

JE-H(St)H FE180/E30-E90 Bd

Installation cables, fire-resistant, halogen-free, orange (red) sheath



Cable structure

- Copper plain conductor diameter 0,8 mm
- Core insulation of halogen-free elastomer compound
- Color coded cores according to DIN VDE 0815
- Cores twisted to pairs, 4 pairs consist to unit, units twisted in layers and units identified by numbered tape.
- Twisted units wrapped with special glass-fibre tape
- Electrostatic screening (St) with plastic coated aluminium foil (Al PET) + CuSn drain wire N 0,8 mm
- Halogen-free sheath of polymer compound, flame retardant
- Color sheath orange or red with imprint BRANDMELDEKABEL for fire alarms

Tests

- Flame-retardant to DIN VDE 0482-332-3-24/EN 60332-3-24/IEC 60332-3-24 (cat. C)
- Corrosiveness of combustion gases to IEC 60754-2
- Halogen-free to IEC 60754-1
- Smoke density to IEC 61034-1, 61034-2
- Insulation integrity under direct flame propagation according to DIN VDE 0472 part 814, IEC 60331
- Function integrity according to DIN VDE 4102 part 12 of electrical cable system for a period of 30–90 min.

Technical data

- Halogen-free, flame retardant installation cable according to DIN VDE 0815
- **Insulation integrity** - under the impact of flames 180 min according to IEC 60331, DIN VDE 0472 part 814
- **Function integrity according to DIN VDE 4102 part 12** E30–E90 depending on installation technique
- **Conductor resistance** (loop) max. 73,2 Ω/km
- **Temperature range** during installation -5 °C to +50 °C fixed from -30 °C to +70 °C
- **Operating voltage** (peak value) 225 V
- **Test voltage a.c.** core/core 500 V core/screen 2000 V
- **Insulation resistance** min. 100 MΩ/km
- **Mutual capacitance** at 800 Hz max. 120 nF/km (this value can be exceeded by 20 % in cables up to 4 pairs)
- **Capacitance unbalance** 200pF/100 m, (20% of the values, but one value up to 400 pF is allowed)
- **Minimum bending radius** approx. 15× cable diameter
- **Radiation resistance** up 100×10⁶ kJ/kg (up 100Mrad)

Application

Halogen-free, flame resistant installation cables are mostly used in telecommunication and fire alarm systems. The electrostatic screening considerably reduces effect of outer electrical interferences. In case of fire no flame propagation and low smoke density. These flame-resistant cables are used for fixed installation in all locations where a special protection against fire and fire damage to human life and equipment is necessary such as in industry complexes, power stations, public buildings, hotels, airports, subways, theatres, hospitals etc.

FE180: Insulation integrity for 180 min. Test according to IEC 60331 and DIN VDE 0472 part 814 Insulation integrity under direct impact of flames for a period of 180 minutes

E30: Function integrity according to DIN VDE 4102 part 12 of electrical cable system for a period of min. 30 minutes. The function integrity for 30 minutes assures the functional performance of the fire warning and alarm systems, safety and spare lighting, passenger and evacuation lifts in order to evacuate persons and animals from a burning building.

E90: Function integrity according to DIN VDE 4102 part 12 of electrical cable system for a period of min. 90 minutes assures the functional performance of water-pressure rising systems to avoid smoke and heat in safety stairs, machine rooms, emergency lifts, extract systems etc.

Note

E30–E90 functionality to DIN VDE 4102 part 12, depending on installation technique
Conforms to RoHS.

BRANDMELDEKABEL – with red sheath for fire alarms.

CE = the product is conformed with the EC Low-Voltage Directive 73/23/EEC

Functionality E30-E90

Part No. sheath orange	Part No. sheath red	Number of cores × core cross section [mm²]	Approx. outer Ø [mm]	Cooper weight [kg/km]	Approx. cable weight [kg/km]
05341481	05341571	1×2×0,8	7,5	15	60
0534081	0534091	2×2×0,8	7,5	25	74
0534082	0534092	4×2×0,8	10,8	45	127
0534083	0534093	8×2×0,8	16,9	85	300
0534084	0534094	12×2×0,8	18,5	126	336
0534085	0534095	16×2×0,8	20,1	166	426
0534086	0534096	20×2×0,8	22,2	206	529
0534087	0534097	32×2×0,8	29,1	326	859
0534088	0534098	40×2×0,8	34,2	407	1094
0534089	0534099	52×2×0,8	37,3	529	1280

Functionality E30

Part No. sheath orange	Part No. sheath red	Number of cores × core cross section [mm²]	Approx. outer Ø [mm]	Cooper weight [kg/km]	Approx. cable weight [kg/km]
05341482	05341572	1×2×0,8	7,4	15	60
0534148	0534157	2×2×0,8	7,4	25	74
0534149	0534158	4×2×0,8	9,3	45	127
0534150	0534159	8×2×0,8	11,4	85	300
0534151	0534160	12×2×0,8	13,0	126	336
0534152	0534161	16×2×0,8	15,7	166	426
0534153	0534162	20×2×0,8	16,5	206	529
0534154	0534163	32×2×0,8	20,3	326	859
0534155	0534164	40×2×0,8	23,4	407	1094
0534156	0534165	52×2×0,8	25,2	529	1280