

# GCA3-PT - CANopen® up to 4.7 m

Interface CANopen®

Measuring length absolute 2.3 m and 4.7 m

## Overview

- Interface CANopen®
- Magnetic sensing method
- Operating temperature -40...+85 °C
- Protection IP 67
- Flange connector M12 or cable
- Measuring length 2.3 m and 4.7 m
- Designed for harsh environmental conditions
- Removable stickers for drainage



Picture similar

## Technical data

### Technical data - electrical ratings

Voltage supply	10...30 VDC
Reverse polarity protection	Yes
Short-circuit proof	Yes (27 VDC or ground)
Consumption typ.	20 mA (24 VDC, w/o load) 35 mA (24 VDC, w/o load, redundant)
Initializing time typ.	≤ 170 ms after power on ≤ 1 s after power on (redundant)
Interface	CANopen®
Function	Linear position feedback
Profile conformity	CANopen® CiA communication profile DS 301, LSS profile DSP 305, device profile DS 406
Measuring range	Up to 4.7 m
Resolution	0.1 mm/step
Linearity typ.	±0.2 % FS (measuring length 2.3 m) ±0.4 % FS (measuring length 4.7 m)
Absolute accuracy typ.	±0.3 % FS (+25 °C / measuring length 2.3 m) ±0.6 % FS (+25 °C / measuring length 4.7 m)
Sensing method	Magnetic
Code	Programmable
Interference immunity	EN 61000-6-2
Emitted interference	EN 61000-6-3
Programmable parameters	Operating modes Rotating direction Scaling Zero position

### Technical data - mechanical design

Protection EN 60529	IP 67 (housing, drainage holes closed) IP 54 (cable inlet)
Material	Cable: stainless steel cable AISI 316 coated with nylon PA12 Housing: plastic and aluminium
Operating temperature	-40...+85 °C
Measuring length	2.3 m 4.7 m
Cable acceleration	≤50 m/s <sup>2</sup>
Cable diameter	0.7 mm
Cable fastening	Eyelet Height: 5 mm Internal diameter: 8 mm Outer diameter: 15 mm
Pull-in force	>1.5 N (pull-in force reduced at low temperatures)
Pull-out force	≤8 N
Relative humidity	95 % non-condensing
Resistance	EN 60068-2-6 Vibration 20 g, 58-2000 Hz EN 60068-2-27 Shock 50 g, 11 ms
Weight approx.	625 g
Connection	Flange connector M12, 5-pin Cable 2 m, radial
Instruction	Please consider the assembly instructions

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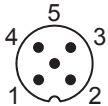
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## Terminal assignment

### Flange connector M12, male, 5-pin, A-coded

Pin	Signals	Description
1	CAN_GND	Ground connection relating to CAN
2	+Vs	Voltage supply
3	GND	Ground connection relating to +Vs
4	CAN_H	CAN Bus Signal (dominant High)
5	CAN_L	CAN Bus Signal (dominant Low)



### Cable

Core colour	Signals	Description
white	GND	Ground connection relating to +Vs
brown	+Vs	Voltage supply
green	CAN_H	CAN Bus Signal (dominant High)
yellow	CAN_L	CAN Bus Signal (dominant Low)
grey	CAN_GND	Ground connection relating to CAN

Cable data: 5 x 0.5 mm<sup>2</sup>, 2 m

Terminals GND and CAN\_GND are internally connected and identical in their functions.

## CANopen® features

Operating modes	Time-driven (Event-Time) Synchronously triggered (Sync)
Node Monitoring	Heartbeat (default: disabled)
Programmable parameters	Operating modes Rotating direction Scaling Zero position
Diagnosis	Position error
Default	Baud rate 250 kbit/s Channel A: Node-ID 4 (04h) Channel B: Node-ID 5 (05h)

## Data transfer

### PDO Mapping / ID 4

#### PDO 1

LSB	...	...	MSB	...	...	...	...
Byte 0	1	2	3	4	5	6	7
linear position 0 → 23000\47000 <sub>dec</sub> in steps of 0.1 mm position increasing in size and value							

### PDO Mapping / ID 5

#### PDO 1

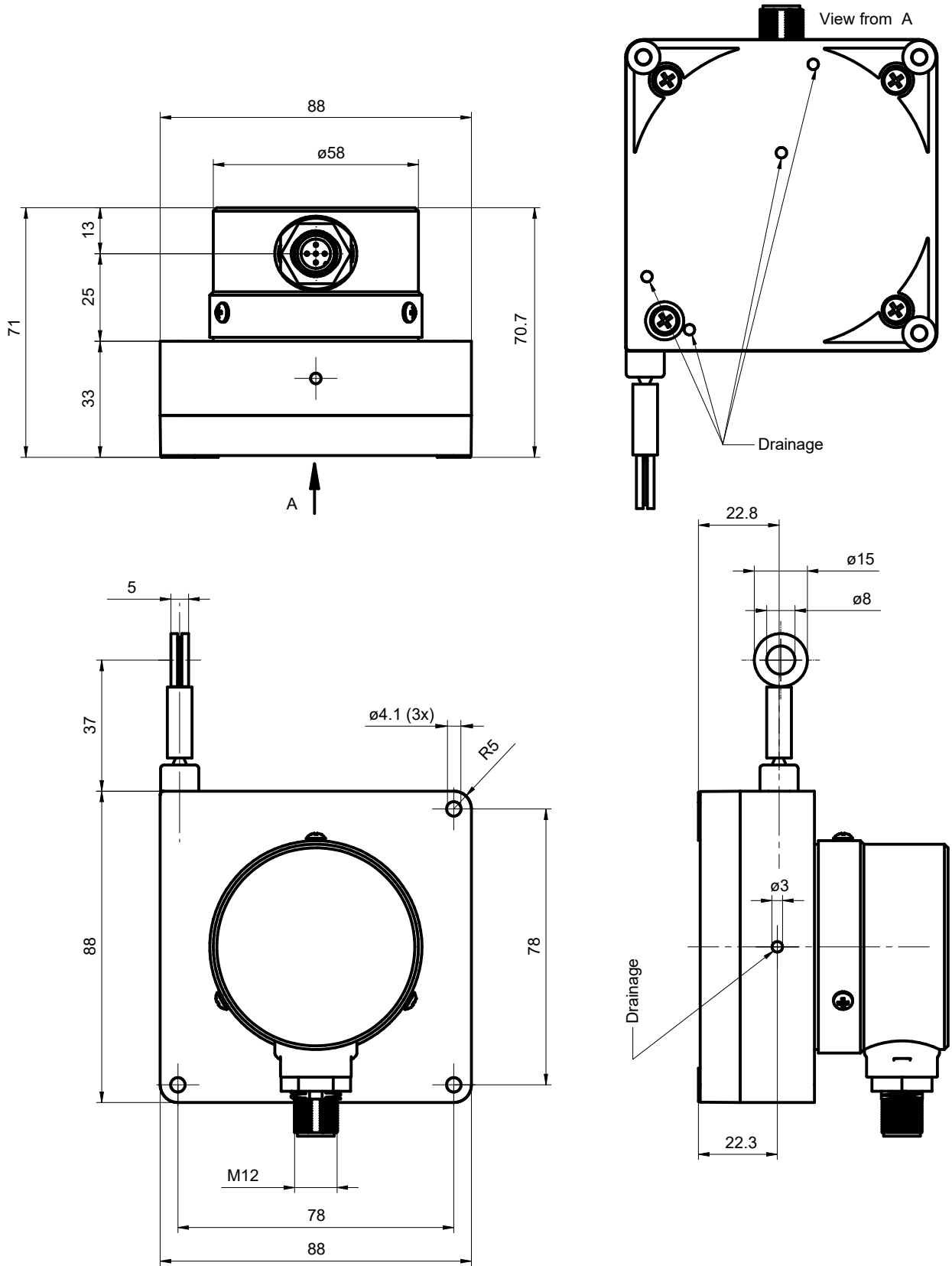
LSB	...	...	MSB	...	...	...	...
Byte 0	1	2	3	4	5	6	7
linear position 0 → 23000\47000 <sub>dec</sub> in steps of 0.1 mm position increasing in size and value							

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## Dimensions



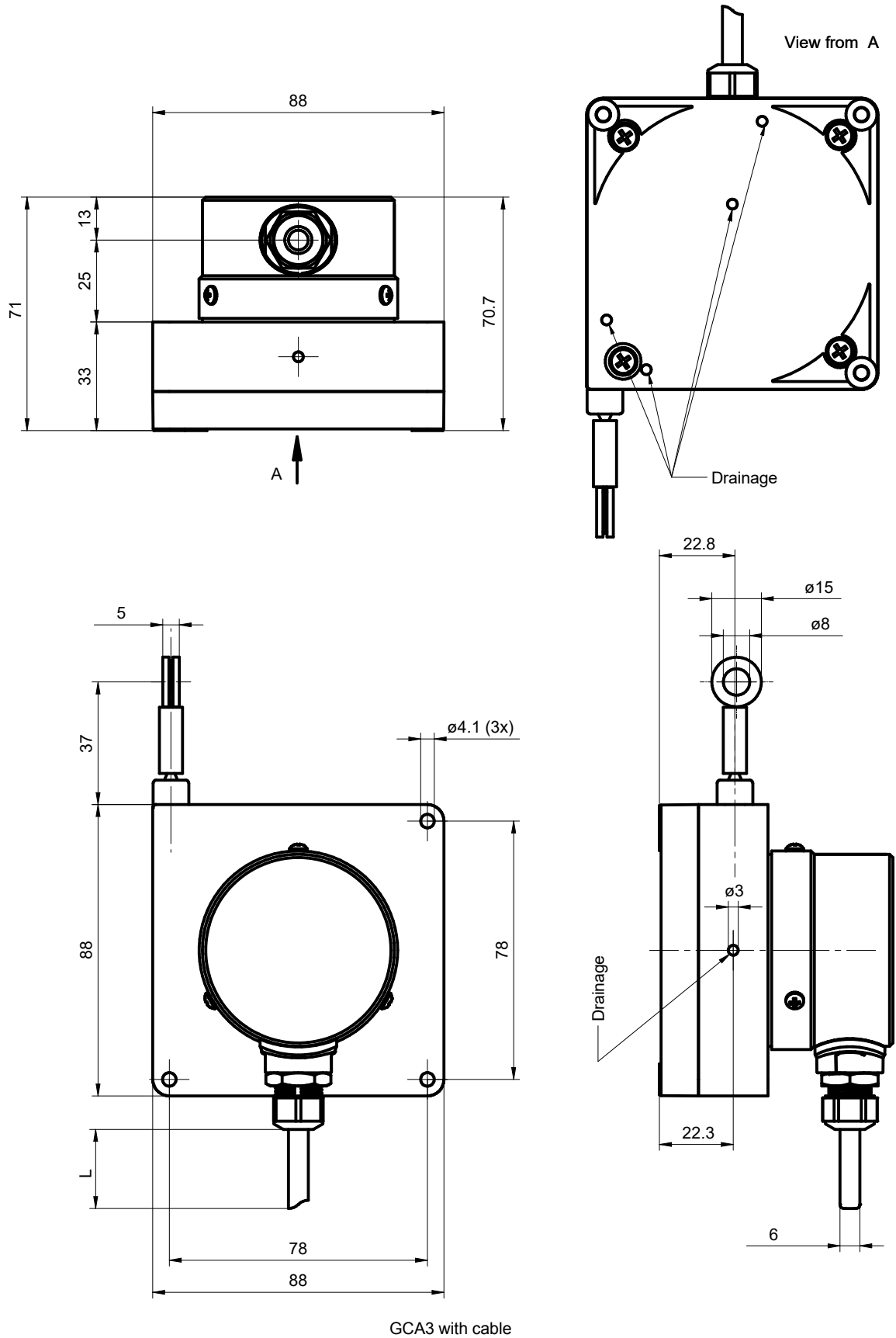
GCA3 with flange connector M12

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**Ordering reference**

	GCA3-	P	T	###	.	R	C	#	.	##	0	.	A
<b>Product</b>	GCA3-												
<b>Type</b>		P											
Plastic		P											
<b>Technology</b>			T										
Magnetic multiturn			T										
<b>Measuring range</b>													
2.3 m				023									
4.7 m				047									
<b>Measuring wire fixation</b>													
Ring						R							
<b>Measuring wire diameter</b>													
0.70 mm							C						
<b>Connection</b>													
Cable radial, 2 m								L					
Flange socket radial, M12, 5-pin, male contacts, CCW								N					
<b>Voltage supply / interface</b>													
10...30 VDC / CANopen® (DS406)										C6			
10...30 VDC / CANopen® (DS406) redundant										C8			
<b>Resolution supplement</b>													
No option											0		
<b>Operating temperature</b>													
-40...+85 °C													

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