

# INSTRUMENTATION CABLES

## FT50/55-CS/SWAIS SERIES

High Performance Intrinsically Safe  
Multipair SWA Overall Foil Screened Tinned  
Instrumentation Cable 110VAC 90°C



### APPLICATIONS:

**Hazardous Areas** This steel wire armour cable is suitable for use for instrumentation in oil and gas industries, mine sites and other harsh environments, when wiring of intrinsically safe circuits are specified.

**BUS Systems** Extra low capacitance cable suitable for RS485, RS422 POS, building and home BUS automation systems.

**Signal and Controls** Power control or signal/instrumentation cables on machines, conveying equipment or similar industrial applications.

**Marine** Tinned copper conductors for use in marine applications.

### PRODUCT FEATURES:

- ▶ Steel wire armoured for hazardous conditions
- ▶ Extremely pliable PVC sheath
- ▶ UV stabilised
- ▶ Flame retardant
- ▶ Reduced flame propagation
- ▶ Heat, oil and chemical resistant *(See Technical Section)*

### CONSTRUCTION:

**Conductor** Annealed tinned copper stranded (Class 2).

**Insulation** Special SPVC V-90 (available in LSHF on request).

**Filler** Non-hydroscopic polypropylene filler.

**Screening** Collective shield of aluminium/polyester foil complete with tinned copper drain wire.

**Bedding** Flame retardant 5V-90 PVC extruded non-hydroscopic.

**Armour** Steel wire armour.

**Sheath** Special SPVC 5V-90 (available in LSHF on request).

### CHARACTERISTICS:

**Operating Temperature Range** Fixed -20°C to 90°C.

**Maximum Conductor Temperature** 90°C.

**Rated Voltage** 110VAC / 150VDC.

**Minimum Bending Radius** 10 x cable diameter.

**Sheath Colour** Intrinsically safe blue.

**Standard Core Colours** Each pair – 1 x white and 1 x black conductor, with numbered cores.

**Relevant Standards** AS/NZS 1125, AS/NZS 2381, AS/NZS 3808, IEC 60332-1-2, IEC 60079.14, IEC 60332-3-22, **RoHS** Compliant.

Property	0.5mm <sup>2</sup>		1.5mm <sup>2</sup>	
	Value	Units	Value	Units
DC Conductor Resistance @ 20°C	38.4	Ω/km	13.6	Ω/km
Max. Capacitance Cond. to Cond. (screened)	145	pF/m	200	pF/m
Max. Capacitance Cond. to Scr. (screened)	240	pF/m	300	pF/m
Max. Capacitance Cond. to Cond. (unscreened)	82	pF/m	110	pF/m
Cross talk attenuation between pairs @ 1kHz (screened)	>125	dB/100m	>125	dB/100m
Cross talk attenuation between pairs @ 1kHz (unscreened)	>90	dB/100m	>90	dB/100m
Characteristic impedance @ 1kHz (screened)	300	Ω	150	Ω
Characteristic impedance @ 1kHz (unscreened)	380	Ω	200	Ω
Inductance @ 1kHz	1.00	mH/km	0.95	mH/km
L/R ratio @ 1kHz	13.7	μH/Ω	36.5	μH/Ω
Insulation Resistance @ 20°C	140	MΩ.km	140	MΩ.km

See over for full product table ▶

## FT50/55-CS/SWAIS SERIES continued

Code	No. of Cores x Size  (mm <sup>2</sup> )	Nearest AWG	Approx. Stranding  No. of wires x mm <sup>2</sup>	Overall Diameter over bedding  (mm)	Overall Diameter over Armour  (mm)	Approx. Overall Diameter  (mm)	Approx. Weight  (Kg/Km)	Gland Size
FT5001CSSWAIS	1 pair 0.5	20	7/0.30	5.6	7.4	10.4	225	GMCW16 or GMCW20SS
FT5002CSSWAIS	2 pair 0.5	20	7/0.30	8.6	10.4	12.5	298	GMCW16 or GMCW20SS
FT5004CSSWAIS	4 pair 0.5	20	7/0.30	9.8	11.6	14.5	358	GMCW20S
FT5006CSSWAIS	6 pair 0.5	20	7/0.30	10.6	12.4	15.5	440	GMCW20S
FT5008CSSWAIS	8 pair 0.5	20	7/0.30	11.4	13.2	16.7	507	GMCW20
FT5010CSSWAIS	10 pair 0.5	20	7/0.30	13.3	15.1	18.7	592	GMCW25
FT5012CSSWAIS	12 pair 0.5	20	7/0.30	13.7	15.5	19.1	632	GMCW25
FT5016CSSWAIS	16 pair 0.5	20	7/0.30	15.4	17.2	21.3	763	GMCW25
FT5020CSSWAIS	20 pair 0.5	20	7/0.30	16.6	19.1	23.2	1006	GMCW25
FT5024CSSWAIS	24 pair 0.5	20	7/0.30	18.9	21.4	25.6	1150	GMCW25
FT5036CSSWAIS	36 pair 0.5	20	7/0.30	21.8	24.3	28.8	1449	GMCW32
FT5102ESSWAIS	1 pair 1.5	15	7/0.50	6.7	8.5	11.5	278	GMCW20S
FT5502CSSWAIS	2 pair 1.5	15	7/0.50	10.4	12.2	14.3	390	GMCW20S
FT5504CSSWAIS	4 pair 1.5	15	7/0.50	11.9	13.7	17.8	498	GMCW20
FT5506CSSWAIS	6 pair 1.5	15	7/0.50	13.2	15.0	18.3	651	GMCW20
FT5508CSSWAIS	8 pair 1.5	15	7/0.50	14.2	16.0	19.2	749	GMCW25
FT5510CSSWAIS	10 pair 1.5	15	7/0.50	16.7	19.2	22.5	1043	GMCW25
FT5512CSSWAIS	12 pair 1.5	15	7/0.50	17.3	19.8	23.8	1150	GMCW25
FT5516CSSWAIS	16 pair 1.5	15	7/0.50	19.4	21.9	26.0	1370	GMCW32
FT5520CSSWAIS	20 pair 1.5	15	7/0.50	21.3	23.8	28.1	1591	GMCW32
FT5524CSSWAIS	24 pair 1.5	15	7/0.50	24.3	26.8	32.1	1856	GMCW40
FT5536CSSWAIS	36 pair 1.5	15	7/0.50	27.9	31.1	35.0	2645	GMCW50