

ABS.VALUE ENCODER MULTITURN 6FX2001-5FN25 27 BIT WITH
PROFINET OPERATE VOLTAGE 10-30V SYNCHROFLANGE /
SHAFT 6MM CONNECTOR M12 RADIAL



Figure similar

product brand name	Measuring systems
Measuring procedure / for position feedback	absolute
Manner of function / of absolute encoder	multiturn
Operating voltage / of the rotary encoder / at DC	10 ... 30
Design of the interface	PROFINET IO with RT / IRT
Design of input / for clock cycle	2 ports IRT
Design of encoder output	2 ports IRT
Property of the output / Short-circuit proof	Yes
Display version / for diagnostic function	Yes (green/red/yellow)
Transfer rate	100 Mbit/s
Speed	
• for digital measuring accuracy +/- 1 bit / with electrical rotation transmission / maximum	5 800 1/min
• maximum	6 000 1/min
Wire length	
• maximum	100 m
Digital resolution	27 bit; (8192 increments x 16384 rpms)
Type of coding	

• for sampling • for transmission	Gray binary, PROFINET
Product function	
• parameterizable preset • parameterizable counting direction	Yes; Any Yes
Measurement deviation angle of rotation / of absolute encoder	79"; with 8192 increments ($\pm 1/2$ LSB)
Friction torque / at 20 °C / maximum	0.01 N·m
Starting torque / at 20 °C / maximum	0.01 N·m
Axial force / at shaft	
• with $n > 6000$ rpm / maximum • with $n \leq 6000$ rpm / maximum	10 N 40 N
Cantilever force / at shaft extension	
• with $n > 6000$ rpm / maximum • with $n \leq 6000$ rpm / maximum	20 N 110 N
Rotary encoder shaft version	Solid shaft
Diameter / of rotary encoder shaft	6 mm
Length / of rotary encoder shaft	10 mm
Angular acceleration / maximum	100 000 rad/s ²
Moment of inertia / of rotor	
• with solid shaft encoder	0.000003 kg·m ²
Vibrational acceleration / at 55 Hz ... 2 kHz / acc. to IEC 60068-2-6	100 m/s ²
Shock acceleration	
• limited to 2 ms / acc. to IEC 60068-2-27 • limited to 6 ms / acc. to IEC 60068-2-27	2 000 m/s ² 1 000 m/s ²
Protection class IP	
• without shaft input • with shaft input	IP67 IP64
Ambient temperature / during operation	-40 ... +85
EMI immunity	Tested to DIN EN 50081 and EN 50082
Certificate of suitability	CE, cULus
Consumed current / minimum	130 mA
Consumed current / maximum	400 mA; (< 4 W)
Type of electrical connection	2 x connector M12, 4-pin for PROFINET Ports, 1 x connector M12, 4-pin for operating voltage
Telegram format	According to PNO cncoder profile V4.1 Class1, Class 2, Class 3, Class 4, standard telegrams 81/82/83/84, Siemens telegram 860
Direction of connection opening	Radial
Measuring cycle	1 ... 100
Product function	
• parameterizable resolution per revolution • parameterizable resolution per revolution / Note	Yes Any 1 ... 8192

• parameterizable total resolution	Yes
• parameterizable total resolution / Note	Any 1 ... 8192
• parameterizable speed signal	Yes
• parameterizable limit switch	No
• parameterizable isochronous mode	Yes
• Slave-to-slave communication parameterizable	No
• online parameterization	Yes
Certificate of suitability / PI certificate	Yes
Profile / is supported	PNO encoder profile V4.1
Flange type	Synchro flange
Net weight	0.43 kg

Further information

Information und Download Center

https://www.automation.siemens.com/mcms/infocenter/content/en/Pages/order_form.aspx

Technical documentation

<http://w3.siemens.com/mcms/mc-solutions/en/motion-control/support/technical-documentation/Pages/technical-documentation.aspx>

Industry Mall

<https://eb.automation.siemens.com/mall/en/WW/Catalog/Product/6FX2001-5FN25/all>

Industry Online Support

<http://support.automation.siemens.com/WW/view/en/6FX2001-5FN25/all>

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