MEASUREMENT

Conductivity

Measuring range	0 ... 2000 µS/cm 0 ... 20 mS/cm 0 ... 200 mS/cm 0 ... 500 mS/cm 0 ... 1000 mS/cm 0 ... 2000 mS/cm (uncompensated)
Accuracy	± 0.5 %
Repeatability	0.2 %
Temperature compensation	solute-specific matrix-based (NaCl etc.), linear, non-linear TC curve (6-point), freely programmable custom table
Linear temperature coefficient	0 ... 5.4 %/°C
Reference temperature	15 ... 30 °C, 25 °C (default)

Temperature

Sensor	Pt1000, Class A
Measuring range	-20 ... 140 °C
Accuracy	± 0.3 °C
Repeatability	0.1 °C
Response time	t_{90} < 30 s

Concentration

Measuring range	**NaCl:** 0 ... 25 % by weight **NaOH:** 0 ... 15 % by weight (0 ... 70 °C) **NaOH:** 20 ... 50 % by weight (0 ... 70 °C) **Na_2SO_4:** 0 ... 40 % by weight **H_3PO_4:** 0 ... 15 % by weight (0 ... 100 °C)
Accuracy	± 0.5 %

Density

Measuring range	**NaCl:** 0 ... 25 °B (0 ... 100 °C) **NaOH:** 0 ... 20 °B (0 ... 70 °C) **NaOH:** 25 ... 50 °B (0 ... 70 °C) **Na_2SO_4:** 0 ... 40 °B (0 ... 100 °C)
Accuracy	± 0.5 %

ELECTRICAL

Analog Outputs

Number of channels	2
Conductivity, concentration, temperature	4 - 20 mA, electrically isolated
Resolution	12-bit
Accuracy	± 0.3 %
Sampling time	500 ms
Maximum load impedance	600 Ω

Switch Output-1

Contact	Solid-state relay
Maximum load current	100 mA @ 24 VDC

Switch Output-2

Contact	Solid-state relay
Maximum load current	200 mA @ 24 VDC

Digital Input

Voltage range	18 ... 30 VDC
Input current	7 mA @ 24 VDC
Input signal type	Sinking, IEC61131-2 Type-3

IO-Link

IO-Link specification	Version 1.1
IO-Link smart sensor profile	2nd edition
SIO mode	Yes
Speed	COM2 (38.4 kBaud)
Minimum cycle time	30 ms
Process data width	17 bytes

Power

Supply	18 ... 30 VDC
Maximum power consumption	3 W @ 24 VDC
Reverse polarity protection	Yes
Electrical connection	M12, A Coded, 4-pin

MECHANICAL

Media temperature	-20 ... 140 °C
Media pressure	0 ... 10 bar @ 120 °C
Enclosure protection rating	IEC 60529, IP67
Surface roughness	Ra < 0.4 µm
Weight	~0.76 kg
Ambient temperature	-20 ... 70 °C

Wetted Materials

Probe	Virgin PEEK (polyether ether ketone)
Process connection	Stainless steel EN 1.4404 (AISI 316L)
Seal	EPDM

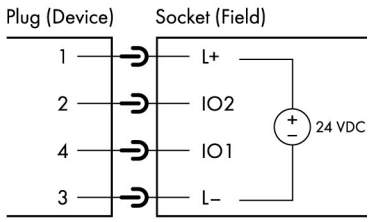
Transmitter Materials

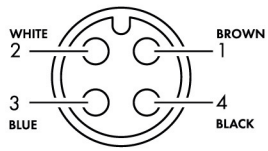
Enclosure	PA6-GF15
Seals	EPDM, TPE, NBR
Display window	PET

GENERAL

Display	TFT-LCD, 2.8", Resistive touch
Electromagnetic compatibility	IEC 61326, Class B
Environmental testing	IEC 60068

ELECTRICAL CONNECTION



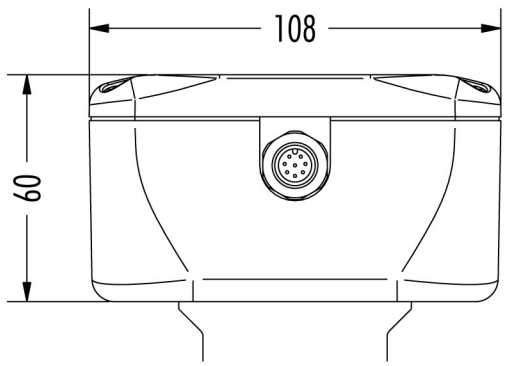


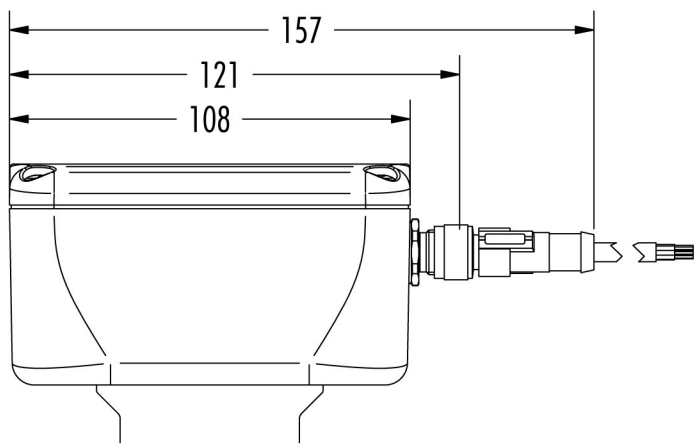
***** M12 connector, connection diagram

Pin	Signal	Color	Description
1	L+	Brown	Supply voltage + (18 to 30 VDC / min. 3 W)
2	IO2	White	input / output 2, current output, switch output, digital input
3	L-	Blue	Supply voltage -
4	IO1	Black	input / output 1, IO-Link, current output, switch output

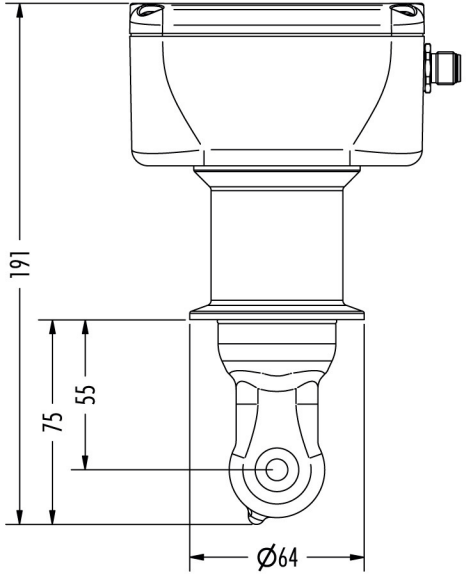
* IO1 and IO2 can be configured independently.

DIMENSIONS

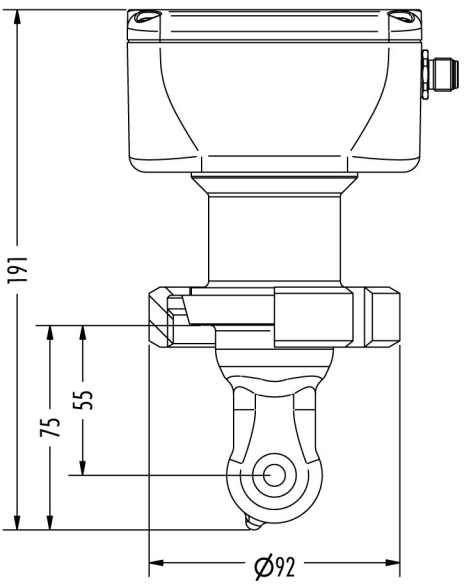




* Transmitter device dimensions in mm



* C50 version device dimensions in mm



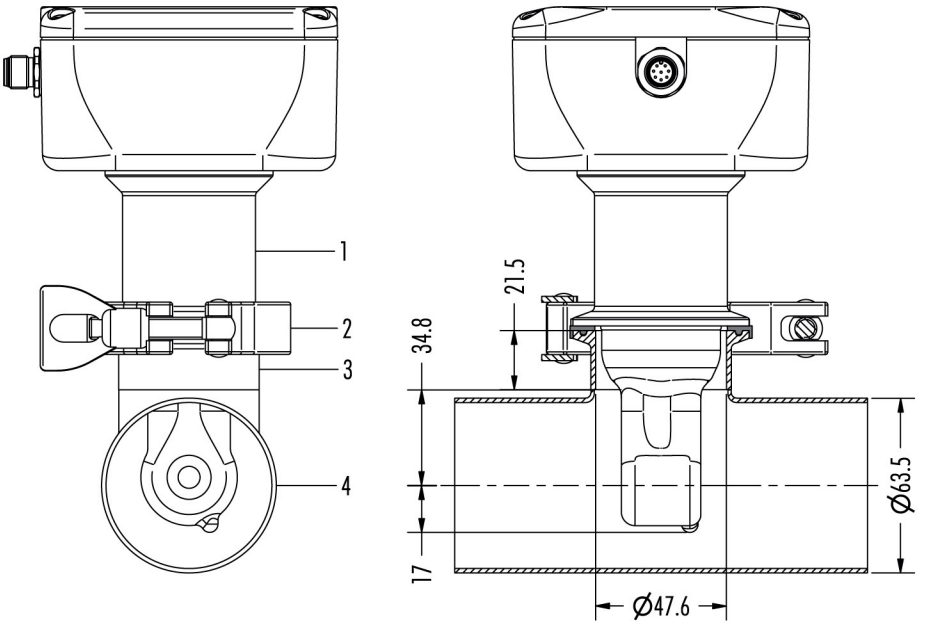
*U50 version device dimensions in mm

MAINTENANCE & CALIBRATION

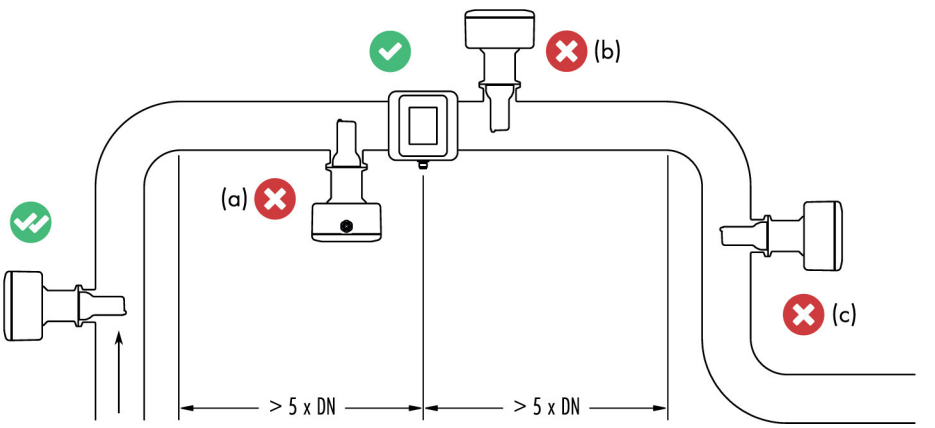
ICT200 is calibrated and tested at the factory, eliminating the need for recalibration during commissioning. Its toroidal measurement technology ensures minimal maintenance and calibration requirements.

The only recommended maintenance procedure is to periodically check the probe bore, particularly in harsh environments. If the probe bore is found to be dirty, please remove any debris to prevent misleading measurements. A clogged probe can affect the accuracy of the sensor readings.

MOUNTING

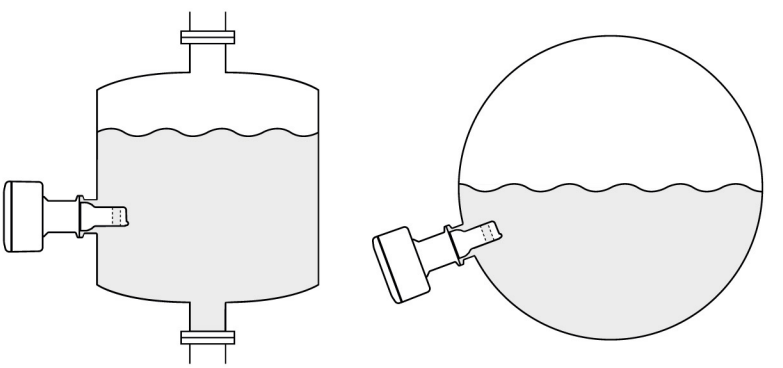


C50 process connection mounting example
(1) Process connection, ISO 2852 Tri-Clamp 1½", EN 1.4404
(2) Clamp ring, EN 1.4301
(3) Clamp liner, ISO 2852 1½"
(4) Short reducer tee, ISO 2852 2"×1½"



* Correct mounting orientations of the conductivity transmitter on a pipeline
(a) Possible solid deposits
(b) Possible air entrapment
(c) Possible air bubble formation

Warning:
The sensor must be completely immersed in the medium.
Keep the transmitter far away from direct radiation and heat (e.g. steam valve.)



* Correct tank mounting

(1) Device Code	
	ICT200 Inductive Conductivity Transmitter

(2) User Interface	
D	TFT-LCD Touch Screen Display
0	No

*(3) IO-Link	
I	Yes
0	No

(4) Wireless Connection	
W	Wi-Fi and Bluetooth
0	No

(5) Measurement Range	
S1	Single (200 mS/cm)
S2	Single (500 mS/cm)
S3	Single (1000 mS/cm)
S4	Single (2000 mS/cm)
M6	Multiple (2, 20, 200, 500, 1000, 2000 mS/cm)

(6) Process Connection	
C50	Tri-Clamp ISO 2852 1½"
C65	Tri-Clamp ISO 2852 2"
U50	Dairy fitting DIN 11851 DN 50
U65	Dairy fitting DIN 11851 DN 65
G50	Thread G1½
G65	Thread G2
S50	SMS 2"

	(1)		(2) (3) (4)		(5)		(6)
Order code structure		-		-		-	
Order code example	ICT200	-	D I W	-	M6	-	C50

* Only "M6" measurement range option is available with "IO-Link" option.

Transmitter Cables	
TC-M12-4FO-5	Transmitter cable, M12, A-Coded, 4-pin, female/open, 5 meters
TC-M12-4FO-10	Transmitter cable, M12, A-Coded, 4-pin, female/open, 10 meters
TC-M12-4FO-20	Transmitter cable, M12, A-Coded, 4-pin, female/open, 20 meters
TC-M12-4FM-5	Transmitter cable, M12, A-Coded, 4-pin, female/male double ended, IO-Link, 5 meters
TC-M12-4FM-10	Transmitter cable, M12, A-Coded, 4-pin, female/male double ended, IO-Link, 10 meters
TC-M12-4FM-20	Transmitter cable, M12, A-Coded, 4-pin, female/male double ended, IO-Link, 20 meters

Process Connection Sets	
PF-C50-S0	**Tri-Clamp ISO 2852 11⁄2", process connection set:** (PF-C50-S1 + PF-C50-S2 + PF-C50-S3)
PF-C50-S1	EN 1.4404 (AISI 316L) liner
PF-C50-S2	EPDM seal
PF-C50-S3	EN 1.4301 (AISI 304) heavy duty clamp ring
PF-C50-S4	EN 1.4404 (AISI 316L) blind
PF-C65-S0	**Tri-Clamp ISO 2852 2", process connection set:** (PF-C65-S1 + PF-C65-S2 + PF-C65-S3)
PF-C65-S1	EN 1.4404 (AISI 316L) liner
PF-C65-S2	EPDM seal
PF-C65-S3	EN 1.4301 (AISI 304) heavy duty clamp ring
PF-C65-S4	EN 1.4404 (AISI 316L) blind
PF-U50-S0	**Dairy fitting DIN 11851 DN 50, process connection set:** (PF-U50-S1 + PF-U50-S2)
PF-U50-S1	EN 1.4404 (AISI 316L) liner
PF-U50-S2	EPDM seal
PF-U50-S3	EN 1.4301 (AISI 304) nut
PF-U50-S4	EN 1.4404 (AISI 316L) blind
PF-U65-S0	**Dairy fitting DIN 11851 DN 65, process connection set:** (PF-U65-S1 + PF-U65-S2)
PF-U65-S1	EN 1.4404 (AISI 316L) liner
PF-U65-S2	EPDM seal
PF-U65-S3	EN 1.4301 (AISI 304) nut
PF-U65-S4	EN 1.4404 (AISI 316L) blind
PF-S50-S0	**SMS 2", process connection set:** (PF-S50-S1+PF-S50-S2)
PF-S50-S1	EN 1.4404 (AISI 316L) liner
PF-S50-S2	EPDM seal
PF-S50-S3	EN 1.4301 (AISI 304) nut
PF-S50-S4	EN 1.4404 (AISI 316L) blind