TRIFLEX Plus

Low voltage - Energy, cabling, signalling and control

H07RN-F

Structure and electrical, physical, mechanical requirements:	EN 50525-2-21
Current rating:	IEC 60364-5-52
Ozone resistance:	EN 60811-403
Determination of halogen gases test and flourine:	EN 50267-2-1
Determination of degree of acidity (pH and conductivity) tests:	EN 50267-2-2
Determination of smoke emission cable:	EN 61034-2
Tests at low temperature	EN 60811-504
	EN 60811-505
	EN 60811-506
Low Voltage Directive:	2014/35/UE
RoHS Directive:	2011/65/UE

REACTION TO FIRE

CPR COMPLIANT
REGULATION 305/2011/EU

Standard:	EN 50575:2014+A1:2016
Class:	E_{ca}
Classification:	EN 13501-6
Flame propagation:	EN 60332-1-2
Notified Body:	2479 - L.S. FIRE TESTING INSTITUTE
CE	2017

www.latrivenetacavi.com

Inherent to H07RN-F

Description

- Conductor: class 5, flexible, plain copper wire
- Insulation: special rubber
- Sheath: LS0H rubber compound
- Colour: black

Installation conditions

- Minimum installation temperature: -25°C (*)
- Recommended minimum bending radius: 6 times the cable diameter for mobile use, 4 times for static use
- Recommended maximum tensile stress: 15 N/mm² of the cross-section of the copper for mobile use, 50 N/mm² for static use.

Functional characteristics

- Rated voltage Uo/U: 450/750 V a.c. por fixed and protected laying 0.6/1 kV a.c.
- Max. short circuit temperature: 250°C

Special features

Good flexibility and mechanical resistance to abrasion, shocks, crushing and lacerations (AG2).
Good resistance to atmospheric agents, grease and mineral oils.

Flexibility for minimum 100.000 alternate bending cycles for size below or equal to 4 mm² (standard required by EN 50525-2-21 is 30.000 cycles).

Use and installation method

Reference Guide EN 50565:
For mobile laying: indoor use, outdoor use and in industrial and agricultural workshops.
For supplying industrial and agricultural machines and appliances subject to medium mechanical stresses (e.g. heating plates, inspection lamps, electric tools such as drills, circular saws and domestic electric tools).
For fixed laying: it can be used in temporary buildings or huts in building sites. Suitable for connections of constructive elements of lifting appliances and machines. Suitable for use in dry, humid or moist rooms.
If used in protected installations such as tubes or similar closed systems, voltages up to 1000V in a.c. or 750V in d.c. to ground are allowed.

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.

Additional TRIFLEX Plus features declared by LTC:

In addition to the characteristics of the cable H07RN-F:
- Zero Halogen compounds
- UV resistant
  (ISO 4892-2:2013 / IEC 60811-501:2012 / 1000 h)

TRIFLEX Plus cable includes cable specifications:
H07BN4-F
- Heat resistant for maximum conductor temperature 90 °C

H07BB-F
- Resistant to heat and low temperatures (-50 °C STATIC USE ; -40 °C MOBILE USE) for a maximum conductor temperature of 90 °C
- (*) Minimum installation temperature: -40°C

H07RN8-F
- Water resistant for permanent immersions, class AD8
- Salt water resistance up to 50 bar (500 meters).

Colours of the cores

SINGLE-CORE
TWO-CORE
THREE-CORE or
FOUR-CORE or
FIVE-CORE or

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

Marking

TRIFLEX PLUS LTC H07RN-F IEMMEQU ◄HAR► [form.] Eca 450/750V - Fixed and Protected 600/1000V [traceability] [year] Made in Italy [metric]
TRIFLEX PLUS LTC 07RN-F [form.] Eca 450/750V - Fixed and Protected 600/1000V [traceability] [year] Made in Italy [metric]

Single-core

Formation	Approx. conductor Ø	Average insulation thickness	Average sheath thickness	Max. external Ø	Max. electrical resistance at 20°C	Approx. cable weight	Free laying at 30°	Voltage drop
n° x mm^2	mm	mm	mm	mm	Ω/km	kg/km	A	V/A·Km
1 x 1,5	1,5	0,8	1,4	7,1	13,3	51	24	26,5
1 x 2,5	2,0	0,9	1,4	7,9	7,98	67	33	16,0
1 x 4	2,5	1,0	1,5	9,0	4,95	92	45	9,93
1 x 6	3,0	1,0	1,6	9,8	3,30	121	58	6,63
1 x 10	4,0	1,2	1,8	11,9	1,91	186	80	3,87
1 x 16	5,0	1,2	1,9	13,4	1,21	256	107	2,47
1 x 25	6,2	1,4	2,0	15,8	0,780	368	135	1,61
1 x 35	7,4	1,4	2,2	17,9	0,554	485	169	1,17
1 x 50	8,9	1,6	2,4	20,6	0,386	668	207	0,844
1 x 70	10,5	1,6	2,6	23,3	0,272	905	268	0,609
1 x 95	12,2	1,8	2,8	26,0	0,206	1180	328	0,484
1 x 120	13,8	1,8	3,0	28,6	0,161	1460	383	0,388
1 x 150	15,4	2,0	3,2	31,4	0,129	1810	444	0,325
1 x 185	16,9	2,2	3,4	34,4	0,106	2165	510	0,279
1 x 240	19,5	2,4	3,5	38,3	0,0801	2750	607	0,221
1 x 300	21,6	2,6	3,6	41,9	0,0641	3271	703	0,184
1 x 400	24,8	2,8	3,8	46,8	0,0486	4286	823	0,159
1 x 500	28,5	3,0	4,0	52,0	0,0384	5301	946	0,137
1 x 630	32,8	3,0	4,1	57,0	0,0287	6959	1088	0,122

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

Two-core

Formation	Approx. conductor Ø	Average insulation thickness	Average sheath thickness	Max. external Ø	Max. electrical resistance at 20°C	Approx. cable weight	Free laying at 30°	Voltage drop
n° x mm^2	mm	mm	mm	mm	Ω/km	kg/km	A	V/A·Km
2 x 1	1,3	0,8	1,3	10,0	19,5	93	19	45,2
2 x 1,5	1,5	0,8	1,5	11,0	13,3	115	26	30,6
2 x 2,5	2,0	0,9	1,7	13,1	7,98	165	36	18,4
2 x 4	2,5	1,0	1,8	15,1	4,95	225	49	11,4
2 x 6	3,0	1,0	2,0	16,8	3,30	300	63	7,63
2 x 10	4,0	1,2	3,1	22,6	1,91	550	86	4,44
2 x 16	5,0	1,2	3,3	25,7	1,21	745	115	2,84
2 x 25	6,2	1,4	3,6	30,7	0,780	1060	149	1,85

N.B. Permissible current rating values are according to:
- two-phase circuit for two-core cables

Three-core

Formation (*)	Approx. conductor Ø	Average insulation thickness	Average sheath thickness	Max. external Ø	Max. electrical resistance at 20°C	Approx. cable weight	Free laying at 30°	Voltage drop
n° x mm^2	mm	mm	mm	mm	Ω/km	kg/km	A	V/A·Km
3 x 1	1,3	0,8	1,4	10,7	19,5	120	17	45,2
3 x 1,5	1,5	0,8	1,6	11,9	13,3	150	23	30,6
3 x 2,5	2,0	0,9	1,8	14,0	7,98	200	32	18,4
3 x 4	2,5	1,0	1,9	16,2	4,95	295	42	11,4
3 x 6	3,0	1,0	2,1	18,0	3,30	380	54	7,63
3 x 10	4,0	1,2	3,3	24,2	1,91	675	75	4,44
3 x 16	5,0	1,2	3,5	27,6	1,21	950	100	2,84
3 x 25	6,2	1,4	3,8	33,0	0,780	1355	127	1,85
3 x 35	7,4	1,4	4,1	37,1	0,554	1765	158	1,34
3 x 50	8,9	1,6	4,5	42,9	0,386	2415	192	0,962
3 x 70	10,5	1,6	4,8	48,3	0,272	3230	246	0,691
3 x 95	12,2	1,8	5,3	54,0	0,206	4225	298	0,546
3 x 120	13,8	1,8	5,6	60,0	0,161	5190	346	0,438
3 x 150	15,4	2,0	6,0	66,0	0,129	6415	399	0,366
3 x 185	16,9	2,2	6,4	72,0	0,106	7700	456	0,280
3 x 240	19,5	2,4	7,10	82,0	0,0801	9458	538	0,230
3 x 300	22,0	2,6	7,70	90,0	0,0641	11635	621	0,200

(*) also available without the green/yellow
N.B. Permissible current rating values are according to:
- three-phase circuit for three-core cables

Four-core

Formation (*)	Approx. conductor Ø	Average insulation thickness	Average sheath thickness	Max. external Ø	Max. electrical resistance at 20°C	Approx. cable weight	Free laying at 30°	Voltage drop
n° x mm^2	mm	mm	mm	mm	Ω/km	kg/km	A	V/A·Km
4G1	1,3	0,8	1,5	11,9	19,5	145	17	39,0
4G1,5	1,5	0,8	1,7	13,1	13,3	175	23	26,5
4G2,5	2,0	0,9	1,9	15,5	7,98	255	32	16,0
4G4	2,5	1,0	2,0	17,9	4,95	355	42	9,93
4G6	3,0	1,0	2,3	20,0	3,30	485	54	6,63
4G10	4,0	1,2	3,4	26,5	1,91	845	75	3,87
4G16	5,0	1,2	3,6	30,1	1,21	1185	100	2,47
4G25	6,2	1,4	4,1	36,6	0,780	1730	127	1,61
4G35	7,4	1,4	4,4	41,1	0,554	2250	158	1,17
4G50	8,9	1,6	4,8	47,5	0,386	3085	192	0,844
4G70	10,5	1,6	5,2	54,0	0,272	4145	246	0,609
4G95	12,2	1,8	5,9	61,0	0,206	5465	298	0,484
4G120	13,8	1,8	6,0	66,0	0,161	6670	346	0,388
4G150	15,4	2,0	6,5	73,0	0,129	8290	399	0,325
4G185	16,5	2,2	7,0	80,0	0,106	9385	456	0,280
4G240	19,5	2,4	7,7	91,0	0,0801	12310	538	0,230
4G300	22,0	2,6	8,4	101,0	0,0641	15285	621	0,200

(*) also available without the green/yellow
N.B. Permissible current rating values are according to:
- three-phase circuit for three-core cables

Five-core

Formation (*)	Approx. conductor Ø	Average insulation thickness	Average sheath thickness	Max. external Ø	Max. electrical resistance at 20°C	Approx. cable weight	Free laying at 30°	Voltage drop
n° x mm^2	mm	mm	mm	mm	Ω/km	kg/km	A	V/A·Km
5G1	1,3	0,8	1,6	13,1	19,5	180	17	39,0
5G1,5	1,5	0,8	1,8	14,4	13,3	220	23	26,5
5G2,5	2,0	0,9	2,0	17,0	7,98	310	32	16,0
5G4	2,5	1,0	2,2	19,9	4,95	445	42	9,93
5G6	3,0	1,0	2,5	22,2	3,30	605	54	6,63
5G10	4,0	1,2	3,6	29,1	1,91	1035	75	3,87
5G16	5,0	1,2	3,9	33,3	1,21	1465	100	2,47
5G25	6,2	1,4	4,4	40,4	0,780	2145	127	1,61
5G35	7,4	1,4	4,6	45,1	0,554	2579	158	1,17
5G50	8,9	1,6	5,2	53	0,386	3594	192	0,844
5G70	10,5	1,6	5,7	60	0,272	4837	246	0,609
5G95	12,2	1,8	6,3	67	0,206	6269	298	0,484
5G120 **	13,8	1,8	6,3	-	0,161	7770	346	0,375

(*) also available without the green/yellow
(**) This formation is not IMQ HAR
N.B. Permissible current rating values are according to:
- three-phase circuit for three-core cables

Multi-core / signalling and control

Formation (*)	Approx. conductor Ø	Average insulation thickness	Average sheath thickness	Max. external Ø	Max. electrical resistance at 20°C	Approx. cable weight	Free laying at 30°	Voltage drop
n° x mm^2	mm	mm	mm	mm	Ω/km	kg/km	A	V/A·Km
7G1,5	1,5	0,8	2,5	17,2	13,3	355	16	30,7
12G1,5	1,5	0,8	2,9	22,4	13,3	505	16	30,7
12G2,5	2,0	0,9	3,1	26,2	7,98	710	25	18,4
36G2,5	2,0	0,9	4,3	41,8	7,98	1750	13	18,4

(*) also available without the green/yellow
N.B. Permissible current rating values are according to:
- all conductors are charged (except for the green/yellow).