

GCA3-PM - analog up to 4.7 m

Analog output

Measuring length absolute 2.3 m and 4.7 m

Preliminary

Overview

- Analog interface
- Magnetic sensing
- 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



Technical data

Technical data - electrical ratings

Voltage supply	8...30 VDC 12...30 VDC
Reverse polarity protection	Yes
Short-circuit proof	Yes
Consumption typ.	30 mA (24 VDC, w/o load, current output) 10 mA (24 VDC, w/o load, voltage output)
Initializing time	≤ 500 ms after power on
Interface	Analog 0...10 V / 0.5...4.5 V / 4...20 mA
Load resistor	Between Out/0 V ≥3 kΩ / voltage output 270 Ω / 10 VDC (500 Ω / 15 VDC) Current output
Function	Linear position feedback
Measuring range	Up to 4.7 m
Resolution	12 bit
Linearity typ.	±0.5 % FS (measuring length 2.3 m) ±0.4 % FS (measuring length 4.7 m)
Absolute accuracy typ.	±0.6 % FS (+25 °C / measuring length 2.3 m) ±1 % FS (-40...+85 °C / measuring length 2.3 m) ±0.5 % FS (+25 °C / measuring length 4.7 m) ±0.9 % FS (-40...+85 °C / measuring length 4.7 m)
Sensing method	Magnetic
Interference immunity	EN 61000-6-2
Emitted interference	EN 61000-6-3

Technical data - mechanical design

Protection EN 60529	IP 67 (housing, drainage holes closed) IP 54 (cable inlet)
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Technical data - mechanical design

Material	Cable: stainless steel cable AISI 316 coated with nylon PA12 Housing: plastic
Operating temperature	-40...+85 °C
Service life	Typ. 500 000 strokes (the lifetime depends on the type of load. It is affected by environmental conditions, installation location, measuring range in use, travel speed and acceleration)
Measuring length	2.3 m 4.7 m
Cable acceleration	≤1 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 (+25 °C, pull-in force reduced at low temperatures)
Pull-out force	≤8 N (+25 °C)
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.	440 g
Connection	Flange connector M12, 5-pin Flange connector M12, 8-pin Cable 2 m, radial
Instruction	Please consider the assembly instructions

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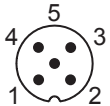
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Terminal assignment

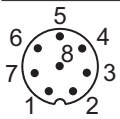
Flange connector M12, male, 5-pin, A-coded

Pin	Signals	Description
1	0 V	Ground connection relating to +Vs
2	+Vs	Voltage supply
3	Uout/lout	Output
4	n.c.	Do not use
5	n.c.	Do not use



Flange connector M12, male, 8-pin, A-coded, redundant version

Pin	Signals	Description
1	0 V1	Ground connection relating to +Vs1
2	+Vs1	Voltage supply 1
3	Uout1/lout1	Output 1
4	0 V2	Ground connection relating to +Vs2
5	+Vs2	Voltage supply 2
6	Uout2/lout2	Output 2
7	n.c.	Do not use
8	n.c.	Do not use



Cable

Core colour	Signals	Description
white	0 V	Ground connection relating to +Vs
brown	+Vs	Voltage supply
green	Uout/lout	Output

Cable data: 3 x 0.5 mm², 2 m

Cable redundant version

Core colour	Signals	Description
white	0 V1+2	Ground connection relating to +Vs1 and +Vs2
brown	+Vs1	Voltage supply 1
green	Uout1/lout1	Output 1
yellow	+Vs2	Voltage supply 2
grey	Uout2/lout2	Output 2

Cable data: 5 x 0.5 mm², 2 m

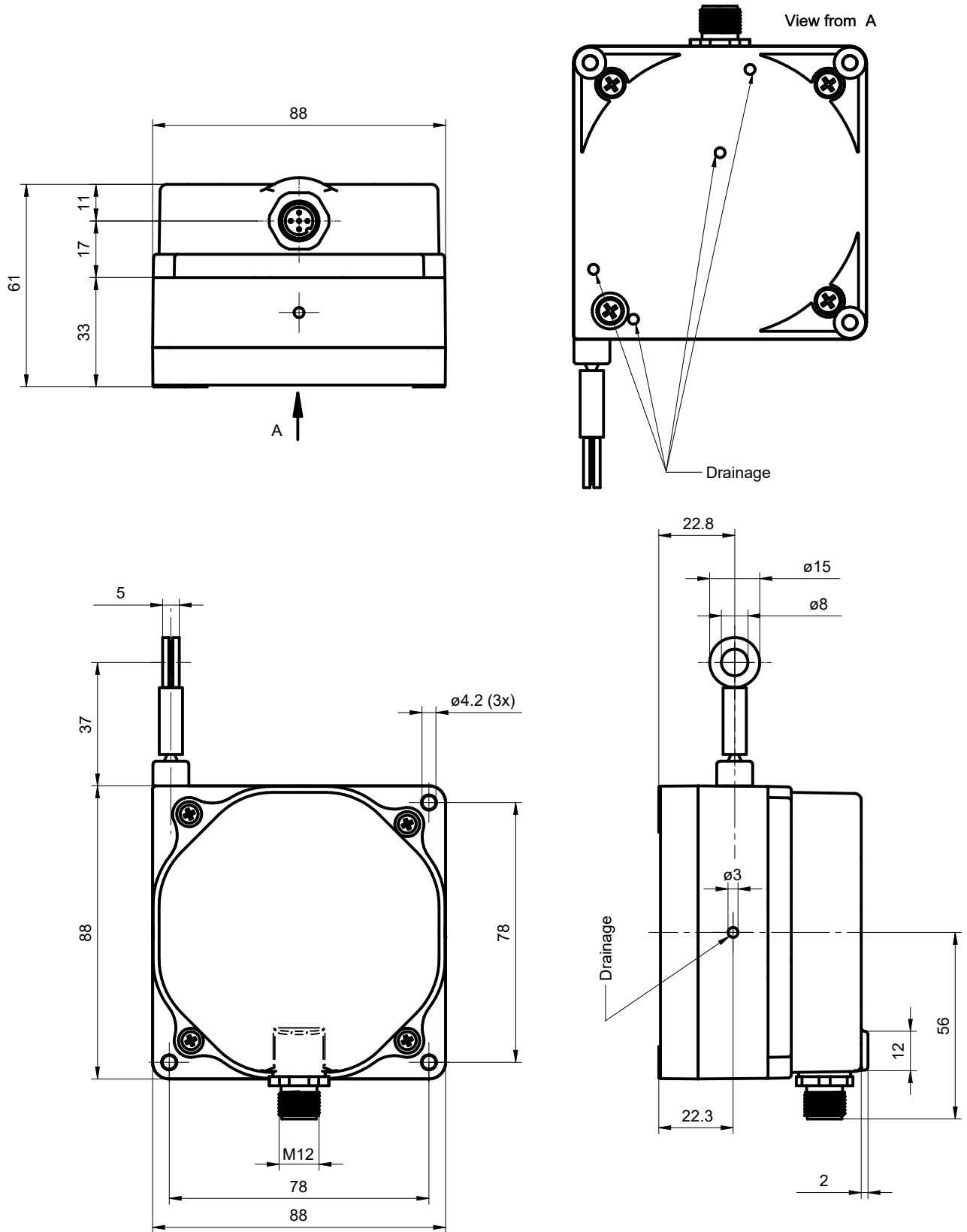
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Dimensions



GCA3 with flange connector M12

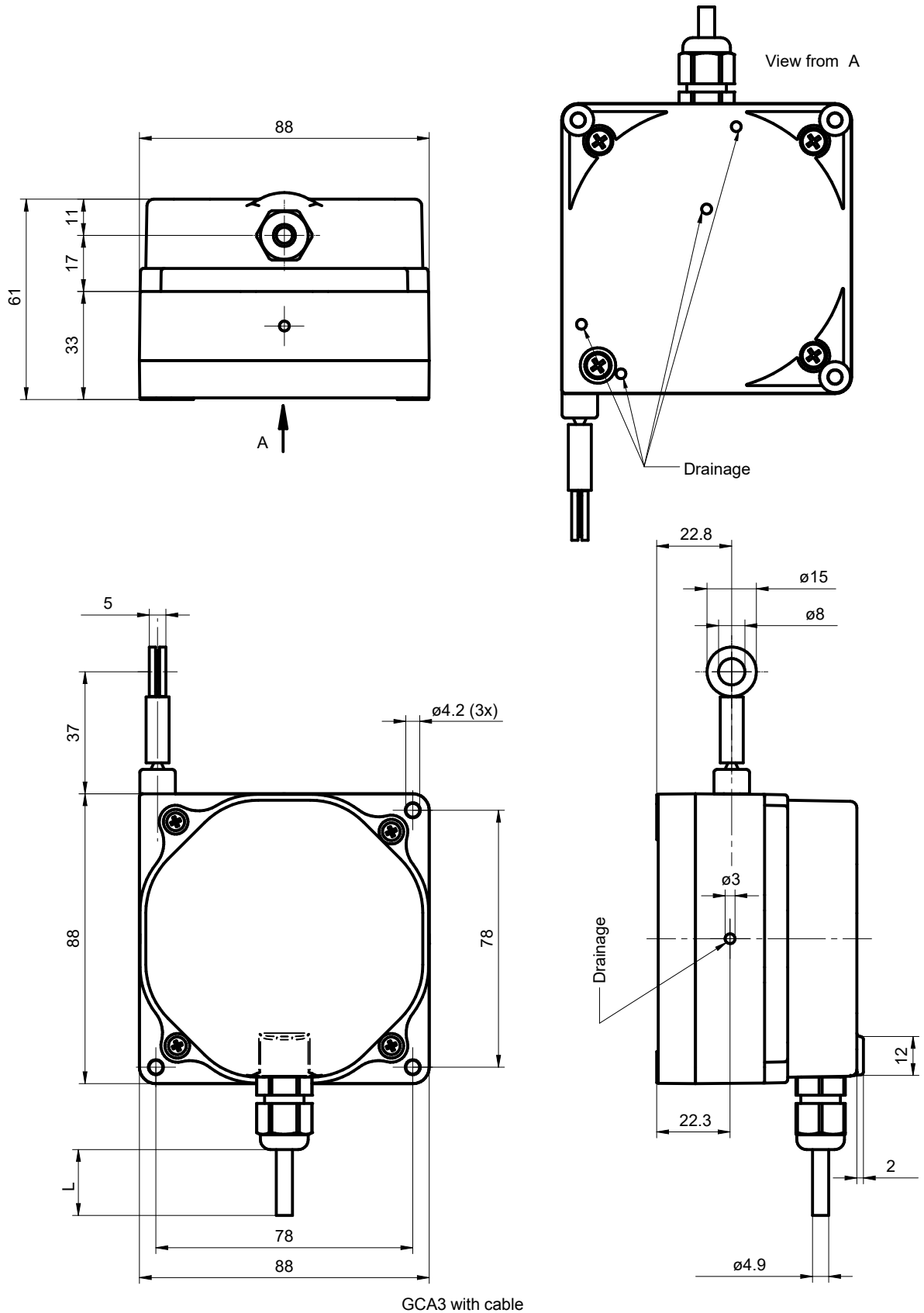
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Ordering reference

	GCA3-	P	M	###	.	R	C	#	.	##	0	.	A
Product	GCA3-												
Type		P											
Plastic		P											
Technology			M										
Magnetic			M										
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, CCW													N
Flange socket radial, M12, 8-pin, male contacts, CCW													B
Voltage supply / interface													
8...30 VDC / Analog 0.5...4.5 VDC													V3
12...30 VDC / Analog 0...10 VDC													V6
12...30 VDC / Analog 4...20 mA													C0
8...30 VDC / Analog 0.5...4.5 VDC redundant													R3
12...30 VDC / Analog 0...10 VDC redundant													R6
12...30 VDC / Analog 4...20 mA redundant													R0
Resolution supplement													
No option													0
Operating temperature													
-40...+85 °C													A