

Absolute encoders - bus interfaces

Solid shaft with clamping or synchro flange

Optical multiturn encoders 13 bit ST / 16 bit MT, DeviceNet

GXP8W - DeviceNet



GXP8W with clamping flange

Features

- Encoder multiturn / DeviceNet
- Optical sensing method
- Resolution: singleturn 13 bit, multiturn 16 bit
- Clamping or synchro flange
- High resistance to shock and vibrations
- LED status indicator
- Permanent check of code continuity
- Maximum resistant against magnetic fields

Technical data - electrical ratings

Voltage supply	10...30 VDC
Reverse polarity protection	Yes
Consumption w/o load	≤50 mA (24 VDC)
Initializing time typ.	250 ms after power on
Interface	DeviceNet
Function	Multiturn
Transmission rate	125...500 kBaud
Profile conformity	Device Profile Encoder V 1.0
Operating mode	I/O-Polling, Cyclic, Change of State
Identifier	11 bit
Steps per revolution	≤8192 / 13 bit
Number of revolutions	≤65536 / 16 bit
Absolute accuracy	±0.025 °
Sensing method	Optical
Code	Binary
Code sequence	CW default, programmable
Output stages	CAN bus standard ISO / DIS 11898
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-4
Programmable parameters	Operating modes Total resolution Preset Scaling
Diagnostic functions	Position or parameter error Multiturn sensing
Status indicator	DUO-LED integrated in housing
Approval	UL approval / E63076

Technical data - mechanical design

Size (flange)	ø58 mm
Shaft type	ø10 mm solid shaft (clamping flange) ø6 mm solid shaft (synchro flange)
Flange	Clamping or synchro flange
Protection DIN EN 60529	IP 54 (without shaft seal), IP 65 (with shaft seal)
Operating speed	≤10000 rpm (mechanical) ≤6000 rpm (electric)
Starting acceleration	≤1000 U/s ²
Starting torque	≤0.015 Nm (+25 °C, IP 54) ≤0.03 Nm (+25 °C, IP 65)
Rotor moment of inertia	20 gcm ²
Admitted shaft load	≤20 N axial ≤40 N radial
Materials	Housing: steel Flange: aluminium
Operating temperature	-25...+85 °C -40...+85 °C (optional)
Relative humidity	95 % non-condensing
Resistance	DIN EN 60068-2-6 Vibration 10 g, 16-2000 Hz DIN EN 60068-2-27 Shock 200 g, 6 ms
Weight approx.	350 g
Connection	Connector M12, 5-pin

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Part number

GXP8W.		20	M1	10
				Interface
				10 DeviceNet
				Connection
			M1	Connector M12, 5-pin, radial
				Voltage supply
		20		10...30 VDC
				Flange / Solid shaft
0				Clamping flange / \varnothing 10 mm, IP 54
A				Clamping flange / \varnothing 10 mm, IP 65
1				Synchro flange / \varnothing 6 mm, IP 54
B				Synchro flange / \varnothing 6 mm, IP 65

Accessories

Connectors and cables

11040255	Female connector M12, 5-pin, A-coded, 2 m cable (Z 180.003)
11034341	Female connector M12, 5-pin, A-coded, 5 m cable (Z 180.005)
11004569	Female connector M12, 5-pin, A-coded, 10 m cable (Z 180.007)

Mounting accessories

10117669	Eccentric fixing, single (Z 119.006)
10141255	Adaptor plate for clamping flange for modification into synchro flange (Z 119.013)
10117667	Mounting adaptor for encoders with synchro flange (Z 119.015)
10125051	Mounting adaptor for encoders with clamping flange (M3) (Z 119.017)
10158124	Bearing flange for encoders with synchro flange (Z 119.035)
10141132	Spring washer coupling D1=6 / D2=10 (Z 121. C01)

DeviceNet features

Bus protocol	DeviceNet
Device profiles	Device Profile for Encoders V 1.0
Operating mode	I/O-Polling Cyclic Change of State
Preset	This parameter is for setting the encoder to a requested position value assigned to a defined shaft position of the system. The offset between the encoder zero point and the mechanical zero point is stored in the encoder.
Rotating direction	This parameter is for defining the rotating direction in which there have to be ascending or descending position values.
Scaling	Parameterizing of steps per revolution and of the total resolution.
Diagnosis	The encoder supports the following error warnings: - Position and parameter error - Lithium battery voltage control (Multiturn)
Default	125 kbit/s, Mac ID 63

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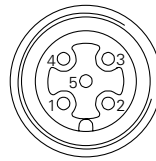
GXP8W - DeviceNet

Terminal significance

UB	Encoder voltage supply.
GND B	Encoder ground connection relating to UB.
CAN_L	CAN bus signal (dominant Low)
CAN_H	CAN bus signal (dominant High)
DRAIN	Shield connection. Internally on housing by RC circuit.

Terminal assignment

Connector	Assignment
Pin 1	DRAIN
Pin 2	UB
Pin 3	GNDB
Pin 4	CAN_H
Pin 5	CAN_L



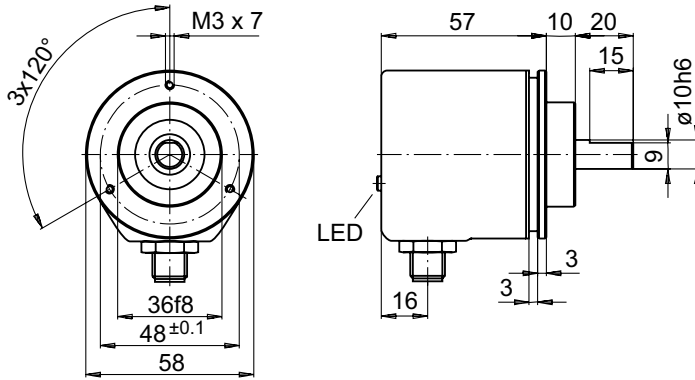
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Dimensions

GXP8W - clamping flange



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