



## FRA 145/S EMC Screened Multicore

### Applications

Multicore cable with improved fire performance and very high resistance to temperature designed for internal wiring in lamps, heating appliances and distribution boxes in apparatus, mechanical and plant engineering, etc. Used for fixed and flexible application in dry, humid and wet rooms.

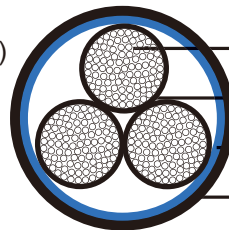


### Standard

- IEC 60754-1, EN 50267-2-1 (halogen free)
- IEC 60754-2, EN 50267-2-2 (no corrosive gases)
- NES 02-713, NFC 20-454 (no toxic gases)
- IEC 61034, EN 50268-2 (low smoke density)
- IEC 60332-1, EN 50265-2-1 (flame retardant)
- IEC 60332-3, EN 50266-2, NF C 32-070

(non-flame propagating)

- DIN 51900 (low fire load)



- Stranded Tinned Copper Conductor
- Electron Beam Crosslinkable Polyolefine Copolymer Insulation
- Copper Wire Screen
- Electron Beam Crosslinkable Polyolefine Copolymer Sheath

### Construction

- **Conductors:** Class 5 stranded tinned copper to IEC60228/VDE 0295.
- **Insulation:** Electron beam crosslinkable polyolefine copolymer.
- **Screen:** Copper wire screen.
- **Sheath:** Electron beam crosslinkable polyolefine copolymer.

### Electrical Characteristics at 20°C

Nominal Conductor Cross Section	mm <sup>2</sup>	0.50	0.75	1.0	1.5	2.5	4.0	6.0	10
Maximum Conductor Resistance	Ω/km	40.1	26.7	20.0	13.7	8.21	5.09	3.39	1.95
Voltage Rating	V	300/500V (≤1mm <sup>2</sup> ); 450/750V (≥1.5mm <sup>2</sup> )							



## ▾ Mechanical and Thermal Properties

Minimum Bending Radius: 4xOD (Static); 6xOD (Flexing)

Temperature Range: -55°C ~+145°C (Static); -40°C ~+120°C (Flexing)

Short Circuit Temperature: +280°C

## ▾ Dimensions and Weight

No. of cores& Nominal Conductor Cross Sectional Area No.×mm <sup>2</sup>	Number and Nominal Diameter of Strands No/mm	Nominal Insulation Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
1×0.5	19/0.18	0.5	3.7	23
2×0.5	19/0.18	0.5	5.6	45
3×0.5	19/0.18	0.5	6.1	59
4×0.5	19/0.18	0.5	6.7	72
5×0.5	19/0.18	0.5	7.3	86
6×0.5	19/0.18	0.5	7.9	102
7×0.5	19/0.18	0.5	8.4	118
8×0.5	19/0.18	0.5	9.0	133
10×0.5	19/0.18	0.5	10.0	157
12×0.5	19/0.18	0.5	10.0	164
1×0.75	24/0.20	0.6	4.0	28
2×0.75	24/0.20	0.6	6.7	66
3×0.75	24/0.20	0.6	7.1	78
4×0.75	24/0.20	0.6	7.7	94
5×0.75	24/0.20	0.6	8.5	113
6×0.75	24/0.20	0.6	8.9	132
7×0.75	24/0.20	0.6	9.9	158
8×0.75	24/0.20	0.6	10.6	181
10×0.75	24/0.20	0.6	11.5	209
12×0.75	24/0.20	0.6	11.5	219
14×0.75	24/0.20	0.6	12.2	251
16×0.75	24/0.20	0.6	12.9	279
19×0.75	24/0.20	0.6	14.5	347
21×0.75	24/0.20	0.6	15.3	385
1×1	32/0.20	0.6	4.2	33
2×1	32/0.20	0.6	7.2	79
3×1	32/0.20	0.6	7.7	89
4×1	32/0.20	0.6	8.3	113
5×1	32/0.20	0.6	9.0	134
6×1	32/0.20	0.6	9.5	156
7G1	32/0.20	0.6	10.9	187
8×1	32/0.20	0.6	11.4	218
10×1	32/0.20	0.6	12.5	253
12×1	32/0.20	0.6	12.5	266
1×1.5	30/0.25	0.6	4.8	43



No. of cores & Nominal Conductor Cross Sectional Area No. × mm <sup>2</sup>	Number and Nominal Diameter of Strands No./mm	Nominal Insulation Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
2×1.5	30/0.25	0.6	8.4	105
3×(G)1.5	30/0.25	0.6	8.9	119
4×(G)1.5	30/0.25	0.6	9.9	163
5×1.5	30/0.25	0.6	10.7	183
6×1.5	30/0.25	0.6	11.5	219
7×(G)1.5	30/0.25	0.6	12.7	273
8×1.5	30/0.25	0.6	13.7	305
10×1.5	30/0.25	0.6	15.0	309
12×1.5	30/0.25	0.6	15.0	371
14×1.5	30/0.25	0.6	16.0	455
16×1.5	30/0.25	0.6	17.0	502
19×1.5	30/0.25	0.6	19.3	627
21×1.5	30/0.25	0.6	20.3	698
25×1.5	30/0.25	0.6	21.7	737
1×2.5	50/0.25	0.7	5.6	61
2×2.5	50/0.25	0.7	9.9	157
3×(G)2.5	50/0.25	0.7	10.5	198
4×2.5	50/0.25	0.7	11.5	236
5×(G)2.5	50/0.25	0.7	12.6	287
6×2.5	50/0.25	0.7	13.8	321
7G2.5	50/0.25	0.7	15.5	430
8×2.5	50/0.25	0.7	16.5	461
10×2.5	50/0.25	0.7	18.3	534
12×2.5	50/0.25	0.7	18.3	569
14×2.5	50/0.25	0.7	19.6	664
16×2.5	50/0.25	0.7	20.7	753
19×2.5	50/0.25	0.7	23.5	934
21×2.5	50/0.25	0.7	24.4	1022
1×4	56/0.30	0.8	6.3	84
2×4	56/0.30	0.8	10.9	174
3×4	56/0.30	0.8	11.5	226
4×4	56/0.30	0.8	13.2	317
5G4	56/0.30	0.8	14.5	376
6×4	56/0.30	0.8	15.6	436
7×4	56/0.30	0.8	17.0	531
8×4	56/0.30	0.8	18.3	610
10×4	56/0.30	0.8	20.7	736
12×4	56/0.30	0.8	20.7	791
14×4	56/0.30	0.8	22.1	910
1×6	81/0.30	0.9	6.9	109
2×6	81/0.30	0.9	12.1	250
3×6	81/0.30	0.9	12.8	316
4×6	81/0.30	0.9	14.3	404



No. of cores& Nominal Conductor Cross Sectional Area No.×mm <sup>2</sup>	Number and Nominal Diameter of Strands No/mm	Nominal Insulation Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
5×6	81/0.30	0.9	16.0	518
6×6	81/0.30	0.9	17.4	595
7×6	81/0.30	0.9	19.3	716
1×10	78/0.40	1.0	8.4	168
2×10	78/0.40	1.0	15.1	390
3G10	78/0.40	1.0	16.4	529
4G10	78/0.40	1.0	18.1	669
5G10	78/0.40	1.0	20.2	840
6G10	78/0.40	1.0	22.3	973
7G10	78/0.40	1.0	24.3	1132



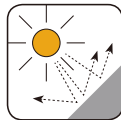
Impact Resistant



Highly Flexible



Weather Resistant



UV Resistant



Fire Retardant  
NF C32-070-2.2(C1)  
IEC 60332-3/EN50266



Flame Retardant  
NF C32-070-2.1(C2)  
IEC 60332-1/EN 50265-2-1



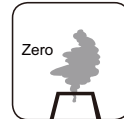
Low Corrosivity  
EN 50267-2-2/NF C32-074  
IEC 60754-2/NF C20-453



Low Toxicity



Low Smoke Emission  
IEC 61034/NFC20-902  
EN 50268/NF C32-073



Zero Halogen  
IEC 60754-1/NF C20-454  
EN 50267-2-1