

# DIGITAL COMMUNICATION

## FIELDBUS

### Foundation Fieldbus Cables



FOUNDATION

A Foundation Fieldbus Network is a digital, bidirectional, multi-drop communication link for multiple intelligent field devices and automation systems at a communications rate of 31.25 kB/s. Depending mainly on the current requirement of each device, up to 32 sensors and actuators are possible on a fieldbus link with a maximum transmission distance of 1900m. Fieldbus is the process industry digital replacement for analog 4-20 mA transmission of process variables.

### Applications

- SA SP-50 and Fieldbus spec. IEC 61158-2
- CSA C22.2 NO. 230, Tray Cables (TC)
- CSA C22.2 NO. 174, Cables and Cable Glands for Use in Hazardous Locations
- CSA C22.2 NO. 239, Control and Instrumentation Cables (ACIC)
- CSA FT4, UL 1685, Vertical Tray Flame Test rated
- IEEE 383 & 1202 (70,000 BTU/hr), Vertical Flame Test rated
- ICEA T-30-520 (70,000 BTU/hr), Vertical Flame Test rated
- UL 2250, Instrumentation Tray Cables (ITC-ER)
- UL 13, Power Limited Tray Cables (PLTC-ER)
- UL 1277, Tray Cables (TC-ER)
- UL 1569, Metal Clad Cables (MC)
- Direct burial rated
- UV sunlight resistant "SUN RES" (all colours)
- Rated for use in hazardous locations:
  - Class 1 Zone 0 (Intrinsically Safe cables only)
  - Class 1 Zone 1 (Div 1)
  - Class 1 Zone 2 (Div 2)
  - TC-BCD gas groups rated (Tray cables only)
  - HL-BCD gas groups rated (Armoured cables only)

### Constructions

- Shielding:
  - Single or multiple aluminum/polyester shielded pairs (2 to 24) with tinned copper drain wires
  - Overall aluminum/polyester shield with tinned copper drain wire
- Jacket:
  - Orange jacket (standard)
  - Black jacket with integral or printed or stripe (optional)
  - Blue intrinsically safe jacket (optional)
- Available In:
  - Marine/shipboard with a bronze or tinned copper braid
  - Optional insulated green bonding conductor
  - Overall tinned copper braid for low frequency shielding effectiveness

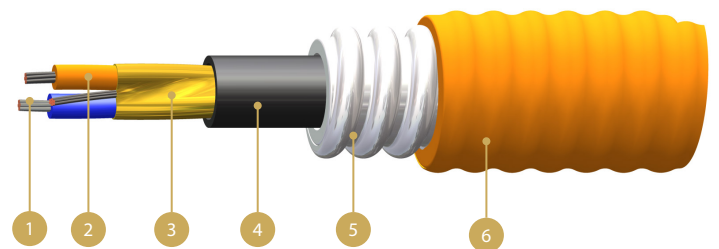
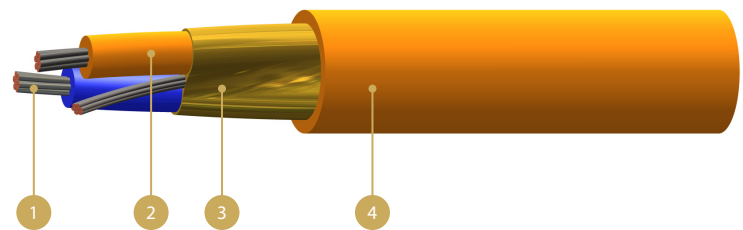
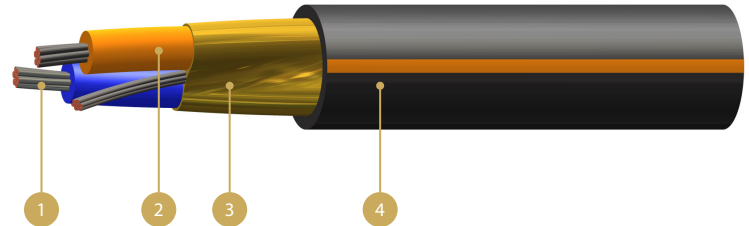
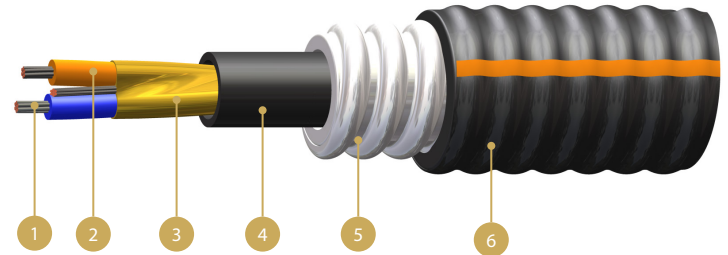
#### Head Office

ShawFlex  
A division of ShawCor Ltd.  
25 Bethridge Rd.  
Toronto, Ontario  
Canada M9W 1M7, Canada  
Tel: +1 416 743 7111

[shawflex.com](http://shawflex.com)



TC HL



1. Stranded Tinned Copper Pairs (18AWG to 14AWG)
2. XLPE (RW90 rated) Insulated Pairs (standard)
3. Individual Aluminum/Mylar Shield with Drain Wire Over Each Pair
4. FR PVC Protective Jacket
5. Aluminum Interlocked Armour (standard)
6. FR PVC Outer Protective Jacket



**SHAWFLEX**

A SHAWCOR COMPANY

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## FIELDBUS

	CSA	UL
<b>Characteristics</b>		
Flame Retardant (FT4/IEEE 1202), UL 1685	●	●
Sunlight Resistant (all colours)	●	●
Wet Rated	●	●
-40°C Cold Impact	●	Upon request
Direct Burial	●	●
Exposed Runs		●
<b>Electrical Characteristics</b>		
Impedance (ohms)	100 ±20	100 ±20
Attenuation @39 kHz (dB/km)	<3	<3
Capacitance Unbalance to shield (pF/m)	<4	<4
<b>Voltage Ratings</b>		
300V	ACIC or TC	ITC/PLTC-ER
600V	ACIC or TC	MC/TC-ER
<b>Armouring Options</b>		
Aluminum Interlock Armour	●	●
Steel Interlock Armour	●	●
Steel Wire Served Armour	●	300 V only
<b>Jacketing Options</b>		
PVC	●	●
PVC LAG	Interlocked armour only	●
LSZH Thermoplastic	●	●
CPE Thermoplastic or Thermoset		●
<b>Insulation Options</b>		
XLPO (CSA - 90°C wet/105°C dry)	●	
XLPO (UL - 90°C wet/dry)		●
<b>Shielding Options</b>		
ISOS Aluminum Mylar (standard)	●	●
ISOS Aluminum Mylar with Overall Tinned Copper Braid	●	●

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