



Electrical Surface Instrument Cable

Surface instrumentation cable is a 600 volt, 18 AWG shielded twisted pair instrumentation cable with XLPE insulation. It is used for electrical power connection and signal communication from the well head outlet to the surface instrument system. Approved for Class I, Zone 1 locations.



Applications

Gardex® FieldBus is a completely self-contained fieldbus communication cable for use in harsh environments. Gardex FieldBus is flexible and its impervious armor prevents the entrance of water, gas and corrosive elements into the electrical core. It may be installed in tray, duct, conduit, self-supported or direct burial applications.

Specifications

General	
Wire size (AWG)	18
Number of pairs	1 (multi-pair available)
Inner jacket thickness, in. (mm)	0.04 (1.02)
Armor thickness, in. (mm)	0.025 (0.64)
Armor diameter, in. (mm)	0.54 (13.7)
Outer jacket thickness, in. (mm)	0.05 (1.27)
Nominal overall diameter, in. (mm)	0.65 (16.51)
Approximate net weight, lb. per 1000 ft. (kg per 1000 m)	182 (597)
Temperature rating, °F (°C)	-94 to 194 (-70 to 90)
Insulation, °F (°C)	Passes ASTM D 746-04 brittleness temperature impact test at -103 (-75) Passes MIL-C-13777 cold bend test at -85 (-65)
UL listed	NEC Type MC, UL 1569 NEC Type MC-HL, UL 2225
UL approved and marked	FT-4 designation (flame test) -40°F (-40°C) meeting cold impact requirement of CSAC22.2 No. 0.3
Construction	
Conductor	18 AWG, 7 strand annealed tin copper, Class B strand per ASTM B-8 and B-33
Insulation	Cross-linked polyethylene (XLPE)
Shielded pair	Twisted with tin copper drain wire and aluminum foil shield
Shielded pair jacket	Flame retardant black ARCTIC Grade PVC
PVC armor	Continuously welded and corrugated aluminum
Electrical	
Impedance	100 Ohms
Mutual capacitance, pf per ft (pf per m)	17 (55.8)
Inductance	0.17 µH/ft (.56 µH/m)
Conductor resistance, 68°F (20°C)	7.34 Ohms per 1000 ft (24.1 Ohms per 1000 m)

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