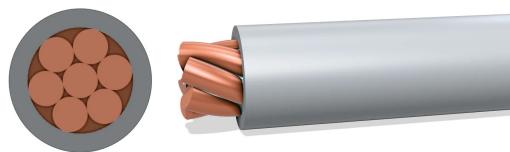


Application

H07Z1-R is a harmonised single-core, non-sheathed wire with a stranded plain copper conductor of class 2 and a halogen-free, low-smoke thermoplastic insulation, rated 450/750 V and manufactured in accordance with EN 50525-3-31 (Type 2). It is intended for fixed installation in surface-mounted or recessed conduit, trunking or closed installation ducts, and for protected fixed wiring inside lighting fittings, switchgear and control equipment, in buildings where many people gather and the emission of smoke and corrosive gases in the event of fire must be limited. The stranded conductor makes the larger cross-sections easier to handle than a solid conductor; the wire is available in the cross-sections 1.5 to 400 mm² in a range of colours; 500 and 630 mm² on request. It is not intended for direct burial, outdoor use without protection, or for flexing in service.



CONSTRUCTION

Conductor	Stranded plain annealed copper, class 2 acc. to IEC 60228 / EN 60228.
Insulation	Halogen-free thermoplastic compound type TI7 acc. to EN 50363-7, low smoke emission; no outer sheath (non-sheathed core).
Core colours	Black, blue, brown, grey, white, red, green/yellow; other colours on request.

ELECTRICAL & THERMAL PROPERTIES

Rated voltage U₀/U	450/750 V.
Test voltage	2,500 V AC.
Standard	EN 50525-3-31, Type 2 (HD 21.15); insulation compound acc. to EN 50363-7; conductors acc. to IEC 60228 / EN 60228.
Flame-retardant	Acc. to EN 60332-1-2 / IEC 60332-1-2; flame spread of bunched cables acc. to EN 60332-3-24 / IEC 60332-3-24 (Type 2).
Halogen-free	Acc. to EN 60754-1 / IEC 60754-1 and EN 60754-2 / IEC 60754-2; low smoke density acc. to EN 61034-2 / IEC 61034-2.
Conductor standard	IEC 60228 / EN 60228, class 2 (stranded).
Max. conductor temperature	+70 °C (max. +150 °C for 5 s in short circuit).
Permitted outer cable temperature, fixed	-10 °C to +70 °C (min. +5 °C during installation).
Min. bending radius, fixed	6 × outer diameter.
Reaction to fire (CPR)	Cca-s1,d2,a1 (EN 50575, halogen-free); B2ca-s1,d1,a1 on request.

DIMENSIONS & TECHNICAL DATA

Cross-sections 500 and 630 mm² available on request.

Size (mm ²)	Cond. R @20°C (Ω/km)	Nominal O.D. (mm)	Weight (kg/km)
1.5	12.1	2.9	22
2.5	7.41	3.6	33
4	4.61	4.1	47
6	3.08	4.6	66
10	1.83	5.9	110
16	1.15	6.8	169
25	0.727	8.3	260
35	0.524	9.4	350
50	0.387	11	472
70	0.268	12.5	665
95	0.193	14.6	913
120	0.153	16.2	1160
150	0.124	18	1420
185	0.0991	20	1760
240	0.0754	22.7	2320
300	0.0601	25.8	2922
400	0.047	29.3	3760

Outer diameters, weights and conductor resistance are the nominal manufacturer values of the leading reference source (stranded class-2 plain copper conductor); all values are indicative and non-binding.