

SENSITHERM S.r.l.

Thermocouple extension and compensating cables
Multipairs screened, armoured cables ENI 0163.00



Type PVC/PVC/SWA/PVC - PVC/OS/PVC/SWA/PVC - PVC/IS/OS/PVC/SWA/PVC
FR2XORFR - FR2XOHRFR - FR2XHOHRFR

Conductor

Solid conductor of thermocouple material to following table

- 16 AWG (1,29 mm) for single pair
- 20 AWG (0,81 mm) for multipairs

Insulation

PVC type R2 according to CEI 20-11

Identification pairs : colour code according to ANSI MC 96.1

Laying up

Core twisted to pairs ; Pairs twisted in concentric layers

Individual screen

Each pair shall have a laminated screening tape of aluminium bonded to polyester, white copper tinned drain wire in electrical contact with the metallic side tape. Over the screening tape shall be applied a binder of PET tape.

Overall screen

Over the pair layer will be shielded with aluminium/mylar tape, with copper drain wire 20 AWG placed between the aluminium/mylar tape and further mylar tape.

Inner sheath

PVC type RZ according to CEI 20-11

Armour

Galvanized steel wires or braid

Outer sheath

PVC type RZ according to CEI 20-11, Hydrocarbon Resistant.

Colour code acc. to ANSI MC 96.1

Marking

On the outer sheath " manufacturer's name, year, description cable, CEI 20-22 II, ENI Code " with ink-jet printer.

Performance

Reaction to fire - Flame propagation : a) Test of single cable acc. to CEI 20-35/1-1
b) Test on bunched cable acc. to CEI 20-22/3-2

Minimum bending radius

10 times overall diameter

Technical data & Electrical properties

Thermocouple Type	Wires for Thermocouples		Cable Type	Temperature range	Tolerances Class 2 IEC 60584-3	Colouring ANSI MC 96.1		
	Positive	Negative				Jacket	Positive	Negative
T	Cu	CuNi	TX	- 25 to + 100° C	± 60 µV ± 1,0°C	Blue	Blue	Red
J	Fe	CuNi	JX	- 25 to + 200° C	± 140 µV ± 2,5°C	Black	White	Red
E	NiCr	CuNi	EX	- 25 to + 200° C	± 200 µV ± 2,5°C	Purple	Purple	Red
K	NiCr	Ni	KX	- 25 to + 200° C	± 100 µV ± 2,5°C	Yellow	Yellow	Red
S	PtRh 10	Pt	SX	- 25 to + 200° C	± 30 µV ± 2,5°C	Green	Black	Red

For Intrinsically Safe installations (AD-I), the insulation material is Polyethylene ;
The colour of jacket is light blue marked by a colour strip of thermocouple.

Temperature rating : - during operation - 40 + 70°C
- during installation - 5 + 50°C

Insulation resistance : > 100 Mohm x Km

Mutual capacitance : < 0,14 µF/Km

Inductance : < 4 mH/Km

Rated voltage : U/U₀ = 300/300 V (Insulation degree 1,5) Test voltage - core/core : 1.500 V

Rated voltage : U/U₀ = 450/750 V (Insulation degree 3) Test voltage - core/core : 3.000 V

Test voltage - core/shield : 1.000 V

Test voltage - adjacent shield : 125 V