





## TECHNICAL SPECIFICATIONS – LEVEL METER

Supply voltage		18 ... 36 V DC
Output		4 ... 20 mA, HART®
Basic error <sup>1)</sup> (for reference reflector)	0,1 – 0,2 m 0,2 – 2,0 m 2,0 – 40 m	+/- 10 mm +/- 4 mm +/- 2 mm
Resolution		1 mm
Ambient temperature range		-30 ... +70°C
Process temperature range		-40 ... +85°C
Process pressure	GRLM-70N-10 (30) GRLM-70N-12	0 ... 100 bar 0 ... 25 bar
Maximal length of measuring electrode	GRLM-70N-10 GRLM-70N-12 GRLM-70N-30	5 m 2 m 40 m
Dead zone <sup>2)</sup>		100 mm
Protective zone around the electrode		400 mm
Maximum tensile strength of the rope electrode		1400 kg
Maximal current output load resistance (U = 24 V DC)		$R_{max} = 270 \Omega$ <sup>3)</sup>
Protection class		IP67
Process connection		screwing with thread G1"
Recommended cable		PVC 2 x 0,75 mm <sup>2</sup> (3 x 0,5 mm <sup>2</sup> )
Sensitivity		3 steps (low - medium - high)
Damping		1 .. 99 s
Warm up time		cca 60 s
Failure indication (echo loss, level in dead zone <sup>2)</sup> , internal failure)		Adjustable in modes: 3,75 mA, 22 mA, LAST <sup>4)</sup>
Weight (without electrode)		0,5 kg

1) Error is +/- 6 mm in area 200 mm from the end of the electrode or from the end of the rope without weight

2) Dead zone = Blind zone = Blocking distance

3) Including 250R resistor in case of HART connection.

4) Level meter displays last measured value.

## TECHNICAL SPECIFICATIONS – DISPLAY MODUL

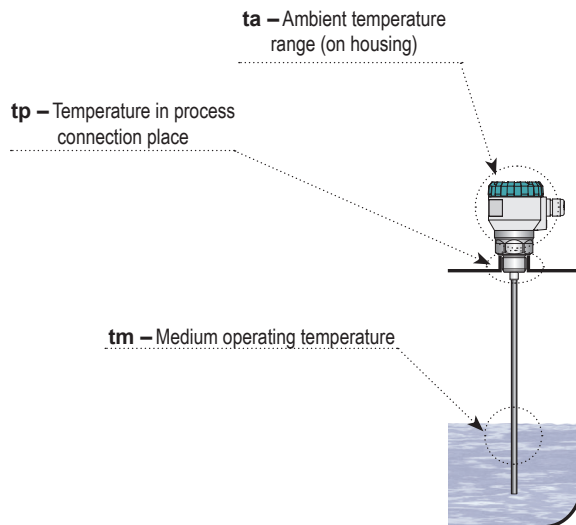
Type of display		matrix OLED
Resolution		128 x 64 pixels
Height of digits / Number of display digits of measured values		9 mm / 5 digits
Colour of display		yellow
Type of buttons		membrane
Ambient temperature range		-30 ... +70°C
Weight		46 g

## USED MATERIALS

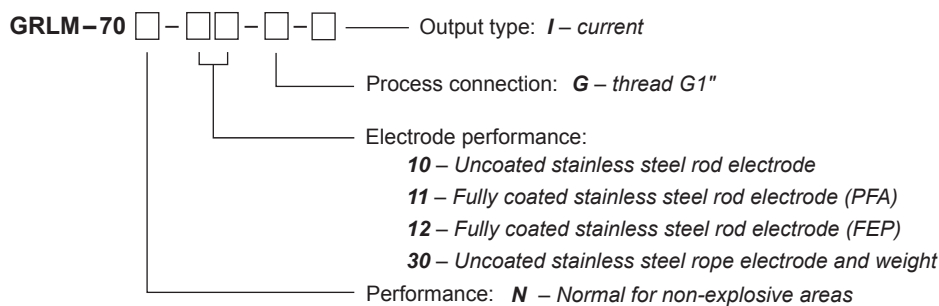
Sensor part	Variants	Standard material
Lid	All types	aluminium with powder coating
Glass	All types	polycarbonate
Body	All types	aluminium with powder coating
Housing with thread	All types	St. Steel W. Nr. 1.4571 (AISI 316 Ti)
Electrode	GRLM-70N-10 (11)	St. Steel W. Nr. 1.4571 (AISI 316 Ti)
Electrode	GRLM-70N-12	St. Steel W. Nr. 1.4301 (AISI 304)
Electrode coating	GRLM-70N-11	PFA
Electrode coating	GRLM-70N-12	FEP
Rope electrode	GRLM-70N-30	St. Steel W. Nr. 1.4404 (AISI 316 L)
Weight	GRLM-70N-30	St. Steel W. Nr. 1.4301 (AISI 304)

## TEMPERATURE AND PRESSURE DURABILITY

Variants / Performance	Temperature $t_p$	Temperature $t_m$	Temperature $t_a$	Max. operation pressure for temp. $t_p$	
				to 30°C	to 85°C
GRLM-70N-10	-40°C ... +85°C	-40°C ... +300°C	-30°C ... +70°C	15 MPa	10 MPa
GRIM-70N-11 (12)	-40°C ... +85°C	-40°C ... +200°C	-30°C ... +70°C	4 MPa	1,5 MPa
GRLM-70N-30	-40°C ... +85°C	-40°C ... +200°C	-30°C ... +70°C	15 MPa	10 MPa



## ORDER CODE



## CORRECT SPECIFICATION EXAMPLES

GRLM-70N-10-G-I  
 GRLM-70N-12-G-I

GRLM-70N-30-G-I

## ACCESSORIES

**Standard – included in the price of the level meter**

- 1 pc of Seal (asbestos free)

**Optional – for extra charge (see datasheet "Accessories")**

- Fixing St. steel nuts G1"
- Steel or Stainless steel welding flange ON-G1"
- Other seals (PTFE, Al, etc.)

## SAFETY, PROTECTION, COMPATIBILITY AND EXPLOSION PROOF

The level meter GRLM-70 is equipped with protection against reverse polarity and output current overload. Protection against dangerous contact is secured by low safety voltage that complies with EN 33 2000-4-41. Electromagnetic compatibility according to EN 55022/B, EN 61326/Z1 and EN 61000-4-2 to 6.