

# PROTOFLEX - EMV - FC

XLPE insulated, UV stabilised EMC Cable



## APPLICATION

Specifically designed low capacitance screened cable for connection between AC variable speed drives and motors. Suitable for fixed installation and occasional freely flexing applications in dry damp and wet conditions. U.V stabilised for outdoor use.  
Not suitable for direct installation into the ground or submersion in water.

## DESIGN

Electromagnetic compatibility (EMC) is the ability of electrical or electronic equipment to function normally in an environment without being effected by (EMI) electromagnetic and (RFI) radio frequency interferences or in turn disturbing the environment by transmitting EMI or RFI.  
The Siemens PROTOFLEX -EMV screened power cable consists of finely stranded copper conductors with Cross Linked Poly Ethylene (XLPE) insulation covered with a tinned copper braided screen and a PVC orange, transparent sheath.  
For cable cross sections 16mm<sup>2</sup> or greater the earth conductor is divided evenly into 3 seperate cores and uniformly located in the interstitial gaps around the power cores. This achieves a truly concentric design in accordance with the EMC standards.  
The overall tinned copper braid screen is specifically designed for optimum Electromagnetic Compatibility (EMC) by taking into account the percentage coverage, braid fan angle, and wire gauge which all results in a very low transfer resistance. The screen offers a low DC resistance affording protection from low frequency interference such as AC harmonics.  
The cable is in accordance with AS 1125 for the conductors and AS 1347 for the sheath. Fire performance is according to IEC 06332- 1

## OPERATING TEMPERATURE

- Minimum permissible ambient temperature -40°C
- Maximum permissible conductor temperature 90°C
- Maximum permissible short circuit temperature 250°C
- Minimum ambient temperature for optimum fully flexible operation -5°C

## CURRENT CARRYING CAPACITY

Current ratings are based on continuous operation at an ambient temperature of 40°C. At other temperatures these values must be converted using the following table.

°C	15	20	25	30	35	40	45	50	55	60	65	70	75	80
Factor	1.26	1.20	1.15	1.12	1.05	1.	0.94	0.88	0.81	0.73	0.65	0.57	0.47	0.34

## MINIMUM BENDING RADII

For recommended bending radii refer to the selection and ordering data tables.

## CORE COLOUR IDENTIFICATION

4 core - brown, blue, black, green/yellow

## VOLTAGE RATING

Rated AC voltage:	U <sub>0</sub> /U	= 0.6kV/1kV
Rated DC voltage:	U <sub>0</sub> /U	= 0.9/1.8kV
AC test voltage:		= 5kV

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## Selection and ordering data

No. of cores and conductor rated cross-section	Part No.	Conductor design approx. No. of strands x Max. strand diameter	Operating capacitance	Nominal diameter over screen	Max outer diameter	Min bending radii fixed	Min bending radii flexing	Net weight	Unenclosed Touching
mm <sup>2</sup>		mm	nF/Km	mm	mm	mm	mm	kg/km	A
4 x 1.5	5DE6 600	28 x 0.25	130	8.4	11.5	69	92	150	21
4 x 2.5	5DE6 601	46 x 0.25	145	9.4	13.0	100	125	205	27
4 x 4	5DE6 602	5 x 0.30	145	11.6	15.5	124	155	320	37
4 x 6	5DE6 603	77 x 0.30	160	12.8	17.0	136	170	410	48
4 x 10	5DE6 604	78 x 0.39	185	15.3	19.5	156	195	600	67
3 x 16 + 3 x 2.5	5DE6 605	26 x 0.39	235	16.2	21.0	168	210	770	90
3 x 25 + 3 x 4	5DE6 606	96 x 0.39	245	19.8	24.5	196	245	1110	119
3 x 35 + 3 x 16/3	5DE6 607	27 x 0.39	270	22.5	28.0	224	280	1510	147
3 x 50 + 3 x 25/3	5DE6 608	388 x 0.39	270	26.7	33.0	264	330	2140	184
3 x 70 + 3 x 35/3	5DE6 610	553 x 0.39	295	30.6	37.0	296	370	2860	228
3 x 95 + 3 x 50/3	5DE6 611	729 x 0.39	300	35.1	42.0	336	420	3740	274
3 x 120 + 3 x 50/3	5DE6 612	932 x 0.39	312	39.6	46.5	372	465	4810	320
3 x 150 + 3 x 70/3	5DE6 613	66 x 0.39	315	44.3	51.5	412	515	5850	368
3 x 185 + 3 x 95/3	5DE6 614	425 x 0.39	315	48.9	57.0	456	570	7100	420
3 x 240 + 3 x 120/3	5DE6 615	887 x 0.39	320	55.8	64.5	516	645	9400	498
3 x 300 + 3 x 150/3	5DE6 616	2350 x 0.39	330	62.9	72.0	576	720	11680	576