

Product information

Turbidimeter MAT433 / 437



- Wide measuring range for scanning high turbidity level
- Absorption turbidity measurement according to EN ISO 27027
- 2 switch outputs, function programmable
- Analog output 0/4...20mA
- Parametrization via GHMware and internal mini USB interface
- Wide view LED status display (MAT433)
- Graphic LC-Display with capacitive buttons (MAT437)

Characteristics

The turbidimeter MAT433/437 is used for phase detection in food and beverage industry. The absorption measurement principle according to EN ISO 27027 is designed to measure very high turbidities. The turbidity is output as a percentage of the maximum measurement value. This value can be converted with an integrated conversion table into material-specific concentrations or into the formazine based unit FAU.

Technical data

Power supply

Supply voltage : 18...30 V DC, max. 3 W
Electrical connection : M12 plug or cable gland M16x1.5 polyamide (PA) or SS-type 1.4305
CE-conformity : EN 61326:2013-07

Ambient conditions

Ambient temperature : -10...+60°C
Climatic class : EN60068-2-38:2010-06
Vibration class : EN60068-2-6, GL Test2

Sensor

Measuring range : 0...100% Absorption, scalable in material specific concentration units, 0...4000FAU

Accuracy : 2%

Process temperature : 0...+90 °C, 120 °C < 30 min

Process pressure : 0...10 bar

Process material : 1.4404, sapphire glass

Process connection : welded connection acc. DIN EN 10357, series A (former DIN11850, Reihe2), Milk pipe connection acc. DIN11851

Outputs

Analog output : active 0/4...20 mA, burden < 600 Ω
Switching outputs : 2 x transistor PNP / NPN programmable max.30 V DC, 100 mA

Response time : programmable 0,01 ... 10 s

Display MAT433 : LED's, 3 colors, programmable

Display MAT437 : Graphic LC-Display, lighted white/red 4 capacitive buttons

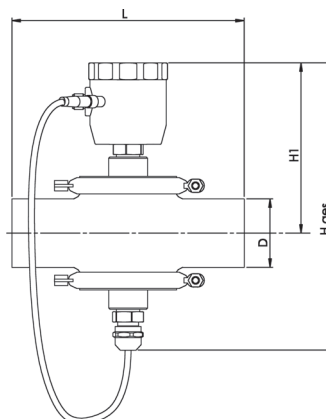
Case : round stainless steel housing Ø 59 mm

Material : 1.4305

LED / LCD window : acrylic glass (PMMA)

protection class : IP67 / IP69K

Dimensions



Dimensions MAT433

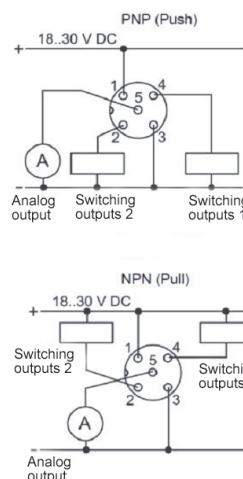
DN	H1 [mm]	H ges [mm]	D [mm] DIN EN 10357 Series A	L [mm] VARINLINE® - housing with welded nozzle	L [mm] milk-pipe thread nozzle DIN11851
DN25	112	191	29x1,5	180	238
DN40	118	203	41x1,5	180	246
DN50	124	215	53x1,5	180	250
DN65	132	231	70x2	250	330
DN80	139,5	246	85x2	250	340
DN100	149	265	104x2	250	358

Dimensions MAT437

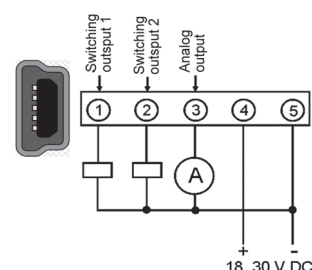
DN	H1 [mm]	H ges [mm]	D [mm] DIN EN 10357 series A	L [mm] VARINLINE® - housing with welded nozzle	L [mm] milk-pipe thread nozzle DIN11851
DN25	120	199	29x1,5	180	238
DN40	126	211	41x1,5	180	246
DN50	132	223	53x1,5	180	250
DN65	140	239	70x2	250	330
DN80	147,5	254	85x2	250	340
DN100	157	273	104x2	250	358

Connection diagrams

M12 device plug



Terminal clamps and USB Mini-B plug



Cable colors (plug):

- 1 = brown
- 2 = white
- 3 = blue
- 4 = black
- 5 = gray

Product information

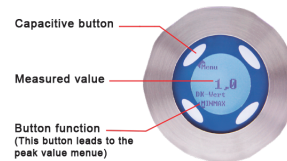
Displays

MAT433



Display : wide view LED status
LED function programmable e.g.:
green : on (operation)
red : switch output 1

MAT437



Capacitive button
Measured value
Button function
(This button leads to the
peak value menu)

Display: LC display
Programmable via
capacitive button
or GHMware
configuration software

Ordering Code

MAT433 - 1. - 2. - 3. - 4. - 5.

1. Nominal diameter	
025	DN25
040	DN40
050	DN50
065	DN65
080	DN80
100	DN100
2. Optical path length	
06	6 mm
3. Process connection	
1	Welded nozzle (incl. VARINLINE® housing)
4. Electrical connection	
0	M12-plug (standard)
1	Cable gland M16x1,5; polyamide (PA)
2	Cable gland M16x1,5; SS-type (1.4305)
5. Optionen	
00	without Options

MAT437 - 1. - 2. - 3. - 4. - 5.

1. Nominal diameter	
025	DN25
040	DN40
050	DN50
065	DN65
080	DN80
100	DN100
2. Optical path length	
06	6 mm
3. Process connection	
1	Welded nozzle (incl. VARINLINE® housing)
4. Electrical connection	
0	M12-plug (standard)
1	Cable gland M16x1,5; polyamide (PA)
2	Cable gland M16x1,5; SS-type (1.4305)
5. Options	
00	without Options

Process adaptations

Additional milk-pipe-adapter weld on the VARINLINE®-case of the MAT43X.

APT 1. 2. 3.

1. Process connection	
3	Milk pipe DIN11851 two-sided thread nozzle
2. Nominal diameter	
3	DN25
4	DN40
5	DN50
6	DN65
7	DN80
8	DN100
3. Optionen	
0	without Options
1	two-sided cone nozzle
2	Thread- / cone nozzle

Other process adaptations on request

Accessory

ACI211 USB connection cable
ACH connection cable