

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 ²
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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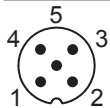
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Terminal assignment

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 mm², 2 m

Terminals GND and CAN_GND are internally connected and identical in their functions.

CANopen® features

Operating modes	Timer-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 _{dec} in steps of 0.1 mm position increasing in size and value							

PDO Mapping / ID 5

PDO 1

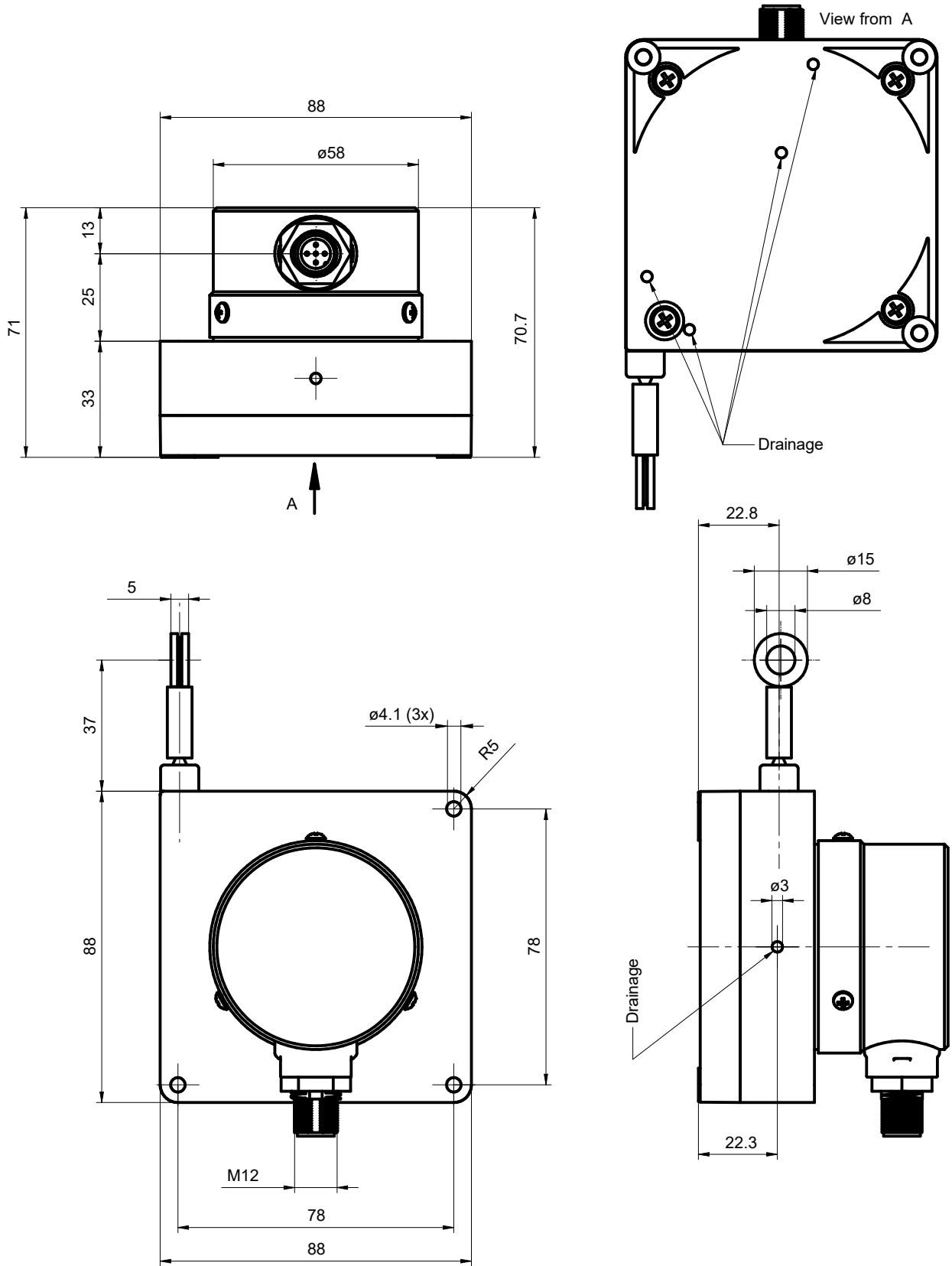
LSB	MSB
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Dimensions



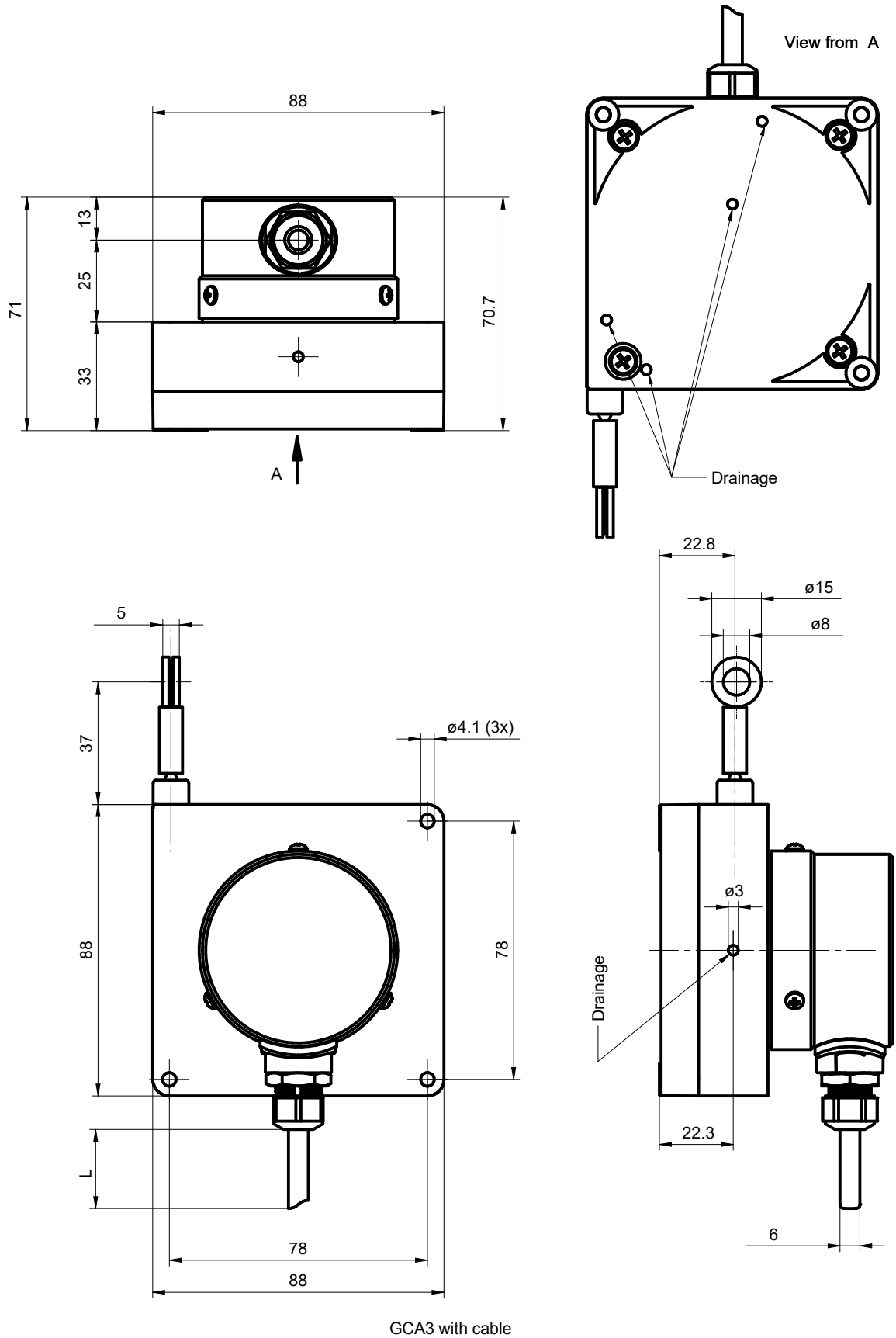
GCA3 with flange connector M12

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Ordering reference

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

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