

The reference standard:

The reference standard for conduit systems and accessories for electrical installations is EN 50086 which specifies performance and necessary tests for systems required to protect conductors.

Mechanical and thermal characteristics

Conformity to that standard provides a systems' classification according to the declared properties. The reference standard provides a classification code for mechanical, thermal and electrical properties first four digits of which are illustrated below.

Classification
CEI EN 50086

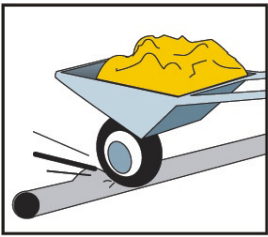
1st
DIGIT

2nd
DIGIT

3rd
DIGIT

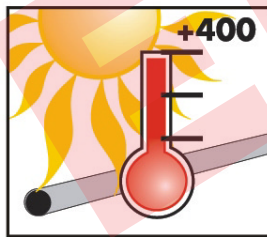
4th
DIGIT

Compression strength



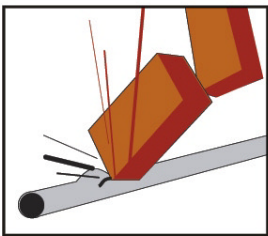
1 = very light	125 N
2 = light	320 N
3 = medium	750 N
4 = heavy	1,250 N
5 = very heavy	4,000 N

Maximum operating temperature



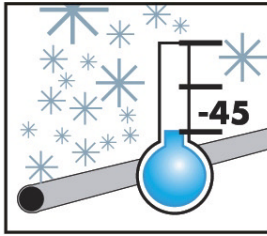
1 =	+60 °C
2 =	+90 °C
3 =	+105 °C
4 =	+120 °C
5 =	+150 °C
6 =	+250 °C
7 =	+400 °C

Impact strength



1 = very light	0.5 J
2 = light	1 J
3 = medium	2 J
4 = heavy	6 J
5 = very heavy	20 J

Minimum operating temperature



1 =	+5 °C
2 =	-5 °C
3 =	-15 °C
4 =	-25 °C
5 =	-45 °C





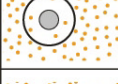

EN50086 standard

Index of protection

The protection enclosures are classified (EN 60529) according to their degree of protection against external agents. The index of protection is indicated by two digits following the letters.


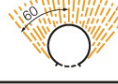

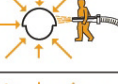

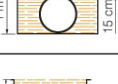

1st digit IP

Protection against the ingress of solid bodies

	0 No protection
	1 Protection against solid bodies larger than 50 mm (e.g.: accidental contact)
	2 Protection against solid bodies larger than 12 mm (e.g.: finger)
	3 Protection against solid bodies larger than 2.5 mm
	4 Protection against solid bodies larger than 1 mm
	5 Protection against dust
	6 Complete protection against dust

2nd digit IP

Protection against the ingress of liquids

	2 Protection against drops of water falling at up to 15° from the vertical
	3 Protection against drops of rain water at up to 60° from the vertical
	4 Protection against sprays of water from all directions
	5 Protection against jets of water from all directions
	6 Protection against jets of water of similar force to heavy seas
	7 Protection against the effects of immersion
	8 Protection against prolonged effects of immersion under pressure