SIEMENS

Datasheet for

SITRANS Probe LU240 Ultrasonic level transmitter ideal for level, volume, and volume flow measurements. It works with liquids, slurries, and bulk materials up to 12 m (40 ft).

Ordering data: **7ML51101DD074CF3**
E33

General

Manufacturer	Siemens
Supplier	Siemens
Product designation	Ultrasonic level meter
Brand name	SITRANS Probe LU240
Type designation	SITRANS Probe LU240 Ultrasonic level transmitter ideal for level, volume, and volume flow measurements. It works with liquids, slurries, and bulk materials up to 12 m (40 ft).
Article number	7ML51101DD074CF3-Z E33
Net weight	1,25 kg
Slogan	The ultrasonic level transmitter for all level, volume and volume flow demands and every challenging environment.

Mode of operation and application

Measuring principle	ultrasonic
Operating frequency of the sensor	54 kHz
Beam angle	10 Degree

Input

Measurand	Level
Measurand	Volume flow
Measurand	Volume

Measuring range

Measuring range	
Measuring range (minimum)	0,2 m
Measuring range (maximum)	6 m
Measuring range	
Measuring range (minimum)	-40 °C
Measuring range (maximum)	85 °C
Temperature compensation	
Temperature compensation, minimum	-40 °C
Temperature compensation, maximum	85 °C

Output

Current output

Number of outputs	1
Signal range	4 ... 20 mA
Failure signal (minimum)	3,55 mA
Failure signal (maximum)	22,8 mA

Operating conditions

Medium temperature	
Medium temperature (minimum)	-40 °C
Medium temperature (maximum)	85 °C
Degree of pollution	Pollution degree 4

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Standard for the degree of pollution	IEC 61010-1
Overvoltage class	Installation category I
Standard for the overvoltage class	IEC 61010-1

Pressure

Operating pressure, relative	
Operating pressure, relative (minimum)	-0,2 bar
Operating pressure, relative (maximum)	0,5 bar

Environmental conditions

Ambient temperature during operation	
Ambient temperature during operation (minimum)	-40 °C
Ambient temperature during operation (maximum)	80 °C
Ambient temperature during storage	
Ambient temperature during storage (minimum)	-40 °C
Ambient temperature during storage (maximum)	85 °C
Ambient temperature during transport	
Ambient temperature during transport (minimum)	-40 °C
Ambient temperature during transport (maximum)	85 °C
Installation altitude MSL (maximum)	5.000 m
Relative humidity during operation	
Relative humidity during operation (minimum)	0
Relative humidity during operation (maximum)	100

Degree of protection

IP rating	IP66
IP rating	IP68

Electromagnetic compatibility EMC

Standard for EMC	IEC 61326-1
Standard for EMC	EN 55011

Structural Design

Mechanical design

Design of the device	compact version, sensor integrated

Process connection

Design	male thread
Standard	ANSI B1.20.1
Nominal size	2" NPT

Material

Process connection

Material	polyvinylidene-fluoride (PVDF)

Enclosure

Material	Polycarbonate (PC)
Material	Polybutylene terephthalate (PBT)
Material of the lid	polycarbonate (PC)
Material of the lid	Polybutylene terephthalate (PBT)

Sensor

Material of the sensor	polyvinylidene-fluoride (PVDF)

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Material of the active surface of the ultrasonic transmitter	Polyvinylidene fluoride (PVDF)

Cable entry & cable gland

Material of the cable entry	polyamide (PA)

Electrical connections

Connection technology	2-wire technology
Potential insulation	galvanic
Potential insulation	to all inputs
Potential insulation	to all outputs
Potential insulation	to all supplies
Number of cable entries	2
Design of the cable entry	M20 x 1.5
Number of conductors of the connection cable	2

Display and operating controls

Display	with display
Design of the display	LCD
Design of the display	alphanumeric
Number of digits of the display	5
Operating controls	Pushbutton
Number of controls	4

Power supply

Electrical

Type of power supply	External
Voltage type	DC
Nominal voltage, DC	24 V
Supply voltage, DC	
Supply voltage, DC (minimum)	10,5 V
Supply voltage, DC (maximum)	30 V

Communication

Protocol	HART
Protocol version	Version 7
Programming	SIMATIC PDM Software

Certificates and approvals

Explosion protection

Ex-marking (IECEx & ATEX)	Ex ia IIC...T4 Ga

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