## FEATURES

- ✓ 2HR Fire Rated
- ✓ AS/NZS 3013 Approved
- ✓ AS/NZS 5000.2 Approved
- ✓ AS/CA S008 Compliant
- ✓ AS 1670:2018 Markings
- ✓ ActivFire Certified
- ✓ RCM Certified
- ✓ 110°C continuous operation
- ✓ Low smoke zero halogen
- ✓ Flame retardant
- ✓ Easy to strip and terminate
- ✓ Smallest diameter on the market
- ✓ 8-10 twists per meter

## PRODUCT DESCRIPTION

FireSense fire rated cables have been specifically designed for use with Australian Fire Alarm and EWIS systems.

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 and are the only fire rated cables in Australia to have ActivFire Certification.

FireSense fire rated cables have also been tested and approved to electrical standards AS/NZS 5000.2 and communication/wiring standard AS/CA S008 by respective industry testing authorities.

It is a requirement of AS/NZS 1670.1, 1670.4, 1668.1 & 4214 that cables be approved to AS/NZS 3013 and AS/CA S008.

Our cables have a reduced outside diameter which allows 2 cables to fit within a single conduit providing ease of installation. The cable's copper conductors and firm insulation material also allows for neat placement on cable trays and allows ease of stripping and termination. The screened alternative reduces electrical noise & reduces the impact on signals.

It is recommended that FireSense stainless steel cable ties be used for fixing cable to tray every 1.0 meter 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 ≥ 25mm diameter cables should be supported with stainless steel ties every 300mm.
If cable bunch is < 25mm diameter cables should be supported with stainless steel ties every 600mm.

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**FireSense**
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## ORDERING INFORMATION

| Part Number | No. of Cores | Cross Section (mm²) | Copper Wire Diameter (mm) | Twist per m | Approx Overall Dia (mm) | AS/NZS 3013 Classification | Drum Length |
|---|---|---|---|---|---|---|---|
| FR-0.75-2CS | 2 | 0.75 | 0.37 | 8-10 | 10.3 | WS51W | 250m, 500m |
| FR-1.50-2CS | 2 | 1.50 | 0.52 | 8-10 | 10.5 | WS52W | 250m, 500m |

## TECHNICAL SPECIFICATIONS

| | |
|---|---|
| Conductors | Stranded Annealed Copper |
| Flame Barrier | Mica Tape |
| Insulation | Flame Retardant, Low Smoke, Zero Halogen (X-HF-110) |
| Sheath | Flame Retardant, Low Smoke, Zero Halogen (HFS-110-TP)* |
| Voltage Rating | 450/750V |
| Operating Temperature | -25ºC to +110ºC |
| Insulation Colour | Red, White |
| Sheath Colour | Red |
| Min Bending Radius | 10 x Cable Diameter |
| Overall Screen | Aluminium/Polyester Laminate |
| Drain Wire | Tinned Copper 7/0.25mm² |
| AS1670.2018 Sheath Marking | ELV FIRE |

* 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 Appendix A,B,D,E |
| Conductors | AS/NZS 1125 Class 2, IEC 60228 |
| Cable Construction | AS/NZS 5000.2 |
| Vertical Flame Spread | AS/NZS 1660.5.1 |
| Smoke Density | AS/NZS 1660.5.2, IEC 61034 |
| Halogen Gas | AS/NZS 1660.5.3, IEC 60754 -1 & 2 |
| Acidity of Gases | AS/NZS 1660.5.4 |
| Vertical Flame Propagation | AS/NZS 1660.5.6, IEC 60332-1, IEC 60332-3-24 |
| ACMA Compliance | AS/CA S008 |
| Markings | AS 1670:2018 |

## ELECTRICAL CHARACTERISTICS

| Part Number | Resistance (Ω / km) | Capacitance Red/White (pF/m) | Capacitance Conductor/Screen (pF/m) | Inductance (uH/m) |
|---|---|---|---|---|
| FR-0.75-2CS | 23.4 | 55 | 108 | 0.87 |
| FR-1.50-2CS | 11.9 | 89 | 163 | 0.74 |

## APPROVALS

| Part Number | AS/NZS 3013 | | | AS/NZS 5000.2 | |
|---|---|---|---|---|---|
| | Rating | Certificate No. | Issuer | Certificate No. | Issuer |
| FR-0.75-2CS | WS51W | SFC2331900b.1 | Warrington Fire | ASA-181007-EA | ASA |
| FR-1.50-2CS | WS52W | SFC2401600b.2 | Warrington Fire | ASA-181007-EA | ASA |

| ActivFire Listing No. | afp-2417 |
|---|---|

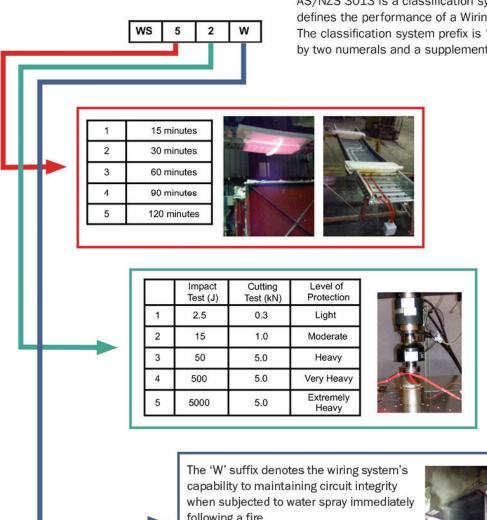| RCM Responsible Supplier | E6560 | Level 3 | ASA-181007-EA |
|---|---|---|---|

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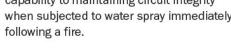
AS/NZS 3013 is a classification system which defines the performance of a Wiring System (WS). The classification system prefix is 'WS' followed by two numerals and a supplementary letter W. ie.

| WS | 5 | 2 | W |
|----|---|---|---|

| | |
|---|---|
| 1 | 15 minutes |
| 2 | 30 minutes |
| 3 | 60 minutes |
| 4 | 90 minutes |
| 5 | 120 minutes |



| | Impact Test (J) | Cutting Test (kN) | Level of Protection |
|---|---|---|---|
| 1 | 2.5 | 0.3 | Light |
| 2 | 15 | 1.0 | Moderate |
| 3 | 50 | 5.0 | Heavy |
| 4 | 500 | 5.0 | Very Heavy |
| 5 | 5000 | 5.0 | Extremely Heavy |



The 'W' suffix denotes the wiring system's capability to maintaining circuit integrity when subjected to water spray immediately following a fire.

Cables are subjected to fire at 1050ºC for 120 minutes, then water sprayed for a further 3 minutes.