

# INSTRUMENTATION CABLES

## FT50/55-ESCS/SWAIS

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



### APPLICATIONS:

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

**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-hygroscopic polypropylene filler.

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

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

**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-ESCS/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 <sup>2</sup> )	Approx. Weight  (Kg/Km)	Gland Size
<b>FT5002ESCSWAIS</b>	2 pair 0.5	20	7/0.30	8	9.8	12.9	245	GMCW16 or GMCW20SS
<b>FT5004ESCSWAIS</b>	4 pair 0.5	20	7/0.30	10.5	12.3	14.3	340	GMCW20S
<b>FT5006ESCSWAIS</b>	6 pair 0.5	20	7/0.30	12.7	14.5	16.7	420	GMCW20
<b>FT5008ESCSWAIS</b>	8 pair 0.5	20	7/0.30	14.5	17.0	19.4	630	GMCW25S
<b>FT5010ESCSWAIS</b>	10 pair 0.5	20	7/0.30	15.9	18.4	20.9	710	GMCW25S
<b>FT5012ESCSWAIS</b>	12 pair 0.5	20	7/0.30	16.3	18.8	21.3	760	GMCW25S
<b>FT5016ESCSWAIS</b>	16 pair 0.5	20	7/0.30	20.2	23.4	26.3	1130	GMCW25
<b>FT5020ESCSWAIS</b>	20 pair 0.5	20	7/0.30	22.6	25.8	29.2	1304	GMCW32
<b>FT5024ESCSWAIS</b>	24 pair 0.5	20	7/0.30	23.5	26.7	30.1	1450	GMCW32
<b>FT5502ESCSWAIS</b>	2 pair 1.5	15	7/0.50	10.8	12.6	14.9	380	GMCW20S
<b>FT5504ESCSWAIS</b>	4 pair 1.5	15	7/0.50	14.5	17.0	19.6	680	GMCW25S
<b>FT5506ESCSWAIS</b>	6 pair 1.5	15	7/0.50	17.6	20.8	23.7	1010	GMCW25S
<b>FT5508ESCSWAIS</b>	8 pair 1.5	15	7/0.50	18.5	21.7	24.7	1130	GMCW25
<b>FT5510ESCSWAIS</b>	10 pair 1.5	15	7/0.50	22.4	25.6	28.9	1400	GMCW32
<b>FT5512ESCSWAIS</b>	12 pair 1.5	15	7/0.50	23.5	26.7	30.1	1540	GMCW32
<b>FT5516ESCSWAIS</b>	16 pair 1.5	15	7/0.50	28.2	31.4	35.3	1950	GMCW40
<b>FT5520ESCSWAIS</b>	20 pair 1.5	15	7/0.50	31.4	35.4	39.6	2550	GMCW40
<b>FT5524ESCSWAIS</b>	24 pair 1.5	15	7/0.50	34.3	39.3	44.0	3270	GMCW50S
<b>FT5536ESCSWAIS</b>	36 pair 1.5	15	7/0.50	42.0	47.0	52.2	4360	GMCW50
<b>FT5550ESCSWAIS</b>	50 pair 1.5	15	7/0.50	49.2	54.2	60.1	5550	GMCW63