

SERVO LK SMS FX8PLUS motor cable**DB0027784EN**
valid from: 30.03.2011**Application**

LAPP servo motor cables according to Siemens®* (see footnote) Standard **FX8008 PLUS** are part of a new generation of very highly flexible screened motor-power- cables (P/Ns **0027784** to **0027789**), with PUR outer sheath and UL/CSA approvals. They are suitable in **very high dynamically operating power chain applications** under accelerations up to **50m/s²** as well as for static use. Lapp FX8PLUS motor cables are made in accordance to Siemens Motion Connect* typically used for interconnection in between motors and servo drive controllers of Siemens SINAMICS* drive systems. Typical kind of application: In power chains of **modern high speed/high efficient machine tools**, production plants, car body presses, transfer lines...

USA: According NFPA 79 Ed. 2007 AWM is accepted only, when part of a listed assembly. Cables can be used in dry and damp areas and also outdoor provided the recommended temperatures of use are respected. Usage of these cables in moving cable carriers, respectively on motor drum guidance or under a strain of more than 20 N/mm² is not allowed. LK SMS-FX8PLUS cables are increased oil-resistant, halogen-free and free of lacquer destructive substances ("free of silicones").

Technical Data

Conductor	Stranded copper wires acc. IEC 60228 Cl. 6 /VDE 0295 Cl. 6
Insulation	PP Polypropylene
Conductor ID Code	Black with white Alphanumeric marking: Sizes: 1.5 -2.5mm ² : V/L2 U/L1/C/L+ W/L3/D/L- Greenyellow Sizes: 4 – 16mm ² : U/L1/C/L+ V/L2 W/L3/D/L- Greenyellow
Cable make-up	3 + PE power conductors, associated by fillers, twisted together to form a round cable
Overall shield	Tinned copper braid, coverage ≥ 80 %
Jacket	TMPU Polyurethane DIN EN 50363-10-2 Orange (~RAL 2003)
Nominal Voltage	IEC/VDE: 0.6/1kV
Operating voltage	UL & CSA: 1000V
Test voltage	4kVrms x 5min between all Conductors as well as all shields.
Insulation resistance:	≥ 2500 MOhm x km, resp. 10MOhm x km at 80°C
Capacitance (800-1200Hz)	1.5mm ² - 6mm ² : max. 150 pF/m 10mm ² -16mm ² : max. 300pF/m
Shield transfer impedance	Size 1.5 to 4mm ² : 0.01 MHz to 2 MHz: ≤ 20 mOhm/m 4 MHz: ≤ 40 mOhm/m 10 MHz: ≤ 100 mOhm/m 30 MHz: ≤ 300 mOhm/m

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Size 6mm² to 16mm²:

0.01 MHz to 1 MHz: ≤ 10 mOhm/m

2 MHz ≤ 20 mOhm/m

4 MHz ≤ 40 mOhm/m

10 MHz ≤ 100 mOhm/m

30 MHz ≤ 300 mOhm/m

Temperature range

Operating: - 20°C up to +60°C

Static/storage. - 50°C up to +80°C

Max. allowable on conductors: +80°C

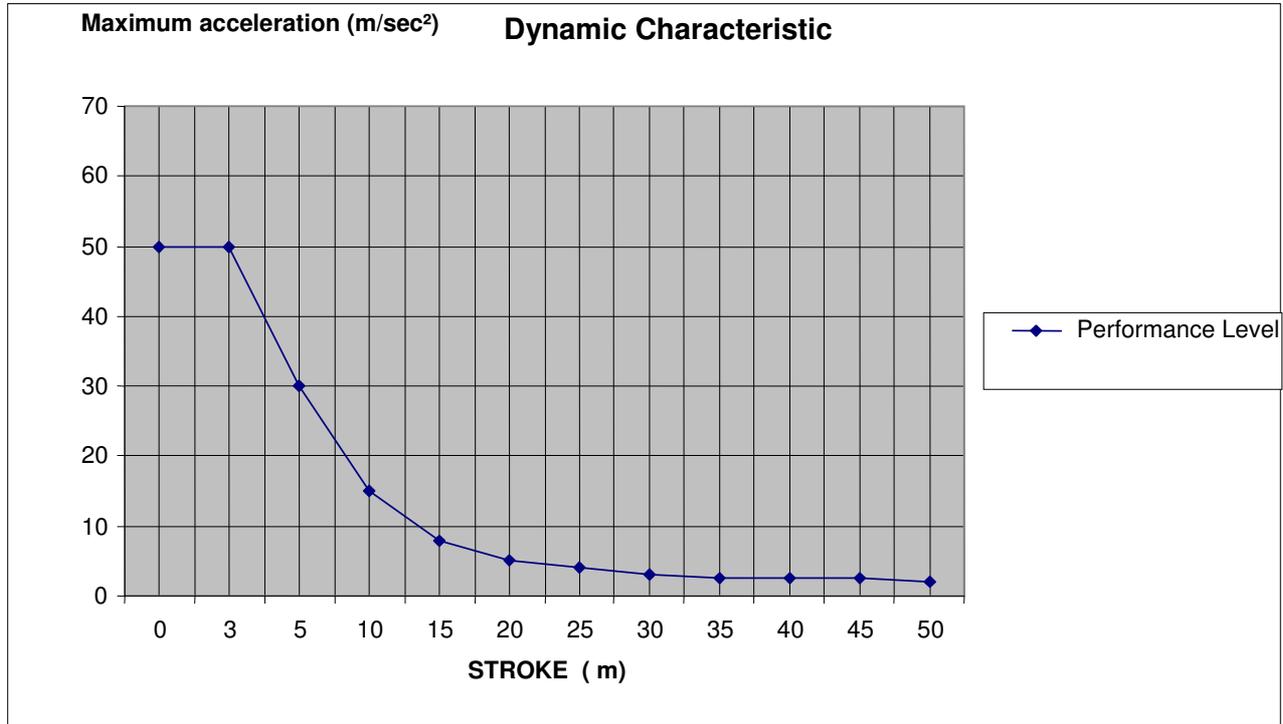
Dynamic performance**Pulling force (Dynamic)** ≤ 20 N/mm²**Pulling force (Static)** ≤ 50 N/mm²**Max. Acceleration** see Table B**Max. Length horizontal of motor cables** 1,5mm² - 16mm² see Table B**Max. Speed** 5m/s resp. 300m/min**Min. bending radii**
Dynamic applications: 7.5 x cables outer diameter
Static applications: 4 x cables outer diameter**Max torsion load** +/- 30°/m**Bends** 10.000.000**Oil resistance** DIN EN 50363-10-2**Halogen free** VDE0472-815**Flame resistance** IEC/ EN 60332-1-2 IEC/EN 60332-1-3; FT1, VW-1**Approvals:**
USA: UL AWM rec. Style 21223, 80°C, 1000V, VW-1
Canada: CSA AWM I/II A/B 80°C, 1000V, FT1
Europe: VDE registrated. VDE Reg. Nb: see outer sheath imprint**Conformities:** DESINA, RoHS, CE**Table A**

Part Number	Product Name	Nominal diameter in mm			
		above insulated conductor approx.	above overall shield approx.	above outer jacket approx.	
0027784	SERVO LK SMS FX8PLUS-1BB11/4G1.5	2.4	6.7	9.1	+/- 0.4
0027785	SERVO LK SMS FX8PLUS-1BB21/4G2.5	3.0	8.3	10.6	+/- 0.4
0027786	SERVO LK SMS FX8PLUS-1BB31/4G4	3.6	9.8	11.9	+/- 0.4
0027787	SERVO LK SMS FX8PLUS-1BB41/4G6	4.4	11.8	14.4	+/- 0.5
0027788	SERVO LK SMS FX8PLUS-1BB51/4G10	5.6	14.8	17.5	+/- 0.7
0027789	SERVO LK SMS FX8PLUS-1BB61/4G16	7.1	18.1	21.6	+/- 0.7

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Table B motor cable 1.5 – 16mm²



* SIEMENS, SINAMICS, MOTION CONNECT, DRIVE CLIQ and Siemens part designations (i.e. 6FX5002/5008, 6FX7002/7008, 6FX8002/8008, 6FX8002/8008-Plus) are registered trademarks of Siemens AG and for comparing purpose only.