

# Absolute encoders - bus interfaces

Hollow shaft  $\varnothing 14$  mm

Multiturn encoder 13 bit ST / 12 bit MT, Interbus

## GXP6H



GXP6H with hollow shaft

### Technical data - electrical ratings

Voltage supply	10...30 VDC
Reverse polarity protection	Yes
Consumption w/o load	$\leq 60$ 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	$\pm 0.025^\circ$
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  $\varnothing 14$  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	$\varnothing 75$ mm
Shaft	$\varnothing 14$ mm hollow shaft
Protection DIN EN 60529	IP 54
Operating speed	$\leq 6000$ rpm (mechanical) $\leq 6000$ rpm (electric)
Rotor moment of inertia	20 gcm <sup>2</sup>
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
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2	10	A1	01	Interface Interbus K3
		A1		E-connection M23 connector, 2 x 9-pin radial
	10			Voltage supply 10...30 VDC, galvanically isolated
2				Hollow shaft 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

# Absolute encoders - bus interfaces

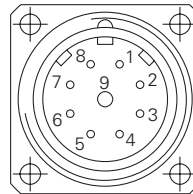
Hollow shaft  $\varnothing 14$  mm

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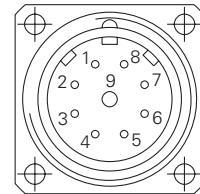
## GXP6H

Terminal significance	
D01, $\overline{D01}$ D11, $\overline{D11}$	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, $\overline{D02}$ D12, $\overline{D12}$	Outgoing remote bus.
GND	Ground connection for ongoing remote bus.
PE	Shield connected to encoder housing.
$\overline{RBST}$	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	D11	Pin 3	D12
Pin 4	$\overline{D11}$	Pin 4	$\overline{D12}$
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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## Dimensions

