



SAT210, measures light absorbance in the visible range for 6 different wavelengths to monitor the concentration changes based on Beer–Lambert law. For each pathlength, a pair of LED and photodetector is utilized. Measuring the actual temperature by integrated temperature sensors, SAT210 compensates the drift in the photodetector readings due to temperature changes. Due to the additional feedback detectors, the aging in the LEDs are also compensated. Fluorinated ethylene propylene (FEP) body ensures protection against aggressive chemicals and up to 140 °C process temperature.

- Two path lengths available: 1 mm, 10 mm.
- Absorbance range: 0 ... 3 AU (absorption units).
- Absorbance values for six different wavelengths (450, 500, 550, 570, 600 and 650 nm) along with total absorbance in the visible spectrum.
- Simple automatic calibration procedure.
- Reference feedback detectors to compensate for LED aging.
- Very high chemical resistant FEP body, durable to 140 °C.
- 2x 4-20 mA analog current output, selectable for any wavelength.

MEASUREMENT

Measuring range	0 ... 3 AU
Wavelengths	450, 500, 550, 570, 600, 650 nm
Optical pathlengths	1 mm, 10 mm
Accuracy	± 1 %
Repeatability	0.2 %

ANALOG OUTPUTS

Number of channels	2
Absorbance	4 - 20 mA, electrically isolated
Resolution	12-bit
Sampling time	500 ms
Enclosure protection rating	600 Ω
Accuracy	± 0.3 %

POWER

Supply	18 ... 30 VDC
Maximum power consumption	1.5W @24 VDC
Reverse polarity protection	Yes
Electrical connection	M12, A Coded, 8-pin

DIGITAL INPUT

Voltage range (1)	18 ... 30 VDC
Input current	5 mA @ 24 VDC
Input signal type	PNP
Isolation resistance	1000 GΩ @ 500 VDC

DIGITAL OUTPUT

Contact	Solid-state relay
Maximum load current	20 mA @ 24 VDC
Isolation resistance	1000 GΩ @ 500 VDC

GENERAL

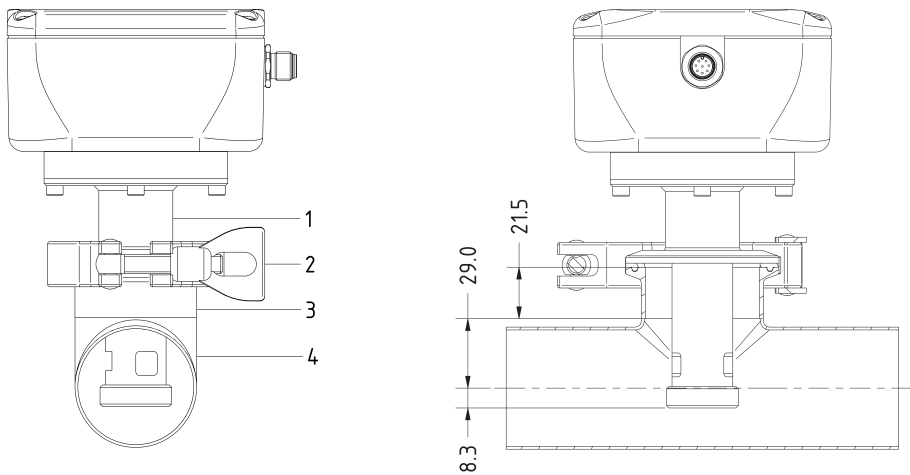
Display	TFT-LCD, 2.8", Resistive touch
Ambient temperature	0 °C...+55 °C
Storage temperature	-25 °C...+85 °C
Electronic housing	PA6-GF30
Wetted materials	FEP, EPDM O-ring, Stainless steel (EN 1.4404)
Enclosure protection rating	IEC 60529, IP67
Electromagnetic compatibility	IEC 61326, Class B
Environmental testing	IEC 60068
Weight	~0.76 kg

- MAINTENANCE & CALIBRATION -

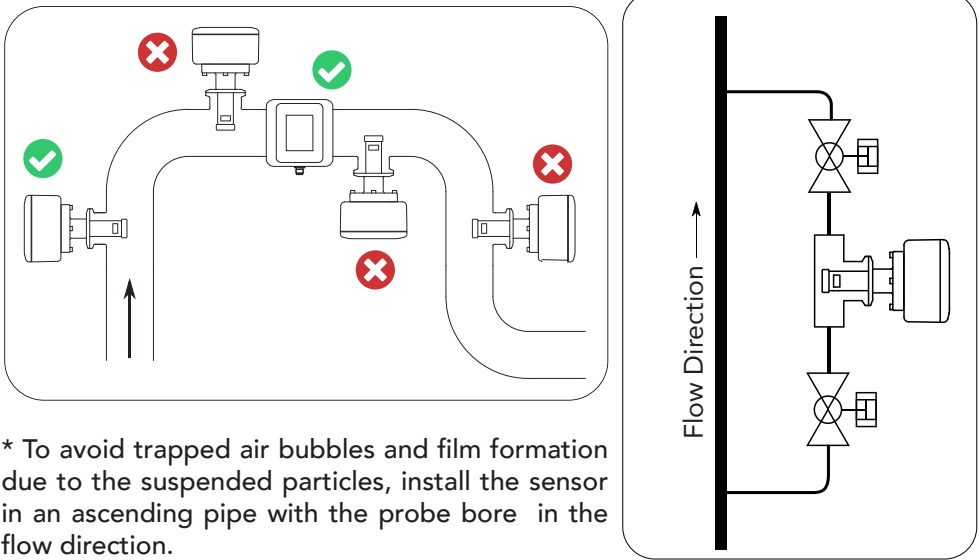
Especially in harsh environments, probe bore should be checked regularly. If it is dirty, please clean the bore. A dirty probe bore results in misleading measurements.

For calibration, fill a container with the reference liquid (typically DI water) and place the probe into the container. Make sure that there are no air bubbles in the optical pathlengths and start the automatic calibration procedure.

MOUNTING

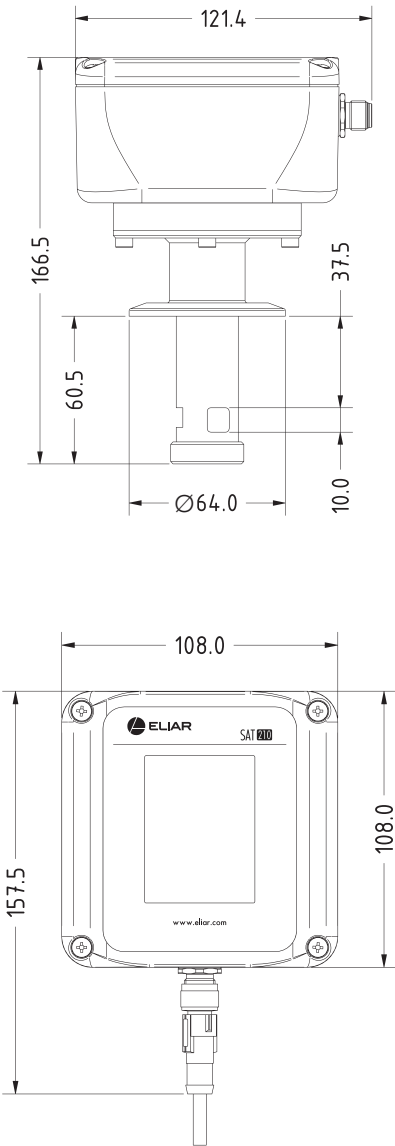


- (1) Process connection, Clamp (ISO 2852) 1 1/2", EN 1.4404
(2) Clamp ring, EN 1.4301
(3) Clamp liner (ISO 2852) 1 1/2", EN 1.4404
(4) Short equal tee (ISO 2037) 1 1/2", EN 1.4404



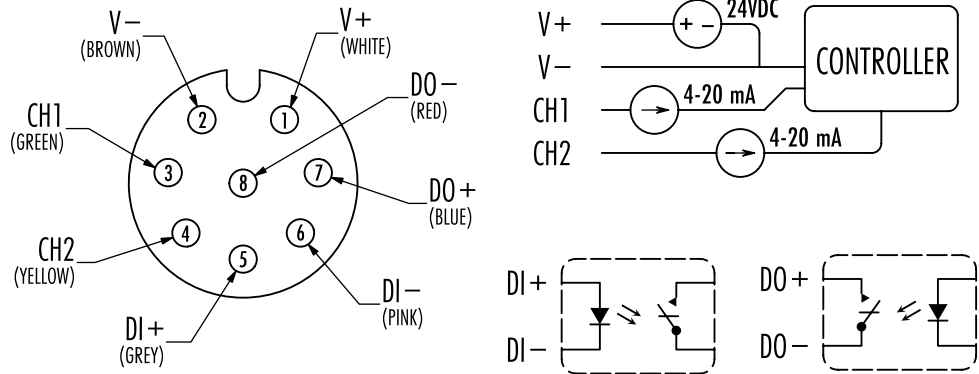
* To avoid trapped air bubbles and film formation due to the suspended particles, install the sensor in an ascending pipe with the probe bore in the flow direction.

DIMENSIONS



**All dimensions are in mm.

CONNECTION DIAGRAM



ORDER CODE

SAT210	User Interface	Wireless Connection	Optical Path Lengths (OPL)	Process Connection
	D TFT-TS Display	W Yes	S1 OPL1: 1 mm, OPL2: 1 mm	C50 Tri-Clamp ISO 2852 1 1/2"
	0 No	0 No	S10 OPL1: 10 mm, OPL2: 10 mm	
			M110 OPL1: 1 mm, OPL2: 10 mm	

ACCESSORIES

Order Code	Description
SS-M128C2	Sensor Cable, M12, A-Code, 8-pin, Single End (2 m)
SS-M128C5	Sensor Cable, M12, A-Code, 8-pin, Single End (5 m)
SS-M128C10	Sensor Cable, M12, A-Code, 8-pin, Single End (10 m)
SS-C50S	Process Connection Set (Liner + EPDM Seal Ring + Heavy Duty Single Pin Ring)

*** Please make contact for your questions about the order code and other requests.

**** Remember to make accessory choice.