



THERMOCOUPLE CABLES

Multipair Individual and Overall Screen, Armoured and with Hi-Pack protection

XLPE/IS/OS/HIPK/SWA/LSZH

APPLICATIONS

This is an alternative to lead sheathed cables and can be used in cable tray, conduit or direct burial to connect different types of thermocouple in industrial process controls. This protection has lower weight and smaller diameter compared to lead sheath. Excellent protection against corrosion, humidity, in petrochemical plants.

OPERATING TEMPERATURE

-20 °C to +80 °C (for general use); -40 °C to +90 °C (on request).

MINIMUM BENDING RADIUS

20 times the outer diameter.

CABLE CONSTRUCTION

Conductors Solid alloy.

Calibration ANSI MC 96.1 or IEC 60584-3.

Insulation PVC, PE, XLPE or LSZH thermoplastic material.

Twisting The insulated cores shall be twisted in pairs for a good reduction of the electromagnetic noise.

Individual screen Aluminium/polyester tape, coverage >100%, aluminium in contact with tinned copper drain wire.

Cabling The screened pairs are cabled with suitable non hygroscopic fillers (when necessary) and wrapped with polyester tape if required.

Overall screen Aluminium/polyester tape, coverage >100%, aluminium in contact with tinned copper drain wire.

Hi-Pack protection Aluminium tape coated with a protective plastic coating, longitudinally applied, bonded to black extruded bedding of High Density Polyethylene compound plus an additional Polyamide-Polypropylene special thermoplastic alloy.

Armour Single layer of galvanized steel wires (SWA).

Outer sheath PVC or LSZH thermoplastic material.

APPLICABLE STANDARDS

Basic design EN 50228-7

Flame retardant IEC 60332-1

Halogen free properties (only for LSZH cables) IEC 60754-1

Low smoke emission (only for LSZH cables) IEC 61034-2

EN 50228-7 (300 V)

Cross section (AWG)	Diameter under armour (mm)	Outer diameter (mm)	Weight (kg/km)
20 AWG solid			
U-XLPE/IS/OS/HIPK/SWA/LSZH			
1x2x20	5,7	10,6	358
2x2x20	8,6	13,8	609
4x2x20	10,0	15,1	744
6x2x20	11,8	17,1	1099
12x2x20	15,7	21,2	1487
16x2x20	17,4	23,8	2149
24x2x20	21,8	28,3	2718
18 AWG solid			
U-XLPE/IS/OS/HIPK/SWA/LSZH			
1x2x18	6,5	12,2	416
2x2x18	10,0	15,9	698
4x2x18	11,5	17,7	1076
6x2x18	13,9	20,0	1299
12x2x18	18,4	24,9	2190
16x2x18	20,5	27,1	2594
24x2x18	25,5	32,5	3422
16 AWG solid			
U-XLPE/IS/OS/HIPK/SWA/LSZH			
1x2x16	7,6	13,4	467
2x2x16	12,0	18,1	780
4x2x16	14,1	20,3	1224
6x2x16	16,9	23,3	1503
12x2x16	22,7	29,3	2468
16x2x16	25,3	32,1	3160
24x2x16	31,8	39,8	4394

approximate values

Electrical Characteristics			
Cross section (AWG)	20	18	16
Capacitance (pF/m)	≤150	≤150	≤150
L/R (μH/Ohm)	≤25	≤25	≤25