

RADAR LEVEL TRANSMITTER

4–20 mA / RS485 / Bluetooth

ETRANS – R01e 80 GHz Datasheet

Precise Measurement,
Ultimate Control

www.enelean.com



Radar Level Transmitter

MODEL R01e 80 GHz



Application Areas

- Water and Wastewater Management
- Environmental Monitoring & Hydrology
- Civil Infrastructure & Municipal Services
- Agriculture
- Open Channels
- Rainwater Basins
- Dams and Reservoirs
- Simple Industrial Liquid Storage

Features

- Measured Product: Liquids
- Measurement Range Options: 15 m
- Process Connection: G Threaded or Flange
- Cable Entry: M12 x 1.5 (F)
- Electronics / Output: Two-wire 4...20mA_i/ MODBUS, or Wireless Bluetooth
Four wire 4-20mA or RS485 (select one of)

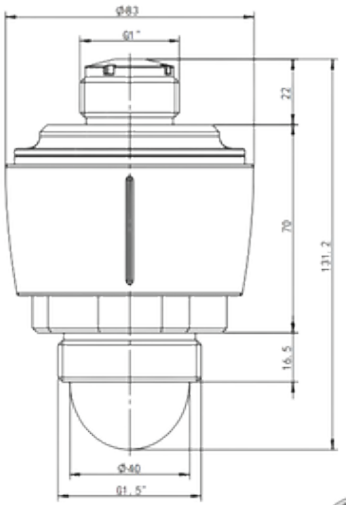
Description

The Etrans-R01e is a high-performance radar level transmitter designed for precision liquid measurement, operating within a frequency range of 77GHz to 81GHz. This advanced sensor offers a maximum measuring range of 30 meters with a high degree of accuracy of $\pm 2\text{mm}$, ensuring reliable data even in complex industrial environments. Built with a durable Polypropylene (PP) or PVDF housing, it supports various process connections and is capable of operating in temperatures ranging from -40°C to 80°C under normal atmospheric pressure.

To ensure optimal performance, proper installation is critical to avoid signal interference from internal tank structures like staircases or grilles. The device should be mounted vertically to direct its narrow $\pm 3.5^{\circ}$ beam angle straight toward the liquid surface, as angling the sensor or placing it near obstructions can result in false echoes or signal loss. With versatile signal outputs including 4-20mA, RS485, and Bluetooth, this radar transmitter provides a seamless integration solution for modern monitoring systems.



Structure



TECHNICAL FEATURES

Operating Frequency	77GHz - 81GHz
Measurement Range	30 M
Measurement Accuracy	±2 mm (for liquids)
Beam Angle	±3.5°
Material	PP (PolyPropylene)
Process Connection	Thread or Optional flange DN and ANSI (customized)
Process Temperature	-40°C to 80°C
Process Pressure	Normal atmospheric pressure
Signal output	4-20mA / RS485/ Bluetooth
Protection Class	Two-wire DC 24V (22V~30V)
Power supply	IP67
Dimensions	83mm x 128mm
Weight	0,5 Kg (depends on the connection type)
Communication	Bluetooth

Contact us

Enelsan Istanbul Office Address

Şerifali, Barbaros Cd. No: 60, 34775 Ümraniye/İstanbul

Enelsan Factory 1 Address

Çerkeşli OSB Mahallesi İmes 4 Bulvarı No: 11 Dilovası/Kocaeli

Enelsan Factory 2 Address

Çerkeşli OSB Mahallesi İmes 14. Cadde No: 17 Dilovası/Kocaeli

Phone: +90 262 754 63 13

Fax: +90 262 754 93 93

sales@enelsan.com

Radar Level Transmitter
MODEL R01e 80 GHz



Etrans-R01e /

1

2

3

4

5

6

7

8

1 Measured Product

Water / Liquids	☒	W
-----------------	-------------------------------------	---

2 Measurement Range

10 m	☒	10
20 m	☐	20
30 m	☐	30

3 Process Connection

G " Thread	☒	G
Flange	☐	F

4 Process temperature

-40...+80°C	☒	N
-------------	-------------------------------------	---

5 Cable Entry

M12 x1.5 (F)	☒	M
--------------	-------------------------------------	---

6 Electronic

Two-wire 4...20mA	☒	T
MODBUS	☐	M
Wireless Bluetooth	☐	B

7 Protection

IP 67	☒	P
-------	-------------------------------------	---

8 Cable length

1	☒	1
2	☐	2
5	☐	5
10	☐	10