

Absolute encoders - bus interfaces

Hollow shaft ø14 mm

Multiturn encoder 13 bit ST / 12 bit MT, Interbus

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GXP6H



GXP6H with hollow shaft

Technical data - electrical ratings

Voltage supply	10...30 VDC
Reverse polarity protection	Yes
Consumption w/o load	≤60 mA (24 VDC)
Initializing time (typ.)	50 ms after power on
Interface	Interbus
Transmission rate	500 kBaud
Profile conformity	Encoder profile 71
Steps per turn	8192 / 13 bit
Number of turns	4096 / 12 bit
Absolute accuracy	±0.025°
Sensing method	Optical
Code	Gray or binary
Code sequence	CW default, programmable
Output circuit	RS485
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-4
Programmable parameters	Total resolution Rotating direction and code Preset and offset Zero point setting
Approval	UL approval / E63076

Features

- Encoder multiturn / Interbus
- Optical sensing
- Resolution: singleturn 13 bit, multiturn 12 bit
- Hollow shaft ø14 mm
- Interbus encoder profile 71
- ENCOM profile K3
- High reliability by self-diagnostics
- Zero point, offset and turning direction programmable
- Cost-efficient mounting

Optional

- Transmission rate 2 MBaud

Technical data - mechanical design

Housing	ø75 mm
Shaft	ø14 mm hollow shaft
Protection DIN EN 60529	IP 54
Operating speed	≤6000 rpm (mechanical) ≤6000 rpm (electric)
Rotor moment of inertia	20 gcm ²
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.	430 g
E-connection	Connector, 2 x 9-pin

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Part number

GXP6H.	2	10	A1	01
				<u>Interface</u>
			01	Interbus K3
				<u>E-connection</u>
		A1		M23 connector, 2 x 9-pin radial
				<u>Voltage supply</u>
		10		10...30 VDC, galvanically isolated
				<u>Hollow shaft</u>
2				Hollow shaft ø14 mm with pin 15 mm clamping ring on housing

Accessories

Connectors and cables (page %S)

Z 153.B01 Mating connector M23, 9-pin, less cable

Z 153.S01 Cable connector M23, 9-pin, less cable

Mounting accessories (page %S)

Z 119.037 Rubber buffer element 18.5 mm long, as torque support

Z 119.039 Set of adjusting angles as torque support

Z 119.040 Shoulder screw M5 as torque support

Z 119.041 Torque support by rubber buffer element for encoders with 15 mm pin

Z 119.043 Spring coupling for GX and G1

Interbus features

Bus protocol	Interbus
Device profile	Encoder profile 71
Coupling	
IB user type	2 wire remote bus
IB bus width	4 byte
PCP length	No parameter channel
ID-Code	55
Interface	
Type A1	2 wire remote bus (galvanically isolated)
Type W1	2 wire remote bus
Programmable parameters	– Resolution steps and revolutions – Rotating direction and code – Preset – Zero point shift – Offset – Measuring range – Encoder reset

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Hollow shaft $\varnothing 14$ mm

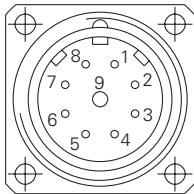
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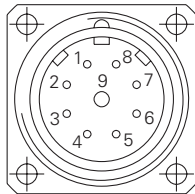
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Terminal significance	
D01, $\overline{D01}$ DI1, $\overline{DI1}$	Arriving remote bus (galvanically isolated).
GND I	Ground connection for arriving remote bus (galvanically isolated).
UB	Connections for voltage supply UB carried by the bus, current load between the arriving and departing connections max. 700 mA.
GND B	
D02, $\overline{D02}$ DI2, $\overline{DI2}$	Outgoing remote bus.
GND	Ground connection for ongoing remote bus.
PE	Shield connected to encoder housing.
RBST	Input for recognition of other bus users. Connection open: final user / termination Connected to GND: user X.

Terminal assignment			
Male connector	Assignment	Female connector	Assignment
Pin 1	D01	Pin 1	D02
Pin 2	$\overline{D01}$	Pin 2	$\overline{D02}$
Pin 3	DI1	Pin 3	DI2
Pin 4	$\overline{DI1}$	Pin 4	$\overline{DI2}$
Pin 5	GND I	Pin 5	GND
Pin 6	PE	Pin 6	PE
Pin 7	UB	Pin 7	UB
Pin 8	GND B	Pin 8	GND B
Pin 9	–	Pin 9	$\overline{RBST}$



Arriving interface
(male connector)



Departing interface
(female connector)

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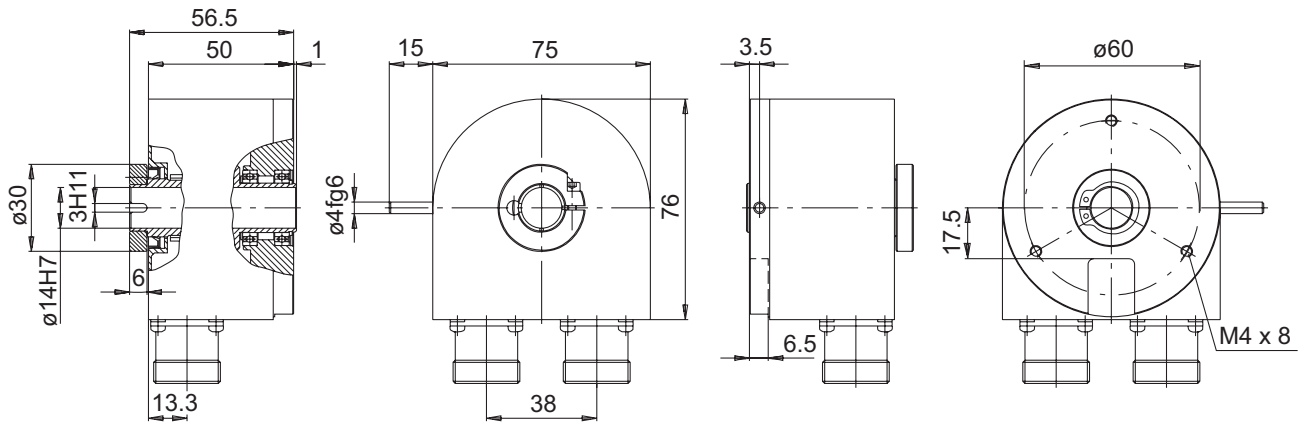
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Dimensions



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