ARLM-70



ANTENNA RADAR LEVEL METER "AMANDA"





- Non-contact antenna radar level meter
- Display of values on OLED or LCD display
- Measuring range up to 8 m or 20 m
- Current output (4 ... 20 mA) with HART[®] protocol
- Measurement independent of the temperature and pressure of the atmosphere above the surface
- The possibility of measuring even in aggressive vapors



Designed for reliable level measurement of various liquids and pasty substances

work environmentexplosion-free areasupply voltage1834 V DCsupply voltagecurrent 420 mAoutput typecurrent 420 mAcurrent consumption420 mA/max.22 mAbasic measurement >simm distance 0.3 m 1 m)current output errormax.80 µAcurrent output error0.1 mmresolution0.1 mmfadad zone30 cmfunction principleNGNQfunction principle6.0 cmfunction principle5.0 cmfunction principle2.0 cmfunction principle5.0 cmfunction principle5.0 cmfunction principle3.0 cmfunction principle5.0 cm </th <th colspan="6">TECHNICAL SPECIFICATIONS</th>	TECHNICAL SPECIFICATIONS					
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	recommended cable					
weight approx. 0,5 kg	tightening torque of the cable gland		3 Nm			
	weight		approx. 0,5 kg			

*Including HART[®] 250 Ω resistor

BASIC FEATURES AND USE

Non-contact radar level meters with an antenna are suitable for continuous level measurement at medium and longer distances. They can be used both in various closed tanks, containers, in semi-open sumps, and in open space. Their use is suitable where their advantages are fully applied:

- 1. non-contact measurement
- 2. the independence of the measurement from the temperature and pressure of the atmosphere above the surface
- 3. the possibility of measuring even in a vacuum
- the possibility of measuring even in aggressive vapors
 the measurement is independent of the medium parameters

The ARLM-70 "Amanda" radar level gauge works on the FMCW (frequency modulated continuous wave) principle with a frequency of 25 GHz (K-Band).

The level meter is equipped with a compact covered funnel antenna. The antenna cover prevents dirt, vapors and gases from entering the antenna.

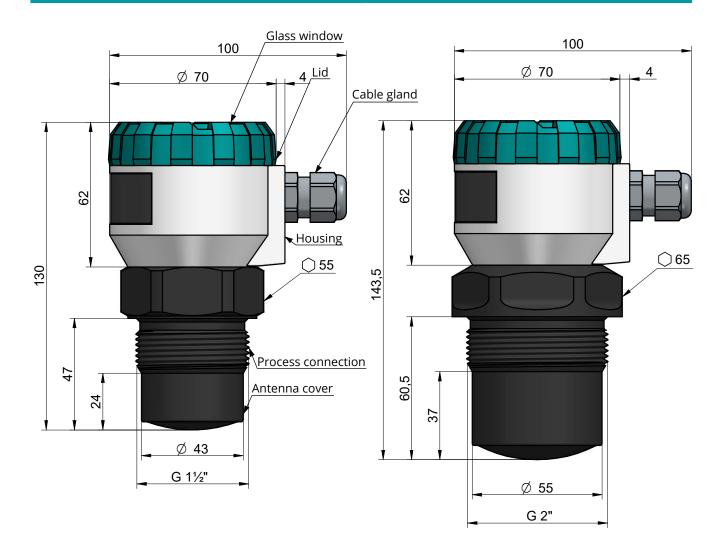
The ARLM-70 is intended for measuring the level of liquid and pasty substances.

The level meter with two-wire connection with a current output of 4 ... 20 mA with HART[®] communication. The measuring range is within 0,3 ... 8 m or 0,3 ... 20 m.

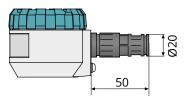
DIMENSIONS

ARLM-70-08

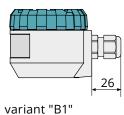
ARLM-70-20



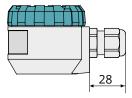
CABLE GLAND DESIGN



variant "H1" with protective conductor



with cable gland M16



variant "B2" with cable gland M20

TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS – DISPLAY MODULE						
Type of display		matrix OLED, LCD				
Resolution		128 x 64 pixels				
Height of digits / Number of display digits of measured values		9 mm / 5 digits				
Colour of display	OLED LCD	yellow black with white background light				
Type of buttons		low lift membrane				
Ambient temperature range	OLED LCD	-30 +70 °C -20 +70 °C				
Weight		46 g				

The Bill

OLED- suitable for indoor and low-light applications.

LCD - suitable for outdoor applications particularly with direct sunlight.

USED MATERIALS					
parts of the sensor	variants	standard material			
Lid	ARLM-70N	aluminium alloy with powder coating			
Glass window	all types	polycarbonate			
Housing	ARLM-70N	aluminium alloy with powder coating			
Process connection	all types	plastic material PP			
Cable gland	ARLM-70N	plastic - polyamide			

INSTALLATION AND OPERATION

The level meters are mounted in a vertical position in a suitable flange in the upper lid of the tank, or into the hole using the fixing nut. The tightening torque needs to be selected taking into account the gasket used and the working overpressure in the tank.

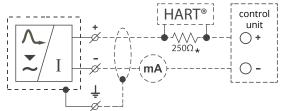
The place for installation must be chosen so that the electromagnetic wave (transmitted by the level gauge) is not affected by nearby objects (reinforcements, ladders, stirrers, etc.) or by the flow of the liquid being filled. The level gauge can be placed in a pipe extension that has a length smaller than the diameter.

If the level meter has not yet been installed, it must be stored in an intact condition with the cap tightened and the sealing plug in the cable gland.

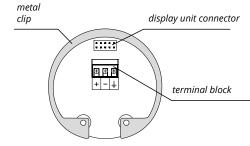
The level meter does not require any operator to operate. During operation, the operator of the technological unit is informed about the height of the measured substance level using a display module or a follow-up device.

ELECTRICAL CONNECTION

When using the M16 socket, the level meter is connected to the follow-up (evaluation) device with a suitable cable with an external diameter of 6 - 8 mm via screw terminals located under the display module. Recommended core cross-section for the current version is 2 x 0,5 ... 0,75 mm². The positive pole (+U) is connected to the (+) terminal, the negative pole (0 V) to the (-) terminal and the shield (only for shielded cables) is connected to the (\perp).



* In the possible use of HART[®] communication Wiring diagram of the level meter with current output ARLM-70



Inside view of screw terminals of the level meter with current output ARLM-70

SETTING ELEMENTS

Settings are performed using 3 buttons located on the display module DM-70. All the settings are available in the menu of the level meter.

Button ok

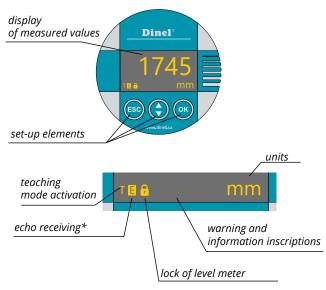
- Set-up mode access •
- Confirmation of selected item in the menu •
- Move the cursor in the line
- Saving of set-up data •

Button 🗧

- Move in the menu
- Change of values •

Button ESC

- Cancelling of carried out changes
- Shift one level up

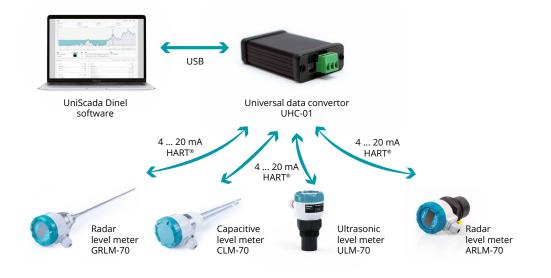


* Slow flashing while the reflected signal (echo) is received from the measured level.

DinelClou DinelCloud web interface GSM Internet USB UniScada Dinel software Programmable control unit ... 20 mA 4 PCU-100 HART® Radar level meter ARLM-70

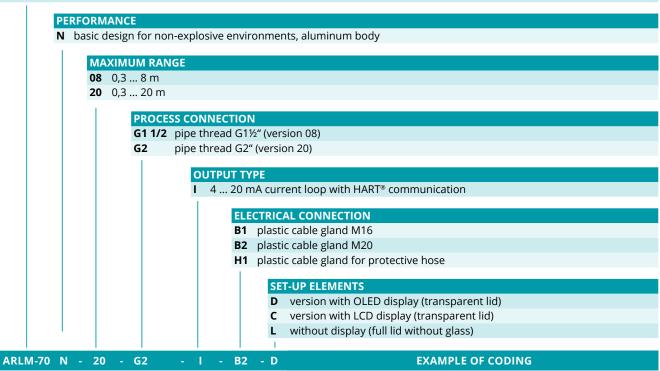
CONNECTION TO PCU-100

CONNECTION TO UHC-01



ORDER CODE

ARLM-70



ACCESSORIES

1x O-ring EPDM	included in the price		\bigcirc
Telescopic bracket	at extra cost	VKD	
universal convertor from USB to HART®	at extra cost	UHC-01	
display unit	at extra cost	DM-70	
fixing nut plastic	at extra cost	PUM-G1½ PUM-G2	0
extension cable for display	at extra cost	PK-70-1	
stainless steel or steel welding flange	at extra cost	NN-G1½ ON-G1½ NN-G2 ON-G2	\bigcirc
protective hose (for type of cable outlet H1)	at extra cost	OH-13	

Further information can be found in the ARLM-70 manual on our website www.dinel.cz The manufacturer reserves the right to change the specifications and appearance of the product without prior notice.





www.dinel.cz