

# Safe-T-Line Cables

3-hour Fire Rated Cables

Product Bulletin



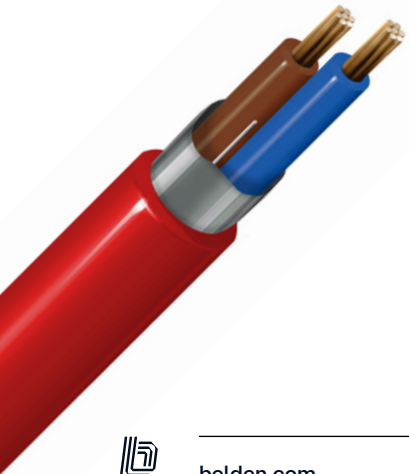
Belden offers a full line of BS 6387 and LPCB approved Fire-resistive, 3-hour Rated New Generation Circuit Integrity (CI) cables.

- **The most economical choice** of only three options to **meet the 3-hour circuit integrity code** requirements from lifesaving Emergency Voice-Alarm Communications (EVAC) systems (beside very expensive structural/architectural 3-hour chase and the use of mineral insulated cables)
- **Easier to Terminate and Install:** Belden Fire-resistive Safe-T-Line cables are manufactured with a **user friendly**, aluminium-polyester Beldfoil shielding tape, instead of the copper tapes making Belden's CI cable the most easily terminated cable of its kind
- **A large variety** of industrial 3-hour rated, shipboard 2-hour rated and LPCB approved CI cables to meet your individual needs

## Key Features

- Safe-T-Line CI cables meet the most stringent circuit integrity requirements on the market: BS 6387 CWZ
- C: resistance to fire at a temperature of 950 °C for 3 hours
- W: resistance to fire with waterspray for 15 minutes at 650 °C
- Z: resistance to fire with mechanical shock for 15 minutes at 950 °C
- LPCB approved
- Resistance to fire for unprotected small cables used in emergency circuits for 2 hours as per EN 50200
- Riser rated FPLR cables as per UL 1666
- Low smoke, halogen free cables with operating temperature of up to 105 °C, suitable for applications where temperature ranges are variable

Belden 3-hour Rated Safe-T-Line CI cables ensure continued operation of a building's EVAC systems in event of fire. ABS-approved CI cables are suitable for shipboard applications or handling controlled shutdown situations in industrial environments.



## LPCB Approved CI Cables

Belden Safe-T-Range covers easy-strip LPCB approved cables tailored for the European and Middle East market. The range comes in variants of 2, 3 and 4 conductors, for 1.5 mm<sup>2</sup> to 4 mm<sup>2</sup> and is manufactured in Europe.

### Safe-T-Line Cable

Circuit Integrity (CI) Fire Alarm – Flame Retardant, Low Smoke, Zero Halogen Jacket, LPCB Approved

BS 6387 CWZ, EN 50200 PH120 + Annex E, IEC 60332-3-24, IEC 60332-3-25


Description	Part No.	No. of Cond.	Stranding	Standard Lengths		Reel Weight per meter		Insulation Thickness		Nominal OD		Nominal Capacitance		Maximum DC Resistance $\Omega$ /Mft.
				ft	m	lb	kg	inch	mm	inch	mm	pF/ft	pF/m	
<b>Shielded Multi-conductor • Silicone Rubber (BS7655 E12) Insulation • Red or White Low Smoke Zero Halogen Jacket</b>														
1.5 mm <sup>2</sup> - Solid	79001FS	2	solid	1640	500	83.3	37.8	0.03	0.7	0.31	7.9	21	70	12.10
	79003FS	3				118.6	53.8			0.35	8.8			
	79005FS	4				143.5	65.1			0.37	9.5			
1.5 mm <sup>2</sup> - Stranded	79001FF	2	class 2	1640	500	83.3	37.8	0.03	0.7	0.31	7.9	23	75	12.10
	79003FF	3				118.6	53.8			0.35	8.8			
	79005FF	4				143.5	65.1			0.37	9.5			
2.5 mm <sup>2</sup> - Solid	79002FS	2	solid	1640	500	121.5	55.1	0.03	0.8	0.36	9.2	24	80	7.41
	79004FS	3				158.0	87			0.38	9.7			
	79006FS	4				203.5	92.3			0.46	11.7			
2.5 mm <sup>2</sup> - Stranded	79002FF	2	class 2	1640	500	121.5	55.1	0.03	0.8	0.37	9.3	26	85	7.41
	79004FF	3				158.0	71.7			0.39	9.9			
	79006FF	4				203.4	92.3			0.43	10.9			
4 mm <sup>2</sup> - Stranded	79007FF	2	class 2	1640	500	182.0	82.6	0.03	0.8	0.45	11.4	30	100	4.61
	79009FF	3				237.1	107.6			0.48	12.1			
	79011FF	4				303.2	137.6			0.52	13.3			

## Industrial 3-hour Rated CI Cables

Belden Type PLTC shielded multi-conductor cables are for industrial use, to be employed in controlled shutdown or emergency situations in circuitry that pertains to mission-critical industrial processes. Belden Part Nos. 5240FRE and 5201FRE are for installation in risers or Power Limited Trays.


### Safe-T-Line Cable

PLTC 3-hour Fire Rated/Industrial Control Shutdown Cable – Flame Retardant, Low Smoke, Zero Halogen Jacket, Riser-Rated

Description	Part No.	No. of Cond.	Stranding	Standard Lgths		Standard Unit Wt		Insulation Thickness		Nominal OD		Nominal Capacitance		Nominal DC Resistance $\Omega$ /Mft.	
				ft	m	lb	kg	inch	mm	inch	mm	pF/ft	pF/m		
<b>Shielded Multi-conductor • Thermoset Elastomer Insulation • Beldfoil Shield • Sunlight Resistant • Red Polyolefin Jacket</b>															
<b>16 AWG</b>															
<b>NEC: FPLR, ITC, PLTC</b> BS 6387 CWZ EN 50200 PH120 	5240FRE	2	7 × 24	500	152.4	55	25	0.034	0.86	0.35	8.4	31	102	4.0	
					2500	762.0	185			84	0.35				8.9
	5201FRE	3	7 × 24	500	152.4	88	40			0.37	9.7				
				2500	762.0	230	150	0.37	9.4						





## Safe-T-Line Cable

Circuit Integrity (CI) Fire Alarm - Flame Retardant, Low Smoke, Zero Halogen Jacket, Riser-Rated; FPLR

Description	Part No.	No. of Cond.	Stranding	Standard Lgths		Standard Unit Wt		Insulation Thickness		Nominal OD		Nominal Capacitance		Nominal DC Resistance Ω/Mft.
				ft	m	lb	kg	inch	mm	inch	mm	pF/ft	pF/m	
<b>Unshielded Multi-conductor • Thermoset Elastomer Insulation • Red Polyolefin Jacket</b>														
<b>NEC: FPLR, ITC, PLTC</b> BS 6387 CWZ EN 50200 PH120 	<b>18 AWG</b>													
	5320UME	2	solid	1000	304.8	40	18	0.034	0.86	0.31	7.9	17	56	5.9
	5322UME	4				65	30			0.35	8.9			
	5324UME	5				95	43			0.42	10.7			
	5326UME	6				120	55			0.45	11.4			
	<b>16 AWG</b>													
	5220UME	2	solid	1000	304.8	49	22	0.034	0.86	0.33	8.4	19	62	4.0
	5222UME	4				81	37			0.38	9.7			
	<b>14 AWG</b>													
	5120UME	2	solid	1000	304.8	71	32	0.034	0.86	0.36	9.1	21	69	2.5
	5122UME	4				121	55			0.41	10.4			
	<b>12 AWG</b>													
	5020UME	2	solid	1000	304.8	100	45	0.034	0.86	0.39	10	23	75	1.6
	5022UME	4				168	76			0.45	11.4			

## Safe-T-Line Cable









Circuit Integrity (CI) Fire Alarm - Flame Retardant, Low Smoke, Zero Halogen Jacket, Riser-Rated; FPLR

Description	Part No.	No. of Cond.	Stranding	Standard Lengths		Standard Unit Weight		Insulation Thickness		Nominal OD		Nominal Capacitance		Nominal DC Resistance Ω/Mft.
				ft	m	lbs	kg	inch	mm	inch	mm	pF/ft	pF/m	
<b>Shielded Multi-conductor • Thermoset Elastomer Insulation • Beldfoil Shield • Red Polyolefin Jacket</b>														
<b>18 AWG</b>														
<b>NEC: FPLR, ITC, PLTC</b> BS 6387 CWZ EN 50200 PH120 	5320FME	2	solid	1000	304.8	45	20	0.34	0.86	0.31	7.9	27	89	6.5
	5322FME	4				70	32			0.35	8.9			
	5324FME	6				100	45			0.42	10.7			
	5326FME	8				125	57			0.45	11.4			
<b>NEC: FPLR</b> BS 6387 CWZ EN 50200 PH120 	5300FME	2	7 × 26	1000	304.8	47	21	0.34	0.86	0.32	8.1	27	89	6.6
	5302FME	4				72	33			0.36	9.1			
	5304FME	6				104	47			0.44	11.2			
	5306FME	8				130	59			0.48	12.2			
<b>16 AWG</b>														
<b>NEC: FPLR, ITC, PLTC</b> BS 6387 CWZ EN 50200 PH120 	5220FME	2	solid	1000	304.8	55	25	0.34	0.86	0.33	8.4	31	102	4.0
	5222FME	4				88	40			0.38	9.7			
<b>NEC: FPLR, ITC, PLTC</b> BS 6387 CWZ EN 50200 PH120 	5200FME	2	7 × 24	1000	304.8	58	26	0.34	0.86	0.35	8.9	31	102	4.0
	5202FME	4				93	42			0.4	10.2			

All 2-conductor versions are color-coded black and red; 4 or more conductor versions are all black and numbered. Available through 8 conductor by special order. Contact Belden distribution.

## Safe-T-Line Cable

Circuit Integrity (CI) Fire Alarm – Flame Retardant, Low Smoke, Zero Halogen Jacket, Riser-Rated; FPLR

Description	Part No.	No. of Cond.	Stranding	Standard Lengths		Standard Unit Weight		Insulation Thickness		Nominal OD		Nominal Capacitance		Nominal DC Resistance Ω/Mft.
				ft	m	lbs	kg	inch	mm	inch	mm	pF/ft	pF/m	
<b>Shielded Multi-conductor • Thermoset Elastomer Insulation • Beldfoil Shield • Sunlight Resistant • Red Polyolefin Jacket</b>														
<b>14 AWG</b>														
NEC: FPLR, ITC, PLTC BS 6387 CWZ EN 50200 PH120  	5120FME	2	solid	1000	304.8	81	37	0.034	0.86	0.36	9.1	33	108	2.5
	5122FME	4				131	60			0.41	10.4			
NEC: FPLR, ITC, PLTC BS 6387 CWZ EN 50200 PH120  	5100FME	2	7 × 22	1000	304.8	83	38	0.034	0.86	0.38	9.7	33	108	2.6
	5102FME	4				133	60			0.44	11.2			
<b>12 AWG</b>														
NEC: FPLR, ITC, PLTC BS 6387 CWZ EN 50200 PH120  	5020FME	2	solid	1000	304.8	114	52	0.034	0.86	0.39	10	37	121	1.6
	5022FME	4				182	83			0.45	11.4			
NEC: FPLR, ITC, PLTC BS 6387 CWZ EN 50200 PH120  	5000FME	2	7 × 20	1000	304.8	116	53	0.034	0.86	0.42	10.7	40	131	1.6
	5002FME	4				185	84			0.48	12.1			

Notes: All 2-conductor versions are color-coded black and red; 4 or more conductor versions are all black and numbered. Available through 8 conductor by special order. Contact Belden distribution.







## Shipboard 2-hour Rated CI Cables

Belden also offers ABS-type approved products (Part Nos. 1320SB and 1321SB) with type approved Low Smoke, Zero Halogen properties for use in demanding marine applications.

ABS (the American Bureau of Shipping) is the leading international classification society devoted to promoting the security of marine-related life and property. With ABS-type approval, no additional special approvals or insurance company exceptions are required for Belden cable system installations.

### Safe-T-Line Cable

ABS Type Approved 2-hour Fire Rated Shipboard Cable – Flame Retardant, Low Smoke, Zero Halogen Jacket; FPLR, CMG-LS, FT4, IEC

Description	Part No.	No. of Cond.	Stranding	Standard Lgths		Standard Unit Wt		Insulation Thickness		Nominal OD		Nominal Capacitance		Nominal DC Resistance $\Omega$ /Mft.
				ft	m	lb	kg	inch	mm	inch	mm	pF/ft	pF/m	
<b>Shielded Multi-conductor • Thermoset Elastomer Insulation • Beldfoil Shield • Sunlight Resistant • Red Polyolefin Jacket</b>														
<b>18 AWG Solid Bare Copper</b>														
NEC: FPLR,CMG-LS IEC: 60331-23  	1320SB	1	16/2	1000	304.8	55	25	0.034	0.86	0.33	8.4	31	102	4.0
<b>ABS Model Certificate No. 06-HS184641F-PDA</b>														
<b>16 AWG Solid Bare Copper</b>														
NEC: FPLR,CMG-LS IEC: 60331-23  	1321SB	1	16/2	1000	304.8	55	25	0.034	0.86	0.33	8.4	31	102	4.0
<b>ABS Model Certificate No. 06-HS184641F-PDA</b>														



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