Pressalis

Datasheet

Submersible level transmitters

LT41

Cellular or LoRaWAN level transmitter to 60 m



Probe and LCD housing reporting over NB-IoT, 4G or LoRaWAN, on an 8000 mAh battery or external DC supply.

Depth range	Network	Battery	Display
0 to 3 m up to 0 to 60 m	**NB-IoT, 4G or LoRaWAN**	**3.6 V, 8000 mAh, 1 to 3 years**	**Segment LCD**

Overview

LT41 is a wireless submersible level transmitter: a 304 stainless steel probe on cable, joined to a die-cast aluminium housing with a segment LCD, the radio and the battery. It reports over NB-IoT, 4G or LoRaWAN, with CoAP, MQTT or LoRaWAN Specification 1.0.2 as the protocol. A well or tank is read with no signal cable back to a panel.

Power is a 3.6 V lithium battery of 8000 mAh, or an external 9 to 30 V DC supply. On battery, life depends on how often it reports. With sampling every minute it runs 50 days at one report every 10 minutes, 260 days at one per hour and more than 3 years at one every 12 hours.

Ranges run from 0 to 3 m up to 0 to 60 m, the deepest of the wireless models. Accuracy is ±0.5 % or ±1 % of span, overload 2 x range and burst 3 x range. It goes on reservoirs, boreholes, fire water tanks, building storage tanks and river or channel gauging points.

Specifications

Measurement

Measurement	Hydrostatic level, submersible
Depth range	0 to 3 m up to 0 to 60 m water column
Standard ranges	3, 5, 10, 15, 20, 25, 30 m, up to 60 m
Accuracy	±0.5 % or ±1 % of span
Long-term stability	±0.2 % of span
Overload	2 x range
Burst	3 x range

Temperature compensation	-10 to 80 °C

Medium and environment

Medium	Non-corrosive liquids compatible with 304 stainless steel
Medium temperature	-10 to 60 °C
Operating temperature	-20 to 60 °C
Storage	-40 to 85 °C, 0 to 95 % RH
Protection	Housing IP65, probe IP68

Wireless and power

Network	NB-IoT, 4G or LoRaWAN
Protocols	CoAP, MQTT, LoRaWAN Specification 1.0.2
Battery	3.6 V lithium, 8000 mAh, 1 to 3 years depending on reporting
External supply	9 to 30 V DC, 24 V DC nominal
Battery life, report every 10 min	50 days, sampling every minute
Battery life, report every hour	260 days, sampling every minute
Battery life, report every 12 h	More than 3 years, sampling every minute
Sampling interval	Settable, 10 to 3600 s
Reporting interval	Settable, 1 to 1440 min
NB-IoT current	Sleep 25 µA, sampling 5 mA for 400 ms, sending 50 mA average for 5 s, online 15 mA for 90 s, all maximum
4G current	Sleep 25 µA, sampling 5 mA for 400 ms, sending 80 mA average for 5 s, online 15 mA for 90 s, all maximum
LoRaWAN current	Sleep under 20 µA, sampling under 5 mA, sending under 140 mA, receiving under 20 mA
Display	Segment LCD

Mechanical

Materials	304 stainless steel probe, die-cast aluminium housing
Probe size	28 mm diameter, 138 mm long
Housing height	105 mm

Common configurations

Any combination from the ordering code can be quoted. Other ranges and connections on request.

Depth range	Network	Power	Accuracy	Order code
0 to 5 m	NB-IoT	Battery	±0.5 % of span	**LT41-W5-NB-B-A05**
0 to 10 m	NB-IoT	Battery	±0.5 % of span	**LT41-W10-NB-B-A05**
0 to 20 m	4G	Battery	±0.5 % of span	**LT41-W20-G4-B-A05**
0 to 10 m	LoRaWAN	Battery	±0.5 % of span	**LT41-W10-LW-B-A05**
0 to 30 m	4G	External DC	±0.5 % of span	**LT41-W30-G4-E-A05**
0 to 60 m	NB-IoT	External DC	±1 % of span	**LT41-W60-NB-E-A1**

Ordering code

One code from each group, in this order. Example: **LT41-W3-NB-B-A05**. Send the code and the quantity to **contact@pressalis.com** for a quote.

LT41	-	**W3**	-	**NB**	-	**B**	-	**A05**
Model		Depth range		Network		Power		Accuracy

Depth range

W3	0 to 3 m water column
W5	0 to 5 m water column
W10	0 to 10 m water column
W15	0 to 15 m water column
W20	0 to 20 m water column
W25	0 to 25 m water column
W30	0 to 30 m water column
W60	0 to 60 m water column
X	Other range, state in the request

Network

NB	NB-IoT
G4	4G
LW	LoRaWAN

Power

B	3.6 V lithium battery, 8000 mAh
E	External DC supply, 24 V nominal

Accuracy

A05	±0.5 % of span
A1	±1 % of span