



GU series - Ultrasonic driver for Level probe



Functionalities

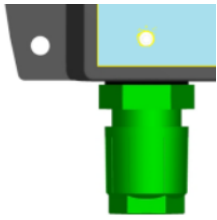
- On-site wireless set up using Rfid, or remotely by GPRS
- Communication : GSM /GPRS, and 3G in option
- Relay outputs for process
- Memory of 100 000 mesures

The GU range of drivers allows to supply the ultrasonic probes of 30KHz and 40KHz, to remotely set them up and to send all data using GSM / GPRS / 3G / 4-20mA / Modbus.

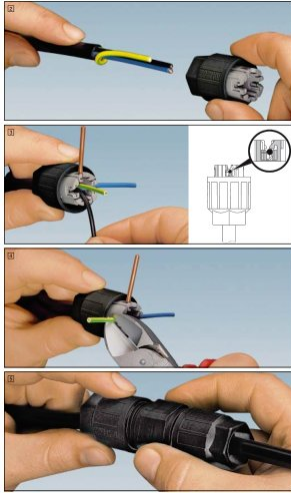
Features	Master Generator GU1500-80X-Ex-GSM (868 MHz - EU) GU2500-90X-Ex-GSM (915 MHz - US) 3G available in option	Slave Generator GU1500-80X-Ex (868 MHz - EU) GU2500-90X-Ex (915 MHz - US) 3G available in option
Ultrasonic frequency	GU1500 : 40KHz (probe SU1500) GU2500 : 30KHz (probe SU2500)	
Measuring range	GU1500 : 0.4 ... 15m GU2500 : 0.6 ... 25m	
Resolution	1cm for dist. < 10m 2cm for : 10m < dist. < 20m 3cm for dist. > 20m	
Accuracy	± 5% on solids / ± 1% sur les liquid materials	
Wireless communication	- Local radio HF - WIJI® Protocol - GSM / GPRS - 3G available in option, addition of a modem mother board	- Local HF Radio - WIJI® protocol
Connectivity	CAN Bus (IJICAN®) / Modbus on RS485 / 4-20 mA	
Radio range	100m	
Temperature compensation	T°C included in the ultrasonic probe (10K NTC)	
Data logger	100 000 Measurements	
Data concentrator	Up to 32 sondes esclaves	No
HF / GSM antenna	Internal HF : ¼ wave length / GSM : Quad bande Patch	Internal HF : ¼ wave length
Operating température	-40 ...85°C	
Housing	PA6 50% glass fiber	
Sealing	IP65 with an aerator	
Power supply	8 to 30V DC	
Current consumption	1A max.	300mA max.
Connectors	- 4 pts with Insulation displacement for the ultrasonic probe - 8 pts M12 Circular connector for power supply, communication, and current output - Earth connection tab	
Configuration	Avelour software or remotely using GPRS	Avelour software
Technologies	Acoustic imaging / eKo® Algorithm / LAMY® filtering	
Security et certifications	Ex ATEX (3D - zone 22) compatibility CE	

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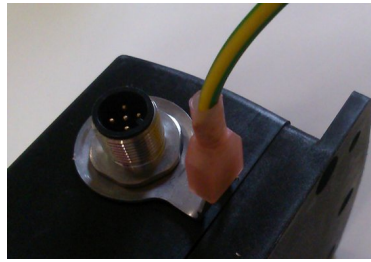
Ultrasonic Probe (use only SU1500 or SU2500)



- 1- Signal - Red
- 2- GND - Black
- 3- Shield
- 4- T°C : White

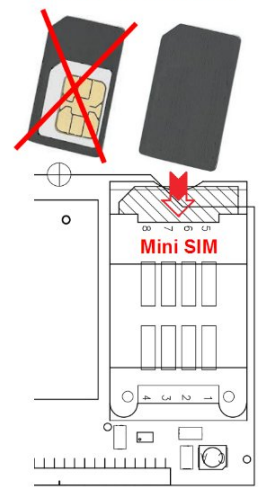


Connection to the Earth



Use an insulated crimp receptacle to wire the device tab to a metallic part linked to the Earth (silo structure, cable tray,...). This link needs to be as short as possible.
Tab size : 6.35 x 0.81mm

Sim card insertion



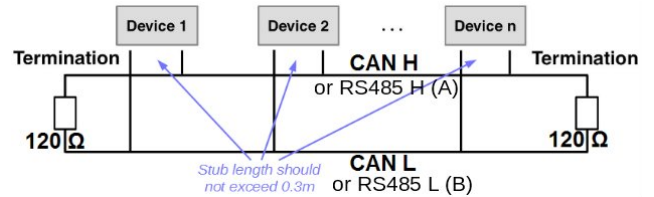
8 pins circular connector

Pin	Color	Feature
1	White	Power Supply (typ. +24V)
2	Brown	Ground (0V)
3	Green	CAN High
4	Yellow	CAN Low
5	Grey	RS485 +
6	Green	RS485 -
7	Blue	Current loop output
8	Red	Drain / Shield

FEMALE CONNECTOR
- FRONT VIEW -

- Use a shielded double twisted pair cable (Power & Bus) for the inter-peripheral connections when CAN or RS485 bus is used.

- Minimum 2 x0.5mm² (AWG20) for the power supply wires.



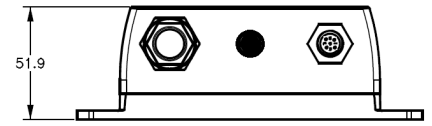
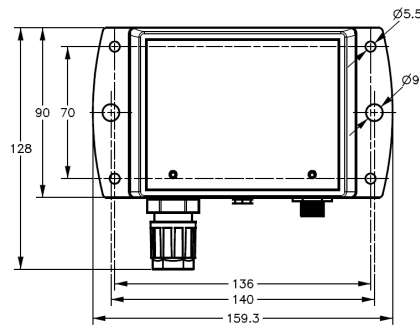
Modbus register table (read only)

Industry & Farm Modbus Profile	Adresse	Offset	Size (nb registers)	Data	Coding	Unit
Single sensor or Concentrator (Slot 0)	0	0	2	Date (Unix Timestamp)	Inverted long integer	second
	2	2	2	Power voltage : resolution 1/20 V	Inverted float	V
	4	4	2	Temperature : resolution 1/10 °C	Inverted float	°C
	6	6	2	Distance	Inverted long integer	mm
	8	8	2	Height	Inverted long integer	mm
	10	10	2	Percent	Inverted long integer	%
	12	12	2	Volume	Inverted float	m ³
	14	14	2	Weight	Inverted float	t
If concentration properties are activated						
1 st paired peripheral (Slot 1)	16	0	2	Date (Unix Timestamp)	Inverted long integer	second
	18	2	2	Power voltage : resolution 1/20 V	Inverted float	V
	...					
2 nd paired peripheral (Slot 2)	30	14	2	Weight	Inverted float	t
	32	0	2	Date (Unix Timestamp)	Inverted long integer	second
	34	2	2	Power voltage : resolution 1/20V	Inverted float	V
...

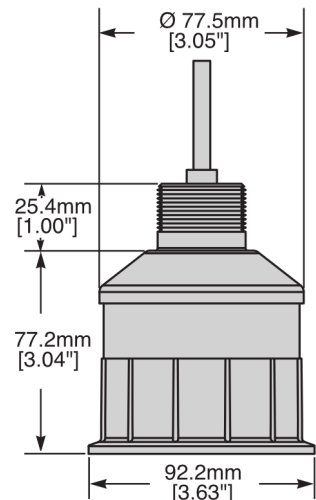
Modbus RS485 specifications

- ASCII or RTU
- Baud rate (set by the user) : 600, 1200, 2400, 4800, 9600, 14400, 19200, 38400, 57600 (default = 9600bps)
- Default 8 data bits, 1 stop bit and no parity (set by the user)
- Slave address : default addr = 1(set by the user)
- Word (16bits) coded in « little endian » : lsb first
- Short = 1 word = 16bits / Long = 2 words = 32bits
- 32bits inverted = word 2 before word 1

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Features	Ultrasonic probe SU1500
Level measuring range	0,4 ... 15m
Ultrasonic frequency	40 KHz
Beam width	14°
Accuracy	± 5% on solid / ± 1% on liquid materials
- Housing - Acoustic windows	- Glass filled polyester - Glass filled epoxy
Operating temperature	-40°C...+90°C
Sealing	IP67
Dimensions	Ø 92 x 103mm
Weight	600g
En version ATEX	Ultrasonic probe SU1500-Ex Ex II 1 D Ex maD IIIC T85°C Da



Features	Ultrasonic probe SU2500
Level measuring range	0,6 ... 25m
Ultrasonic frequency	30 KHz
Beam width	12°
Accuracy	± 5% on solid / ± 1% on liquid materials
- Housing - Acoustic windows	- Glass filled polyester - Glass filled epoxy
Operating temperature	-40°C...+90°C
Sealing	IP67
Dimensions	Ø 106 x 141mm
Weight	800g
En version ATEX	Ultrasonic probe SU2500-Ex Ex II 1 D Ex maD IIIC T85°C Da

