

# GCA3-PT - 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



Picture similar

## Technical data

### Technical data - electrical ratings

Voltage supply	8...30 VDC 14...30 VDC
Consumption typ.	35 mA (24 VDC, w/o load)
Initializing time	≤ 170 ms after power on
Interface	Analog 0...10 V / 0.5...4.5 V / 4...20 mA
Load resistor	Between Out/0 V >1 kΩ / voltage output 0...10 V Between Out/0 V >2 kΩ / voltage output 0.5...4.5 V 500 Ω / current output
Function	Linear position feedback
Measuring range	Up to 4.7 m
Resolution	0.1 mm/step
Linearity typ.	±0.1 % FS (measuring length 2.3 m) ±0.2 % FS (measuring length 4.7 m)
Absolute accuracy typ.	±0.1 % FS (+25 °C / measuring length 2.3 m) ±0.2 % 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

### 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 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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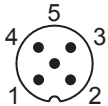
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## Terminal assignment

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

Pin	Signals	Description
1	0 V	Ground connection relating to +Vs
2	+Vs	Voltage supply
3	Uout/Iout	Output
4	DV	DATAVALID
5	Teach	Teach input



### Cable

Core colour	Signals	Description
white	0 V	Ground connection relating to +Vs
brown	+Vs	Voltage supply
green	Uout/Iout	Output
yellow	DV	DATAVALID
grey	Teach	Teach input

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

## Terminal significance

Iout	Current output Load: <500 Ω
Uout	Voltage output Current output: max. 10 mA Load resistor: >1 kΩ between Uout / 0 V (version 0...10 V) >2 kΩ (version 0.5...4.5 V)
Teach	Teach in Maximum 0...+Vs Level LOW: <1 V Level HIGH: >2.1 V
DV	Diagnostic output/Teach output Function normal operation: DATAVALID (Diagnostic output) Type NPN output, Pull-Up 10 kΩ integrated - No error: HIGH - Error: LOW Function teach process: Teach status

## Teach process

### Activate teach process

Start teach process within 5 minutes after power on. Set teach input for >5 seconds on HIGH and afterwards on LOW level.  
DV/Status output: Oscillates after 5 seconds.

### Position 1

Get encoder on position intended for min. voltage output / current output. Set teach input for >0.1 seconds on HIGH.  
DV/Status output: Switches to HIGH level for 3 seconds and flashes shortly.

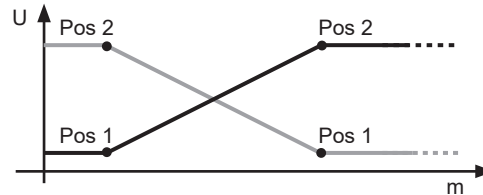
### Position 2

Get encoder on position intended for max. voltage output / current output. Set teach input for >0.1 seconds on HIGH.  
DV/Status output: Switches to HIGH level for 3 seconds and flashes shortly. If measuring range is exceeded or the limits are too close to each other, the teaching process was not successful and has to be repeated.

### Default

Set teach input for >15 seconds on HIGH.  
DV/Status output: Oscillates after 5 seconds.

## Behavior



— Teach in direction - move in  
— Teach in direction - move out

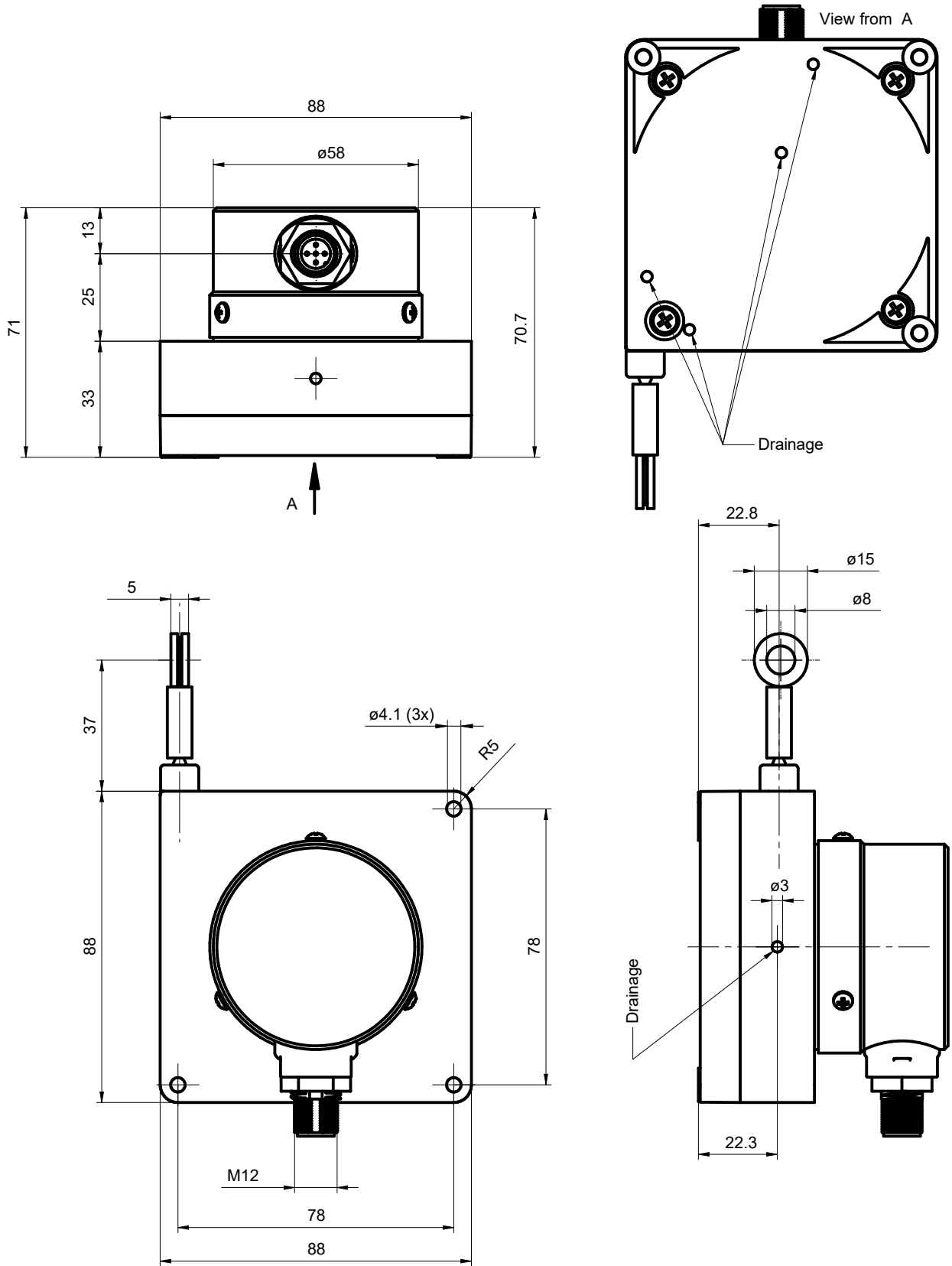
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## Dimensions



GCA3 with flange connector M12

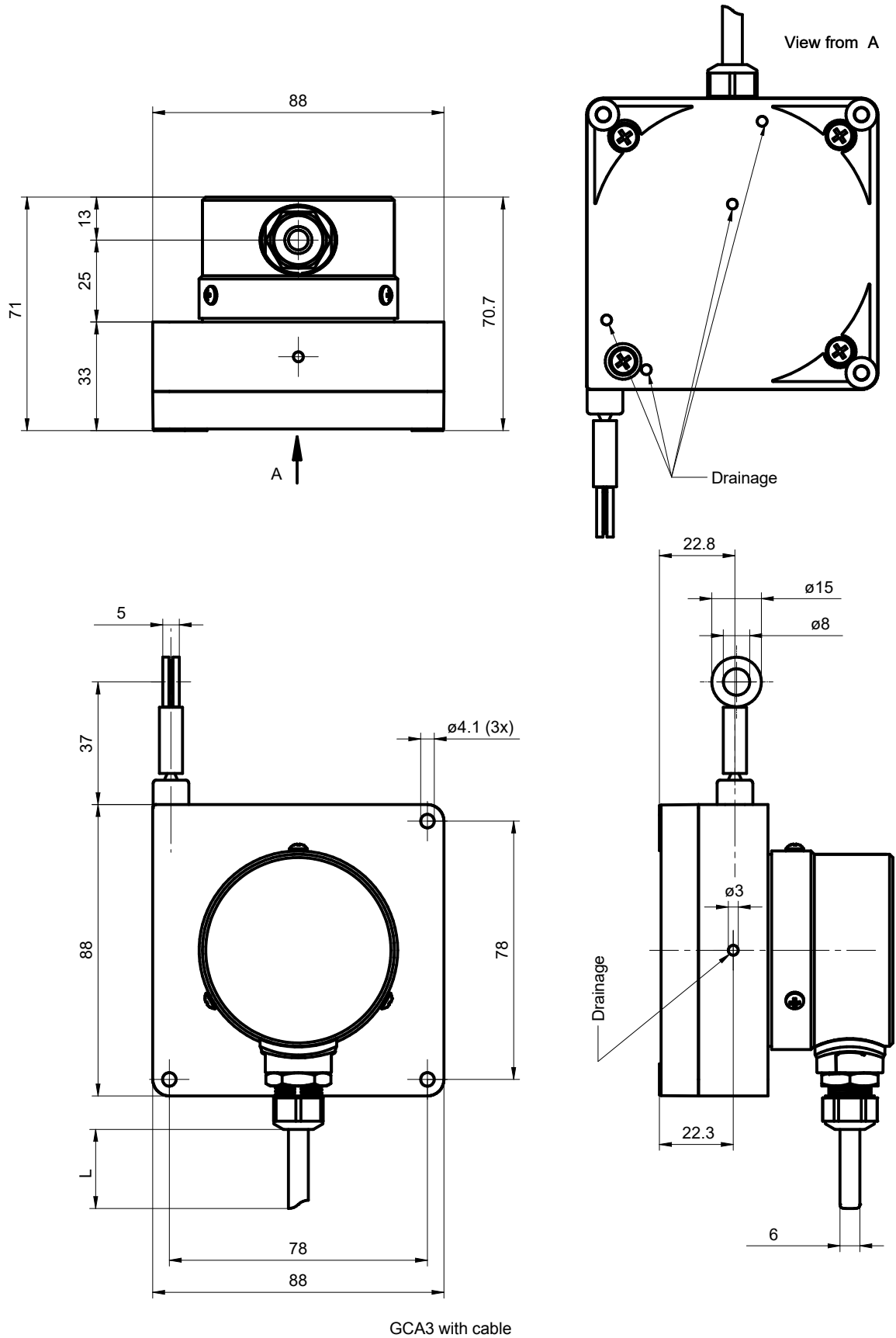
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## Dimensions



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## Ordering reference

	GCA3-	P	T	###	.	R	C	#	.	##	0	.	A
<b>Product</b>	GCA3-												
<b>Type</b>		P											
Plastic													
<b>Technology</b>			T										
Magnetic multiturn													
<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>													
8...30 VDC / Analog 0.5...4.5 VDC													V3
14...30 VDC / Analog 0...10 V													V1
14...30 VDC / Analog 4...20 mA													C4
<b>Resolution supplement</b>													
No option													0
<b>Operating temperature</b>													
-40...+85 °C													

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