

#### FEATURES

- ✓ 2HR Fire Rated
- ✓ 110°C conductor temp
- ✓ AS/NZS 3013 – WS52W
- ✓ AS/NZS 5000.1
- ✓ AS/CA S008
- ✓ RCM Certified
- ✓ ActivFire Certified
- ✓ Flame retardant
- ✓ Ideal for VSD applications
- ✓ Low smoke zero halogen (PVC Free)  
Third Party Accredited



#### PRODUCT DESCRIPTION

FireSense fire rated cables have been specifically designed for use within the Fire Alarm and Mechanical/Electrical industries. They are constructed from the highest quality cross linked polymers available and are designed to be easy to install, strip and terminate.

Our cables have been independently tested and approved by Warrington Fire to the requirements of AS/NZS 3013 for both fire and mechanical cable properties. All FireSense cables are certified 2 hour fire rated.

All FireSense fire rated series cables are made from LSZH materials and have received third party PVC Free Certification from GECA (Good Environmental Choice Australia).

They have also been tested and approved to electrical standards AS/NZS 5000.1 and communication/wiring standard AS/CA S008 by respective industry testing authorities.

FireSense Power cables are manufactured using 100% pure, annealed, copper conductors for ease of termination while achieving the highest possible electrical performance. FireSense's highly specialised insulation and outer sheath materials meet the stringent Impact and Cutting test requirements of AS/NZS 3013 yet allow for ease of stripping and cable placement on trays saving valuable time on site.

FireSense 3C+ES cables are available with 2.5mm<sup>2</sup>, 4.0mm<sup>2</sup> and 6.0mm<sup>2</sup> conductors and contain a copper braid screen specifically designed for interconnection between VSD controllers and essential fire fans.

It is recommended that FireSense stainless steel cable ties be used for fixing cable to tray every 1.0 metre when mounted horizontally and every 0.6 metres when mounted vertically. When fixing FireSense fire rated cables to catenary wire our manufacturer's recommendation is as follows:

If cable bunch is  $\geq 25$ mm diameter cables should be supported with stainless steel ties every 300mm.

If cable bunch is  $< 25$ mm diameter cables should be supported with stainless steel ties every 600mm.

**ORDERING INFORMATION**

Part Number	No. of Cores	Cross Section (mm <sup>2</sup> ) (Conductors)	Cross Section (mm <sup>2</sup> ) (Earth Conductors)	Copper Wire Diameter (mm)	Approx Overall Dia (mm)	Operating Temp (°C)	AS/NZS 3013 Rating
FR-2.50-3C+ES	3 + E	2.50	2.50	0.67	17.7	-25 to +110	WS52W
FR-4.00-3C+ES	3 + E	4.00	2.50	0.85	19.3	-25 to +110	WS52W
FR-6.00-3C+ES	3 + E	6.00	2.50	1.04	21.3	-25 to +110	WS52W

**ELECTRICAL CHARACTERISTICS**

Part Number	DC Resistance (Ω / km)	AC Resistance @ 50Hz (Ω / Km at °C) As per AS3008 Table 35				Current Carrying Capacity Unenclosed (Amps) As per AS3008 Table 15			3 Phase Voltage Drop @ 50Hz (mV/A.m at °C) As per AS3008 Table 42			
		20°C	45°C	75°C	90°C	110°C	Spaced	Touching	Exposed	45°C	75°C	90°C
FR-2.50-3C+ES	7.05	8.14	9.01	9.45	10	35	33	30	14.1	15.6	16.4	17.4
FR-4.00-3C+ES	4.60	5.06	5.61	5.88	6.24	47	44	40	8.77	9.71	10.2	10.8
FR-6.00-3C+ES	2.98	3.38	3.75	3.93	4.17	59	56	50	5.86	6.49	6.8	7.22

**TECHNICAL SPECIFICATIONS**

<b>Conductors</b>	Stranded Annealed Copper
<b>Overall Screen</b>	Braided Annealed Copper
<b>Flame Barrier</b>	Mica Tape
<b>Insulation</b>	Flame Retardant, Low Smoke, Zero Halogen (X-HF-110)
<b>Sheath</b>	Flame Retardant, Low Smoke, Zero Halogen (HFS-110-TP)*
<b>Operating Temperature</b>	-25°C to +110°C
<b>Insulation Colour</b>	Red, Blue, White, Green/Yellow
<b>Sheath Colour</b>	Red
<b>Min Bending Radius</b>	10 x Cable Diameter

\* Please note: LSZH HFS-110-TP sheath material is UV stabilised but red colour may be subject to fading over time if exposed to direct sunlight.

**STANDARDS COMPLIANCE**

Fire & Mechanical	AS/NZS 3013
Cable Construction	AS/NZS 5000.1
ACMA Compliance	AS/CA S008
Conductors	AS/NZS 1125
Insulation	AS/NZS 3808
Sheath	AS/NZS 3808
Cable	AS/CA S008
Cable Performance	AS/NZS 4507 (RHE-3)
Vertical Flame Spread	AS/NZS 1660.5.1 (Section 6 - Category C - AS/NZS IEC 60332-3-24)
Smoke Density	AS/NZS 1660.5.2, AS/NZS IEC 61034
Halogen Gas	AS/NZS 1660.5.3, AS/NZS IEC 60754-1
Acidity of Gases	AS/NZS 1660.5.4, AS/NZS IEC 60754-2
Vertical Flame Propagation	AS/NZS 1660.5.6, AS/NZS IEC 60332-1

**APPROVALS & CERTIFICATION**

Part Number	AS/NZS 3013			AS/NZS 5000.1	
	Rating	Certificate No.	Issuer	Certificate No.	Issuer
FR-2.50-3C+ES	WS52W	SFC26123E-R5.0	Warrington Fire	GMA-511153	Global Mark Pty Ltd
FR-4.00-3C+ES	WS52W	SFC26123F-R5.0	Warrington Fire	GMA-511153	Global Mark Pty Ltd
FR-6.00-3C+ES	WS52W	SFC26123G-R5.0	Warrington Fire	GMA-511153	Global Mark Pty Ltd

ActivFire Listing Number	afp-2417		
RCM Responsible Supplier	E6560	Level 3	GMA-511153
GECA Claims Authentication License Number	Fir-2021		
Bureau Veritas CoC Number	2835		

#### CLASSIFICATION

AS/NZS 3013 is a classification system which defines the performance of a Wiring System (WS). The classification system prefix is 'WS' followed by two numerals and a supplementary letter W. ie

#### AS/NZS 3013 Fire Rated Cable Technical Information

**Classification of the fire and mechanical performance of wiring system elements:**

AS/NZS 3013 is a classification system which defines the performance of a Wiring System (WS). The classification system prefix is 'WS' followed by two numerals and a supplementary letter W. ie.

