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ANDERSON NEGELE TURBIDITY SENSOR ITM-51

ITM-51 & ITM-51R

ITM-51



- Infrared Backscatter Principle
- Measuring Range > 2000 NTU (> 500 EBC)
- Operating Pressure Max 16 Bar
- Approvals: FDA; 3-A

PRODUCT DESCRIPTION

From a diode, infrared light is radiated into the medium. The particles present in the medium reflect the incident light detected by the receiving diode (so-called backscatter method). The electronics calculate from the received signal, the relative turbidity of the medium.
The relative turbidity is given in NTU, or on the Nails calibration standard specified in "% TU" or in the EBC.

Suitable for pipe sizes as small as DN25 the versatility is broad and it has been used in many applications with great success. Not only does it help to optimise systems but the reduction in lost water, cleaning solutions and product allow it to quickly and effectively pay for itself, whilst continuing to streamline and save the end user money from the day that it is installed.

With a complete range of process connections and a remote version available there is a solution for nearly all applications where turbidity monitoring is required.

Application Examples:

- Patented Frontflush sensor
- Infrared back scatter technology
- Independent to reflexions at small diameters or electro-polished surfaces
- No colour dependency (wave length 860 nm)
- Sapphire glass optics
- IP69K
- High reproducibility: ≤ 1 % of full scale
- Switching output (switchpoint and hysteresis freely adjustable)
- CIP/SIP – Cleaning up to 140°C for 30 minutes maximum
- FDA and 3A (3A Tri-Clamp only) Certified

Please refer to the images below for ordering information.

Order code

ITM-51 (relative turbidity meter)

Process connection

S0L	(CLEANadapt G1/2", 15 mm sensor tip)
S01	(CLEANadapt G1/2", frontflush)
TC1	(Tri-Clamp 1½")
TC2	(Tri-Clamp 2")
T25	(Tri-Clamp 2½")
TC3	(Tri-Clamp 3")
TL1	(Tri-Clamp 1½", long)
TL2	(Tri-Clamp 2", long)
TL5	(Tri-Clamp 2½", long)
TL3	(Tri-Clamp 3", long)
V25	(Varivent type F, DN 25)
V40	(Varivent type N, DN 40/50)
XXX	(further process connections on request)

Enclosure Orientation

H	(horizontal)
V	(vertical)

Output

A42	(1 x 4...20 mA turbidity only, display prepared)
A52	(1 x 4...20 mA turbidity, 1 x switching out, no external range switching, display prepared)
A53	(1 x 4...20 mA turbidity, 1 x switching out, external range switching, display prepared)

Electrical connection

P	(cable gland M16x1.5)
D	(2 x cable gland M16x1.5)
M	(1 x M12 connector, 4-pin for output A42, 5-pin for output A5x)
N	(2 x M12 plug, standard)
A	(2 x M12 plug, 4-pin, power/output, 5-pin output/input)

Interface/Display

X	(without Interface)
S	(Simple User Interface with small display)
L	(Large User Interface with display)

Enclosure

X	(opaque plastic cap)
P	(clear plastic cap)
M	(without control window)
W	(with control window)

Parameter configuration

X	(standard)
S	(write out details)

ITM-51 S01 / V / A53 / D / L / P / X

Order code

ITM-51R (relative turbidity meter, remote version, remote cable must be ordered seperately)

Process connection

S0L	(CLEANadapt G1/2", 15 mm sensor tip)
S01	(CLEANadapt G1/2", frontflush)
TC1	(Tri-Clamp 1½")
TC2	(Tri-Clamp 2")
T25	(Tri-Clamp 2½")
TC3	(Tri-Clamp 3")
TL1	(Tri-Clamp 1½", long)
TL2	(Tri-Clamp 2", long)
TL5	(Tri-Clamp 2½", long)
TL3	(Tri-Clamp 3", long)
V25	(Varivent type F, DN 25)
V40	(Varivent type N, DN 40/50)
XXX	(further process connections on request)

Output

A42	(1 x 4...20 mA turbidity only, display prepared)
A52	(1 x 4...20 mA turbidity, 1 x switching out, no external range switching, display prepared)
A53	(1 x 4...20 mA turbidity, 1 x switching out, external range switching, display prepared)

Electrical connection

P	(cable gland M16x1.5)
D	(2 x cable gland M16x1.5)
M	(1 x M12 connector, 4 pin for output A42, 5 pin for output A5x)
N	(2 x M12 plug, standard)
A	(2 x M12 plug, 4 pin, power/output, 5 pin output/input)

Interface/Display

X	(without Interface)
L	(Large User Interface with display)

Enclosure

X	(opaque plastic cap)
P	(clear plastic cap)
M	(without control window)
W	(with control window)

Parameter configuration

X	(standard)
S	(write out details)

ITM-51R / S01 / A53 / N / L / P / X

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TECHNICAL DATA

Approvals	3-A, EHEDG, FDA
Area of apllication	Food
IP class	IP67, IP69K
Material cover	Polycarbonate
Material detector	Sapphire
Material of connection	Stainless steel 316L
Material of sensor housing	Stainless steel 1.4308
Measurement accuracy	+/-3% - 0-999NTU ; +/- 5% > 999NTU

Pressure range max	20 bar
Pressure range min	-1 bar
Response time	750 ms
Supply voltage dc max	32 V DC
Supply voltage dc min	18 V DC
Temperature ambient from	-10 °C
Temperature ambient to	60 °C
Temperature of media from	-10 °C
Temperature of media to	130 °C
Weight	750 g