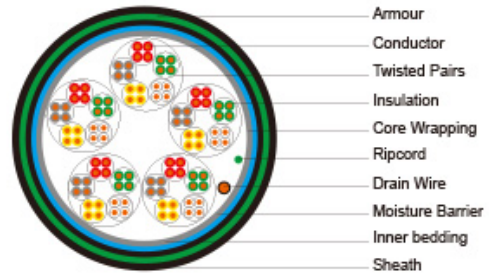


SR Insulated & LSZH Sheathed Fire Resistant Cables to DIN VDE 0815



JE-H(St)H...Bd FE180 E30	JE-H(St)H...Bd FE180 E30 BMK
Application	The cables are similar in design and application to CW 1600, but with Silicon Rubber Insulation. They are used for the internal wiring of building when the circuit integrity during fire is paramount. The cables are intended for use in fire fighting plants with special ceramized silicon insulation, with and without aluminium foil and LSZH outer sheath
Standards	EN 50200:2000-02 EN 50266 EN 50267 EN 50268 BS 6387 IEC 60331 DIN VDE 0472-814
Construction	
Conductors	Solid annealed bare or tinned copper sized 0.6/0.8/0.9mm as per class 1 of VDE 0295/IEC 60228
Insulation	Silicon Rubber compound as per DIN VDE 0266
Twisted Pairs	Insulated conductors are twisted into pairs with varying lay length to minimize crosstalk
Cabling Element	Twisted Pairs
Cable Core Assembly	The twisted pairs are stranded to the core in layers
Core Wrapping	One or more non hygroscopic polyester tapes are helically or longitudinally laid with an overlap prior to sheathing
Screen	A laminated Aluminium/Polyester tape is placed in contact with solid copper 0.6mm or 0.8mm drain wire
Inner bedding (for armoured cables)	PE or LSZH compound.
Armour (for armoured cables)	Either corrugated steel tape armour or galvanized steel wire is applied over an inner polyethylene sheath. For steel tape armour, the 0.15mm thick steel tape is coated with a copolymer and applied with an overlap. For steel wire armour, single layer of galvanized steel wire armour is applied
Sheath	LSZH compound HM2 as per VDE 0207-24

Ripcord	Nylon ripcord may be placed parallel to the cores to facilitate sheath removal
Drain Wire	A solid tinned earth/continuity wire shall be laid longitudinally for screened cables

Type Codes

JE-	Fire Alarm Cable	H	Halogen Free & Zero Halogen
Bd	Unit stranding	(St)	Static Shield of aluminium tape
FE180	Insulation Integrity (950°C 180 minutes)	E30	30 minutes Circuit Integrity

Electrical Properties

Conductor Diameter	mm	0.6	0.8	0.9
Conductor Size	mm ²	0.283	0.5	0.312
Maximum Conductor Resistance @20°C	Ω/km	63	34.6	28.0
Maximum Loop Resistance @20°C	Ω/km	130	73.2	60
Minimum Insulation Resistance @500V DC @20°C	MΩ.km	100	100	100
Maximum Average Attenuation @0.8KHz	dB/km	1.7	1.2	0.74
Nominal Mutual Capacitance @0.8KHz	nF/km	120	120	120
Maximum Capacitance Unbalance K1 @0.8KHz pair-to-pair	pF/100m	200	200	200
Working Voltage	V	225	225	225
Nominal Insulation Thickness	mm	0.3	0.4	0.45
Nominal Insulated Conductor Diameter	mm	1.2	1.6	1.7

Mechanical and Thermal Properties

Temperature range during operation (fixed state): -30°C – +70°C

Temperature range during installation (mobile state): -20°C – +50°C

Minimum bending radius: 7.5 x Overall Diameter (unarmoured cable); 15 x Overall Diameter (armoured cables)

Fire Hazard Performance

1) Minimum Smoke Emission	IEC 61034, EN 50268 (New: EN 61034), VDE 0482-268 (New: VDE 0482-1034)
	These standards specify a method to measure the generation of smoke from cables during fire. The result is expressed as percentage of light transmitted. Usually, the smoke density shall not be less than 60%.
2) Halogen	IEC 60754-1, EN 50267-2-1

Free	These standards specify a method for determination of the amount of halogen acid gas, evolved during combustion of compound. The hydrochloric acid yield should be less than 0.5%.
3) Non corrosive gases	IEC 60754-2, EN 50267-2-2, VDE 0482-267
	These standards specify a method for determination of acidity of gas evolved during combustion of cables by measuring PH and conductivity. The specimen is deemed to pass this test if the pH value is less than 4.3 when related to 1 litre of water and conductivity is less than 10 µs/min.
4) Reduced Fire Propagation	IEC 60332-3C, EN 50266-2-4, VDE 0482-266-2-4
	These standards specify a method for flame propagation test for bunched cables.
5) Flame Retardancy	IEC 60332-1, VDE 0482-265-2-1
	These standards specify a method for flame propagation test for single core cables.
6) Temperature Index	BS EN ISO 4589-3, BS 2782 Part 1
	These standards specify a method for measuring the temperature Index of materials. The temperature index shall be equal or greater than 280°C.
7) Oxygen Index	BS EN ISO 4589-2, BS 2863
	These standards specify a test for measuring the minimum oxygen concentration to support candle like combustion of plastics. The oxygen index shall not be less than 30%.

Colour Code

Quad colour in each bundle:

Pair 1: Blue-Red

Pair 2: Green-Yellow

Pair 3: Green-Brown

Pair 4: White-Black

The individual bundles are identified by a numbered helix.

Dimensions And Weight

VDE CODE: JE-H(St)H...x2x0.8 Bd FE180 E30

Cable Code	Number of Pairs	Nominal Insulation Thickness mm	Nominal Sheath Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
0.8mm Conductor, 1.6mm Insulated Wire					
TP815JE-H(St)H-Bd-FE180-E30-1P08	1	0.4	1.0	6.0	46
TP815JE-H(St)H-Bd-FE180-E30-2P08	2	0.4	1.0	6.6	61
TP815JE-H(St)H-Bd-FE180-E30-4P08	4	0.4	1.0	8.8	104
TP815JE-H(St)H-Bd-FE180-E30-6P08	6	0.4	1.0	10.8	160
TP815JE-H(St)H-Bd-FE180-E30-8P08	8	0.4	1.0	12.8	218

TP815JE-H(St)H-Bd-FE180-E30-10P08	10	0.4	1.2	13.1	220
TP815JE-H(St)H-Bd-FE180-E30-12P08	12	0.4	1.2	13.5	235
TP815JE-H(St)H-Bd-FE180-E30-16P08	16	0.4	1.2	14.7	297
TP815JE-H(St)H-Bd-FE180-E30-20P08	20	0.4	1.2	16.1	367
TP815JE-H(St)H-Bd-FE180-E30-24P08	24	0.4	1.4	18.1	440
TP815JE-H(St)H-Bd-FE180-E30-30P08	30	0.4	1.4	20.1	645
TP815JE-H(St)H-Bd-FE180-E30-32P08	32	0.4	1.4	20.6	645
TP815JE-H(St)H-Bd-FE180-E30-40P08	40	0.4	1.4	22.5	656
TP815JE-H(St)H-Bd-FE180-E30-50P08	50	0.4	1.6	24.3	840

VDE CODE: JE-H(St)H(SWA)H...x2x0.6/0.8/0.9 Bd FE180 E30

Cable Code	Number of Pairs	Nominal Insulation Thickness mm	Nominal Bedding/ Sheath Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
0.6mm Conductor, 1.2mm Insulated Wire					
TP815JE-H(St)H(SWA)H-Bd-FE180-E30-2P06	2	0.3	1.0/1.8	12.1	305
TP815JE-H(St)H(SWA)H-Bd-FE180-E30-3P06	3	0.3	1.0/1.8	12.6	325
TP815JE-H(St)H(SWA)H-Bd-FE180-E30-6P06	6	0.3	1.0/1.8	13.2	380
TP815JE-H(St)H(SWA)H-Bd-FE180-E30-8P06	8	0.3	1.0/1.8	14.6	415
TP815JE-H(St)H(SWA)H-Bd-FE180-E30-10P06	10	0.3	1.0/1.8	16.5	450
TP815JE-H(St)H(SWA)H-Bd-FE180-E30-12P06	12	0.3	1.0/1.8	17.0	500
TP815JE-H(St)H(SWA)H-Bd-FE180-E30-20P06	20	0.3	1.0/1.8	20.5	580

TP815JE-H(St)H(SWA)H-Bd-FE180-E30-25P06	25	0.3	1.0/1.8	21.5	940
TP815JE-H(St)H(SWA)H-Bd-FE180-E30-30P06	30	0.3	1.0/1.8	22.5	1300
0.8mm Conductor, 1.6mm Insulated Wire					
TP815JE-H(St)H(SWA)H-Bd-FE180-E30-2P08	2	0.4	1.0/1.8	14.0	415
TP815JE-H(St)H(SWA)H-Bd-FE180-E30-3P08	3	0.4	1.0/1.8	14.0	425
TP815JE-H(St)H(SWA)H-Bd-FE180-E30-6P08	6	0.4	1.0/1.8	15.0	485
TP815JE-H(St)H(SWA)H-Bd-FE180-E30-8P08	8	0.4	1.0/1.8	17.5	520
TP815JE-H(St)H(SWA)H-Bd-FE180-E30-10P08	10	0.4	1.2/1.8	19.0	540
TP815JE-H(St)H(SWA)H-Bd-FE180-E30-12P08	12	0.4	1.2/1.8	20.5	600
TP815JE-H(St)H(SWA)H-Bd-FE180-E30-20P08	20	0.4	1.4/1.8	24.5	1050
TP815JE-H(St)H(SWA)H-Bd-FE180-E30-25P08	25	0.4	1.4/1.8	27.0	1250
TP815JE-H(St)H(SWA)H-Bd-FE180-E30-30P08	30	0.4	1.4/1.8	28.5	1450
0.9mm Conductor, 1.7mm Insulated Wire					
TP815JE-H(St)H(SWA)H-Bd-FE180-E30-10P09	10	0.45	1.2/1.8	19.7	600
TP815JE-H(St)H(SWA)H-Bd-FE180-E30-15P09	15	0.45	1.2/1.8	23.0	1020
TP815JE-H(St)H(SWA)H-Bd-FE180-E30-20P09	20	0.45	1.4/1.8	25.3	1160
TP815JE-H(St)H(SWA)H-Bd-FE180-E30-25P09	25	0.45	1.4/1.8	27.3	1330
TP815JE-H(St)H(SWA)H-Bd-FE180-E30-30P09	30	0.45	1.4/1.8	29.3	