



Low voltage - Energy, cabling, signalling and control

# 07BQ-F

Structure and electrical, physical, mechanical requirements:	Reference to EN 50525-2-21 IEC 60502-1
Halogen free:	IEC 60754-1
No corrosive gases:	IEC 60754-2
Oil resistant:	according to EN 50363-10-2 EN 60811-404 (24 Std. / 100 °C)
Low Voltage Directive:	2014/35/EU
RoHS Directive:	2011/65/EU

## REACTION TO FIRE

 <b>CPR COMPLIANT</b> <b>REGULATION 305/2011/EU</b>	
Standard:	EN 50575:2014+A1:2016
Class:	E <sub>ca</sub>
Classification:	EN 13501-6
Flame propagation:	EN 60332-1-2
Notified Body:	0051 - IMQ
	2017



## Description

- Conductor: class 5, flexible, plain copper wire
- Insulation: EPR rubber compound, quality EI6 (thicknesses according to IEC 60502-1)
- Filler (optional): LS0H rubber, penetrating between the cores (only in multi-core cables)
- Sheath: LS0H TPU polyurethane
- Colour: orange

LS0H = Low Smoke Zero Halogen

## Functional characteristics

- Rated voltage  $U_0/U$ :  
450/750 V (max 480/820 V a.c.)  
560/1120 V (max 620/1240 V d.c.)
- Max. operating temperature: 90°C
- Min. operating temperature: -60°C (without mechanical shocks)
- Max. short circuit temperature: 250°C

## Special features

Good resistance to mechanical stress and abrasion.  
Good flexibility and behaviour at low temperatures.  
Good resistance to UV (ISO 4892-2).  
Absence of halogens. Sea water resistant.

## Installation conditions

- Minimum installation temperature: -40°C
- Recommended minimum bending radius: ~6 times the cable diameter for mobile use, 4 times for static use
- Recommended maximum tensile stress: 15 N/mm<sup>2</sup> of the cross-section of the copper for mobile use, 50 N/mm<sup>2</sup> for static use.

## Colours of the cores

SINGLE-CORE ●  
FOUR-CORE ●●●● or ●●●●  
FIVE-CORE ●●●●● or ●●●●●

The cores in multiple cables for signal and control are black, numbered, with or without GREEN/YELLOW

## Marking

▲ LTC 07BQ-F [form.] Eca [order number] [year] Made in Italy [metric]

## Use and installation method

Reference Guide EN 50565:

They can be used both indoors and outdoors, in dry, damp or wet conditions. Suitable for heavy-duty uses and to power industrial and farm machinery. For connections undergoing moderate mechanical stresses, such as those in power tools (drills, circular saws, electrical home appliances) and heaters, as long as they do not touch hot parts and are not exposed to heat radiation. Avoid skin contact if they are used at high operating temperatures. Suitable to be used for fixed installations on temporary building fronts and workmen's shelter at work sites. Suitable up to 1000 V A.C. for fixed installations and duly shielded (in ducts and equipment). Not suitable for underground laying, even if shielded.

Reference Construction Products Regulation 305/2011 EU and Standard EN 50575:

The cable is suitable for the supply of electricity in buildings and other civil engineering works.

## Single-core

Formation	Approx. conductor Ø	Average insulation thickness	Nominal external Ø	Max. electrical resistance at 20°C	Approx. cable weight	Current rating in air at 30°C	Voltage drop
n° x mm <sup>2</sup>	mm	mm	mm	Ω/km	kg/km	A	V/A·Km
1 x 10	4,0	1,2	8,8	1,91	150	80	3,87
1 x 16	5,0	1,2	10,0	1,21	210	107	2,47
1 x 25	6,2	1,4	11,6	0,780	305	135	1,61
1 x 35	7,4	1,4	12,9	0,554	405	169	1,17
1 x 50	8,9	1,6	14,9	0,386	565	207	0,844
1 x 70	10,5	1,6	16,8	0,272	770	268	0,609
1 x 95	12,2	1,8	18,8	0,206	990	328	0,484
1 x 120	13,8	1,8	20,9	0,161	1240	383	0,388
1 x 150	15,4	2,0	22,9	0,129	1535	444	0,325
1 x 185	16,9	2,2	24,9	0,106	1860	510	0,279
1 x 240	19,5	2,4	28,0	0,0801	2405	607	0,221
1 x 300	21,6	2,6	30,8	0,0641	2990	703	0,184

N.B. Permissible current rating values are according to:  
- three-phase circuit

## Four-core and five-core

Formation	Approx. conductor Ø	Average insulation thickness	Nominal external Ø	Max. electrical resistance at 20°C	Approx. cable weight	Current rating in air at 30°C	Voltage drop
n° x mm <sup>2</sup>	mm	mm	mm	Ω/km	kg/km	A	V/A·Km
4G25	6,2	1,4	26,4	0,780	1450	127	1,61
4G35	7,4	1,4	30,0	0,554	1940	158	1,17
4G50	8,9	1,6	34,7	0,386	2690	192	0,844
4G70	10,5	1,6	39,1	0,272	3620	246	0,609
4G95	12,2	1,8	43,9	0,206	4680	298	0,484
5G25	6,2	1,4	29,8	0,780	1795	127	1,61
5G35	7,4	1,4	33,2	0,554	2360	158	1,17
5G50	8,9	1,6	38,4	0,386	3330	192	0,844
5G70	10,5	1,6	43,7	0,272	4450	246	0,609
5G95	12,2	1,8	48,7	0,206	5415	298	0,484

N.B. Permissible current rating values are according to:  
- three-phase circuit

## Multi-core

Formation	Approx. conductor Ø	Average insulation thickness	Nominal external Ø	Max. electrical resistance at 20°C	Approx. cable weight	Current rating in air at 30°C	Voltage drop
n° x mm <sup>2</sup>	mm	mm	mm	Ω/km	kg/km	A	V/A·Km
7G1,5	1,5	0,8	12,5	13,3	210	16	30,7
12G1,5	1,5	0,8	15,5	13,3	340	16	30,7
16G2,5	2,0	0,9	22,2	7,98	845	25	18,4

N.B. Permissible current rating values are according to:  
- all conductors are charged (except for the green/yellow).