

Measuring systems

Built-on optoelectronic rotary encoders

Accessories

Overview



Couplings and clamp straps

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Couplings and clamp straps are available as mounting accessories for the built-on rotary encoders. The clamp straps are used to fix the encoders with Synchro flange.

Signal connector as mating connector

A signal connector with mating connector is available for encoders with flange outlet or with cable and connector. The connector with 12 contacts is suitable for all incremental encoders. The connector with 17 contacts is suitable for absolute encoders with EnDat.

Signal connector

A signal connector is available as replacement for encoders with cable and connector.

Technical specifications

Product name		Spring disk coupling 6FX2001-7KF..	Plug-in coupling 6FX2001-7KS..
Transmission torque, max.	Nm (oz _f)	0.8 (2.88)	0.7 (2.52)
Shaft diameter			
• Both ends	mm (in)	6 (0.24)	6 or 10 (0.24 or 0.39)
• d_1/d_2	mm (in)	6/5 (0.24/0.20)	–
Center offset of shafts, max.	mm (in)	0.4 (0.02)	0.5 (0.02)
Axial offset	mm (in)	± 0.4 (0.02)	± 0.5 (0.02)
Angular displacement of shafts, max.	Degrees	3	1
Torsional rigidity	Nm/rad (oz _f /rad)	150 (539.51)	31 (111.5)
Lateral spring stiffness	N/mm (lb _f)	6 (1.35)	10 (2.25)
Moment of inertia	gcm ² (lb _f -in-s ²)	19 (168 × 10 ⁻⁷)	20 (177 × 10 ⁻⁷)
Speed, max.	rpm	12000	12000
Ambient temperature			
• Operation	°C (°F)	-40 ... +150 (-40 ... +302)	-40 ... +80 (-40 ... +176)
Weight, approx.	g (oz)	16 (0.56)	20 (0.71)

Selection and ordering data

Description	Order No.
Spring disk coupling Shaft diameter: • 6 mm/6 mm (0.24 in/0.24 in) • 6 mm/5 mm (0.24 in/0.20 in)	6FX2001-7KF10 6FX2001-7KF06
Plug-in coupling Shaft diameter: • 6 mm/6 mm (0.24 in/0.24 in) • 10 mm/10 mm (0.39 in/0.39 in)	6FX2001-7KS06 6FX2001-7KS10
Clamp strap (1 unit) For double-track encoders and encoders with Synchro flange (3 units are required)	6FX2001-7KP01
Signal connector with union nut (1 unit) Mating connector for incremental encoder with TTL, sin/cos 1 V _{pp} , HTL and absolute encoder with SSI 12-pole, insulator body each with 12 socket contacts 0.08 ... 0.22 mm ² and 0.20 ... 0.56 mm ² , 2 × cable clamp 6.5 ... 10 mm, and 10.1 ... 13 mm	6FX2003-0SU12
Signal connector with union nut (1 unit) Mating connector for absolute encoder with EnDat 17-pole, insulator body with 17 socket contacts 0.20 ... 0.56 mm ² , 2 × cable clamp 6.5 ... 10 mm, and 10.1 ... 13 mm	6FX2003-0SU17
Signal connector with external thread for encoders with cable (1 unit) Replacement connector for incremental encoder with RS422, sin/cos 1 V _{pp} and HTL 12-pole, insulator body with 12 pin contacts 0.20 ... 0.56 mm ² , 2 × cable clamp 6.5 ... 10 mm, and 10.1 ... 13 mm	6FX2003-0SA12
Power connecting cable Pre-assembled cable for power supply of the absolute encoders with PROFINET IO with M12 plug connector and M12 plug socket, A-coded, 4-pole • Length 2 m (6.56 ft) • Length 3 m (9.84 ft) • Length 5 m (16.4 ft) • Length 10 m (32.8 ft) • Length 15 m (49.21 ft)	6XV1801-5DH20 6XV1801-5DH30 6XV1801-5DH50 6XV1801-5DN10 6XV1801-5DN15
IE connecting cable Pre-assembled signal cable for absolute encoders PROFINET IO with M12 plug connector and RJ45, D-coded, 4-pole • Length 2 m (6.56 ft) • Length 3 m (9.84 ft) • Length 5 m (16.4 ft) • Length 10 m (32.8 ft) • Length 15 m (49.21 ft)	6XV1871-5TH20 6XV1871-5TH30 6XV1871-5TH50 6XV1871-5TN10 6XV1871-5TN15
IE FC RJ45 Plug 145 (1 unit) 2 × 2 RJ45 connector with rugged metal enclosure and FC connection technology, 145° cable outlet	6GK1901-1BB30-0AA0
IE FC M12 Plug PRO (1 unit) M12 connector with metal enclosure and FC connection technology, axial cable outlet, D-coded	6GK1901-0DB20-6AA0
IE FC TP Trailing Cable 2 × 2 (PROFINET Type C) 4-wire, shielded, PROFINET-compliant, TP installation cable for trailing cable use Sold by the meter Max. length 2000 m (6562 ft) Minimum order 20 m (65.5 ft)	6XV1840-3AH10