 10/01
Neoprene grommet	Mini / Std	S – 092	01 – 05/01
Crimp bushing	Mini / Std / Micro	S – 095	01 – 05/01
Safety Clip	Mini / Std	S – 098	01 – 05/01
Panel-Intert Multiple Circuits	Mini	S – 100	01 – 05/01
Panel Cutouts	Mini	S – 101	01 – 05/01
Connectors for Board mounting, up to 220°C	Mini	S – 110	01 – 05/01
Panel Insert round, up to 220°C	Mini	S – 120	01 – 05/01
Panel Insert round with mountingholes, up to 220°C	Mini	S – 125	01 – 05/01
Panel Insert Basic, up to 220°C	Mini	S – 126	01 – 05/01
Panel Insert squared, up to 220°C	Mini	S – 130	01 – 05/01
Panel Insert squared with mountingholes, bis 220°C	Mini	S – 135	01 – 05/01
Panel Insert with flange, up to 220°C	Mini	S – 140	01 – 05/01
Paneleinsatz rectangular, up to 220°C	Mini	S – 145	01 – 05/01
Paneleinsatz with eye, bis 220°C	Mini	S – 150	01 – 05/01
Brass Nut	Mini	S – 190	01 – 05/01
Assembly Set	Mini	S – 191	01 – 05/01
Spring Clip	Mini	S – 195	01 – 05/01
Panel Insert, Multiple Circuits	Std	S – 200	01 – 05/01
Panel Insert round, up to 220°C	Std	S – 220	01 – 05/01
Panel Insert round with mountingholes, up to 220°C	Std	S – 225	01 – 05/01
Panel Insert Basic, up to 220°C	Std	S – 226	01 – 05/01
Panel Insert squared, up to 220°C	Std	S – 230	01 – 05/01
Panel Insert with mountingholes, up to 220°C	Std	S – 235	01 – 05/01
Panel Insert rectangular (short), up to 220°C	Std	S – 240	01 – 05/01
Panel Insert rectangular (long), up to 220°C	Std	S – 245	01 – 05/01
Panel Insert rectangular with mountingholes, up to 220°C	Std	S – 250	01 – 05/01
Assembly Set Standard	Std	S – 290	01 – 05/01
Assembly Set	Std	S – 291	01 – 05/01
Spring Clip	Std	S – 295	01 – 05/01
Molded Connector	Mini	S – 300	01 – 05/01
Connector for Board mounting, up to 220°C	Micro	S – 610	01 – 05/08
Micro Panel Insert Basic, up to 220°C	Micro	S – 626	01 – 05/08
Micro Panel Insert with Flange, up to 220°C	Micro	S – 640	01 – 05/08

Miniature Connector

S – 010
Rev. 01 – 05/01



Technical Features:

Thermocouple (①):

Thermocouple	Plus	Minus	Norm
Type K	NiCr	NiAl	IEC 584
Type J	Fe	CuNi	IEC 584
Type L	Fe	CuNi	DIN 43710
Type T	Cu	CuNi	IEC 584
Type R/S	Cu	Cu11	IEC 584
Type E	NiCr	CuNi	IEC 584
Type N	NiCrSi	NiSi	IEC 584

Colour Coding (②):

Thermocouple	IEC	ANSI	DIN
Type K	green	yellow	green
Type J	black	black	–
Type L	–	–	blue
Type T	brown	blue	brown
Type R/S	orange	green	white
Type E	violet	violet	–
Type N	pink	orange	–

Additional versions on request

Body Material: break- and hitproof thermoplastic compound

Operating Temp.: permanent 200°C, temporarily up to 250°C

Contacts: Thermocouple Material,
Reverse polarity protected,
plugs with solid and coded flat contacts,
jacks with springloaded contacts

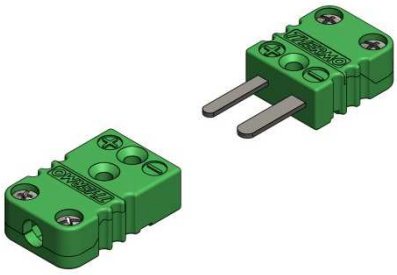
Connection: Stainless Steel screws and stainless steel plates

Identification: indicators for polarity molded in body

Type: acc. to EN 50212

Accessories:

Article	Datasheet
Wire clamp bracket	S – 090
Bend protection	S – 091
Neoprene grommet	S – 092
Crimp bushing	S – 095
Safety Clip	S – 098



Ordering Code:

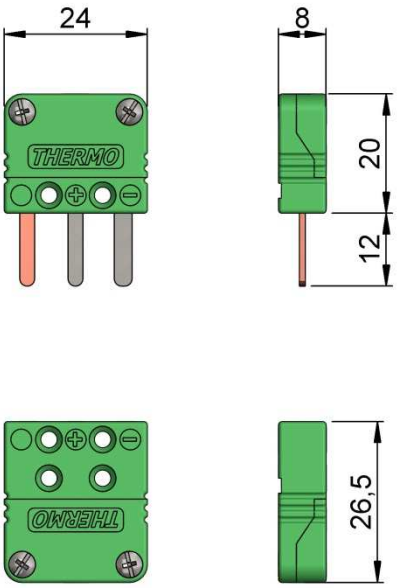
Plug: S – 010 – S – ① – ② Jack: S – 010 – K – ① – ②
①: Thermocouple (K, J, L, T, R/S, E, N)
②: Colour Coding according to IEC, ANSI oder DIN (I, A, D)

Example:

S – 010 – S – T – I: Miniature plug, Thermocouple Type T (Cu-CuNi), brown
S – 010 – K – N – A: Miniature jack, Thermocouple Type N (NiCrSi-NiSi), orange

3-Pin Miniature Connector

S – 013
Rev. 01 – 05/01



Technical Features:

Thermocouple (①):

Thermocouple	Plus	Minus	Norm
Type K	NiCr	NiAl	IEC 584
Type J	Fe	CuNi	IEC 584
Type L	Fe	CuNi	DIN 43710
Type T	Cu	CuNi	IEC 584
Type R/S	Cu	Cu11	IEC 584
Type E	NiCr	CuNi	IEC 584
Type N	NiCrSi	NiSi	IEC 584

Colour Coding (②):

Thermocouple	IEC	ANSI	DIN
Type K	green	yellow	green
Type J	black	black	–
Type L	–	–	blue
Type T	brown	blue	brown
Type R/S	orange	green	white
Type E	violet	violet	–
Type N	pink	orange	–

Additional versions on request

Body Material: break- and hitproof thermoplastic compound

Operating Temp.: permanent 200°C, temporarily up to 250°C

Contacts: Thermocouple Material,
Reverse polarity protected,
plugs with solid and coded flat contacts,
jacks with springloaded contacts

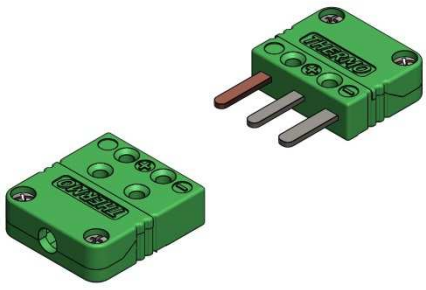
Connection: Stainless Steel screws and stainless steel plates

Identification: indicators for polarity molded in body

Type: acc. to EN 50212

Accessories:

Article	Datasheet
Wire clamp bracket	S – 090
Bend protection	S – 091
Neoprene grommet	S – 092
Crimp bushing	S – 095



Ordering Code:

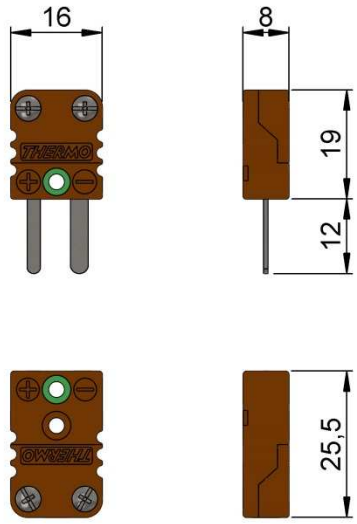
Plug: S – 013– S – ① – ② Jack: S – 013 – K – ① – ②
①: Thermocouple (K, J, L, T, R/S, E, N)
②: Colour Coding according to IEC, ANSI or DIN (I, A, D)

Example:

S – 013 – S – K – D: 3-pole Miniature Plug, Thermocouple Type K (NiCr-NiAl), green
S – 013 – K – J – A: 3-pole Miniature Jack, Thermocouple Type J (Fe-CuNi), black

High-Temperature-Miniature Connector

S – 015
Rev. 01 – 05/01



Technical Features:

Thermocouple (①):

Thermocouple	Plus	Minus	Norm
Type K	NiCr	Ni	IEC 584
Type J	Fe	CuNi	IEC 584
Type L	Fe	CuNi	DIN 43710
Type T	Cu	CuNi	IEC 584
Type R/S	Cu	Cu11	IEC 584
Type E	NiCr	CuNi	IEC 584
Type N	NiCrSi	NiSi	IEC 584

Colour Coding (②): body colour brown, marked with coloured dot:

Thermocouple	IEC	ANSI	DIN
Type K	green	yellow	green
Type J	black	black	–
Type L	–	–	blue
Type T	brown	blue	brown
Type R/S	orange	green	white
Type E	violet	violet	–
Type N	pink	orange	–

Additional versions on request

Body Material: Epoxy

Operating Temp.: permanent 320°C

Contacts: Thermocouple Material,
Reverse polarity protected,
plugs with solid and coded flat contacts,
jacks with springloaded contacts

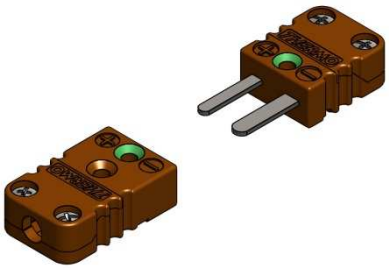
Connection: Stainless Steel screws and stainless steel plates

Identification: indicators for polarity molded in body

Type: acc. to EN 50212

Accessories:

Article	Datasheet
Wire clamp bracket	S – 090
Crimp bushing	S – 095



Ordering Code:

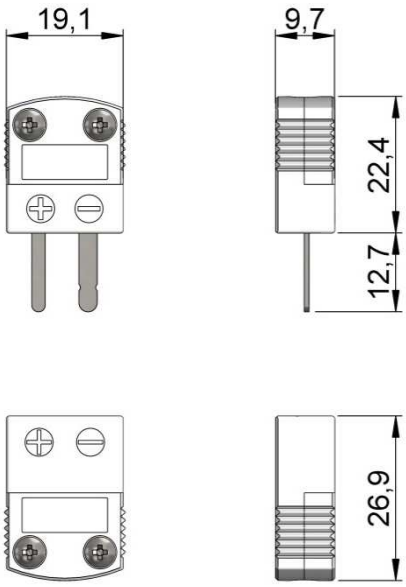
Plug: S – 015 – S – ① – ② Jack: S – 015 – K – ① – ②
①: Thermocouple (K, J, L, T, R/S, E, N)
②: Colour Coding according to IEC, ANSI or DIN (I, A, D)

Example:

S – 015 – S – T – I: High Temperature Miniature Plug, Thermocouple Type T (Cu-CuNi), brown
S – 015 – K – N – A: High Temperature Miniature Jack, Thermopcouple Type N (NiCrSi-NiSi), orange

High-Temperature-Miniature-Connector
Ceramic Construction

S – 017
Rev. 01 – 05/01



Technical Features:

Thermocouple (①):

Thermocouple	Plus	Minus	Norm
Type K	NiCr	Ni	IEC 584
Type J	Fe	CuNi	IEC 584
Type L	Fe	CuNi	DIN 43710
Type T	Cu	CuNi	IEC 584
Type R/S	Cu	Cu11	IEC 584
Type E	NiCr	CuNi	IEC 584
Type N	NiCrSi	NiSi	IEC 584

Colour Coding (②): Body colour grey, marked with coloured dot:

Thermocouple	IEC	ANSI	DIN
Type K	green	yellow	green
Type J	black	black	–
Type L	–	–	blue
Type T	brown	blue	brown
Type R/S	orange	green	white
Type E	violet	violet	–
Type N	pink	orange	–

Additional versions or swaged constructions on request

Body material: Ceramic

Operating Temp.: Max. 450°C

Contacts: Thermocouple Material,
Reverse polarity protected,
plugs with solid and coded flat contacts,
jacks with springloaded contacts

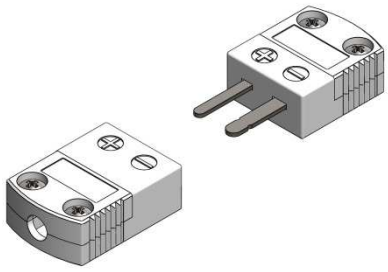
Connection: Stainless Steel screws and stainless steel plates

Identification: indicators for polarity

Type: acc. to EN 50212

Accessories:

Article	Datasheet
Wire clamp bracket	S – 090
Crimp bushing	S – 095



Ordering Code:

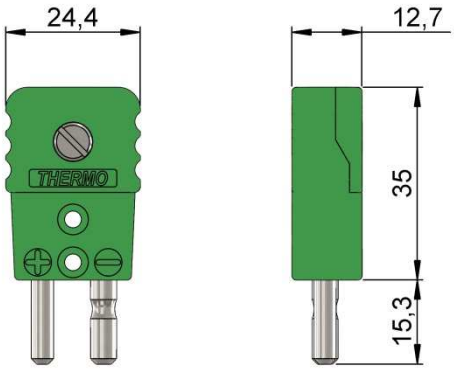
Plug: S – 017 – S – ① – ② Jack: S – 017 – K – ① – ②
①: Thermocouple (K, J, L, T, R/S, E, N)
②: Colour Coding according to IEC, ANSI or DIN (I, A, D)

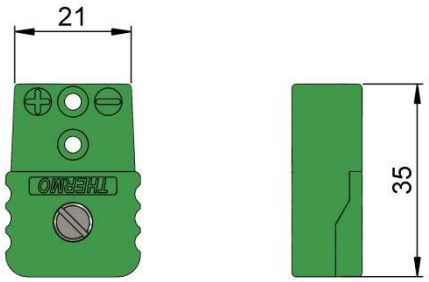
Example:

S – 017 – S – T – I: Ceramic Miniature Plug, Thermocouple Type T (Cu-CuNi), brown
S – 017 – K – K – A: Ceramic Miniature Jack, Thermopaar Type K (NiCr-CuNi), yellow

Standard Connector

S – 020
Rev. 01 – 05/01





Technical Features:

Thermocouple (①):

Thermocouple	Plus	Minus	Norm
Type K	NiCr	NiAl	IEC 584
Type J	Fe	CuNi	IEC 584
Type L	Fe	CuNi	DIN 43710
Type T	Cu	CuNi	IEC 584
Type R/S	Cu	Cu11	IEC 584
Type E	NiCr	CuNi	IEC 584
Type N	NiCrSi	NiSi	IEC 584

Colour Coding (②):

Thermocouple	IEC	ANSI	DIN
Type K	green	yellow	green
Type J	black	black	–
Type L	–	–	blue
Type T	brown	blue	brown
Type R/S	orange	green	white
Type E	violet	violet	–
Type N	pink	orange	–

Additional versions on request

Body Material: break- and hitproof thermoplastic compound

Operating Temp.: permanent 200°C, temporarily up to 250°C

Contacts: Thermocouple Material,
Reverse polarity protected,
plugs with solid and coded round contacts,
jacks with springloaded contacts

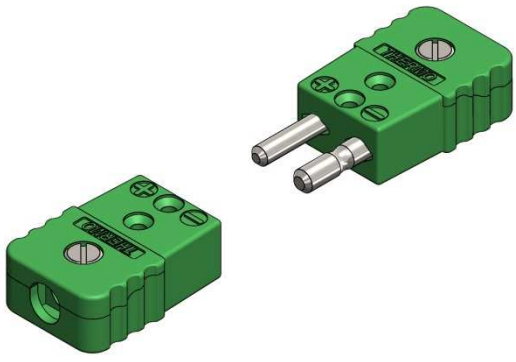
Connection: Stainless Steel screws and stainless steel plates

Identification: indicators for polarity molded in body

Type: acc. to EN 50212

Accessories:

Article	Datasheet
Wire clamp bracket	S – 090
Bend protection	S – 091
Neoprene grommet	S – 092
Crimp bushing	S – 095



Ordering Code:

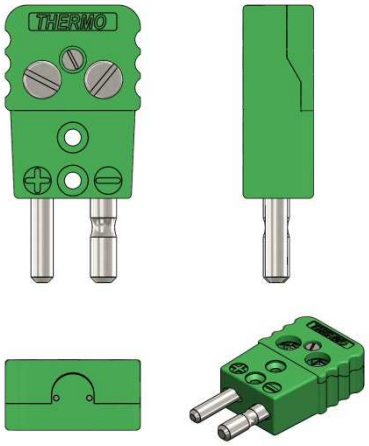
Plug: S – 020 – S – ① – ② Jack: S – 020 – K – ① – ②
①: Thermocouple (K, J, L, T, R/S, E, N)
②: Colour Coding according to IEC, ANSI or DIN (I, A, D)

Example:

S – 020 – S – L – D: Standard Plug, Thermocouple Type L (Fe-CuNi), blue
S – 020 – K – N – A: Standard Jack, Thermocouple Type N (NiCrSi-NiSi), orange

Standard Connector
for Quick Wiring

S – 021
Rev. 01 – 10/01



Technical Features:

Thermocouple (①):

Thermocouple	Plus	Minus	Norm
Type K	NiCr	NiAl	IEC 584
Type J	Fe	CuNi	IEC 584
Type L	Fe	CuNi	DIN 43710
Type T	Cu	CuNi	IEC 584
Type R/S	Cu	Cu11	IEC 584
Type E	NiCr	CuNi	IEC 584
Type N	NiCrSi	NiSi	IEC 584

Colour Coding (②):

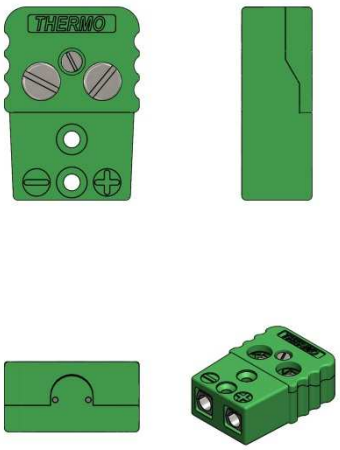
Thermocouple	IEC	ANSI	DIN
Type K	green	yellow	green
Type J	black	black	–
Type L	–	–	blue
Type T	brown	blue	brown
Type R/S	orange	green	white
Type E	violet	violet	–
Type N	pink	orange	–

Additional versions on request

Body Material: break- and hitproof thermoplastic compound

Operating Temp.: permanent 200°C, temporarily up to 250°C

Contacts: Thermocouple Material,
Reverse polarity protected,
plugs with solid and coded round contacts,
jacks with springloaded contacts



Connection: Stainless Steel screws and stainless steel plates
Insertion and fixing of the wires possible with screwed cover.

Identification: indicators for polarity molded in body

Type: acc. to EN 50212

Accessories:

Article	Datasheet
Wire clamp bracket	S – 090

Ordering Code:

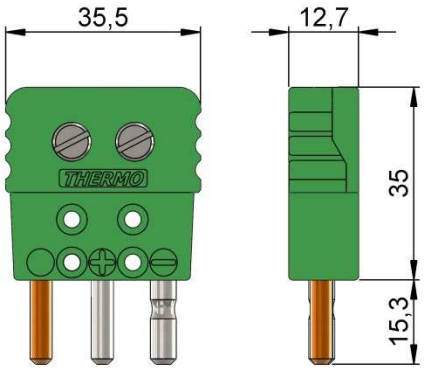
Plug: S – 021 – S – ① – ② Jack: S – 021 – K – ① – ②
①: Thermocouple (K, J, L, T, R/S, E, N)
②: Colour Coding according to IEC, ANSI or DIN (I, A, D)

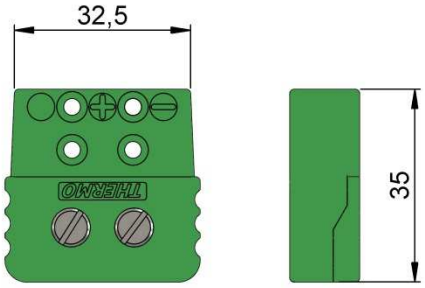
Example:

S – 021 – S – L – D: Standard Plug, Thermocouple Type L (Fe-CuNi), blue
S – 021 – K – N – A: Standard Jack, Thermocouple Type N (NiCrSi-NiSi), orange

3-Pin Standard Connector

S – 023
Rev. 01 – 05/01





Technical Features:

Thermocouple (①):

Thermocouple	Plus	Minus	Norm
Type K	NiCr	NiAl	IEC 584
Type J	Fe	CuNi	IEC 584
Type L	Fe	CuNi	DIN 43710
Type T	Cu	CuNi	IEC 584
Type R/S	Cu	Cu11	IEC 584
Type E	NiCr	CuNi	IEC 584
Type N	NiCrSi	NiSi	IEC 584

Colour Coding (②):

Thermocouple	IEC	ANSI	DIN
Type K	green	yellow	green
Type J	black	black	–
Type L	–	–	blue
Type T	brown	blue	brown
Type R/S	orange	green	white
Type E	violet	violet	–
Type N	pink	orange	–

Additional versions on request

Body Material: break- and hitproof thermoplastic compound

Operating Temp.: permanent 200°C, temporarily up to 250°C

Contacts: Thermocouple Material,
Reverse polarity protected,
plugs with solid and coded round contacts,
jacks with springloaded contacts

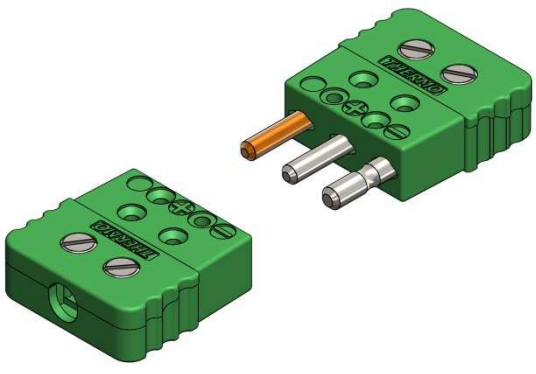
Connection: Stainless Steel screws and stainless steel plates

Identification: indicators for polarity molded in body

Type: acc. to EN 50212

Accessories:

Article	Datasheet
Wire clamp bracket	S – 090
Bend protection	S – 091
Neoprene grommet	S – 092
Crimp bushing	S – 095



Ordering Code:

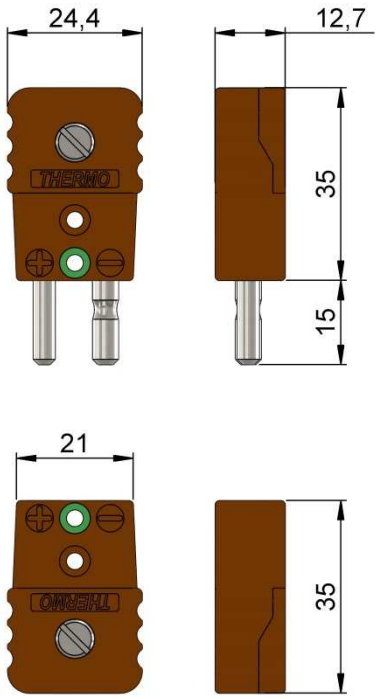
Plug: S – 023– S – ① – ② Jack: S – 023 – K – ① – ②
①: Thermocouple (K, J, L, T, R/S, E, N)
②: Colour Code according to IEC, ANSI or DIN (I, A, D)

Example:

S – 023 – S – K – D: 3-pin Standard Plug, Thermocouple Type K (NiCr-NiAl), green
S – 023 – K – J – A: 3-pin Standard Jack, Thermocouple Type J (Fe-CuNi), black

High-Temperature-Standard-Connector

S – 025
Rev. 01 – 05/01



Technical Features:

Thermocouple (①):

Thermocouple	Plus	Minus	Norm
Type K	NiCr	NiAl	IEC 584
Type J	Fe	CuNi	IEC 584
Type L	Fe	CuNi	DIN 43710
Type T	Cu	CuNi	IEC 584
Type R/S	Cu	Cu11	IEC 584
Type E	NiCr	CuNi	IEC 584
Type N	NiCrSi	NiSi	IEC 584

Colour Coding (②): body colour brown marked with coloured dot:

Thermocouple	IEC	ANSI	DIN
Type K	green	yellow	green
Type J	black	black	–
Type L	–	–	blue
Type T	brown	blue	brown
Type R/S	orange	green	white
Type E	violet	violet	–
Type N	pink	orange	–

Additional versions on request

Body Material: Epoxy

Operating Temp.: permanent 320°C

Contacts: Thermocouple Material,
Reverse polarity protected,
plugs with solid and coded round contacts,
jacks with springloaded contacts

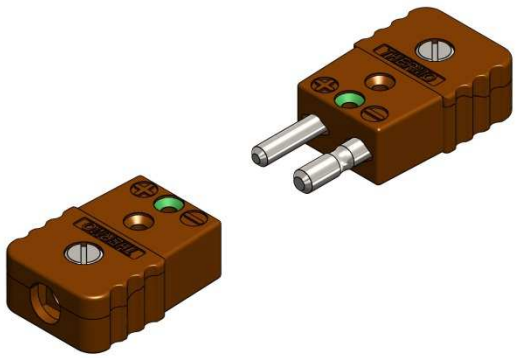
Connection: Stainless Steel screws and stainless steel plates

Identification: indicators for polarity molded in body

Type: acc. to EN 50212

Accessories:

Article	Datasheet
Wire clamp bracket	S – 090
Crimp bushing	S – 095



Ordering Code:

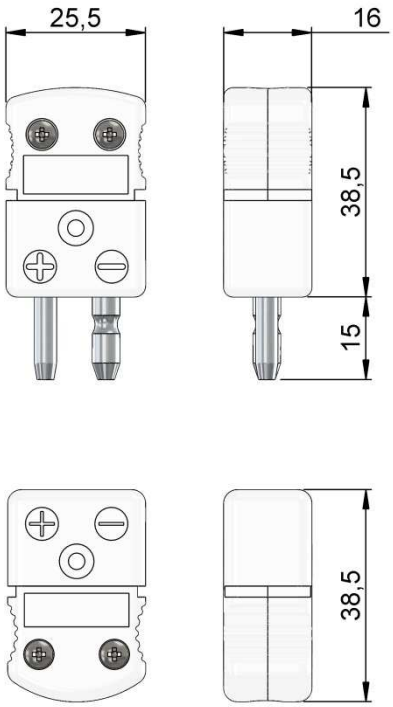
Plug: S – 025 – S – ① – ② Jack: S – 025 – K – ① – ②
①: Thermocouple (K, J, L, T, R/S, E, N)
②: Colour Coding according to IEC, ANSI or DIN (I, A, D)

Example:

S – 025 – S – E – I: High Temperature Standard Plug, Thermopcouple Type E (NiCr-CuNi), violet
S – 025 – K – J – I: High Temperature Standard Jack, Thermopcouple Type J (Fe-CuNi), black

High-Temperature-Standard-Connector
Ceramic Construction

S – 027
Rev. 01 – 05/01



Technical Features:

Thermocouple (①):

Thermocouple	Plus	Minus	Norm
Type K	NiCr	NiAl	IEC 584
Type J	Fe	CuNi	IEC 584
Type L	Fe	CuNi	DIN 43710
Type T	Cu	CuNi	IEC 584
Type R/S	Cu	Cu11	IEC 584
Type E	NiCr	CuNi	IEC 584
Type N	NiCrSi	NiSi	IEC 584

Colour Coding (②): body colour grey, marked with coloured dot:

Thermocouple	IEC	ANSI	DIN
Type K	green	yellow	green
Type J	black	black	–
Type L	–	–	blue
Type T	brown	blue	brown
Type R/S	orange	green	white
Type E	violet	violet	–
Type N	pink	orange	–

Additional versions on request

Body Material: ceramic

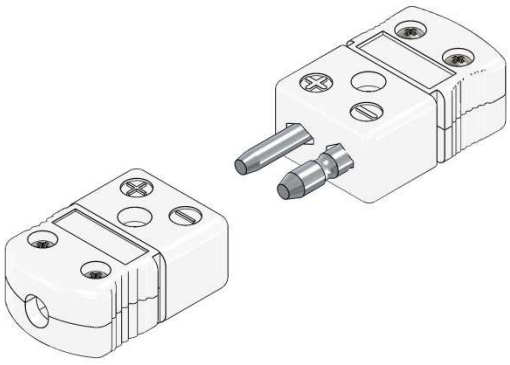
Max. Operating Temp.: 450°C

Contacts: Thermocouple Material,
Reverse polarity protected,
plugs with solid and coded round contacts,
jacks with springloaded contacts

Connection: Stainless Steel screws and stainless steel plates

Identification: indicators for polarity

Type: acc. to EN 50212



Ordering Code:

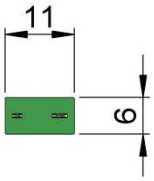
Plug: S – 027 – S – ① – ② Jack: S – 027 – K – ① – ②
①: Thermocouple (K, J, L, T, R/S, E, N)
②: Colour Coding acc. IEC, ANSI or DIN (I, A, D)

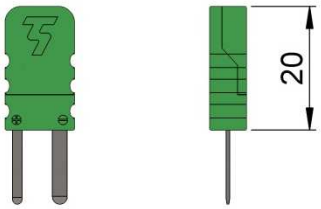
Example:

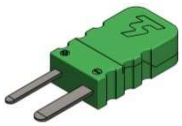
S – 027 – S – T – I: Ceramic High Temperature Standard Plug, Thermopcouple Type T (Cu-CuNi), brown
S – 027 – K – K – A: Ceramic High Temperature Standard Jack, Thermopcouple Type K (NiCr-NiAl), yellow

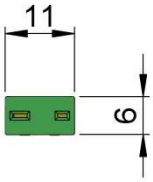
Micro-Connector

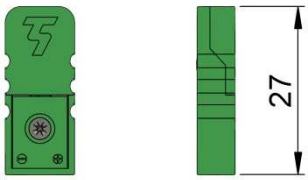
S – 060
Rev. 01 – 04/08











Technical Features:

Thermocouple (①):	Thermocouple	Plus	Minus	Norm
	Type K	NiCr	NiAl	IEC 584

Colour Coding (②):	Thermocouple	IEC	ANSI	DIN
	Type K	green	yellow	green

Additional versions on request

Body Material:	break- and hitproof thermoplastic compound
Operating Temp.:	permanent 200°C, temporarily up to 250°C
Contacts:	Thermocouple Material, Reverse polarity protected, plugs with solid and coded flat contacts jacks with springloaded contacts
Connection:	Stainless Steel screws and stainless steel plates
Identification:	indicators for polarity molded in body

Ordering Code:

Plug: S – 060 – S – ① – ② Jack: S – 060 – K – ① – ②
①: Thermocouple (K)
②: Colour Coding acc. IEC, ANSI or DIN (I, A, D)

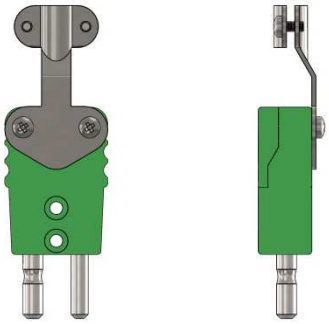
Example:

S – 060 – S – K – I: Micro Plug, Thermocouple Typ K (NiCr-Ni), green
S – 060 – K – K – I: Micro Jack, Thermocouple Typ K (NiCr-Ni), green

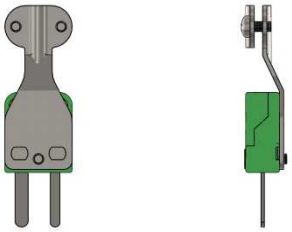
Wire Clamp Bracket for Thermocouple Connectors

in Standard and Miniature Design

Technical Features:



Type:	for Standard Plugs and Jacks
Material:	Stainless Steel
	Projection after assembly measured from rear edge of connector: 27 mm
	Screws for assembly are contained within delivery.



Type:	for Miniature Plugs and Jacks
Material:	Stainless Steel
	Projection after assembly measured from rear edge of connector: 16 mm
	Screws for assembly are contained within delivery.

Ordering Code:

S – 090 – ①

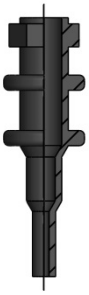
①: S for Standard, M for Miniature

Example:

S – 090 – S Wire Clamp Bracket in Standard Design

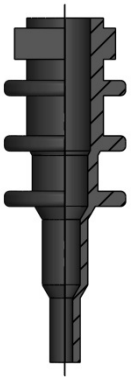
Bend Protection
for Thermocouple Connectors
in Standard- and Miniature Design

S – 091
Rev. 03 – 10/01



Technical Features:

Type:	for Miniature-Plugs and -Jacks
Material:	TPE
Operating Temp.:	approx. 90°C
Hexagon:	6 mm
Inner Diameter:	By cutting the Bend Protection internal diameters of 3.2 mm, 2.2 mm and 1.0 mm are feasible.
Application:	Bend protection of Thermocouples, Wires and Connection Wires.



Type:	for Standard-Plugs and -Jacks
Material:	TPE
Operating Temp.:	approx. 90°C
Square:	10 mm
Inner diameter:	By cutting the Bend Protection internal diameters of 5.0 mm, 4.5 mm, 3.0 mm and 1.5 mm are feasible.
Application:	Bend protection of Thermocouples, Wires and Connection Wires.

Ordering Code:

S – 091 – ①

①: S for Standard; M for Miniature

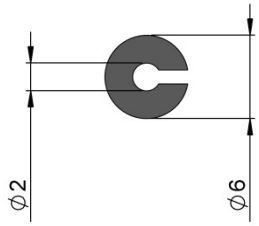
Example:

S – 091 – M Miniature-Bend Protection

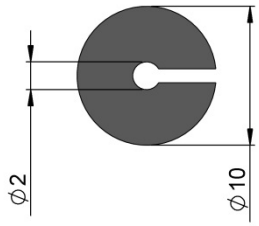
Neoprene Grommet for Thermocouple Connectors

in Standard- and Miniature Design

Technical Features:



Type:	for Miniature-Plugs and -Jacks
Material:	Neoprene
Application:	Strain-relief of Mineral-Insulated-Cables, Thermocouples and Connection wires.



Type:	for Standard-Plugs and -Jacks
Material:	Neoprene
Application:	Strain-relief of Mineral-Insulated-Cables, Thermocouples and Connection wires.

Ordering Code:

S – 092 – ①

①: S for Standard; M for Miniature

Example:

S – 092 – M Miniature-Neopren-Grommet

Crimp Bushing
for Thermocouple Connectors
in Standard- and Miniature Design

Technical Features:

Type:	for Miniature-Plugs and -Jacks
Material:	Brass, MS 58
Hexagon:	6 mm
Application:	Strain-relief of Mineral-Insulated-Cables, Thermocouples and Connection wires.
Typical Diameters:	1.1 mm, 1.7 mm, 2.1 mm, 3.1 mm, 3.3 mm, 3.5 mm, 4.0 mm, 5.2 mm
	Additional versions on request

Type:	for Standard-Plugs and -Jacks
Material:	Brass, MS 58
Square:	10 mm
Application:	Strain-relief of Mineral-Insulated-Cable, Thermocouples and Connection wires.
Typical Diameters:	1.1 mm, 1.7 mm, 2.1 mm, 3.1 mm, 3.3 mm, 3.5 mm, 4.0 mm, 5.2 mm
	Additional versions on request

Type:	for Micro-Plugs and -Jacks
Material:	Brass, MS 58
Hexagon:	5 mm
Application:	Strain-relief of Mineral-Insulated-Cable, Thermocouples and Connection wires.
Typical Diameters::	1.1 mm, 1.7 mm, 2.1 mm, 3.1 mm
	Additional versions on request

Ordering Code:

S – 095 – ①– ②
①: "S" for Standard; "M" for Miniature; „Micro" for Micro
②: Drilling Hole

Example:

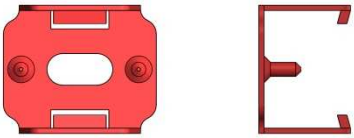
S – 095 – Micro – 2.1: Micro-Crimp Bushing with drilling hole Ø2.1 mm

Safety Clip
for Thermocouple Connectors
in Standard- and Miniature Design

S – 098
Rev. 01 – 05/01

Technical Features:

Type:	for Miniature-Plugs and -Jacks
Material:	break- and hitproof thermoplastic compound
Application:	Protection of Plug-Jacket-Connections



Type:	for Standard-Plugs and -Jacks
Material:	break- and hitproof thermoplastic compound
Application:	Protection of Plug-Jacket-Connections

Ordering Code:

S – 098 – ①

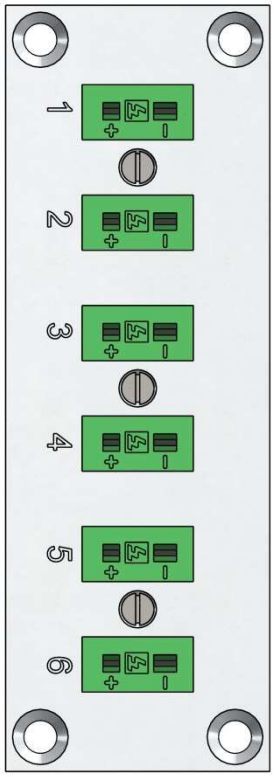
①: S for Standard; M for Miniature

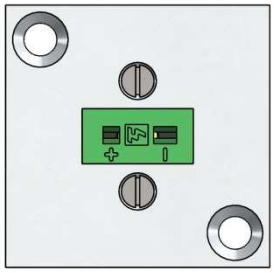
Example:

S – 098 – S Standard-Safety-Clip

Miniature Panel
Multiple Measuring Circuits

S – 100
Rev. 01 – 05/01





Technical Features:

Thermocouple (②):

Thermocouple	Plus	Minus	Norm
Type K	NiCr	NiAl	IEC 584
Type J	Fe	CuNi	IEC 584
Type L	Fe	CuNi	DIN 43710
Type T	Cu	CuNi	IEC 584
Type R/S	Cu	Cu11	IEC 584
Type E	NiCr	CuNi	IEC 584
Type N	NiCrSi	NiSi	IEC 584

Colour Coding (③):

Thermocouple	IEC	ANSI	DIN
Type K	green	yellow	green
Type J	black	black	–
Type L	–	–	blue
Type T	brown	blue	brown
Type R/S	orange	green	white
Type E	violet	violet	–
Type N	pink	orange	–

Additional versions on request

Body Material: break- and hitproof thermoplastic compound

Panel Material: Aluminium, anodized, thickness 2.5 mm

Operating Temp.: permanent 200°C, temporarily up to 250°C

Contacts: Thermocouple Material,
Reverse polarity protected,
with springloaded contacts

Connection: Stainless Steel screws and stainless steel plates

Identification: Indicators for polarity molded in body

Type: acc. to to EN 50212

Dimensions: (①)

1-circuit	Panel:	38	x	38	mm
6-circuits	Panel:	111	x	38	mm
12-circuits	Panel:	206	x	38	mm
18-circuits	Panel:	302	x	38	mm
24-circuits	Panel:	206	x	76	mm

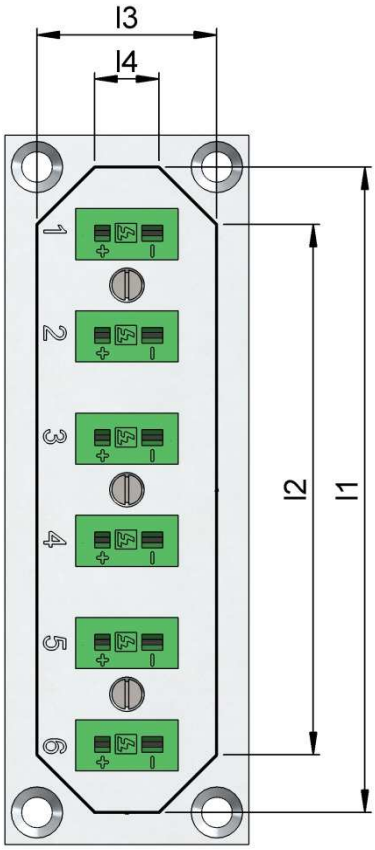
Ordering Code:

S – 100 – S – ① – ② – ③
①: Dimensions
②: Thermocouple (K, J, L, T, R/S, E, N)
③: Colour Coding acc. to IEC, ANSI or DIN (I, A, D)

Example:

S – 100 – S – 06 – S – I: Miniature-Panel, 6-circuit, Thermocouple Type S (Cu-Cu11), orange

Panel Cutouts
Standard- and Miniature Design

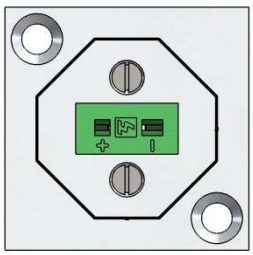


Miniature:

	Height	Width	l1	l2	l3	l4
1- circuit	38 mm	38 mm	28 mm	10 mm	28 mm	10 mm
6- circuits	38 mm	111 mm	101 mm	83 mm	28 mm	10 mm
12- circuits	38 mm	206 mm	196 mm	178 mm	28 mm	10 mm
18- circuits	38 mm	302 mm	292 mm	274 mm	28 mm	10 mm
24- circuits	76 mm	206 mm	196 mm	178 mm	66 mm	48 mm

Standard:

	Height	Width	l1	l2	l3	l4
1- circuit	38 mm	38 mm	28 mm	10 mm	28 mm	10 mm
6- circuits	67 mm	146 mm	126 mm	109 mm	47 mm	30 mm
12- circuits	67 mm	260 mm	240 mm	223 mm	47 mm	30 mm
24- circuits	115 mm	260 mm	240 mm	223 mm	95 mm	78 mm
30- circuits	115 mm	375 mm	355 mm	338 mm	95 mm	78 mm

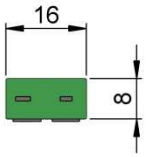


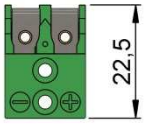
Thermocouple Connector for Board Mounting

Miniature Edition

S – 110

Rev. 01 – 05/01



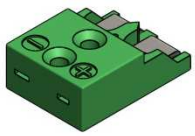


Technical Features:

Thermocouple (①):	Thermocouple	Plus	Minus	Norm
	Type K	NiCr	NiAl	IEC 584
	Cu-Cu	Cu	Cu	–

Colour Coding (②):	Thermocouple	IEC	ANSI	DIN
	Type K	green	yellow	green
	Cu-Cu	–	–	white

Body Material:	break- and hitproof thermoplastic compound
Operating Temp.:	permanent 200°C, temporarily up to 250°C
Contacts:	Thermocouple Material, Reverse polarity protected, with springloaded contacts
Connection:	Stainless Steel screws and stainless steel plates
Identification:	indicators for polarity molded in body
Type:	acc. to EN 50212
Fastening:	by means of screws



Ordering Code:

S – 110 – ① – ②

①: Thermocouple (K) or Contactmaterial (Cu)

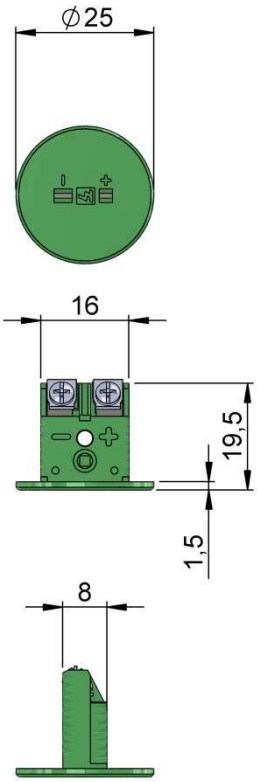
②: Colour Coding acc. to IEC, ANSI or DIN (I, A, D) or „white"

Example:

S – 110 – Cu – white: Miniature-Connector, Copper Contacts, white

Miniature Panel Insert
Rear fastening with brass nut

S – 120
Rev. 01 – 05/01



Technical Features:

Thermocouple (①):

Thermocouple	Plus	Minus	Norm
Type K	NiCr	NiAl	IEC 584
Type J	Fe	CuNi	IEC 584
Type L	Fe	CuNi	DIN 43710
Type T	Cu	CuNi	IEC 584
Type R/S	Cu	Cu11	IEC 584
Type E	NiCr	CuNi	IEC 584
Type N	NiCrSi	NiSi	IEC 584

Colour Coding (②):

Thermocouple	IEC	ANSI	DIN
Type K	green	yellow	green
Type J	black	black	–
Type L	–	–	blue
Type T	brown	blue	brown
Type R/S	orange	green	white
Type E	violet	violet	–
Type N	pink	orange	–

Additional versions on request

Body Material: break- and hitproof thermoplastic compound

Operating Temp.: permanent 200°C, temporarily up to 250°C

Contacts: Thermocouple Material,
Reverse polarity protected,
with springloaded contacts

Connection: Stainless Steel screws and stainless steel plates

Identification: indicators for polarity molded in body

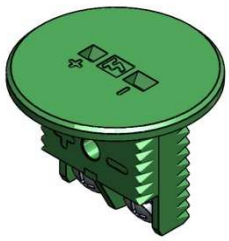
Type: acc. to EN 50212

Fastening: round brass nut or stainless steel clip on rear side

Panel Cutout: 16.5 x 8.5 mm

Accessories:

Article	Datasheet
Brass Nut	S – 190
Spring Set	S – 195



Ordering Code:

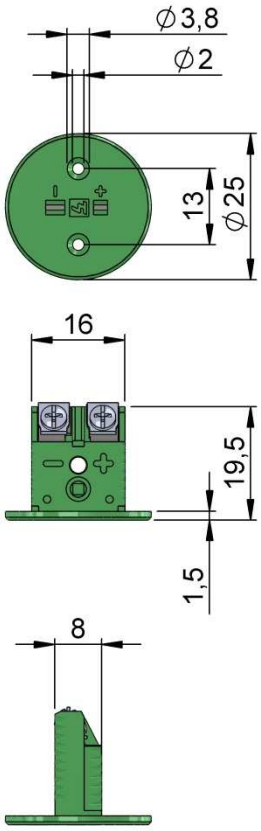
S – 120 – ① – ②
①: Thermocouple (K, J, L, T, R/S, E, N)
②: Colour Coding acc. to IEC, ANSI or DIN (I, A, D)

Example:

S – 120 – K – I: Miniature Panel-Insert, Thermocouple Type K (NiCr-NiAl), green

Miniature Panel Insert
Front fastening with screws

S – 125
Rev. 01 – 05/01



Technical Features:

Thermocouple (①):

Thermocouple	Plus	Minus	Norm
Type K	NiCr	NiAl	IEC 584
Type J	Fe	CuNi	IEC 584
Type L	Fe	CuNi	DIN 43710
Type T	Cu	CuNi	IEC 584
Type R/S	Cu	Cu11	IEC 584
Type E	NiCr	CuNi	IEC 584
Type N	NiCrSi	NiSi	IEC 584

Colour Coding (②):

Thermocouple	IEC	ANSI	DIN
Type K	green	yellow	green
Type J	black	black	–
Type L	–	–	blue
Type T	brown	blue	brown
Type R/S	orange	green	white
Type E	violet	violet	–
Type N	pink	orange	–

Additional versions on request

Body Material: break- and hitproof thermoplastic compound

Operating Temp.: permanent 200°C, temporarily up to 250°C

Contacts: Thermocouple Material,
Reverse polarity protected,
with springloaded contacts

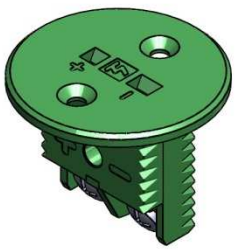
Connection: Stainless Steel screws and stainless steel plates

Identification: indicators for polarity molded in body

Type: acc. to EN 50212

Fastening: screw on front side

Panel Cutout: 16.5 x 8.5 mm



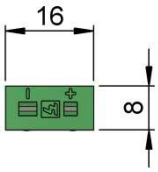
Ordering Code:

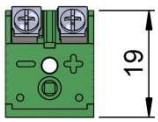
S – 125 – ① – ②
①: Thermocouple (K, J, L, T, R/S, E, N)
②: Colour Coding acc. to IEC, ANSI or DIN (I, A, D)

Example:

S – 125 – K – I: Miniature Panel-Insert, Thermocouple Type K (NiCr-NiAl), green

Miniature Panel Insert
Basic Insert





Technical Features:

Thermocouple (①):

Thermocouple	Plus	Minus	Norm
Type K	NiCr	NiAl	IEC 584
Type J	Fe	CuNi	IEC 584
Type L	Fe	CuNi	DIN 43710
Type T	Cu	CuNi	IEC 584
Type R/S	Cu	Cu11	IEC 584
Type E	NiCr	CuNi	IEC 584
Type N	NiCrSi	NiSi	IEC 584

Colour Coding (②):

Thermocouple	IEC	ANSI	DIN
Type K	green	yellow	green
Type J	black	black	–
Type L	–	–	blue
Type T	brown	blue	brown
Type R/S	orange	green	white
Type E	violet	violet	–
Type N	pink	orange	–

Additional versions on request

Body Material: break- and hitproof thermoplastic compound

Operating Temp.: permanent 200°C, temporarily up to 250°C

Contacts: Thermocouple Material,
Reverse polarity protected,
with springloaded contacts

Connection: Stainless Steel screws and stainless steel plates

Identification: indicators for polarity molded in body

Type: acc. to EN 50212

Fastening: assembly set

Panel Cutout: 16.5 x 8.5 mm

Accessories:

Article	Datasheet
assembly set	S – 191

Ordering Code:

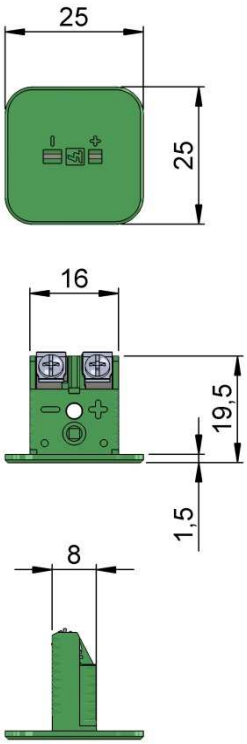
S – 126 – ① – ②
①: Thermocouple (K, J, L, T, R/S, E, N)
②: Colour Coding acc. to IEC, ANSI or DIN (I, A, D)

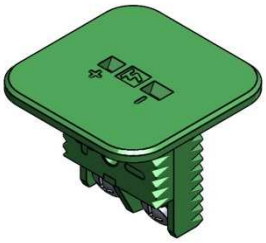
Example:

S – 126 – K – I: Miniature Panel-Insert, Thermocouple Type K (NiCr-NiAl), green

Miniature Panel Insert
Rear Fastening with Nut

S – 130
Rev. 01 – 05/01





Technical Features:

Thermocouple (①):

Thermocouple	Plus	Minus	Norm
Type K	NiCr	NiAl	IEC 584
Type J	Fe	CuNi	IEC 584
Type L	Fe	CuNi	DIN 43710
Type T	Cu	CuNi	IEC 584
Type R/S	Cu	Cu11	IEC 584
Type E	NiCr	CuNi	IEC 584
Type N	NiCrSi	NiSi	IEC 584

Colour Coding (②):

Thermocouple	IEC	ANSI	DIN
Type K	green	yellow	green
Type J	black	black	–
Type L	–	–	blue
Type T	brown	blue	brown
Type R/S	orange	green	white
Type E	violet	violet	–
Type N	pink	orange	–

Additional versions on request

Body Material: break- and hitproof thermoplastic compound

Operating Temp.: permanent 200°C, temporarily up to 250°C

Contacts: Thermocouple Material,
Reverse polarity protected,
with springloaded contacts

Connection: Stainless Steel screws and stainless steel plates

Identification: indicators for polarity molded in body

Type: acc. to EN 50212

Fastening: round brass nut or stainless steel clip on rear side

Panel Cutout: 16.5 x 8.5 mm

Accessories:

Article	Datasheet
Brass Nut	S – 190
Spring Set	S – 195

Ordering Code:

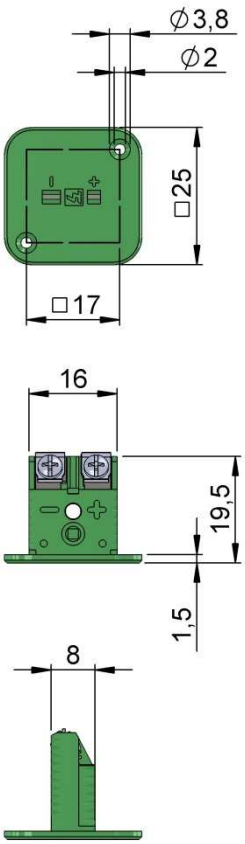
S – 130 – ① – ②
①: Thermocouple (K, J, L, T, R/S, E, N)
②: Colour Coding acc. to IEC, ANSI or DIN (I, A, D)

Example:

S – 130 – L – D: Miniature Panel Insert, Thermocouple Typ L (Fe-CuNi), blue

Miniature Panel Insert
front fastening with screws

S – 135
Rev. 01 – 05/01



Technical Features:

Thermocouple (①):

Thermocouple	Plus	Minus	Norm
Type K	NiCr	NiAl	IEC 584
Type J	Fe	CuNi	IEC 584
Type L	Fe	CuNi	DIN 43710
Type T	Cu	CuNi	IEC 584
Type R/S	Cu	Cu11	IEC 584
Type E	NiCr	CuNi	IEC 584
Type N	NiCrSi	NiSi	IEC 584

Colour Coding (②):

Thermocouple	IEC	ANSI	DIN
Type K	green	yellow	green
Type J	black	black	–
Type L	–	–	blue
Type T	brown	blue	brown
Type R/S	orange	green	white
Type E	violet	violet	–
Type N	pink	orange	–

Additional versions on request

Body Material: break- and hitproof thermoplastic compound

Operating Temp.: permanent 200°C, temporarily up to 250°C

Contacts: Thermocouple Material,
Reverse polarity protected,
with springloaded contacts

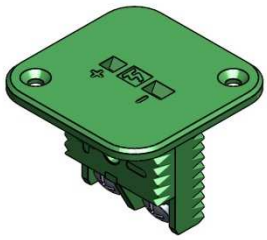
Connection: Stainless Steel screws and stainless steel plates

Identification: indicators for polarity molded in body

Type: acc. to EN 50212

Fastening: screws on front side

Panel Cutout: 16.5 x 8.5 mm



Ordering Code:

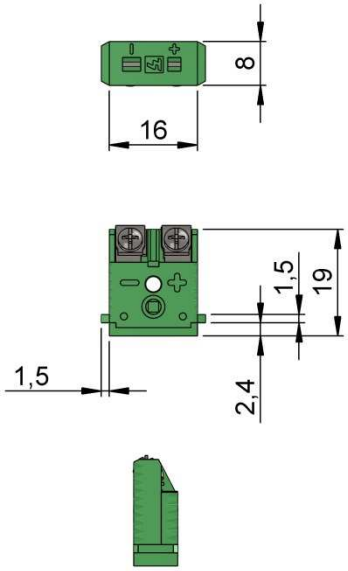
S – 135 – ① – ②
①: Thermocouple (K, J, L, T, R/S, E, N)
②: Colour Coding acc. to IEC, ANSI or DIN (I, A, D)

Example:

S – 135 – J – I: Miniature Panel Insert, Thermocouple Type J (Fe-CuNi), black

Miniature Panel Insert
fastening with assembly set

S – 140
Rev. 01 – 05/01



Technical Features:

Thermocouple (①):

Thermocouple	Plus	Minus	Norm
Type K	NiCr	NiAl	IEC 584
Type J	Fe	CuNi	IEC 584
Type L	Fe	CuNi	DIN 43710
Type T	Cu	CuNi	IEC 584
Type R/S	Cu	Cu11	IEC 584
Type E	NiCr	CuNi	IEC 584
Type N	NiCrSi	NiSi	IEC 584

Colour Coding (②):

Thermocouple	IEC	ANSI	DIN
Type K	green	yellow	green
Type J	black	black	–
Type L	–	–	blue
Type T	brown	blue	brown
Type R/S	orange	green	white
Type E	violet	violet	–
Type N	pink	orange	–

Additional versions on request

Body Material: break- and hitproof thermoplastic compound

Operating Temp.: permanent 200°C, temporarily up to 250°C

Contacts: Thermocouple Material,
Reverse polarity protected,
with springloaded contacts

Connection: Stainless Steel screws and stainless steel plates

Identification: indicators for polarity molded in body

Type: acc. to EN 50212

Panel Cutout: 16.5 x 8.5 mm

Accessories:

Article	Datasheet
Assembly Set	S – 191

Ordering Code:

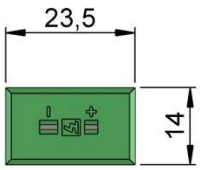
S – 140 – ① – ②
①: Thermocouple (K, J, L, T, R/S, E, N)
②: Colour Coding acc. to IEC, ANSI or DIN (I, A, D)

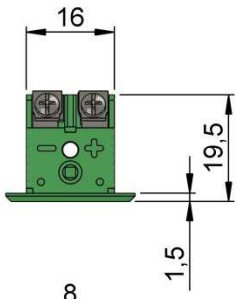
Example:

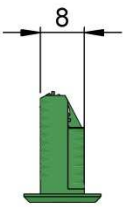
S – 140 – S – I: Miniature Panel Insert, Thermocouple Type S (Cu-Cu11), orange

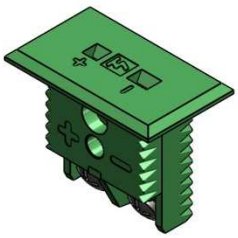
Miniature Panel Insert
fastening with assembly set

S – 145
Rev. 01 – 05/01









Technical Features:

Thermocouple (①):

Thermocouple	Plus	Minus	Norm
Type K	NiCr	NiAl	IEC 584
Type J	Fe	CuNi	IEC 584
Type L	Fe	CuNi	DIN 43710
Type T	Cu	CuNi	IEC 584
Type R/S	Cu	Cu11	IEC 584
Type E	NiCr	CuNi	IEC 584
Type N	NiCrSi	NiSi	IEC 584

Colour Coding (②):

Thermocouple	IEC	ANSI	DIN
Type K	green	yellow	green
Type J	black	black	–
Type L	–	–	blue
Type T	brown	blue	brown
Type R/S	orange	green	white
Type E	violet	violet	–
Type N	pink	orange	–

Additional versions on request

Body Material: break- and hitproof thermoplastic compound

Operating Temp.: permanent 200°C, temporarily up to 250°C

Contacts: Thermocouple Material,
Reverse polarity protected,
with springloaded contacts

Connection: Stainless Steel screws and stainless steel plates

Identification: indicators for polarity molded in body

Type: acc. to EN 50212

Fastening: round brass nut or stainless steel clip

Panel Cutout: 16.5 x 8.5 mm

Accessories:

Article	Datasheet
Brass Nut	S – 190
Spring Set	S – 195

Ordering Code:

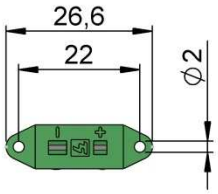
S – 145 – ① – ②
①: Thermocouple (K, J, L, T, R/S, E, N)
②: Colour Coding acc. to IEC, ANSI or DIN (I, A, D)

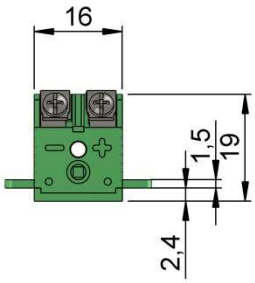
Example:

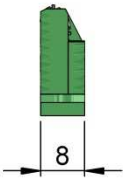
S – 145 – N – I: Miniature Panel Insert, Thermocouple Type N (NiCrSi-NiCr), pink

Miniature Panel Insert
front fastening with screws

S – 150
Rev. 01 – 05/01







Technical Features:

Thermocouple (①):

Thermocouple	Plus	Minus	Norm
Type K	NiCr	NiAl	IEC 584
Type J	Fe	CuNi	IEC 584
Type L	Fe	CuNi	DIN 43710
Type T	Cu	CuNi	IEC 584
Type R/S	Cu	Cu11	IEC 584
Type E	NiCr	CuNi	IEC 584
Type N	NiCrSi	NiSi	IEC 584

Colour Coding (②):

Thermocouple	IEC	ANSI	DIN
Type K	green	yellow	green
Type J	black	black	–
Type L	–	–	blue
Type T	brown	blue	brown
Type R/S	orange	green	white
Type E	violet	violet	–
Type N	pink	orange	–

Additional versions on request

Body Material: break- and hitproof thermoplastic compound

Operating Temp.: permanent 200°C, temporarily up to 250°C

Contacts: Thermocouple Material,
Reverse polarity protected,
with springloaded contacts

Connection: Stainless Steel screws and stainless steel plates

Identification: indicators for polarity molded in body

Type: acc. to EN 50212

Fastening: screws on front side

Panel Cutout: 16.5 x 8.5 mm

Ordering Code:

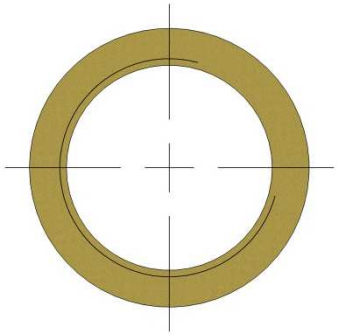
S – 150 – ① – ②
①: Thermocouple (K, J, L, T, R/S, E, N)
②: Colour Coding acc. to IEC, ANSI or DIN (I, A, D)

Example:

S – 150 – S – I: Miniature Panel Insert, Thermocouple Type S (Cu-Cu11), orange

Brass Nut
for Thermocouple Panel Inserts in Miniature Design

S – 190
Rev. 01 – 05/01



Technical Features:

Usage:	For backside mounting of Miniature Panel Inserts acc. to Datasheet S-120, S-125, S-130, S-135 and S-145
Material:	Brass
Thread:	M18 x 1.5
Steel Sheet Thickness:	Please specify

Ordering Code:
S – 190

Technical Features:

Usage: For fastening Miniature Panels Inserts acc. to Datasheets S-126 and S-140

Depending on the number of Panel Inserts, the number of Blocks and Screws and the length of the Rod must be calculated.

The following table shows the combinations for the different multiple measuring circuits acc. to Datasheet S-100

Type	Blocks (①)	Rod (②)
S-100-S-01-...	2 Piece	1 Piece (30 mm)
S-100-S-06-...	3 Pieces	1 Piece (95 mm)
S-100-S-12-...	6 Pieces	1 Piece (190 mm)
S-100-S-18-...	9 Pieces	1 Piece (285 mm)
S-100-S-24-...	12 Pieces	2 Pieces (190 mm each)

Material: Brass, Stainless Steel

Steel Sheat Thickness: 2.5 mm

Ordering Code:

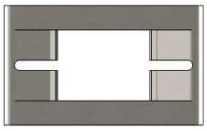
S – 191 – ① – ②
①: Number of Blocks
②: Number and length of rods

Example:

S – 191 – 9 – 1x285: Assembly Set for 18 circuit Miniature Panel Insert

Spring Set
Miniature Edition

S – 195
Rev. 01 – 05/01



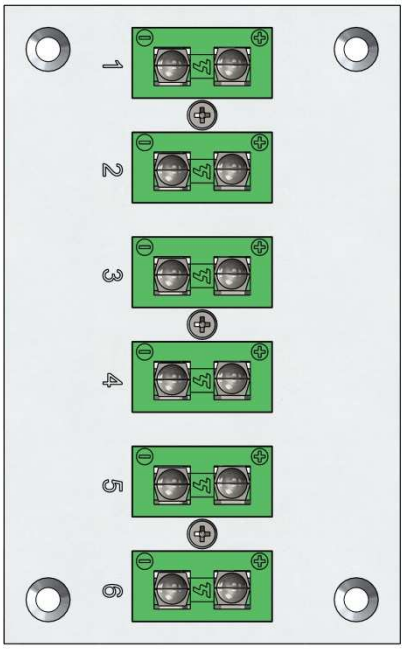
Technical Features:

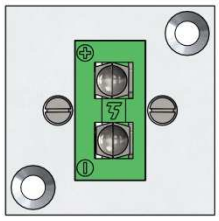
Utilization:	For backside assembly of Miniature Panel Inserts acc. to Datasheet S-120, S-130 and S-145
Material:	Stainless Steel
Steel Sheet Thickness:	2.5 mm

Ordering Code:
S – 195

Standard Panel
Multiple Measuring Circuit

S – 200
Rev. 01 – 05/01





Technical Features:

Thermocouple (②):

Thermocouple	Plus	Minus	Norm
Type K	NiCr	NiAl	IEC 584
Type J	Fe	CuNi	IEC 584
Type L	Fe	CuNi	DIN 43710
Type T	Cu	CuNi	IEC 584
Type R/S	Cu	Cu11	IEC 584
Type E	NiCr	CuNi	IEC 584
Type N	NiCrSi	NiSi	IEC 584

Colour Coding (③):

Thermocouple	IEC	ANSI	DIN
Type K	green	yellow	green
Type J	black	black	–
Type L	–	–	blue
Type T	brown	blue	brown
Type R/S	orange	green	white
Type E	violet	violet	–
Type N	pink	orange	–

Additional versions on request

Body Material: break- and hitproof thermoplastic compound

Panel Material: Aluminium, anodized, thickness 2.5 mm

Operating Temp.: permanent 200°C, temporarily up to 250°C

Contacts: Thermocouple Material,
Reverse polarity protected,
with springloaded contacts

Connection: Stainless Steel screws and stainless steel plates

Identification: indicators for polarity molded in body

Type: acc. to EN 50212

Measures (①)

1-circuit	Panel:	38	x 38	mm
6-circuits	Panel:	146	x 67	mm
12-circuits	Panel:	260	x 67	mm
24-circuits	Panel:	260	x 115	mm
30-circuits	Panel:	375	x 115	mm

Ordering Code:

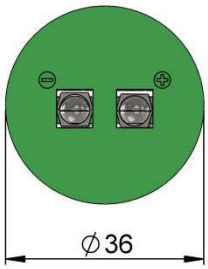
S – 200 – S – ① – ② – ③
①: Dimensions
②: Thermocouple (K, J, L, T, R/S, E, N)
③: Colour Coding acc. to IEC, ANSI or DIN (I, A, D)

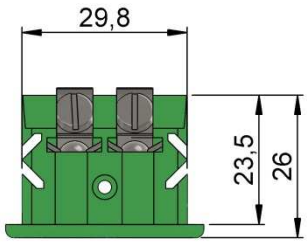
Example:

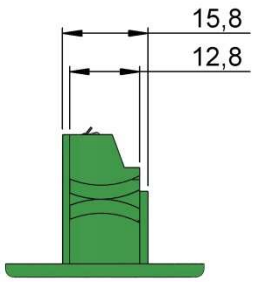
S – 200 – S – 01 – J – I: Standard-Panel-Insert, Thermocouple Type J (Fe-CuNi), black

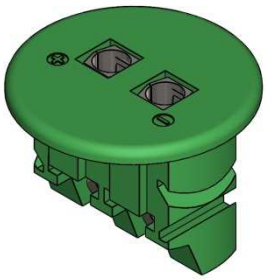
Standard Panel Insert
Rear fastening with assembly set

S – 220
Rev. 01 – 05/01









Technical Features:

Thermocouple (①):

Thermocouple	Plus	Minus	Norm
Type K	NiCr	NiAl	IEC 584
Type J	Fe	CuNi	IEC 584
Type L	Fe	CuNi	DIN 43710
Type T	Cu	CuNi	IEC 584
Type R/S	Cu	Cu11	IEC 584
Type E	NiCr	CuNi	IEC 584
Type N	NiCrSi	NiSi	IEC 584

Colour Coding (②):

Thermocouple	IEC	ANSI	DIN
Type K	green	yellow	green
Type J	black	black	–
Type L	–	–	blue
Type T	brown	blue	brown
Type R/S	orange	green	white
Type E	violet	violet	–
Type N	pink	orange	–

Additional versions on request

Body Material: break- and hitproof thermoplastic compound

Operating Temp.: permanent 200°C, temporarily up to 250°C

Contacts: Thermocouple Material,
Reverse polarity protected,
with springloaded contacts

Connection: Stainless Steel screws and stainless steel plates

Identification: indicators for polarity molded in body

Type: acc. to EN 50212

Fastening: assembly set or stainless steel clip

Panel Cutout: 30 x 16 mm or 30 mm round

Accessories:

Article	Datasheet
Assembly set	S – 290
Spring Set	S – 295

Ordering Code:

S – 220 – ① – ②
①: Thermocouple (K, J, L, T, R/S, E, N)
②: Colour Coding acc. to IEC, ANSI or DIN (I, A, D)

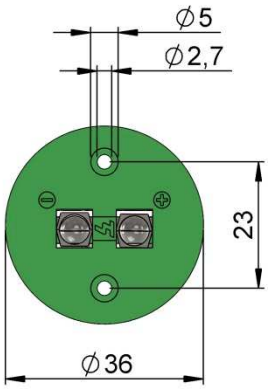
Example:

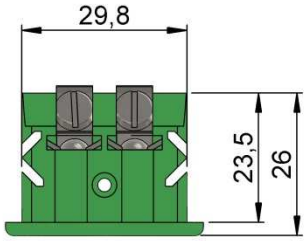
S – 220 – S – I: Standard Panel Insert, Thermocouple Type S (Cu-Cu11), orange

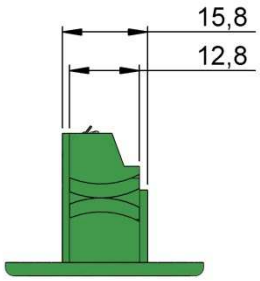
Standard Panel Insert

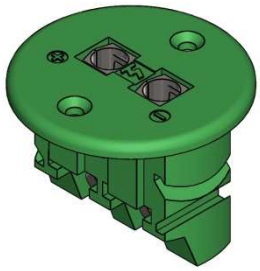
front fastening with screws or
rear fastening with assembly set

S – 225
Rev. 01 – 05/01









Technical Features:

Thermocouple (①):

Thermocouple	Plus	Minus	Norm
Type K	NiCr	NiAl	IEC 584
Type J	Fe	CuNi	IEC 584
Type L	Fe	CuNi	DIN 43710
Type T	Cu	CuNi	IEC 584
Type R/S	Cu	Cu11	IEC 584
Type E	NiCr	CuNi	IEC 584
Type N	NiCrSi	NiSi	IEC 584

Colour Coding (②):

Thermocouple	IEC	ANSI	DIN
Type K	green	yellow	green
Type J	black	black	–
Type L	–	–	blue
Type T	brown	blue	brown
Type R/S	orange	green	white
Type E	violet	violet	–
Type N	pink	orange	–

Additional versions on request

Body Material: break- and hitproof thermoplastic compound

Operating Temp.: permanent 200°C, temporarily up to 250°C

Contacts: Thermocouple Material,
Reverse polarity protected,
with springloaded contacts

Connection: Stainless Steel screws and stainless steel plates

Identification: indicators for polarity molded in body

Type: acc. to EN 50212

Fastening: screws or assembly set screws with lugs

Panel Cutout: 30 x 16 mm or 30 mm round

Ordering Code:

S – 225 – ① – ②
①: Thermocouple (K, J, L, T, R/S, E, N)
②: Colour Coding acc. to IEC, ANSI or DIN (I, A, D)

Example:

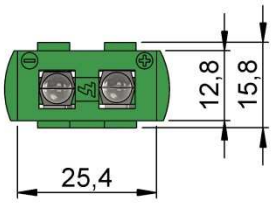
S – 225 – L – D: Standard-Panel-Insert, Thermopcouple Type L (Fe-CuNi), blue

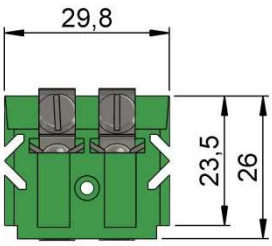
Standard Panel Insert

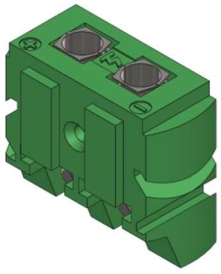
Basic insert, rear fastening with assembly set

S – 226

Rev. 01 – 05/01







Technical Features:

Thermocouple (①):

Thermocouple	Plus	Minus	Norm
Type K	NiCr	NiAl	IEC 584
Type J	Fe	CuNi	IEC 584
Type L	Fe	CuNi	DIN 43710
Type T	Cu	CuNi	IEC 584
Type R/S	Cu	Cu11	IEC 584
Type E	NiCr	CuNi	IEC 584
Type N	NiCrSi	NiSi	IEC 584

Colour Coding (②):

Thermocouple	IEC	ANSI	DIN
Type K	green	yellow	green
Type J	black	black	–
Type L	–	–	blue
Type T	brown	blue	brown
Type R/S	orange	green	white
Type E	violet	violet	–
Type N	pink	orange	–

Additional versions on request

Body Material: break- and hitproof thermoplastic compound

Operating Temp.: permanent 200°C, temporarily up to 250°C

Contacts: Thermocouple Material,
Reverse polarity protected,
with springloaded contacts

Connection: Stainless Steel screws and stainless steel plates

Identification: indicators for polarity molded in body

Type: acc. to EN 50212

Fastening: assembly set

Panel Cutout: 25.5 x 12.9 mm (H x B)

Accessories:

Article	Datasheet
Standard Assembly Set	S – 290
Assembly Set	S – 291

Ordering Code:

S – 226 – ① – ②

①: Thermocouple (K, J, L, T, R/S, E, N)

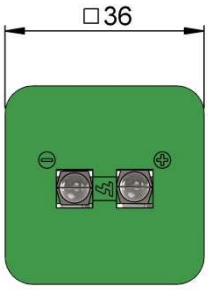
②: Colour Coding acc. to IEC, ANSI or DIN (I, A, D)

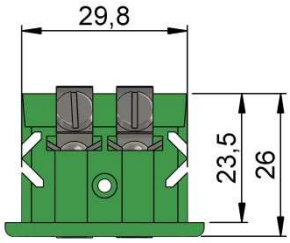
Example:

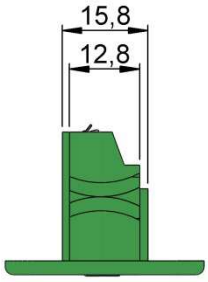
S – 226 – K – I: Standard Panel Insert, Thermocouple Type K (NiCr-NiAl), green

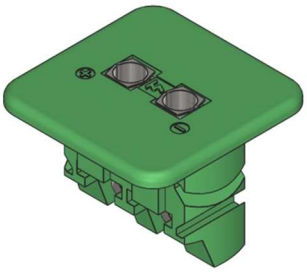
Standard Panel Insert
rear fastening with assembly set

S – 230
Rev. 01 – 05/01









Technical Features:

Thermocouple (①):

Thermocouple	Plus	Minus	Norm
Type K	NiCr	NiAl	IEC 584
Type J	Fe	CuNi	IEC 584
Type L	Fe	CuNi	DIN 43710
Type T	Cu	CuNi	IEC 584
Type R/S	Cu	Cu11	IEC 584
Type E	NiCr	CuNi	IEC 584
Type N	NiCrSi	NiSi	IEC 584

Colour Coding (②):

Thermocouple	IEC	ANSI	DIN
Type K	green	yellow	green
Type J	black	black	–
Type L	–	–	blue
Type T	brown	blue	brown
Type R/S	orange	green	white
Type E	violet	violet	–
Type N	pink	orange	–

Additional versions on request

Body Material: break- and hitproof thermoplastic compound

Operating Temp.: permanent 200°C, temporarily up to 250°C

Contacts: Thermocouple Material,
Reverse polarity protected,
with springloaded contacts

Connection: Stainless Steel screws and stainless steel plates

Identification: indicators for polarity molded in body

Type: acc. to EN 50212

Fastening: assembly set or clip

Panel Cutout: 30 x 16 mm or 30 mm round

Accessories:

Article	Datasheet
assembly set	S – 290
Spring Clip	S – 295

Ordering Code:

S – 230 – ① – ②
①: Thermocouple (K, J, L, T, R/S, E, N)
②: Colour Coding acc. to IEC, ANSI or DIN (I, A, D)

Example:

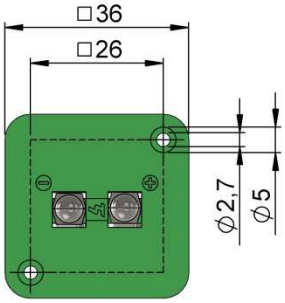
S – 230 – K – I: Standard-Panel-Insert, Thermocouple Type K (NiCr-NiAl), green

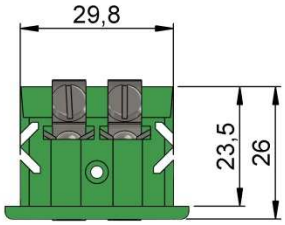
Standard Panel Insert

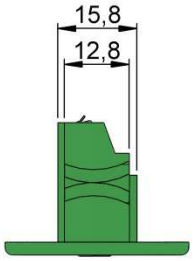
front fastening with screws or
rear fastening with assembly set

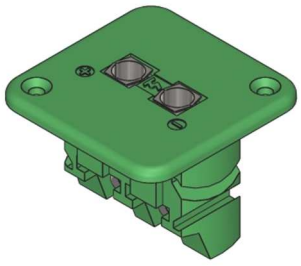
S – 235

Rev. 01 – 05/01









Technical Features:

Thermocouple (①):

Thermocouple	Plus	Minus	Norm
Type K	NiCr	NiAl	IEC 584
Type J	Fe	CuNi	IEC 584
Type L	Fe	CuNi	DIN 43710
Type T	Cu	CuNi	IEC 584
Type R/S	Cu	Cu11	IEC 584
Type E	NiCr	CuNi	IEC 584
Type N	NiCrSi	NiSi	IEC 584

Colour Coding (②):

Thermocouple	IEC	ANSI	DIN
Type K	green	yellow	green
Type J	black	black	–
Type L	–	–	blue
Type T	brown	blue	brown
Type R/S	orange	green	white
Type E	violet	violet	–
Type N	pink	orange	–

Additional versions on request

Body Material: break- and hitproof thermoplastic compound

Operating Temp.: permanent 200°C, temporarily up to 250°C

Contacts: Thermocouple Material,
Reverse polarity protected,
with springloaded contacts

Connection: Stainless Steel screws and stainless steel plates

Identification: indicators for polarity molded in body

Type: acc. to EN 50212

Fastening: screws on the front side

Panel Cutout: 30 x 16 mm or 30 mm round

Ordering Code:

S – 235 – ① – ②

①: Thermocouple (K, J, L, T, R/S, E, N)

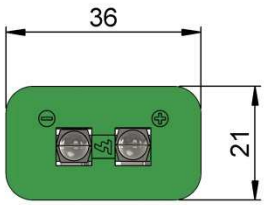
②: Colour Coding acc. to IEC, ANSI or DIN (I, A, D)

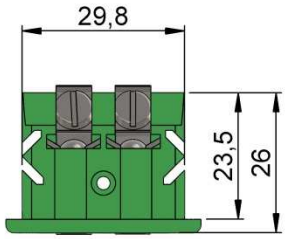
Example:

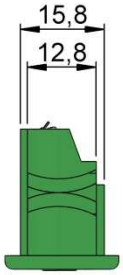
S – 235 – J – I: Standard-Panel-Insert, Thermocouple Type J (Fe-CuNi), black

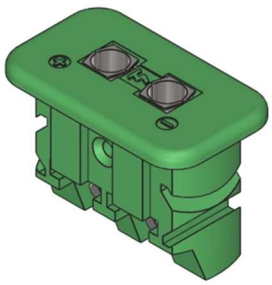
Standard Panel Insert
Rear fastening with assembly set

S – 240
Rev. 01 – 05/01









Technical Features:

Thermocouple (①):

Thermocouple	Plus	Minus	Norm
Type K	NiCr	NiAl	IEC 584
Type J	Fe	CuNi	IEC 584
Type L	Fe	CuNi	DIN 43710
Type T	Cu	CuNi	IEC 584
Type R/S	Cu	Cu11	IEC 584
Type E	NiCr	CuNi	IEC 584
Type N	NiCrSi	NiSi	IEC 584

Colour Coding (②):

Thermocouple	IEC	ANSI	DIN
Type K	green	yellow	green
Type J	black	black	–
Type L	–	–	blue
Type T	brown	blue	brown
Type R/S	orange	green	white
Type E	violet	violet	–
Type N	pink	orange	–

Additional versions on request

Body Material: break- and hitproof thermoplastic compound

Operating Temp.: permanent 200°C, temporarily up to 250°C

Contacts: Thermocouple Material,
Reverse polarity protected,
with springloaded contacts

Connection: Stainless Steel screws and stainless steel plates

Identification: indicators for polarity molded in body

Type: acc. to EN 50212

Fastening: assembly set or stainless steel clip

Panel Cutout: 30 x 16 mm

Accessories:

Article	Datasheet
Assembly set	S – 290
Spring Clip	S – 295

Ordering Code:

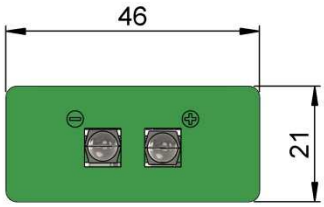
S – 240 – ① – ②
①: Thermocouple (K, J, L, T, R/S, E, N)
②: Colour Coding acc. to IEC, ANSI or DIN (I, A, D)

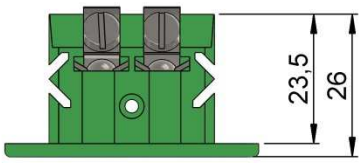
Example:

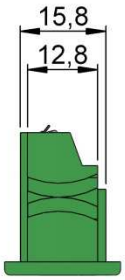
S – 240 – J – I: Standard-Panel-Insert, Thermocouple Type J (Fe-CuNi), black

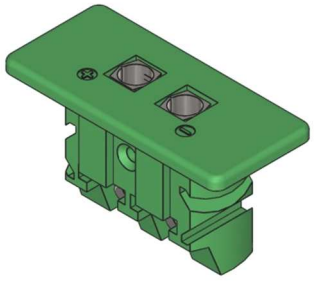
Standard Panel Insert
rear fastening with assembly set

S – 245
Rev. 01 – 05/01









Technical Features:

Thermocouple (①):

Thermocouple	Plus	Minus	Norm
Type K	NiCr	NiAl	IEC 584
Type J	Fe	CuNi	IEC 584
Type L	Fe	CuNi	DIN 43710
Type T	Cu	CuNi	IEC 584
Type R/S	Cu	Cu11	IEC 584
Type E	NiCr	CuNi	IEC 584
Type N	NiCrSi	NiSi	IEC 584

Colour Coding (②):

Thermocouple	IEC	ANSI	DIN
Type K	green	yellow	green
Type J	black	black	–
Type L	–	–	blue
Type T	brown	blue	brown
Type R/S	orange	green	white
Type E	violet	violet	–
Type N	pink	orange	–

Additional versions on request

Body Material: break- and hitproof thermoplastic compound

Operating Temp.: permanent 200°C, temporarily up to 250°C

Contacts: Thermocouple Material,
Reverse polarity protected,
with springloaded contacts

Connection: Stainless Steel screws and stainless steel plates

Identification: indicators for polarity molded in body

Type: acc. to EN 50212

Fastening: assembly set or stainless steel clip

Panel Cutout: 30 x 16 mm

Accessories:

Article	Datasheet
Assembly set	S – 290
Spring Clip	S – 295

Ordering Code:

S – 245 – ① – ②
①: Thermocouple (K, J, L, T, R/S, E, N)
②: Colour Coding acc. to IEC, ANSI or DIN (I, A, D)

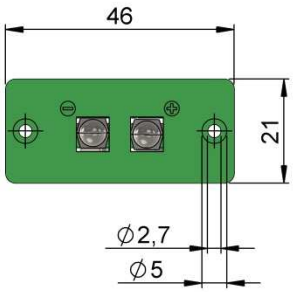
Example:

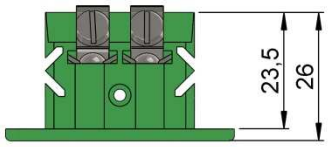
S – 245 – T – I: Standard-Panel-Insert, Thermocouple Type T (Cu-CuNi), brown

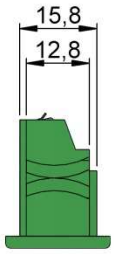
Standard Panel Insert

Front fastening with screws or
rear fastening with assembly set

S – 250
Rev. 01 – 05/01







Technical Features:

Thermocouple (①):

Thermocouple	Plus	Minus	Norm
Type K	NiCr	NiAl	IEC 584
Type J	Fe	CuNi	IEC 584
Type L	Fe	CuNi	DIN 43710
Type T	Cu	CuNi	IEC 584
Type R/S	Cu	Cu11	IEC 584
Type E	NiCr	CuNi	IEC 584
Type N	NiCrSi	NiSi	IEC 584

Colour Coding (②):

Thermocouple	IEC	ANSI	DIN
Type K	green	yellow	green
Type J	black	black	–
Type L	–	–	blue
Type T	brown	blue	brown
Type R/S	orange	green	white
Type E	violet	violet	–
Type N	pink	orange	–

Additional versions on request

Body Material: break- and hitproof thermoplastic compound

Operating Temp.: permanent 200°C, temporarily up to 250°C

Contacts: Thermocouple Material,
Reverse polarity protected,
with springloaded contacts

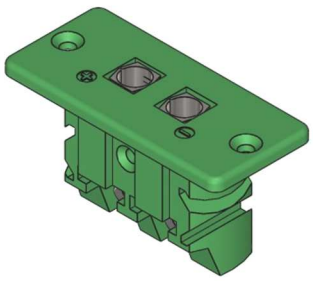
Connection: Stainless Steel screws and stainless steel plates

Identification: indicators for polarity molded in body

Type: acc. to EN 50212

Fastening: screws on frontside

Panel Cutout: 30 x 16 mm

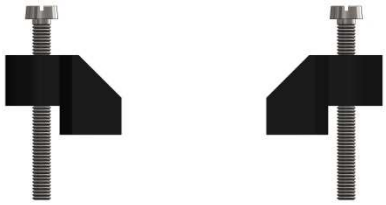


Ordering Code:

S – 250 – ① – ②
①: Thermocouple (K, J, L, T, R/S, E, N)
②: Colour Coding acc. to IEC, ANSI or DIN (I, A, D)

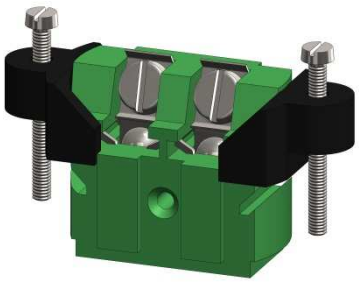
Example:

S – 250 – T – I: Standard-Panel-Insert, Thermocouple Type T (Cu-CuNi), brown



Technical Features:

Uilization:	For assembly of Standard-Panel-Inserts acc. to Datasheets S-225 to S-250.
	Dependent on the panel design, the set ist differently mounted:
	Frontfastening Panels are mounted by clamping the screw from behind against the aluminium sheet.
	For Panels Type S-226 the screws are guided through drill holes in the aluminium sheet and pull the panel from behind against the sheet
Material:	break- and hitproof thermoplastic compound
Steel Sheat Thickness:	Please specify



Ordering Code:
S – 290

Technical Features:

Uilization: For fastening of Miniature Panels Interts acc to Datasheet S-226.

Dependent on the number of Panel Inserts, the numbers of Blocks and Screws and the length of the Rod must be calculated.

The following table shows the combinations for the different multiple measuring circuits acc. to Datasheet S-200.

Type	Blocks (①)	Rods (②)
S-200-S-01-...	2 pieces	1 piece (30 mm)
S-200-S-06-...	3 pieces	1 piece (115 mm)
S-200-S-12-...	6 pieces	1 piece (225 mm)
S-200-S-24-...	12 pieces	2 pieces (225 mm each)
S-200-S-30-...	12 pieces	2 pieces (285 mm each)

Material: Brass, Stainless Steel

Steel Sheet Thickness: 2.5 mm

Ordering Code:

S – 291 – ① – ②
①: Number of Blocks
②: Number of Rods

Example:

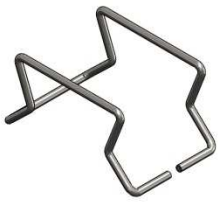
S – 291 – 12 – 2x285: Standard-Assembly Set for 30 circuit Panel Insert

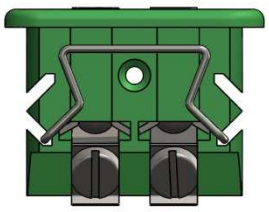
Spring Clip
Standard Edition

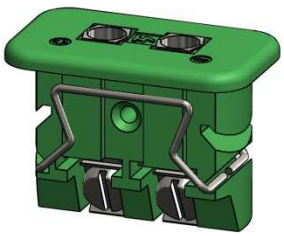
S – 295
Rev. 01 – 05/01

Technical Features:

Uilization:	For backside mounting of Standard Panel Inserts acc. to Datasheets S-225 and S-230 to S-250.
Material:	Stainless Steel
Steel Sheet Thickness:	2.5 mm



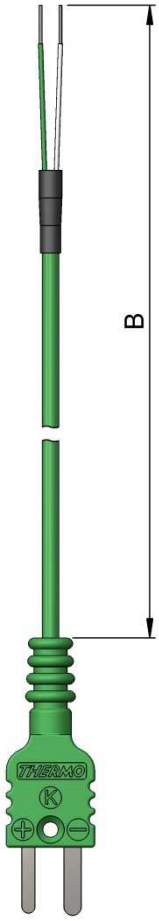




Ordering Code:
S – 295

Molded Connector
with Thermowire

S – 300
Rev. 01 – 05/01



Technical Features:

Thermocouple:	NiCr-NiAl, Type K acc. to IEC 584	
Tolerance:	acc. to DIN IEC 584, Part 2	
Jacket:	PVC	
Operating Temp.:	-15° C up to +105° C	
Connection:	similar to Miniature Plug acc. to Datasheet S-010	
Lead Wire:	PUR-insulated flexible Thermowire	
Wire Length (①):	Please specify	
Colour Coding (②):	Jack:	green acc. to IEC yellow acc. to ANSI
	Wire:	+ green, - white, Sheath black
	Additional versions on request	

Ordering Code:

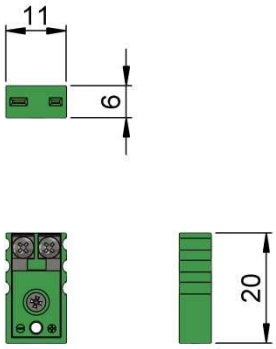
S – 300 – ① – ②
①: Lead Length in mm
②: Colour Coding acc. to IEC, ANSI or DIN (I, A, D)

Example:

S – 300 – 1500 – A: molded Connector, Lead Wire Length 1500 mm, yellow

Thermocouple Connector
Board mounting
Micro Edition

S – 610
Rev. 01 – 05/08



Technical Features:

Thermocouple (①):	Thermocouple	Plus	Minus	Norm
	Type K	NiCr	NiAl	IEC 584

Colour Coding (②):	Thermocouple	IEC	ANSI	DIN
	Type K	green	yellow	green

Body Material:	break- and hitproof thermoplastic compound
Operating Temp.:	permanent 200°C, temporarily up to 250°C
Contacts:	Thermocouple Material, Reverse polarity protected, with springloaded contacts
Connection:	Stainless Steel screws and stainless steel plates
Identification:	indicators for polarity molded in body
Fastening:	by means of screws

Ordering Code:

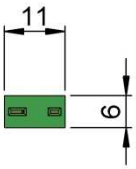
S – 610 – ① – ②
①: Thermocouple (K)
②: Colour Coding, green acc. to IEC (I)

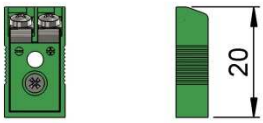
Example:

S – 610 – K – I: Micro-Panel-Insert, Thermocouple Type K (NiCr-Ni), green

Micro Panel Insert

S – 626
Rev. 01 – 05/08





Technical Features:

Thermocouple (①):	Thermocouple	Plus	Minus	Norm
	Type K	NiCr	NiAl	IEC 584
Colour Coding (②):	Thermocouple	IEC	ANSI	DIN
	Type K	green	yellow	green
Body Material:	break- and hitproof thermoplastic compound			
Operating Temp.:	permanent 200°C, temporarily up to 250°C			
Contacts:	Thermocouple Material, Reverse polarity protected, with springloaded contacts			
Connection:	Stainless Steel screws and stainless steel plates			
Identification:	indicators for polarity molded in body			

Ordering Code:

S – 626 – ① – ②
①: Thermocouple (K)
②: Colour Coding, green acc. to IEC (I)

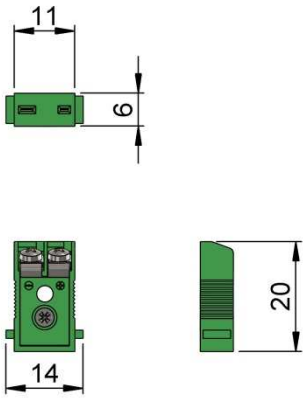
Example:

S – 626 – K – I: Mikro-Panel-Insert Thermocouple Type K (NiCr-Ni), green

Micro Panel Insert

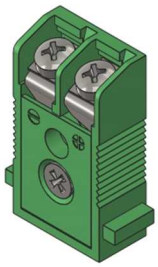
S – 640

Rev. 01 – 05/08



Technical Features:

Thermocouple (①):	Thermocouple	Plus	Minus	Norm
	Type K	NiCr	NiAl	IEC 584
Colour Coding (②):	Thermocouple	IEC	ANSI	DIN
	Type K	green	yellow	green
Body Material:	break- and hitproof thermoplastic compound			
Operating Temp.:	permanent 200°C, temporarily up to 250°C			
Contacts:	Thermocouple Material, Reverse polarity protected, with springloaded contacts			
Connection:	Stainless Steel screws and stainless steel plates			
Identification:	indicators for polarity molded in body			



Ordering Code:

S – 640 – ① – ②

①: Thermocouple (K)

②: Colour Coding, green acc. to IEC (I)

Example:

S – 640 – K – I: Mikro-Panel-Insert, Thermocouple Type K (NiCr-Ni), green

1 Digital-Thermometer TM 100 Type K

1.1 Description

The TM 100 K is a measuring device for the determination of temperatures within the range of 200°C up to +1350°C. It is built into an aluminium die cast housing and shows a socket for the connection of thermos sensors.

1.2 Warranty

Opening the device by unauthorized users will lead to the loss of warranty. Futhermore, the only device allowed for recharging the battery is the one supplied with the instrument.

1.3 In-built battery

The measuring device is powered by an in-built batterym which allows the use oft he instrument for about 40 hours. This battery can be recharged by the applicable device supplied with the instrument by connecting it tot he socket at the bottom oft he instrument. For the protection of the instrument the ambient temperature should not exeed 30°C and the humidity should not exeed 80 percent when recharging the battery.

As soon as the battery is down to 10 percent, the instrument shuts off automatically about six sconds after it is switched on. This is long enough for performing one measuring, but it also indicates that the battery is low.

1.4 Connecting the Sensor

The various temperatur sensors are applied into the socket at the top of the instrument. The display will show "OPEN" when there is no sensor connected to the instrument or if the sensor should be defect.

1.5 Using the Instrument

The instrument is switched on and off by pressing the button labeled "On / Off". When switching it on, this button must be held down until the display shows "S". Thereafter the instrument is ready for measuring.

1.6 Safety Requirements

The sensor must not be touched by items being connected to voltage!

The instrument shouldnot be exposed to high-frequency electromagnetic oscillations.

Otherwise the measuring could be wrong or even the instrument could suffer from internal damage.

Further more the instrument should not be kept in temperatures below the freezing point (e.g. refriginator), because the electronical components inside the instrument are very sensitive against low temperatures.

1.7 Leaving the Range

As Long as the instrument is used for measuring temperatures outside the range of -200°C to +1350°C the display shows "OPEN".

1.8 Technical Data

Temperature Range:	-200ºC bis +1350ºC
Response Time:	approx. 0,5 s
Accuracy:	±0,1ºC
Resolution:	0,1ºC
Operating Temperature:	+5ºC bis +45ºC
Dimensions:	approx. 175 · 80 · 40 mm
Power Suplly:	In-built Battery, Power Device

Fe/CuNi, Type L, acc. to DIN 43710

Basic values from -200°C up to 750°C in steps of 10°C, details in mV

°C	0	10	20	30	40	50	60	70	80	90
-200	-8,15									
-100	-4,75									
0	0,000	0,52	1,05	1,58	2,11	2,65	3,19	3,73	4,27	4,82
100	5,37	5,92	6,47	7,03	7,59	8,15	8,71	9,27	9,83	10,39
200	10,95	11,51	12,07	12,63	13,19	13,75	14,31	14,88	15,44	16,00
300	16,56	17,12	17,68	18,24	18,80	19,36	19,92	20,48	21,04	21,60
400	22,16	22,72	23,29	23,86	24,43	25,00	25,57	26,14	26,71	27,28
500	27,85	28,43	29,01	29,59	30,17	30,75	31,33	31,91	32,49	33,08
600	33,67	34,26	34,85	35,44	36,04	36,64	37,25	37,85	38,47	39,09
700	39,72	40,35	40,98	41,62	42,27	42,92				

Fe/CuNi, Type J, acc. to DIN IEC 584-1

Basic values from -200°C up to 750°C in steps of 10°C, details in mV

°C	0	10	20	30	40	50	60	70	80	90
-200	-7,890									
-100	-4,632									
0	0,000	0,507	1,019	1,536	2,058	2,585	3,115	3,649	4,186	4,725
100	5,268	5,812	6,359	6,907	7,457	8,008	8,560	9,113	9,667	10,222
200	10,777	11,332	11,887	12,442	12,998	13,553	14,108	14,663	15,217	15,771
300	16,325	16,879	17,432	17,984	18,537	19,089	19,640	20,192	20,743	21,295
400	21,846	22,397	22,949	23,501	24,054	24,607	25,161	25,716	26,272	26,829
500	27,388	27,949	28,511	29,075	29,642	30,210	30,782	31,356	31,933	32,513
600	33,096	33,683	34,273	34,867	35,464	36,066	36,671	37,280	37,893	38,510
700	39,130	39,754	40,382	41,013	41,647	42,283				

NiCr/Ni Type K, acc. to DIN IEC 584-1

Basic values from -200°C up to 1370°C in steps of 10°C, details in mV

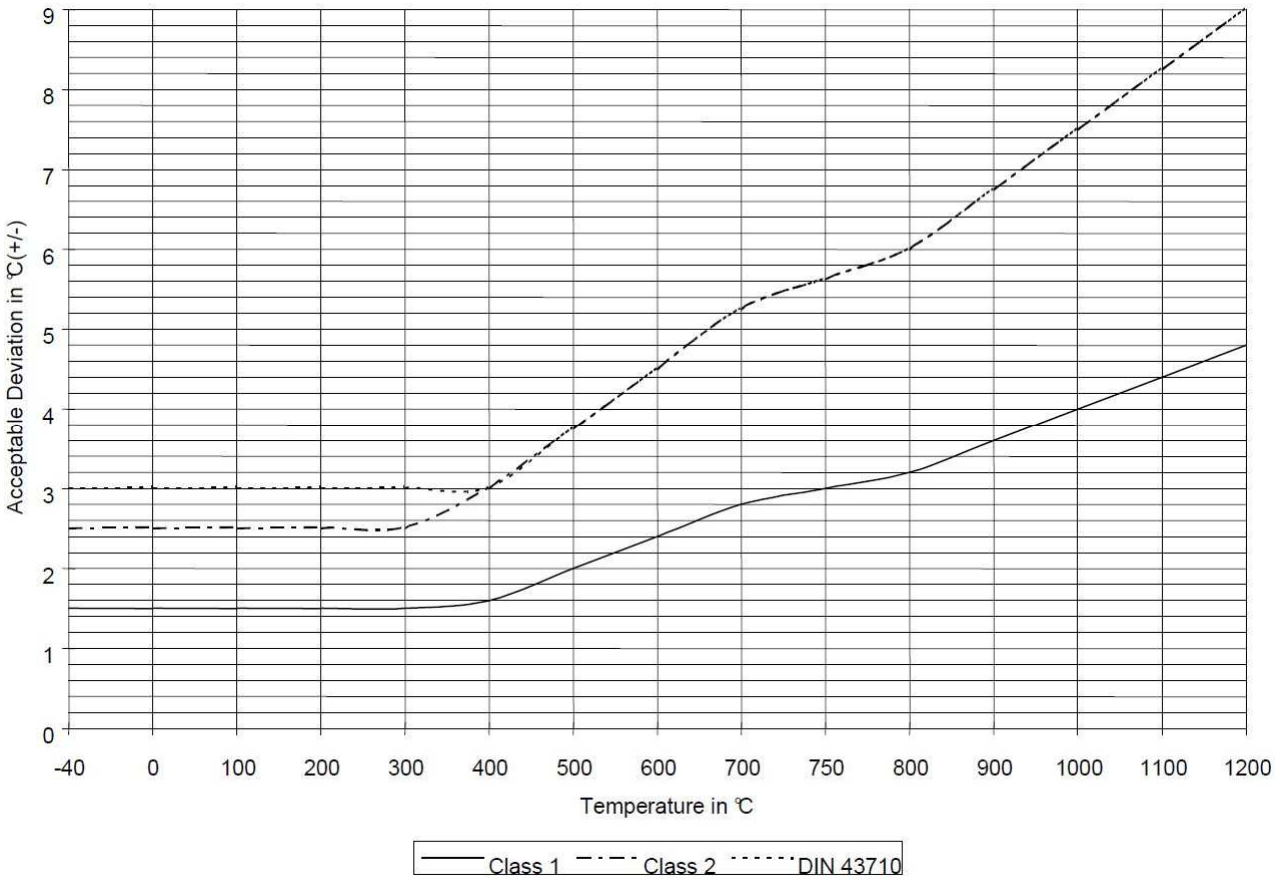
°C	0	10	20	30	40	50	60	70	80	90
-200	-5,891									
-100	-3,553									
0	0,000	0,397	0,798	1,203	1,611	2,022	2,436	2,850	3,266	3,681
100	4,095	4,508	4,919	5,327	5,733	6,137	6,539	6,939	7,338	7,737
200	8,137	8,537	8,938	9,341	9,745	10,151	10,560	10,969	11,381	11,793
300	12,207	12,623	13,039	13,456	13,874	14,292	14,712	15,132	15,552	15,974
400	16,395	16,818	17,241	17,664	18,088	18,513	18,938	19,363	19,788	20,214
500	20,640	21,066	21,493	21,919	22,346	22,772	23,198	23,624	24,050	24,476
600	24,902	25,327	25,751	26,176	26,599	27,022	27,445	27,867	28,288	28,709
700	29,128	29,547	29,965	30,383	30,799	31,214	31,629	32,042	32,455	32,866
800	33,277	33,686	34,095	34,502	34,909	35,314	35,718	36,121	36,524	36,925
900	37,325	37,724	38,122	38,519	38,915	39,310	39,703	40,096	40,488	40,879
1000	41,269	41,657	42,045	42,432	42,817	43,202	43,585	43,968	44,349	44,729
1100	45,108	45,486	45,863	46,238	46,612	46,985	47,356	47,726	48,095	48,462
1200	48,828	49,192	49,555	49,916	50,276	50,633	50,990	51,344	51,697	52,049
1300	52,398	52,747	53,093	53,439	54,125	54,125	54,466	54,807		

Thermocouples acc. to DIN IEC 584

Type	Temperature Range in °C	Tolerance
Class 1		
NiCr/Ni, K	-40 up to 1000	± 1,5°C or ± 0,004 • t
Fe/CuNi, J	-40 up to 750	± 1,5°C or ± 0,004 • t
Class 2		
NiCr/Ni, K	-40 up to 1200	± 2,5°C or ± 0,0075 • t
Fe/CuNi, J	-40 up to 750	± 2,5°C or ± 0,0075 • t
Class 3		
NiCr/Ni, K	-200 up to 40	± 2,5°C or ± 0,015 • t

Thermocouples acc. to DIN 43710

Type	Temperature Range in °C	Tolerance
Fe/CuNi, L	0 up to 900	± 3,0°C or ± 0,0075 • t



Basic Values for Resistance-Sensors

PT100

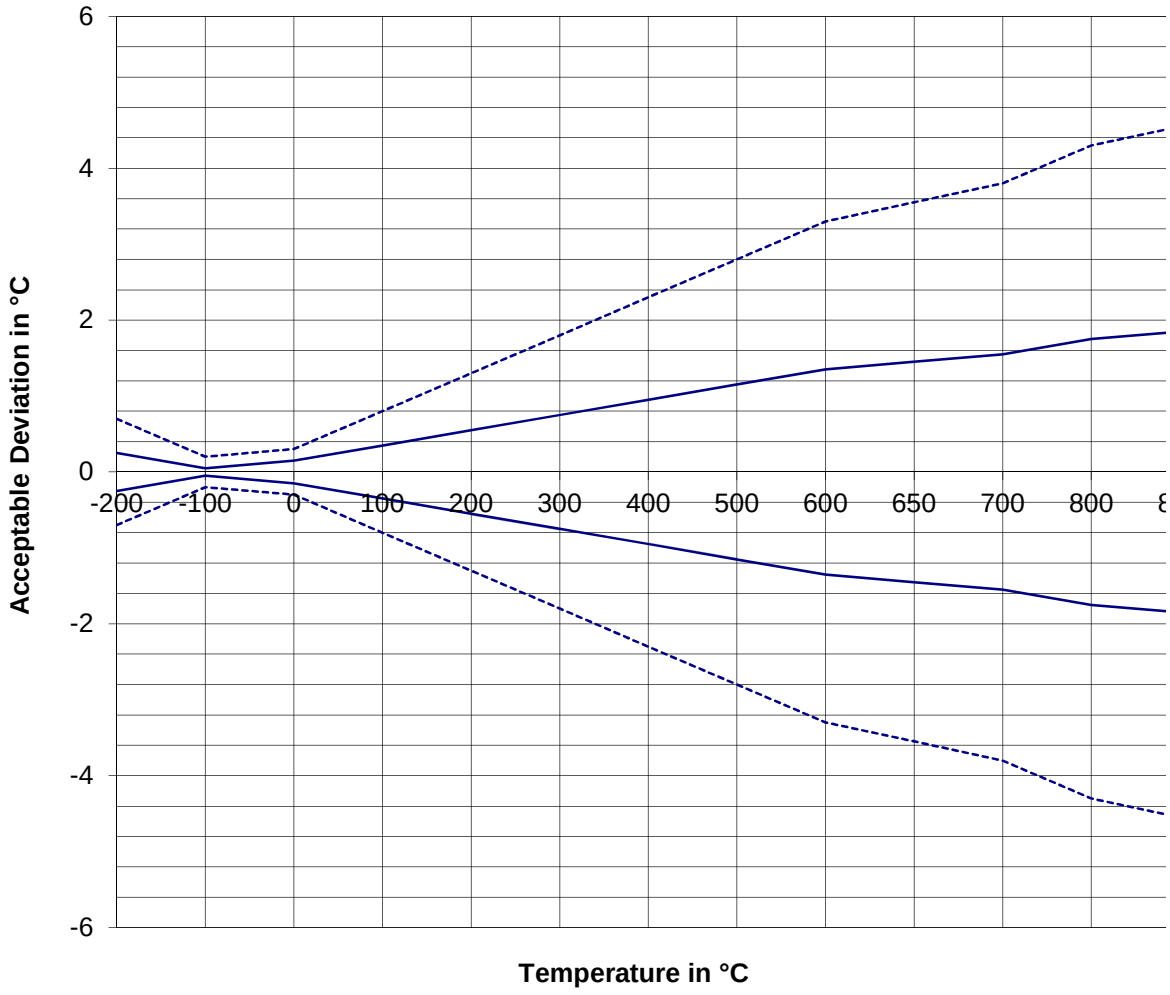
0°C to 400°C

Basic Values from 0°C up to 400°C in steps of 1°C, details in Ω

°C	0	1	2	3	4	5	6	7	8	9
0	100,00	100,39	100,78	101,17	101,56	101,95	102,34	102,73	103,12	103,51
10	103,90	104,29	104,68	105,07	105,46	105,85	106,24	106,63	107,02	107,40
20	107,79	108,18	108,57	108,96	109,35	109,73	110,12	110,51	110,90	111,28
30	111,67	112,06	112,45	112,83	113,22	113,61	113,99	114,38	114,77	115,15
40	115,54	115,93	116,31	116,70	117,08	117,47	117,85	118,24	118,62	119,01
50	119,40	119,78	120,16	120,55	120,93	121,32	121,70	122,09	122,47	122,86
60	123,24	123,62	124,01	124,39	124,77	125,16	125,54	125,92	126,31	126,69
70	127,07	127,45	127,84	128,22	128,60	128,98	129,37	129,75	130,13	130,51
80	130,89	131,27	131,66	132,04	132,42	132,80	133,18	133,56	133,94	134,32
90	134,70	135,08	135,46	135,84	136,22	136,60	136,98	137,36	137,74	138,12
100	138,50	138,88	139,26	139,64	140,02	140,39	140,77	141,15	141,53	141,91
110	142,29	142,66	143,04	143,42	143,80	144,17	144,55	144,93	145,31	145,68
120	146,06	146,44	146,81	147,19	147,57	147,94	148,32	148,70	149,07	149,45
130	149,82	150,20	150,57	150,95	151,33	151,70	152,08	152,45	152,83	153,20
140	153,58	153,95	154,32	154,70	155,07	155,45	155,82	156,19	156,57	156,94
150	157,31	157,69	158,06	158,43	158,81	159,18	159,55	159,93	160,30	160,67
160	161,04	161,42	161,79	162,16	162,53	162,90	163,27	163,65	164,02	164,39
170	164,76	165,13	165,50	165,87	166,24	166,61	166,98	167,35	167,72	168,09
180	168,46	168,83	169,20	169,57	169,94	170,31	170,68	171,05	171,42	171,79
190	172,16	172,53	172,90	173,26	173,63	174,00	174,37	174,74	175,10	175,47
200	175,84	176,21	176,57	176,94	177,31	177,68	178,04	178,41	178,78	179,14
210	179,51	179,88	180,24	180,61	180,97	181,34	181,71	182,07	182,44	182,80
220	183,17	183,53	183,90	184,26	184,63	184,99	185,36	185,72	186,09	186,45
230	186,82	187,18	187,54	187,91	188,27	188,63	189,00	189,36	189,72	190,09
240	190,45	190,81	191,18	191,54	191,90	192,26	192,63	192,99	193,35	193,71
250	194,07	194,44	194,80	195,16	195,52	195,88	196,24	196,60	196,96	197,33
260	197,69	198,05	198,41	198,77	199,13	199,49	199,85	200,21	200,57	200,93
270	201,29	201,65	202,01	202,36	202,72	203,08	203,44	203,80	204,16	204,52
280	204,88	205,23	205,59	205,95	206,31	206,67	207,02	207,38	207,74	208,10
290	208,45	208,81	209,17	209,52	209,88	210,24	210,59	210,95	211,31	211,66
300	212,02	212,37	212,73	213,09	213,44	213,80	214,15	214,51	214,86	215,22
310	215,57	215,93	216,28	216,64	216,99	217,35	217,70	218,05	218,41	218,76
320	219,12	219,47	219,82	220,18	220,53	220,88	221,24	221,59	221,94	222,29
330	222,65	223,00	223,35	223,70	224,06	224,41	224,76	225,11	225,46	225,81
340	226,17	226,52	226,87	227,22	227,57	227,92	228,27	228,62	228,97	229,32
350	229,67	230,02	230,37	230,72	231,07	231,42	231,77	232,12	232,47	232,82
360	233,17	233,52	233,87	234,22	234,56	234,91	235,26	235,61	235,96	236,31
370	236,65	237,00	237,35	237,70	238,04	238,39	238,74	239,09	239,43	239,78
380	240,13	240,47	240,82	241,17	241,51	241,86	242,20	242,55	242,90	243,24
390	243,59	243,93	244,28	244,62	244,97	245,31	245,66	246,00	246,35	246,69
400	247,04									

Basic Values from 400°C up to 800°C in Steps of 1°C, details in Ω

°C	0	1	2	3	4	5	6	7	8	9
400	247,04	247,38	247,73	248,07	248,41	248,76	249,10	249,45	249,79	250,13
410	250,48	250,82	251,16	251,50	251,85	252,19	252,53	252,88	253,22	253,56
420	253,90	254,24	254,59	254,93	255,27	255,61	255,95	256,29	256,64	256,98
430	257,32	257,66	258,00	258,34	258,68	259,02	259,36	259,70	260,04	260,38
440	260,72	261,06	261,40	261,74	262,08	262,42	262,76	263,10	263,43	263,77
450	264,11	264,45	264,79	265,13	265,47	265,80	266,14	266,48	266,82	267,15
460	267,49	267,83	268,17	268,50	268,84	269,18	269,51	269,85	270,19	270,52
470	270,86	271,20	271,53	271,87	272,20	272,54	272,88	273,21	273,55	273,88
480	274,22	274,55	274,89	275,22	275,66	275,89	276,23	276,56	276,89	277,23
490	277,56	277,90	278,23	278,56	278,90	279,23	279,56	279,90	280,23	280,56
500	280,90	281,23	281,56	281,89	282,23	282,56	282,89	283,22	283,55	283,89
510	284,22	284,55	284,88	285,21	285,54	285,87	286,21	286,54	286,87	287,20
520	287,53	287,86	288,19	288,52	288,85	289,18	289,51	289,84	290,17	290,50
530	290,83	291,16	291,49	291,81	292,14	292,47	292,80	293,13	293,46	293,79
540	294,11	294,44	294,77	295,10	295,43	295,75	296,08	296,41	296,74	297,06
550	297,39	297,72	298,04	298,37	298,70	299,02	299,35	299,68	300,00	300,33
560	300,65	300,98	301,31	301,63	301,96	302,28	302,61	302,93	303,26	303,58
570	303,91	304,23	304,56	304,88	305,20	305,53	305,85	306,18	306,50	306,82
580	307,15	307,47	307,79	308,12	308,44	308,76	309,09	309,41	309,73	310,05
590	310,38	310,70	311,02	311,34	311,67	311,99	312,31	312,63	312,95	313,27
600	313,59	313,92	314,24	314,56	314,88	315,20	315,52	315,84	316,16	316,48
610	316,80	317,12	317,44	317,76	318,08	318,40	318,72	319,04	319,36	319,68
620	319,99	320,31	320,63	320,95	321,27	321,59	321,91	322,22	322,54	322,86
630	323,18	323,49	323,81	324,13	324,45	324,76	325,08	325,40	325,72	326,03
640	326,35	326,66	326,98	327,30	327,61	327,93	328,25	328,56	328,88	329,19
650	329,51	329,82	330,14	330,45	330,77	331,08	331,40	331,71	332,03	332,34
660	332,66	332,97	333,28	333,60	333,91	334,23	334,54	334,85	335,17	335,48
670	335,79	336,11	336,42	336,73	337,04	337,36	337,67	337,98	338,29	338,61
680	338,92	339,23	339,54	339,85	340,16	340,48	340,79	341,10	341,41	341,72
690	342,03	342,34	342,65	342,96	343,27	343,58	343,89	344,20	344,51	344,82
700	345,13	345,44	345,75	346,06	346,37	346,68	346,99	347,30	347,60	347,91
710	348,22	348,53	348,84	349,15	349,45	349,76	350,07	350,38	350,69	350,99
720	351,30	351,61	351,91	352,22	352,53	352,83	353,14	353,45	353,75	354,06
730	354,37	354,67	354,98	355,28	355,59	355,90	356,20	356,51	356,81	357,12
740	357,42	357,73	358,03	358,34	358,64	358,95	359,25	359,55	359,86	360,16
750	360,47	360,77	361,07	361,38	361,68	361,98	362,29	362,59	362,89	363,19
760	363,50	363,80	364,10	364,40	364,71	365,01	365,31	365,61	365,91	366,22
770	366,52	366,82	367,12	367,42	367,72	368,02	368,32	368,63	368,93	369,23
780	369,53	369,83	370,13	370,43	370,73	371,03	371,33	371,63	371,93	372,22
790	372,52	372,82	373,12	373,42	373,72	374,02	374,32	374,61	374,91	375,21
800	375,51	375,81	376,10	376,40	376,70	377,00	377,29	377,59	377,89	378,19

Tolerances for Resistance-Sensors
PT100
acc. to DIN IEC 751

Temp. in °C	Acceptable Deviation Class A Ω	Class A °C	Class B Ω	Class B °C
-200	± 0,24	± 0,55	± 0,56	± 1,3
-100	± 0,14	± 0,35	± 0,32	± 0,8
0	± 0,06	± 0,15	± 0,12	± 0,3
100	± 0,13	± 0,35	± 0,30	± 0,8
200	± 0,20	± 0,55	± 0,48	± 1,3
300	± 0,27	± 0,75	± 0,64	± 1,8
400	± 0,33	± 0,95	± 0,79	± 2,3
500	± 0,38	± 1,15	± 0,93	± 2,8
600	± 0,43	± 1,35	± 1,06	± 3,3
650	± 0,46	± 1,45	± 1,13	± 3,6
700			± 1,17	± 3,8
800			±1,28	± 4,3
850			± 1,34	± 4,6