FMC616 Control cables

- Shielded
- PVC outer jacket
- UV-resistance
- Flame-retardant
- Oil-resistant

Dynamic Information

Min. bending radius	Moving in cable carriers	6.8 x d
	Fexible moving	5 x d
	Fixed installation	4 x d
Temperature	Moving in cable carriers	+5°C to +70°C
	Fexible moving	-5°C to +70°C
	Fixed installation	-15°C to +70°C
v max.	Unsupported	10 m/s
	Gliding	5 m/s
a max.	80 m/s^2	
Travel distance	Unsupported travels and up to 100 m for gliding applications	

Cable structure

Conductor		Conductor consisting of bare copper wires (according to DIN EN 60228).
Conductor insulation		Cross -sectional ≤ 0.5 mm^2: Mechanically high-quality TPE mixture.
		Cross -sectional ≥ 0.75 mm^2 : Mechanically high-quality PVC mixture.
Conductor construction		Number of conductors < 12: Conductors cabled in a layer with short pitch length.
		Number of conductors ≥ 12: Conductors combined in bundles and stranded together around a high-tensile strength core, using short pitch directions for a low-torsion cable structure.
Color code		Cross -sectional < 0.5 mm^2: Color code in accordance with DIN 47100
		Cross -sectional ≥ 0.5 mm^2: Black cores with white numbers, one green-yellow core.
Inner jacket		PVC mixture adapted to suit the requirements in cable carriers.
Overall shield		Extremely bending-resistant braiding made of tinned copper wires. Coverage linear approx. 70 %, optical approx. 90 %
Outer jacket		Low-adhesion mixture on the basis of PVC, adapted to suit the requirements in cable carriers (following DIN EN 50363-10-2). Color: Green RAL 6005

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Electrical Information

Nominal voltage	U_0/U: 300/500 V（following VDE0298-3）
Test voltage	2000 V（following EN50395）

Properties and approvals

UV-resistance	Medium
Oil resistance	Oil-resistant (following IEC60811-404, tested by SGS), bio-oil-resistant (following VDMA24568, tested by SGS)
Flame resistance	According to IEC 60332-1-2、VW-1、FT1
REACH	Accordding to the regulation (EC) No. 1907/2006 (REACH)
EAC	Certificate No. KG 417/043.CN.02.00249
Lead-free	Following 2015/863/EU (RoHS-II Tested by SGS)
Cleanroom	Following ISO 14644-1
CE	Following 2014/35/EU
UL	Following UL2570，600V，80℃

Guaranteed service life

Double strokes	5 million times		7.5 million times		10 million times	
Temperature, from/to [°C]	< 10 m	≥ 10 m	< 10 m	≥ 10 m	< 10 m	≥ 10 m
	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+5/+15	7.5	10	8.5	11	9.5	12
+15/+60	6.8	7.5	7.8	8.5	8.8	9.5
+60/+70	7.5	10	8.5	11	9.5	12

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Part No.	Number of cores and conductor nominal cross-section [mm]	Outer diameter [mm]	Copper index [kg/km]	Weight [kg/km]
FMC616.02.04	(4×0.25)C	7	29	61
FMC616.02.25	(25×0.25)C	14.5	111	260
FMC616.03.05	(5×0.34)C	7.5	37	90
FMC616.05.02	(2×0.5)C	7	30	77
FMC616.05.05	(5G0.5)C	8.5	49	106
FMC616.05.07	(7G0.5)C	10	64	127
FMC616.05.09	(9G0.5)C	12	80	154
FMC616.05.12	(12G0.5)C	13	98	232
FMC616.05.18	(18G0.5)C	15	145	286
FMC616.05.25	(25G0.5)C	17.5	192	399
FMC616.07.03	(3G0.75)C	8	46	98
FMC616.07.04	(4G0.75)C	8.5	56	113
FMC616.07.05	(5G0.75)C	9	67	128
FMC616.07.07	(7G0.75)C	10.5	87	152
FMC616.07.12	(12G0.75)C	14	128	266
FMC616.07.18	(18G0.75)C	17.5	196	400
FMC616.07.25	(25G0.75)C	19.5	265	536
FMC616.10.03	(3G1.0)C	8	54	107
FMC616.10.04	(4G1.0)C	9	65	116
FMC616.10.05	(5G1.0)C	9.5	77	136
FMC616.10.07	(7G1.0)C	12	103	205
FMC616.10.12	(12G1.0)C	15	161	319
FMC616.10.18	(18G1.0)C	19	245	482
FMC616.10.25	(25G1.0)C	21	322	595
FMC616.15.03	(3G1.5)C	9	72	122
FMC616.15.04	(4G1.5)C	9.5	88	155
FMC616.15.05	(5G1.5)C	10.5	105	177
FMC616.15.07 ⑦)	(7G1.5)C	12.5	146	258
FMC616.15.12	(12G1.5)C	17	225	375
FMC616.15.18	(18G1.5)C	21	345	581
FMC616.15.25	(25G1.5)C	24	462	865
FMC616.25.03	(3G2.5)C	10.5	107	180
FMC616.25.04	(4G2.5)C	11.5	131	222

⑦) When using the cables with "7G1.5mm²" and "7G2.5mm²" minimum bend radius must be 17.5xd with gliding travel distance ≥ 5m.

Note: The outer diameters are reference values.
G: With green-yellow earth core
x: Without earth core

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