

RFOU-HCF 6/10 (12)kV

EPR/EPR/TCWB/EVA/HCF/SHF1

Hydro Carbon Fire resistant, flame retardant halogen-free medium voltage power cable

NEK 606 Code S30

1100°C / 2000°F / 200 kW/m²



Application

Fixed installation for medium voltage (MV) power in both EX- and safe areas, emergency and critical systems where requirement for fire resistance is vital.

Construction

Conductor	: Tinned stranded and compressed copper (STCC), IEC 60228 class 2
Conductor screen semi conductive	: Semiconductive layer (EP-rubber)
Insulation	: EP-rubber, IEC 60092-360 (EPR)
Insulation screen semi conductive	: Semiconductive layer (EP-rubber)
Lay up / Shielding	: Cores are laid up together. Cores are identified by Brown, Black or Grey threads under and over the metallic screen on each conductor
Inner covering	: Flame retardant and halogen-free thermoplastic compound
Tape over bedding	: PET tape
Armour/screen	: Tinned copper wire braid
Tape over armour/screen	: PET tape
Outer sheath	: Flame retardant, halogen-free and mud resistant thermoset compound, SHF2 (IEC60092-360)
HCF protection	: Extruded heatblock compound
Tape	: Lapped glassfibre tape
Overall sheath	: Flame retardant, halogen-free thermoplastic compound, SHF1 (IEC 60092-360)
Marking text	: E.g. "meter" "year" "manufacturer" "RFOU-HCF 6/10(12)kV P30 1x70/16 mm ² HCF 1100/60 FLEX – FLAME

Outer Sheath Colours

Available colours : Red

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Installation recommendations

Operating Voltage	: 6/10 (12)kV
Min. Bending Radius during Installation	: 20 xD
Min. Bending Radius Fix Installed	: 12 xD
Max. Operating Temperature	: 90°C
Minimum installation	: -10°C

Standards applied

IEC 60092-353	Design
IEC 60332-1-2	Flame Retardant
IEC 60332-3-22	Flame Retardant
IEC 60331-21	Fire Resistant
EN 1363-2 / ISO 834	HC Fire resistance
IEC 60754-1,2	Halogen Free
IEC 61034-1,2	Low Smoke

Range and Dimensions

Article Code	Type mm ²	Diameter over bedding mm	Thickness of armour wires mm	Diameter sheath mm	Diameter overall incl. HCF protection mm	Weight of Cable Approx. (Kg/Km)	Max. pulling tension (N)
N02F01C070BAKRD12	1x 70/16	23.5 ± 1.5	0.30	30.0 ± 2.0	62.0 ± 3.0	5220	3500
N02F01C095BAKRD12	1x 95/16	25.5 ± 1.5	0.30	32.0 ± 2.0	64.5 ± 3.0	5900	4750
N02F01C120BAKRD12	1x 120/20	27.5 ± 1.5	0.30	34.0 ± 2.0	66.5 ± 3.0	6340	6000
N02F01C150BAKRD12	1x 150/19	28.5 ± 1.5	0.30	35.0 ± 2.0	67.5 ± 3.0	6670	7500
N02F01C185BAKRD12	1x 185/18	30.5 ± 1.5	0.30	36.5 ± 2.0	69.0 ± 3.0	7320	9250
N02F01C240BAKRD12	1x 240/21	33.0 ± 1.5	0.30	39.0 ± 2.0	72.0 ± 3.5	8250	12000
N02F01C300BAKRD12	1x 300/29	35.0 ± 1.5	0.30	41.5 ± 2.5	74.5 ± 3.5	9280	15000
N02F03C050BWWRD12	3x 50/31	47.0 ± 1.5	0.40	55.0 ± 3.0	89.0 ± 4.5	10970	7500

Type mm ²	Diameter of copper conductor approx. mm	Insulation thickness, nominal mm	Semiconducting layer thickness approx. mm	Diameter over insulated, screened conductor, approx. mm
1x 70/16	10.3	3.4	0.8	21.5
1x 95/16	12.1	3.4	0.8	23.0
1x 120/20	13.6	3.4	0.8	24.5
1x 150/19	15.1	3.4	0.8	26.0
1x 185/18	16.8	3.4	0.8	28.0
1x 240/21	19.1	3.4	0.8	30.0
1x 300/29	21.5	3.4	0.8	32.5
3x 50/31	8.8	3.4	0.8	20.0

The RFOU-HCF MV cables are available on request in all voltage levels from 3,6/6(7,2)kV up to and including 26/45(52)kV. Please be aware that we have a limitation on the cable diameter which allows us to manufacture mainly single core cables on these voltage levels.

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Electrical value instrumentation cables

No. of cores x cross section	Conductor resistance DC (Ω /km)		Reactance (Ω /km) at 50/60Hz	Impedance (Ω /km) at 90°C at 50/60Hz	Continous Current rating at 45°C	Short circuit [Ampere]	
	at 20°C	at 90°C				1 sec	0.3 sec
1x 70/16	0.270	0.344	0.172	0.385	242	9800	17892
1x 95/16	0.195	0.249	0.164	0.298	293	13300	24282
1x 120/20	0.154	0.196	0.159	0.253	339	16800	30672
1x 150/19	0.126	0.161	0.153	0.222	389	21000	38240
1x 185/18	0.100	0.128	0.148	0.195	444	25900	47286
1x 240/21	0.0762	0.0972	0.143	0.73	522	33600	61344
1x 300/29	0.0607	0.0774	0.137	0.158	601	42000	76681
3x 50/31	0.391	0.499	0.108	0.261	137	7000	12780

NOTICE

Incore Cables has endeavored to ensure the accuracy of the data in this publication, however we cannot be liable for the consequences of errors or omissions. All data is subject to change without notice. The installer and/or user assumes all liability for the consequences of the installation and/or use of any of our products in contravention of any applicable law, regulation or code.

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