

Safe even when the alarms go off.

Afumex® - there when you need it the most.



Afumex®
LSOH cables



Afumex® – there when you need it the most.

It's when the flames consume everything around them and the heat becomes intolerable that our range of Fire Rated Cables, Afumex, display their best qualities. Withstanding the heat, they maintain the supply to critical systems such as fire alarm, emergency lighting and fans (as it is the case of our Fire Resistant cables, Firestop) or simply burn without emitting toxic fumes (like it is the case of our Fire Retardant, non-fire-resistant cables). Low smoke and halogen free – that's the common feature of Afumex, the very well known Prysmian's safe and secure cable family.

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Why choose Afumex?

Afumex is a series of LSOH cables that save lives and money in case of a fire. The black toxic smoke that obstructs the evacuation is gone, just as the corrosive acid that destroys metal and electronic devices. What remain are the flexible and user-friendly qualities, which makes these cables easy to install. It's time to choose a new path – the safe and sound one: Afumex.

LSOH CABLES	PVC CABLES
Reduced smoke formation.	Heavy smoke formation.
Light smoke, easy to find exits.	Black smoke, hard to find exits.
Fewer toxic gases, easier to evacuate.	Lots of toxic gases, obstruct evacuation.
Creates a white harmless powder, spare metals and electronic devices.	Creates hydrochloric acid that destroys electronics and corrodes metals.
Easier to sanitise, shorter production interruption of production.	Inhibits sanitation, longer break.
Better for the environment, contain no phthalates and dioxin.	Harmful to the environment, contain phthalates and dioxin.

Afumex – saves lives

At a fire scene three decisive factors influence the possibilities for people to rapidly find an exit: smoke formation, visibility and the amount of toxic substances in the air. With Afumex LSOH cables, less and lighter smoke is created compared to a fire containing PVC cables. In addition the smoke includes less toxic substances. That is, people at a fire scene equipped with Afumex cables will have better visibility and more time to find exits, which increase the chance to survive.

Afumex – saves money

A fire often involves large financial losses due to damaged electronics, machines and buildings. A contributing cause to these losses is the hydrochloric acid that is developed by traditional PVC cables on fire. The acid corrodes electronics and metals. LSOH cables on the other hand develop a white harmless powder that minimizes damages on buildings as well as equipment. In addition the fire scene will be a lot easier to sanitise, which means the production can be resumed faster.

Afumex – better for health and environment

When manufacturing PVC different types of phthalates are added to make the plastic soft and easy to shape. Recent scientific research however, have shown that these substances can be unhealthy and a source to both cancer and hormone-disturbance. Furthermore, burning PVC develops dioxins. Dioxins are very dangerous to our environment as they are hard to break down and stored in the body tissue of both humans and animals. As Afumex LSOH cables don't include phthalates, nor develop dioxins at a fire, these cables are a better choice for our health and the environment.

“ Low Smoke Zero Halogen cables save lives!
 You would be lucky to find your way out when
 it’s burning in a room that contains PVC cables.

Know the difference: Fire resistance vs Fire retardancy

There is a vast difference between cables that are rated fire resistant and those that only have earned the rating fire/flame retardant.

Flame retardant cables prevent the spread of fire into a new area, while fire resistant cables maintain circuit integrity and continue to work for a specified time under defined conditions. The differences between the two ratings are significant for the critical circuits required for life safety or a safe and immediate plant shut down.

Additionally, fire resistant cables can be used to replace expensive fire rated structures, blankets or wraps and the difficult to install MI cable. Flame retardant cables are not rated to continue to operate in a fire, and in all probability will not maintain circuit integrity during a fire. The summary of differences between flame retardant and fire resistive cables are shown in table below.

FIRE RESISTANT	FIRE/FLAME RETARDANT
Approval: AS/NZS 3013 (WS52W)	Approvals: IEC 60332-1, IEC 60332-3
A cable that will continue to operate in the presence of a fire, also identified as Circuit Integrity Cable.	A cable that will not convey or propagate a fire as defined by the Flame Retardant or Propagation Tests indicated above.

For more information about standards and difference between fire performance test methods, go to page 36 of this catalogue.

“ All fire resistant cables are also flame retardant. However not all flame retardant cables are fire resistant. Know what is required for your application and choose from our Afumex LSOH. We’ve got it all.



AFUMEX LSOH

FIRE RESISTANT			NON-FIRE RESISTANT
Approval: AS/NZS 3013 (WS52W)			Approvals: IEC 60332-1, IEC 60332-3
GOLD	Class 5 Flexible conductor	FIRESTOP FS110 FLEXIBLE MULTICORE	<p>All Fire Resistant cables listed in this catalogue are also available in a NON-FIRE RESISTANT construction with NO FIRE RESISTANCE properties (no Mica glass tape for fire barrier).</p> <p>These are still LSOH, flame/fire retardant and meet all requirements of IEC 60332-1 and IEC 60332-3.</p>
		FIRESTOP FS110 FLEXIBLE SDI	
SILVER	Class 2 Stranded conductor	FIRESTOP FS110 STRANDED CONDUCTOR MULTICORE	
		FIRESTOP FS110 STRANDED CONDUCTOR SDI	
		FIRESTOP FS110 STRANDED CONDUCTOR ALARM CABLE	
BRONZE	Class 2 Stranded conductor	FIRESTOP FS90 STRANDED CONDUCTOR MULTICORE	
		FIRESTOP FS90 STRANDED CONDUCTOR ALARM CABLE	

KEY TERMS

Fire performing = Fire rated (does not refer to any particular standard or test)

Fire resistant = AS/NZS 3013 = Prysmian Firestop Range

Fire retardant = Flame retardant = Fire/Flame Propagation = IEC 60332-1, IEC60332-3

- All fire resistant cables are LSOH
- All flame retardant cables are LSOH
- All fire resistant cables are flame retardant
- NOT all flame retardant cables are fire resistant.

Firestop™

Firestop is a range of polymeric fire resistant cables designed to maintain circuit integrity in a fire situation while minimising the evolution of smoke and gases harmful when exposed to fire. This range is designed to save lives and help protect property in the event of a fire.

Firestop cables are typically used in underground transport tunnels, high-rise building, airports and other densely populated places. They are used where power supply to essential circuits like water pumps, lift motors, emergency lighting, fire alarms and automation and control systems where continued operation is critical in during a fire event.

Prysmian Firestop are low smoke and fume (LSOH) cables that are designed to allow safe evacuation making them ideal for buildings such as multi-storey dwellings, office blocks, hotels and educational institution buildings.

The focus of Prysmian research and development has been to reduce potential hazards by developing cable constructions and materials that will limit flame propagation, contribute less smoke and emit combustion by-products that are not harmful. This performance objective has been achieved in the Firestop range of cables.

Firestop is easy to install fire safety cable range fully complying with the latest version of AS/NZS 3013 standard and Building Code of Australia requirements. This range is classified (WS52W) which implies the scope of testing is designed to confirm performance when installed in a wiring system.

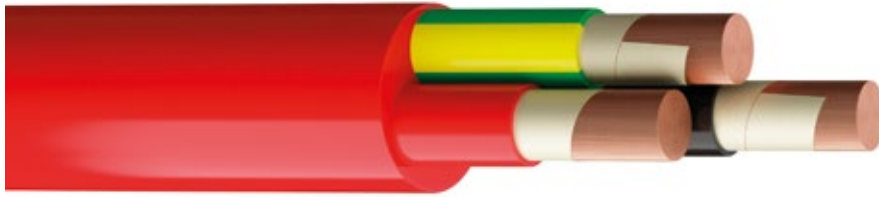
Firestop™ – performance levels included:

- Circuit integrity up to an extreme temperature of 1050 °C at the end of 2 hours.
- Moderate mechanical protection rated in line with building codes requirements.
- Stranded class 2 or bunched class 5 conductor for ease of installation.
- 90 °/110 °C rated for increased current rating and hot ambient.
- LSZH – Suitable for confined and high people density areas.
- 0.6/1 kV – robust construction with improved electrical performance.

GOLD

Firestop FS110 Flexible | Class 5

FIRESTOP FS110 FLEXIBLE MULTICORE



Cable description

Fire rated, flexible multicore LSOH cable suitable for installation wiring.

Application

- Power supply to essential equipment such as lighting, fans and lifts in the event of a fire in confined spaces.
- Classified (WS52W) meaning the scope of testing is designed to confirm performance when installed in a wiring system.
- Circuit integrity up to an extreme temperature of 1050 °C at the end of 2 hours.
- LSZH – Suitable for confined and high people density areas such as underground transport tunnels, airports and public buildings.

Approvals/Qualifications

NATA accredited facility Qualification (third party)
AS/NZS 5000.1.
AS/NZS 3013 WS52W

Behaviour in flame and fire

Fire performance rating:
AS/NZS 3013 WS52W
AS/NZS 4507 CI-3

Flame propagation:
IEC 60332-3 cat A
IEC 60332-1

Halogen free/Low smoke emission:
AS/NZS 4507

Temperature range

Maximum operating temperature: +110 °C
Minimum operating temperature: -25 °C

Flexibility

Minimum bending radius:
Installed cables: 10D
During installation: 12D

Resistance to

Fire: 2 hrs
Chemical exposure: Occasional
Mechanical impact: Moderate
Water exposure: Spray
Solar radiation and weather exposure: UV stabilised

Cable design

Conductor:
Flexible plain annealed copper (class 5)
Fire barrier:
Mica glass tape
Insulation:
X-HF-110 (LSOH)
Colour:
2 cores: Red, black
3 cores: Red, white, blue
4 cores: Red, white, blue, black
5 cores and above: White with numbered cores
Sheath:
Red, HFS-110-TP (LSOH)

Installation conditions

In free air
In duct
Internal wiring
External building

Characteristics

FIRESTOP FS110 FLEXIBLE MULTICORE - STANDARD EARTH

Product code	Number of cores	Nominal conductor area mm ²	Approx. overall diameter mm	Approx. mass kg/100 m	AS/NZS 3013 WS Rating
103CEFFFS110RD	3C+E	10	21.6	60.3	WS52W
163CEFFFS110RD	3C+E	16	24.2	83.1	WS52W
253CEFFFS110RD	3C+E	25	27.5	113.9	WS52W
353CEFFFS110RD	3C+E	35	30.7	148.3	WS52W
503CEFFFS110RD	3C+E	50	35.2	206.1	WS52W
703CEFFFS110RD	3C+E	70	40.8	283.7	WS52W
104CEFFFS110RD	4C+E	10	23.5	80	WS52W
164CEFFFS110RD	4C+E	16	26.5	108	WS52W
254CEFFFS110RD	4C+E	25	30.9	151	WS52W
354CEFFFS110RD	4C+E	35	33.8	196	WS52W
504CEFFFS110RD	4C+E	50	40.1	275	WS52W
704CEFFFS110RD	4C+E	70	45.3	378	WS52W

All other core count constructions available on request.

FIRESTOP FS110 FLEXIBLE MULTICORE - SPECIAL SIZE EARTH

Product code	Number of cores	Nominal conductor area mm ²	Nominal earth area mm ²	Approx. overall diameter mm	Approx. mass kg/100 m	AS/NZS 3013 WS Rating	Resistance DC @ 20°C - phase/earth
104C10EFFF110RD	4C+E	10	10	22.9	86.4	WS52W	1.91/1.91
164C10EFFF110RD	4C+E	16	10	25.2	110	WS52W	1.21/1.91
254C10EFFF110RD	4C+E	25	10	29.0	152.3	WS52W	0.78/1.91
354C16EFFF110RD	4C+E	35	16	32.0	205.8	WS52W	0.554/1.21

GOLD | 0.6/1kV | CLASS 5

FIRESTOP FS110 FLEXIBLE SDI



Cable description

Fire rated, flexible single core LSOH cable suitable for installation wiring.

Application

- Power supply to essential circuits such as mains, sub mains in areas where circuit integrity is essential in the event of a fire.
- Classified (WS52W) meaning the scope of testing is designed to confirm performance when installed in a wiring system.
- Circuit integrity up to an extreme temperature of 1050 °C at the end of 2 hours.
- LSZH – Suitable for confined and high people density areas such as underground transport tunnels, airports and public buildings.

Approvals/Qualifications

NATA accredited facility Qualification (third party)
AS/NZS 5000.1.
AS/NZS 3013 WS52W

Behaviour in flame and fire

Fire performance rating:
AS/NZS 3013 WS52W
AS/NZS 4507 CI-3

Flame propagation:
IEC 60332-3 cat A
IEC 60332-1

Halogen free/Low smoke emission:
AS/NZS 4507

Temperature range

Maximum operating temperature: +110 °C
Minimum operating temperature: -25 °C

Flexibility

Minimum bending radius:
Installed cables: 10D
During installation: 12D

Resistance to

Fire: 2 hrs
Chemical exposure: Occasional
Mechanical impact: Moderate
Water exposure: Spray
Solar radiation and weather exposure: UV stabilised

Cable design

Conductor:
Flexible plain annealed copper (class 5)
Fire barrier:
Mica glass tape
Insulation:
X-HF-110 (LSOH)
Insulation colour:
Natural
Sheath:
Red, HFS-110-TP (LSOH)

Installation conditions

In free air
In duct
Internal wiring
External building

Characteristics

FIRESTOP FS110 FLEXIBLE SDI

Product code	Number of cores	Nominal conductor area mm ²	Approx. overall diameter mm	Approx. mass kg/100 m	AS/NZS 3013 WS Rating
251CFFFS110RD	1C	25	14.1	35.1	WS52W
351CFFFS110RD	1C	35	14.9	44.6	WS52W
501CFFFS110RD	1C	50	16.5	59.7	WS52W
701CFFFS110RD	1C	70	18.2	79.1	WS52W
951CFFFS110RD	1C	95	20.2	101	WS52W
1201CFFFS110RD	1C	120	21.9	126	WS52W
1501CFFFS110RD	1C	150	24.2	155	WS52W
1851CFFFS110RD	1C	185	26.2	186	WS51W
2401CFFFS110RD	1C	240	29.4	241	WS52W
3001CFFFS110RD	1C	300	32.4	298	WS52W
4001CFFFS110RD	1C	400	36.4	388	WS52W
5001CFFFS110RD	1C	500	40.5	496	WS52W
6301CFFFS110RD	1C	630	46.0	655	WS52W

Better safe than sorry.

Prysmian cables – if you want to avoid unpleasant shocks.



To us “good enough” is never good enough. We’re all depending on safe and reliable cables and Prysmian will always stand in the forefront, manufacturing the safest cables for Australian conditions. That includes making rigorous tests of all cables before letting them out on the market.

A brand of the

Prysmian
Group

SILVER

Firestop FS110
Stranded Conductor | Class 2

FIRESTOP FS110 STRANDED CONDUCTOR MULTICORE



Cable description

Fire rated multicore LSOH cable suitable for installation wiring.

Application

- Power supply to essential equipment such as lighting, fans and lifts affording circuit integrity in the event of a fire in confined spaces.
- Classified (WS52W) meaning the scope of testing is designed to confirm performance when installed in a wiring system.
- Circuit integrity up to an extreme temperature of 1050 °C at the end of 2 hours.
- LSZH – Suitable for confined and high people density areas such as underground transport tunnels, airports and public buildings.

Approvals/Qualifications

NATA accredited facility Qualification (third party)
AS/NZS 5000.1.
AS/NZS 3013 WS52W

Behaviour in flame and fire

Fire performance rating:
AS/NZS 3013 WS52W
AS/NZS 4507 CI-3

Flame propagation:
IEC 60332-3 cat A
IEC 60332-1

Halogen free/Low smoke emission:
AS/NZS 4507

Temperature range

Maximum operating temperature: +110 °C
Minimum operating temperature: -25 °C

Flexibility

Minimum bending radius:
Installed cables: 10D
During installation: 12D

Resistance to

Fire: 2 hrs
Chemical exposure: Occasional
Mechanical impact: Moderate
Water exposure: Spray
Solar radiation and weather exposure: UV stabilised

Cable design

Conductor:
Stranded plain annealed copper (class 2)

Fire barrier:
Mica glass tape

Insulation:
X-HF-110 (LSOH)

Colour:
2 cores: Red, black
3 cores: Red, white, blue
4 cores: Red, white, blue, black
5 cores and above: White with numbered cores

Sheath:
Black, HFS-110-TP (LSOH)

Installation conditions

In free air
In duct
Internal wiring
External building

Characteristics

FIRESTOP FS110 STRANDED CONDUCTOR MULTICORE

Product code	Number of cores	Nominal conductor area mm ²	Approx. overall diameter mm	Approx. mass kg/100 m	AS/NZS 3013 WS Rating
1.52CEFS110BK	2C+E	1.5	12.9	20	WS52W
2.52CEFS110BK	2C+E	2.5	14.0	25	WS52W
42CEFS110BK	2C+E	4	14.8	29	WS52W
62CEFS110BK	2C+E	6	15.8	35	WS52W
102CEFS110BK	2C+E	10	18.1	51	WS52W
162CEFS110BK	2C+E	16	20.2	69	WS52W
252CEFS110BK	2C+E	25	24.9	102	WS52W
352CEFS110BK	2C+E	35	27.0	129	WS52W
1.53CEFS110BK	3C+E	1.5	14.0	24	WS52W
2.53CEFS110BK	3C+E	2.5	15.2	31	WS52W
43CEFS110BK	3C+E	4	16.2	36	WS52W
63CEFS110BK	3C+E	6	17.4	44	WS52W
103CEFS110BK	3C+E	10	20.0	65	WS52W
163CEFS110BK	3C+E	16	22.3	88	WS52W
253CEFS110BK	3C+E	25	26.8	130	WS52W
353CEFS110BK	3C+E	35	29.4	167	WS52W
503CEFS110BK	3C+E	50	32.2	216	WS52W
703CEFS110BK	3C+E	70	37.1	296	WS52W
953CEFS110BK	3C+E	95	40.6	383	WS52W
1203CEFS110BK	3C+E	120	44.4	475	WS52W
1503CEFS110BK	3C+E	150	49.5	589	WS52W
1853CEFS110BK	3C+E	185	55.1	742	WS52W
2403CEFS110BK	3C+E	240	61.8	963	WS52W
1.54CFS110BK	4C	1.5	14.0	24	WS52W
2.54CFS110BK	4C	2.5	15.2	31	WS52W
1.54CEFS110BK	4C+E	1.5	15.2	28	WS52W
2.54CEFS110BK	4C+E	2.5	16.5	37	WS52W
44CEFS110BK	4C+E	4	17.7	45	WS52W
64CEFS110BK	4C+E	6	19.1	55	WS52W
104CEFS110BK	4C+E	10	22.1	80	WS52W
164CEFS110BK	4C+E	16	24.6	109	WS52W
254CEFS110BK	4C+E	25	29.8	162	WS52W
354CEFS110BK	4C+E	35	32.8	209	WS52W
504CEFS110BK	4C+E	50	36.0	272	WS52W
704CEFS110BK	4C+E	70	41.6	374	WS52W
954CEFS110BK	4C+E	95	45.8	489	WS52W
1204CEFS110BK	4C+E	120	50.0	607	WS52W
1504CEFS110BK	4C+E	150	55.7	751	WS52W
1854CEFS110BK	4C+E	185	62.0	945	WS52W
2404CEFS110BK	4C+E	240	69.5	1225	WS52W

FIRESTOP FS110 STRANDED CONDUCTOR SDI



Cable description

Fire rated, single core LSOH cable suitable for installation wiring.

Application

- Power supply to essential circuits such as mains, sub mains in areas where circuit integrity is essential in the event of a fire.
- Classified (WS52W) meaning the scope of testing is designed to confirm performance when installed in a wiring system.
- Circuit integrity up to an extreme temperature of 1050 °C at the end of 2 hours.
- LSZH – Suitable for confined and high people density areas such as underground transport tunnels, airports and public buildings.

Approvals/Qualifications

NATA accredited facility Qualification (third party)
AS/NZS 5000.1.
AS/NZS 3013 WS52W

Behaviour in flame and fire

Fire performance rating:
AS/NZS 3013 WS52W
AS/NZS 4507 CI-3

Flame propagation:
IEC 60332-3 cat A
IEC 60332-1

Halogen free/Low smoke emission:
AS/NZS 4507

Temperature range

Maximum operating temperature: +110 °C
Minimum operating temperature: -25 °C

Flexibility

Minimum bending radius:
Installed cables: 10D
During installation: 12D

Resistance to

Fire: 2 hrs
Chemical exposure: Occasional
Mechanical impact: Moderate
Water exposure: Spray
Solar radiation and weather exposure: UV stabilised

Cable design

Conductor:
Stranded plain annealed copper (class 2)
Fire barrier:
Mica glass tape
Insulation:
X-HF-110 (LSOH)
Insulation colour:
Natural
Sheath:
Black, HFS-110-TP (LSOH)

Installation conditions

In free air
In duct
Internal wiring
External building

Characteristics

FIRESTOP FS110 STRANDED CONDUCTOR SDI

Product code	Number of cores	Nominal conductor area mm ²	Approx. overall diameter mm	Approx. mass kg/100 m	AS/NZS 3013 WS Rating
101CFS110BK	1C	10	12.0	21	WS52W
161CFS110BK	1C	16	13.0	28	WS52W
251CFS110BK	1C	25	15.0	40	WS52W
351CFS110BK	1C	35	16.0	49	WS52W
501CFS110BK	1C	50	17.2	63	WS52W
701CFS110BK	1C	70	18.9	82	WS52W

Bigger sizes available on request only.

FIRESTOP FS110 STRANDED CONDUCTOR ALARM CABLE



Cable description

Fire rated fire alarm circuit LSOH cable suitable for installation wiring.

Application

- Power supply cable to fire alarms.
- Classified (WS52W) meaning the scope of testing is designed to confirm performance when installed in a wiring system.
- Circuit integrity up to an extreme temperature of 1050 °C at the end of 2 hours.
- LSZH – Suitable for confined and high people density areas such as underground transport tunnels, airports and public buildings.

Approvals/Qualifications

NATA accredited facility Qualification (third party)
AS/NZS 5000.1.
AS/NZS 3013 WS52W

Behaviour in flame and fire

Fire performance rating:
AS/NZS 3013 WS52W
AS/NZS 4507 CI-3

Flame propagation:
IEC 60332-3 cat A
IEC 60332-1

Halogen free/Low smoke emission:
AS/NZS 4507

Temperature range

Maximum operating temperature: +110 °C
Minimum operating temperature: -25 °C

Flexibility

Minimum bending radius:
Installed cables: 10D
During installation: 12D

Resistance to

Fire: 2 hrs
Chemical exposure: Occasional
Mechanical impact: Moderate
Water exposure: Spray
Solar radiation and weather exposure: UV stabilised

Cable design

Conductor:
Stranded plain annealed copper (class 2)
Fire barrier:
Mica glass tape
Insulation:
X-HF-110 (LSOH)
Colour:
2 cores: Red, white
Sheath:
Red, HFS-110-TP (LSOH)

Installation conditions

In free air
In duct
Internal wiring
External building

Characteristics

FIRESTOP FS110 STRANDED CONDUCTOR ALARM CABLE

Product code	Number of cores	Nominal conductor area mm ²	Approx. overall diameter mm	Approx. mass kg/100 m	AS/NZS 3013 WS Rating
1.52CFS110RD	2C	1.5	12.5	19	WS52W



Only the best for True Blue Aussies.

Australian made quality cables.



We've been producing tailor-made cables in Australia since 1944. And we will continue to do so. Our great staff of highly skilled and experienced people know what it takes to make cables that withstand everything from termites to hazardous mine sites. Just fair dinkum cables, mate.

Australian made? Yes, of course.

A brand of the
Prysmian
Group

BRONZE

Firestop FS90
Stranded Conductor | Class 2

FIRESTOP FS90 STRANDED CONDUCTOR MULTICORE



Cable description

Fire rated multicore LSOH cable suitable for installation wiring.

Application

Power supply to essential equipment such as lighting, fans and lifts affording circuit integrity in the event of a fire in confined spaces.

- Classified (WS52W) meaning the scope of testing is designed to confirm performance when installed in a wiring system.
- Circuit integrity up to an extreme temperature of 1050 °C at the end of 2 hours.
- LSZH – Suitable for confined and high people density areas such as underground transport tunnels, airports and public buildings.

Approvals/Qualifications

NATA accredited facility Qualification (third party)
AS/NZS 5000.1.
AS/NZS 3013 WS52W

Behaviour in flame and fire

Fire performance rating:
AS/NZS 3013 WS52W

Flame propagation:
IEC 60332-1

Halogen free/Low smoke emission:
AS/NZS 4507

Temperature range

Maximum operating temperature: +90 °C
Minimum operating temperature: -25 °C

Flexibility

Minimum bending radius:
Installed cables: 10D
During installation: 12D

Resistance to

Fire: 2 hrs
Chemical exposure: Occasional
Mechanical impact: Moderate
Water exposure: Spray
Solar radiation and weather exposure: UV stabilised

Cable design

Conductor:
Stranded copper conductor (class 2)

Fire barrier:
Mica glass tape

Insulation:
X-90 (XLPE)

Colour:
2 cores: Red, black
3 cores: Red, black, blue
4 cores: Red, black, blue, white
5 cores: White with numbered cores

Sheath:
Orange, red or black, HFS-90-TP (LSOH)

Installation conditions

In free air
In duct
Internal wiring
External building

Characteristics

FIRESTOP FS90 STRANDED CONDUCTOR MULTICORE

Product code	Number of cores	Nominal conductor area mm ²	Approx. overall diameter mm	Approx. mass kg/100 m	AS/NZS 3013 WS Rating
1.52CEFS90	2C+E	1.5	11.9	19	WS52W
2.52CEFS90	2C+E	2.5	13.4	25	WS52W
42CEFS90	2C+E	4.0	14.2	29	WS52W
62CEFS90	2C+E	6.0	15.3	35	WS52W
1.03CFS90	3C	1.0	11.9	17	WS51W
1.53CFS90	3C	1.5	12.5	20	WS52W
2.53CFS90	3C	2.5	13.6	25	WS52W
1.53CEFS90	3C+E	1.5	13.4	23	WS52W
2.53CEFS90	3C+E	2.5	14.6	29	WS52W
43CEFS90	3C+E	4.0	15.6	35	WS52W
63CEFS90	3C+E	6.0	16.8	43	WS52W
1.54CFS90	4C	1.5	13.6	23	WS52W
2.54CFS90	4C	2.5	14.8	30	WS52W
1.54CEFS90	4C+E	1.5	14.6	26	WS52W
2.54CEFS90	4C+E	2.5	16	34	WS52W
44CEFS90	4C+E	4.0	16.8	42	WS52W
64CEFS90	4C+E	6.0	18.5	53	WS52W
1.56CFS90	6C	1.5	16.1	28	WS52W
1.56CEFS90	6C+E	1.5	16.1	29	WS52W
2.56CEFS90	6C+E	2.5	17.6	39	WS52W
1.57CF90	7C	1.5	16.1	29	WS52W
1.510CEFS90	10C+E	1.5	20.2	42	WS52W
2.510CEFS90	10C+E	2.5	22.2	57	WS52W
1.520CEFS90	20C+E	1.5	25.7	72	WS52W
2.520CEFS90	20C+E	2.5	28.4	99	WS52W



FIRESTOP FS90 STRANDED CONDUCTOR ALARM CABLE



Cable description

Fire rated fire alarm circuit LSOH cable suitable for installation wiring.

Application

- Power supply cable to fire alarms.
- Classified (WS52W) meaning the scope of testing is designed to confirm performance when installed in a wiring system.
- Circuit integrity up to an extreme temperature of 1050 °C at the end of 2 hours.
- LSZH – Suitable for confined and high people density areas such as underground transport tunnels, airports and public buildings.

Approvals/Qualifications

NATA accredited facility Qualification (third party)
 AS/NZS 5000.1.
 AS/NZS 3013 WS52W

Behaviour in flame and fire

Fire performance rating:
 AS/NZS 3013 WS52W

Flame propagation:
 IEC 60332-1

Halogen free/Low smoke emission:
 AS/NZS 4507

Temperature range

Maximum operating temperature: +90 °C
 Minimum operating temperature: -25 °C

Flexibility

Minimum bending radius:
 Installed cables: 10D
 During installation: 12D

Resistance to

Fire: 2 hrs
 Chemical exposure: Occasional
 Mechanical impact: Moderate
 Water exposure: Spray
 Solar radiation and weather exposure: UV stabilised

Cable design

Conductor:
 Stranded plain annealed copper (class 2)
 Fire barrier:
 Mica glass tape
 Insulation:
 X-90 (XLPE)
 Colour:
 2 cores: Red, white
 Sheath:
 Red, HFS-90-TP (LSOH)

Installation conditions

In free air
 In duct
 Internal wiring
 External building

FIRESTOP FS90 STRANDED CONDUCTOR ALARM CABLE

Product code	Number of cores	Nominal conductor area mm ²	Approx. overall diameter mm	Approx. mass kg/100 m	AS/NZS 3013 WS Rating
1.5CFS90	2C	1.5	12	18.1	WS52W

Electrical characteristics

ELECTRICAL CHARACTERISTICS

SINGLE CORE							
Size	Resistance		Reactance at (ohm/km)		Voltage drop (mV/A.m)		
	DC @ 20°C	AC @ 110°C (FS110) AC @ 90°C (FS90)	50Hz Trefoil	50Hz Flat Touching	Three phase		Single phase
					Lay flat touching	Trefoil touching	
CLASS 5 FS110 SINGLE CORE							
10	1.91	2.59	0.107	0.123	4.48	4.48	5.17
16	1.21	1.64	0.101	0.116	2.85	2.84	3.28
25	0.780	1.06	0.0973	0.113	1.84	1.84	2.12
35	0.554	0.750	0.0930	0.108	1.31	1.31	1.51
50	0.386	0.523	0.0901	0.105	0.926	0.921	1.06
70	0.272	0.369	0.0869	0.102	0.665	0.658	0.760
95	0.206	0.280	0.0849	0.100	0.518	0.509	0.588
120	0.161	0.219	0.0828	0.0980	0.419	0.408	0.471
150	0.129	0.176	0.0830	0.0982	0.353	0.34	0.393
185	0.106	0.145	0.0821	0.0973	0.307	0.293	0.338
240	0.0801	0.111	0.0808	0.0960	0.259	0.242	0.279
300	0.0641	0.0898	0.0800	0.0953	0.232	0.213	0.246
400	0.0486	0.0699	0.0788	0.0941	0.208	0.187	0.216
500	0.0384	0.0571	0.0780	0.0932	0.194	0.172	0.199
630	0.0287	0.0455	0.0777	0.0929	0.182	0.159	0.184
CLASS 2 FS110 SINGLE CORE							
10	1.83	2.48	0.114	0.129	4.30	4.30	4.97
16	1.15	1.56	0.106	0.122	2.71	2.70	3.12
25	0.727	0.984	0.102	0.118	1.72	1.72	1.99
35	0.524	0.71	0.0982	0.113	1.25	1.24	1.43
50	0.387	0.524	0.0924	0.108	0.929	0.924	1.07
70	0.268	0.363	0.0893	0.104	0.657	0.650	0.751
95	0.193	0.262	0.0868	0.102	0.491	0.481	0.555
120	0.153	0.208	0.0844	0.0996	0.403	0.392	0.453
150	0.124	0.169	0.0844	0.0996	0.344	0.331	0.382
185	0.0991	0.136	0.0835	0.0988	0.296	0.280	0.323
240	0.0754	0.105	0.0818	0.0970	0.252	0.235	0.271
300	0.0601	0.0846	0.0809	0.0961	0.227	0.208	0.240
400	0.047	0.0677	0.0802	0.0955	0.208	0.187	0.216
500	0.0366	0.0547	0.0796	0.0948	0.195	0.172	0.199
630	0.0283	0.0448	0.0787	0.0940	0.184	0.160	0.185
CLASS 2 FS90 SINGLE CORE							
1.5	13.6	17.3	0.155	0.170	30.0	30.0	34.6
2.5	7.41	9.45	0.141	0.156	16.4	16.4	18.9
4	4.61	5.88	0.131	0.146	10.2	10.2	11.8
6	3.08	3.93	0.123	0.138	6.81	6.81	7.86
10	1.83	2.33	0.114	0.129	4.05	4.05	4.68
16	1.15	1.47	0.106	0.122	2.55	2.55	2.94
25	0.727	0.927	0.102	0.118	1.62	1.62	1.87
35	0.524	0.668	0.0982	0.113	1.18	1.17	1.35
50	0.387	0.494	0.0924	0.108	0.878	0.872	1.01
70	0.268	0.342	0.0893	0.104	0.623	0.615	0.710
95	0.193	0.247	0.0868	0.102	0.467	0.457	0.528
120	0.153	0.197	0.0844	0.0996	0.385	0.373	0.431
150	0.124	0.16	0.0844	0.0996	0.330	0.316	0.365
185	0.0991	0.129	0.0835	0.0988	0.285	0.269	0.311
240	0.0754	0.0991	0.0818	0.0970	0.242	0.226	0.261
300	0.0601	0.0803	0.0809	0.0961	0.215	0.199	0.230
400	0.047	0.0646	0.0802	0.0955	0.192	0.176	0.203
500	0.0366	0.0525	0.0796	0.0948	0.174	0.158	0.182
630	0.0283	0.0432	0.0787	0.0940	0.159	0.144	0.166

ELECTRICAL CHARACTERISTICS

MULTICORE					
Size	Resistance		Reactance at 50Hz (ohm/km)	Voltage drop (mV/A.m)	
	DC @ 20°C	AC @ 110°C (FS110) AC @ 90°C (FS90)		Three phase	Single phase
CLASS 5 FS110 MULTICORE					
10	1.91	2.59	0.0810	4.48	5.17
16	1.21	1.64	0.0779	2.84	3.28
25	0.780	1.06	0.0783	1.84	2.12
35	0.554	0.750	0.0761	1.31	1.51
50	0.386	0.523	0.0754	0.917	1.06
70	0.272	0.369	0.0744	0.654	0.755
95	0.206	0.280	0.0729	0.504	0.582
120	0.161	0.219	0.0723	0.403	0.465
150	0.129	0.176	0.0728	0.334	0.386
185	0.106	0.146	0.0730	0.286	0.330
240	0.0801	0.111	0.0722	0.234	0.270
300	0.0641	0.0905	0.0718	0.204	0.236
CLASS 2 FS110 MULTICORE					
10	1.83	2.48	0.0840	4.29	4.95
16	1.15	1.56	0.0805	2.70	3.12
25	0.727	0.984	0.0808	1.71	1.97
35	0.524	0.710	0.0786	1.24	1.43
50	0.387	0.524	0.0751	0.92	1.06
70	0.268	0.364	0.0741	0.645	0.745
95	0.193	0.262	0.0725	0.475	0.548
120	0.153	0.209	0.0713	0.385	0.445
150	0.124	0.170	0.0718	0.322	0.372
185	0.0991	0.136	0.0720	0.271	0.313
240	0.0754	0.105	0.0709	0.224	0.259
300	0.0601	0.0852	0.0704	0.196	0.226
CLASS 2 FS90 MULTICORE					
1.5	13.6	17.3	0.107	30.0	34.6
2.5	7.41	9.45	0.0988	16.4	18.9
4	4.61	5.88	0.0930	10.2	11.8
6	3.08	3.93	0.0887	6.80	7.85
10	1.83	2.33	0.084	4.05	4.68
16	1.15	1.47	0.0805	2.55	2.94
25	0.727	0.927	0.0808	1.61	1.86
35	0.524	0.669	0.0786	1.17	1.35
50	0.387	0.494	0.0751	0.868	1.00
70	0.268	0.343	0.0741	0.609	0.703
95	0.193	0.248	0.0725	0.450	0.520
120	0.153	0.197	0.0713	0.366	0.423
150	0.124	0.16	0.0718	0.307	0.354
185	0.0991	0.129	0.072	0.259	0.299
240	0.0754	0.0998	0.0709	0.216	0.249
300	0.0601	0.0812	0.0704	0.189	0.218

ELECTRICAL CHARACTERISTICS

CURRENT CARRYING CAPACITY* | CLASS 5 | FS110 SINGLE CORE

Nominal conductor area mm ²	Unenclosed			Enclosed	
	Spaced A	Spaced from surface A	Touching surface A	Metallic wiring enclosure in air A	Underground duct one duct A
TWO SINGLE CORE					
10	102	98	80	77	88
16	135	129	105	102	115
25	178	170	139	133	148
35	221	210	172	167	177
50	279	263	218	207	214
70	351	329	273	263	262
95	422	395	329	312	321
120	500	466	390	364	366
150	577	536	450	426	420
185	660	611	516	481	477
240	794	732	621	583	561
300	916	841	716	-	648
400	1105	1006	860	-	738
500	1290	1164	999	-	837
630	1529	1359	1168	-	973
THREE SINGLE CORE					
10	99	85	80	70	76
16	130	112	105	91	97
25	173	149	139	121	125
35	214	184	172	148	151
50	270	233	217	190	188
70	340	292	273	234	229
95	410	353	329	277	268
120	487	418	390	331	316
150	562	482	450	378	357
185	644	553	516	438	404
240	775	665	620	538	481
300	895	766	714	612	542
400	1079	918	855	757	648
500	1260	1064	990	864	729
630	1493	1240	1154	993	828

* Based on 110°C conductor temperature, 40°C ambient air temperature and where applicable, burial depth of 0.5 m, soil temperature of 25°C and soil thermal resistivity of 1.2°C.m/W. Refer to AS/NZS 3008.1.1:2017 for other installation conditions.

ELECTRICAL CHARACTERISTICS

CURRENT CARRYING CAPACITY* | CLASS 5 | FS110 MULTICORE

Nominal conductor area mm ²	Unenclosed		Enclosed	
	Spaced A	Touching surface A	Metallic wiring enclosure in air A	Underground duct one duct A
TWO CORE				
10	94	88	75	84
16	124	116	100	109
25	163	154	129	139
35	202	190	163	171
50	254	238	202	209
70	318	299	257	259
95	381	357	303	304
120	450	421	362	357
150	515	482	412	403
185	586	547	474	456
240	698	652	577	541
300	799	745	656	611
THREE & FOUR CORE				
10	80	75	65	71
16	106	99	84	91
25	140	131	112	118
35	173	162	137	143
50	218	204	175	178
70	273	255	217	217
95	327	306	263	259
120	387	360	306	298
150	444	413	356	341
185	505	470	402	381
240	602	559	489	453
300	688	638	-	509

* Based on 110°C conductor temperature, 40°C ambient air temperature and where applicable, burial depth of 0.5 m, soil temperature of 25°C and soil thermal resistivity of 1.2°C.m/W. Refer to AS/NZS 3008.1.1:2017 for other installation conditions.

ELECTRICAL CHARACTERISTICS

CURRENT CARRYING CAPACITY* CLASS 2 FS110 SINGLE CORE							
Nominal conductor area mm ²	Unenclosed			Enclosed			
	Spaced A	Spaced from surface A	Touching surface A	Metallic wiring enclosure in air A	Underground duct one duct A	Underground duct two duct A	Underground duct three duct A
TWO SINGLE CORE							
10	103	99	81	78	88	97	-
16	137	131	107	104	115	127	-
25	183	175	143	137	148	163	-
35	225	214	176	165	177	195	-
50	276	261	215	205	214	236	-
70	349	328	272	255	262	288	-
95	434	406	339	321	321	352	-
120	505	471	394	369	366	400	-
150	581	540	454	430	420	448	-
185	673	624	527	493	477	517	-
240	806	743	630	594	561	600	-
300	934	857	730	-	648	694	-
400	1094	998	853	-	738	790	-
500	1278	1155	990	-	837	921	-
630	1498	1334	1146	-	973	1045	-
THREE SINGLE CORE							
10	99	86	81	71	77	-	88
16	132	114	107	93	99	-	115
25	177	153	143	125	130	-	148
35	218	188	176	151	155	-	176
50	267	230	215	182	184	-	212
70	339	291	272	234	230	-	259
95	422	363	339	285	277	-	315
120	492	422	394	337	322	-	357
150	565	486	453	382	362	-	400
185	656	564	526	449	415	-	461
240	786	674	629	548	492	-	533
300	912	780	727	626	556	-	617
400	1069	910	847	718	631	-	700
500	1248	1053	981	865	736	-	815
630	1462	1217	1132	983	827	-	920

* Based on 110°C conductor temperature, 40°C ambient air temperature and where applicable, burial depth of 0.5 m, soil temperature of 25°C and soil thermal resistivity of 1.2°C.m/W. Refer to AS/NZS 3008.1.1:2017 for other installation conditions.

ELECTRICAL CHARACTERISTICS

CURRENT CARRYING CAPACITY* | CLASS 2 | FS110 MULTICORE

Nominal conductor area mm ²	Unenclosed		Enclosed	
	Spaced A	Touching surface A	Metallic wiring enclosure in air A	Underground duct one duct A
TWO CORE				
10	95	89	76	85
16	126	118	102	111
25	168	158	133	144
35	206	194	166	175
50	251	236	200	208
70	317	298	256	260
95	392	367	312	313
120	455	426	368	363
150	519	486	417	409
185	598	559	486	468
240	708	662	588	554
300	815	760	670	626
THREE & FOUR CORE				
10	81	76	64	71
16	107	101	86	93
25	144	135	116	122
35	177	166	140	146
50	216	202	174	177
70	272	255	217	217
95	337	314	270	267
120	391	364	311	304
150	447	416	360	346
185	515	479	411	391
240	611	567	498	463
300	701	650	-	522

* Based on 110°C conductor temperature, 40°C ambient air temperature and where applicable, burial depth of 0.5 m, soil temperature of 25°C and soil thermal resistivity of 1.2°C.m/W. Refer to AS/NZS 3008.1.1:2017 for other installation conditions.

ELECTRICAL CHARACTERISTICS

CURRENT CARRYING CAPACITY* | CLASS 2 | FS90 SINGLE CORE

Nominal conductor area mm ²	Unenclosed			Enclosed			
	Spaced A	Spaced from surface A	Touching surface A	Wiring enclosure in air A	Underground duct one duct A	Underground duct two duct A	Underground duct three duct A
TWO SINGLE CORE							
1,5	26	25	20	21	26	30	-
2,5	36	36	28	30	36	41	-
4	48	47	37	38	46	53	-
6	61	60	47	47	58	66	-
10	84	82	65	65	78	87	-
16	112	108	86	84	100	112	-
25	151	145	117	113	131	146	-
35	186	177	144	135	157	175	-
50	228	216	176	166	189	211	-
70	291	273	224	204	233	258	-
95	361	338	278	255	285	309	-
120	422	393	325	292	325	358	-
150	486	451	375	329	365	401	-
185	565	522	436	387	423	463	-
240	678	622	522	461	497	536	-
300	787	718	605	-	562	620	-
400	923	836	708	-	653	706	-
500	1078	966	821	-	739	800	-
630	1261	1113	950	-	856	930	-
THREE SINGLE CORE							
1,5	25	21	20	18	22	-	27
2,5	35	30	28	25	31	-	38
4	46	40	37	33	40	-	49
6	59	50	47	42	50	-	60
10	81	69	65	56	67	-	79
16	108	92	86	72	86	-	101
25	146	125	117	97	113	-	132
35	180	154	144	120	137	-	158
50	221	188	176	143	163	-	190
70	282	240	224	183	203	-	232
95	350	298	278	220	244	-	276
120	410	349	325	261	284	-	320
150	472	403	375	295	320	-	358
185	550	468	435	335	363	-	413
240	660	560	521	399	426	-	477
300	766	648	602	469	491	-	552
400	899	756	702	534	557	-	626
500	1051	874	812	633	648	-	707
630	1230	1010	938	714	727	-	820

* Based on 90°C conductor temperature, 40°C ambient air temperature and where applicable, burial depth of 0.5 m, soil temperature of 25°C and soil thermal resistivity of 1.2°C.m/W. Refer to AS/NZS 3008.1.1:2017 for other installation conditions.

ELECTRICAL CHARACTERISTICS

CURRENT CARRYING CAPACITY* | CLASS 2 | FS90 MULTICORE

Nominal conductor area mm ²	Unenclosed		Enclosed	
	Spaced A	Touching surface A	Wiring enclosure in air A	Underground duct one duct A
TWO CORE & 2 CORE + EARTH				
1,5	24	22	20	24
2,5	34	31	28	34
4	45	42	37	45
6	57	53	46	56
10	78	73	63	75
16	104	97	82	98
25	140	131	110	128
35	173	162	132	154
50	211	197	162	185
70	268	250	200	228
95	331	309	250	279
120	385	359	285	318
150	441	411	332	365
185	509	473	377	413
240	604	562	448	485
300	694	645	523	558
THREE & FOUR CORE				
1,5	20	19	16	20
2,5	28	26	24	29
4	38	35	30	37
6	48	45	38	46
10	66	62	53	63
16	88	83	68	81
25	119	111	91	107
35	147	137	114	130
50	180	168	136	155
70	229	213	173	193
95	283	263	209	233
120	330	306	246	270
150	377	350	277	304
185	436	404	322	348
240	517	479	386	411
300	594	549	-	463

* Based on 90°C conductor temperature, 40°C ambient air temperature and where applicable, burial depth of 0.5 m, soil temperature of 25°C and soil thermal resistivity of 1.2°C.m/W. Refer to AS/NZS 3008.1.1:2017 for other installation conditions.

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General information

GENERAL INFORMATION

The Difference between AS/NZS 3013 and BS 6387

In relation to fire resistance, ultimate performance is maintaining circuit integrity for a period of time to allow safe evacuation in the event of a fire hazard. This performance imperative requires a holistic approach to system design as opposed to independent focus on system components. With regards to cable systems, AS/NZS 3013 differs from other fire test methods such as BS6387 and IEC 60331 in that its test configuration is closely designed to reflect real life installation set up and affords a wiring system (WS) rating. Below are brief insights into the Australian industry perspective to wiring systems and fire test principles.

Wiring System Perspective

AS/NZS 3013 stands out in scope and application in comparison to international standards in that it provides a clear guide to an installation “deemed to comply” to safety requirements as included Australian wiring rules and building code. The inclusion of any wiring system component not tested to this standard implies the whole system requires type testing to demonstrate compliance to the principles

of safety as defined by the regulations. To this end, cables tested to BS6387 or other international standard can therefore not be assumed to be equivalent to cables complying with AS/NZS3013 as such cables do not have any wiring system rating.

Test Method

The fundamental difference between AS/NZS 3013 and BS6387 (including IEC 60331) is the Australian standard fire test is a furnace test while the latter are flame tests. While no test method will replicate fire conditions exactly, it is generally accepted in the industry that heat and therefore temperature plays a significant role in a fire situation and could be sustained longer than flame. Below is a summary of key differences between AS/NZS3013 usual classification requirement of WS52W and BS6387 (highest classification (CWZ)). Both standards have similar circuit integrity testing during water spray.

TEST METHODS - SUMMARY OF KEY DIFFERENCES

	AS/NZS 3013	BS6387 (CWZ)
Scope of Tests	<p>Wiring System e.g. WS52W. Deemed to comply with AS/NZS 3000 and Building code of Australia.</p> <ul style="list-style-type: none"> - Cable installed on a tray with two 90° changes in direction mimicking installed condition. 	<p>Cable classification only. Demonstration of compliance to the principles of safety of wiring system as installed may be required for installations in Australia.</p> <ul style="list-style-type: none"> - Cable supported on test rig with no bearing on installation set up.
Temperature Curve	<p>WS5X Furnace temperature increases up to around 1050°C in 2 hours.</p> <ul style="list-style-type: none"> - All cable components attain the test temperature. 	<p>(C) 950°C flame for duration of 3 hrs.</p> <ul style="list-style-type: none"> - Test temperature is regulated for the flame only. All heat is not necessarily transferred to the cable.
Mechanical protection rating	<p>WSX2 stands for; Moderate protection representing 15 joules impact and 1.0 kN cutting test at operating temperature. This test relates to robustness of the cable in normal operation.</p>	<p>(Z) Mechanical shock during fire test at reduced flame temperature of 650°C – this test is not intended to depict mechanical protection during the life of the cable.</p>

GENERAL INFORMATION

WS rating simplified

What happens in a fire situation?

As the fire starts spreading across the building one aspect becomes critical to guide people to safety: the Emergency Exit signs must remain on, so people can find a safe way out. For the signs to remain on, it must be guaranteed that the power supply will remain on the circuit over a certain period of time, which could be challenged by the cables being exposed to high temperatures and mechanical impact.

How the testing compares to the real fire situation?

The duration of time in which a cable keeps working even under high temperatures generated during the fire situation is assessed as the Level of circuit integrity in fire condition. This is the first digit WSXYW on the rating code. In simple words, it represents the number of minutes the system remained energized while under fire. For Prysmian cables it is mostly WS5YW, which means 120 minutes of power supply to the system.

In addition to high temperatures, parts of the building structure may brake hitting the cable as they fall. The ability to resist such mechanical impact is known as the Level of protection against mechanical damage. This is the second digit of the rating code WS5YW. For Prysmian cables it is mostly 2 or 3 (WS52W or WS53W) meaning moderate to heavy impact protection.

Finally, it would be expected for the water sprinklers to activate during a fire, so the cable is also submitted to a water spray test. In the rating code, this element is represented by a final supplementary letter WS52W.

A more comprehensive detail of the possible ratings in AS/NZS3013 are provided in the table below.

WS RATING							
WS	1 st Numeral Electrical performance			2 nd Numeral Mechanical performance			Supplementary letter
Characteristic lettering "WS"	Level of circuit integrity in fire condition			Level of protection against mechanical damage			Water spray test applied
WS	1	=	15 min	1	=	Light	The letter "W" shall be applied as appropriate.
	2	=	30 min	2	=	Moderate	
	3	=	60 min	3	=	Heavy	
	4	=	90 min	4	=	Very heavy	
	5	=	120 min	5	=	Extremely heavy	

As an example a WS52W rated cable will have the following characteristics;

- WS – be suitable for inclusion in a wiring system.
- 5 – have electrical performance (circuit integrity) for 120 minutes (two hours) in a fire condition.
- 2 – provide a moderate level of protection against impact damage during normal service.
- W – have electrical performance (circuit integrity) following exposure to water from overhead sprinklers.

GENERAL INFORMATION

Recommended guidelines

The major consideration when installing AS/NZS 3013 fire rated cable is to maintain the integrity of the circuit when exposed to fire or other mechanical damage. In order to achieve this, the following needs to be considered:

- Firestop cable is to be used in fixed applications only.
- Firestop cable to be installed in areas where temperature is minus 30 °C or warmer (minus 20 °C or warmer for FS-90 flat cable).
- Firestop cable should be installed without joints or breaks through the fire hazard zone.
- Junctions or Termination Boxes within the fire hazard zone should have a rating commensurate with the cable.
- Bending radius of cable should be no less than 10 x OD set in position and 12 x OD during installation.
- Cables must be strapped to the cable support tray or ladder using stainless steel cable ties or other approved ways.
- Direct surface mounted multicore cables may be fastened to equally rated fire walls using galvanised ferrous saddle or P-clips.

Components of a wiring system can be used with Firestop Cables providing they are approved as per Wiring Systems Standard AS/NZS 3013.

Recommended fixing distances

- Vertical – not more than 0.6 metres.
- Horizontal – not more than 1 metre where supported by cable tray, cable ladder or other continuous fire rated surface. Not more than 0.6 metres when installed on the underside of a continuous fire rated surface.
- Catenary – not more than 0.3 metres.

These are considered minimum requirements, all cables or bunches over 25 mm in diameter need to be supported every 300 mm.



Linking the future

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