AnaCONT

COMPACT DISSOLVED OXYGEN TRANSMITTERS

FEATURES

- *Compact and integrated versions*
- *Separated versions up to 10 m*
- *Measuring range: 0-20 ppm*
- *Replaceable probes*
- *Temperature compensation*
- *Graphical plug-in display*
- *4-20 mA, HART, Relay output*
- *Ex version*
- *Wide range of accessories*

APPLICATION AREA

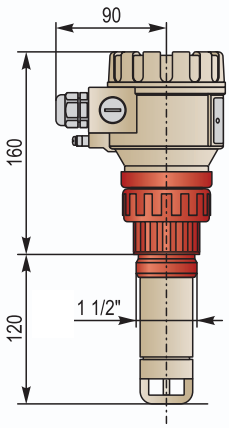
- *Surface water quality assessment*
- *Effluent treatment*
- *Checking aeration in drinking water*

OPERATION

The dissolved oxygen (DO) measurement gives the quantity of dissolved oxygen gas in the liquid, in ppm or mg/l values. The sensor with oxygen-permeable membrane immersed in the liquid provides an electronic signal proportional to the oxygen concentration.

The intelligent electronics calculates and transmits the DO value normalized to 25°C on the basis of the output current of the DO sensor and the potential of the temperature sensor immersed in the medium.

DIMENSIONS



TECHNICAL DATA

General data			
DO measurement		Range: 0…20ppm v. 0…10ppm, Reserve: 20%, Accuracy*: 0.5% of measuring range ±1 digit ±0.01% /°C, Linearity: ±0.05ppm, Resolution: 0.01ppm, (Inner resolution 0.005ppm), Measurement frequency: 300msec, 1sec on display	
DO probe	DO range	0-20 ppm	0-10 ppm
	Process temperature	50°C	
	Process pressure	1 bar	
	Accuracy	±0,5%	
	Membrane material / thickness	PTFE / 125 µm	PTFE / 50 µm
	Housing material	PP, PVDF	
Temp. measurement (semicond. sensor)		Range: -50…130°C, Accuracy: ±0.5°C, Resolution: 0.1°C	
Liquid potential (complementary) electrode		Housing of temperature sensor 1.4571 (stainless steel). Connection: SN6	
DO probe input		Galvanically isolated current input, 0,725V polarization potential, Connection: SN6	
Power supply / Power consumption		12 … 36 V DC / 48 mW … 720 mW, Galvanically isolated, built-in transient overvoltage protection	
Output	Analogue	4 … 20 mA, (3,9 … 20,5 mA), R_{tmax} = 1200 Ω ([Ut - 12 V] / 0,022 A) Galvanically isolated, built-in transient overvoltage protection	
	Relay	SPDT 30 V DC, 1A DC	
	Display	SAP-300 (128x64 pixel graphic monochrome LCD, 41x24mm (actual display area)	
	Serial line	(optional) HART interface, terminal resistor ≥ 250 ohm	
Process temperature		0 °C … +50 °C	
Ambient temperature		Alu. housing: -30 °C …+70 °C, Plastic housing: -25 °C …+70 °C, both with display: -20 °C …+70 °C	
Velocity of flow		min. 0,05m/s	
Sealing		PP sensor-housing: EPDM. Sensor-housing made of other materials: FPM (Viton)	
Ingress protection		Sensor socket: IP 68, Housing: IP 67 (NEMA 6)	
Housing material		Plastic: PBT glass fiber reinforced plastic. Metal : paint coated aluminium	
Electrical connection		2 x M20x1,5 metal cable gland Cable diameter: 7 … 13 mm, or 2 x M20x1,5 plastic cable gland , Cable diameter: 6 … 12 mm Diameter of connection cable: 0,5 … 1,5 mm2 (shielded cable is suggested) + inner thread 2 x NPT 1/2" cable for protecting pipe	
Electrical protection		Class III, ELV supply	

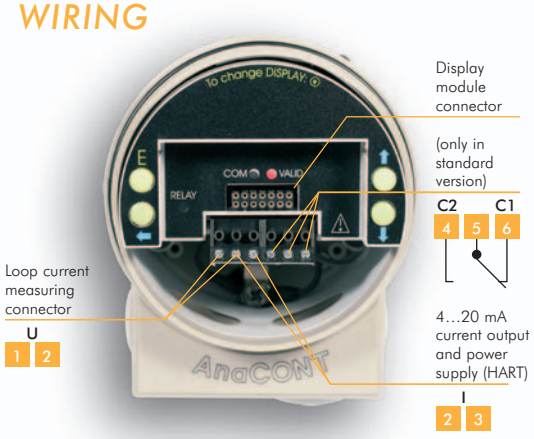
Special data for Ex certified models*	
Ex marking*	ATEX ⟨Ex⟩ II1G EEx ia IIB T6 IP67
Intrinsical safety	Ci ≤ 15 nF, Li ≤ 200 µH, Ui ≤ 30 V, Ii ≤ 140 mA, Pi ≤ 1 W, Use with Eex ia certified power supply only
Ex approved power supply	Uo < 30 V, Io < 140 mA, Po < 1 W, Range of power supply 12 V … 30 V, R_{tmax} = (Ut - 12 V) / 0,02 A
Process temperature	0…+50 °C
Ambient temperature	Metal housing: -30 °C…+70 °C, Plastic housing: -20 °C…+70 °C, With display: -20 °C…+70 °C

* Approval is pending

AnaCONT IN SYSTEM WITH MULTICONT

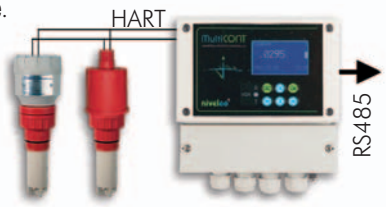
MULTICONT can handle the digital information sent by a max. of 15 HART capable transmitters (pH, ORP, DO, conductivity, temperature, level, pressure). The digital (HART) information is processed, displayed and if needed, transmitted via RS485 communication line to a PC. Visualization can be achieved with **NIVISION** process visualization software.

WIRING



AnaCONT IN SYSTEM WITH A PC

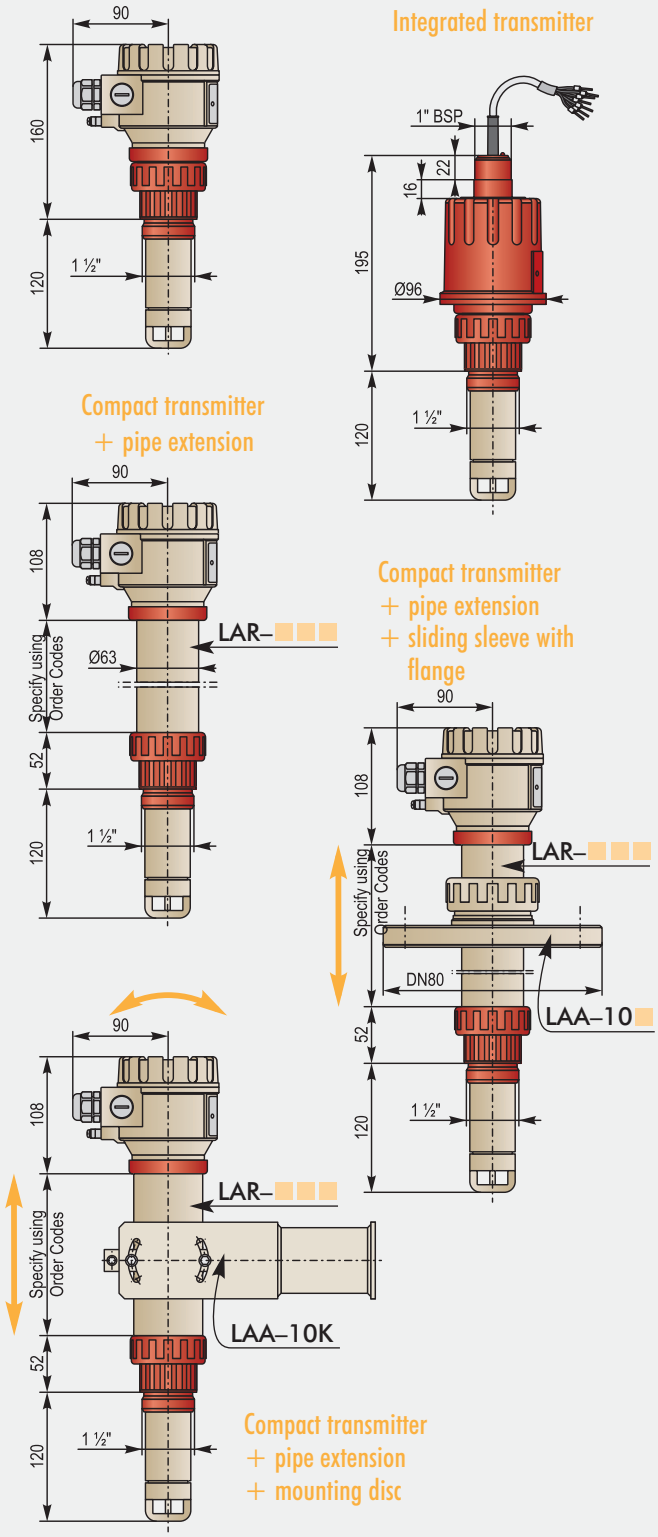
The device with HART output can be connected to a PC using a SAT-304 HARTUSB modem. All the data measured by the **AnaCONT** can be seen on the PC, and if needed the transmitters can also be programmed from here. Max. 15 normal (non Ex) instruments can be connected to a HART line. Applicable softwares: **EView** configuration software or **NIVISION** process visualization software.



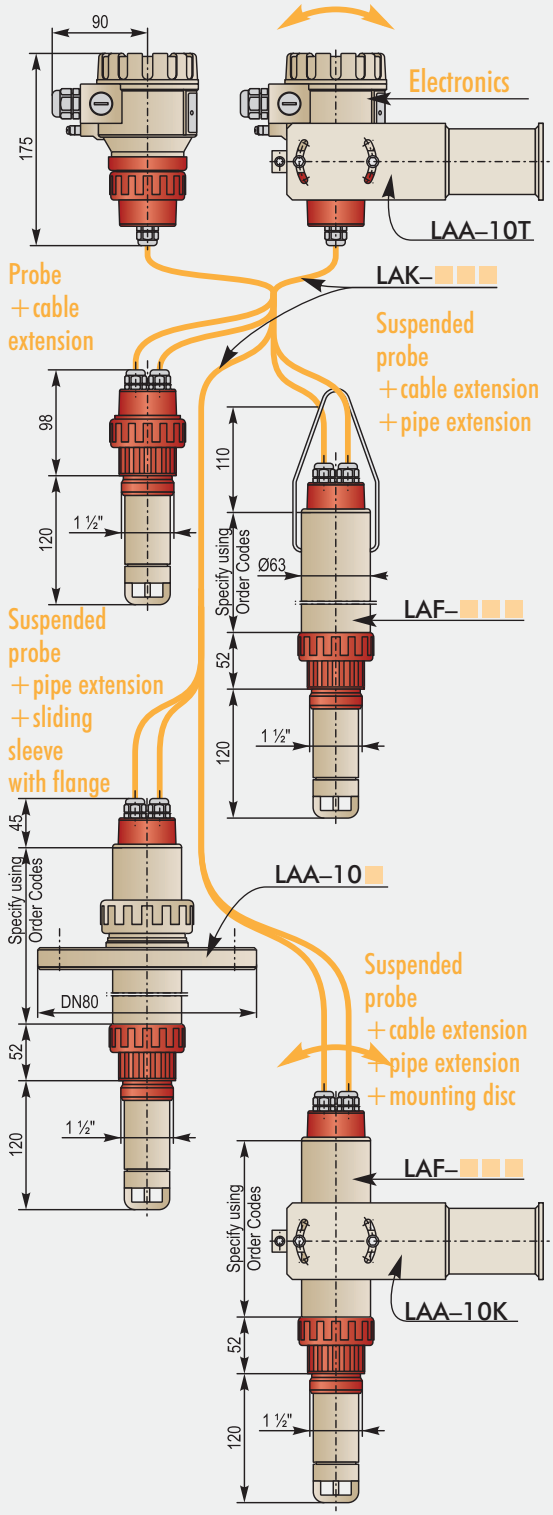
TYPE SELECTION

All accessories are applicable for both types of transmitters (compact and integrated). The special accessories allow easy installation to different technologic processes also. The separated versions make mounting of the electronics away from the sensor part at a desired distance possible. The separation is done by extension pipes or extension cables

COMPACT TRANSMITTER



SEPARATED COMPACT TRANSMITTER



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ORDER CODES (NOT ALL COMBINATIONS AVAILABLE)

AnaCONT compact DO transmitters

AnaCONT L ■ ■ - ■ ■ ■ - ■ [1]

Type	Code
Compact	E
Compact + display	G
Integrated	8 [2]

Housing	Code
Plastic	1
Steel	2

Sensor	Code
D01-mA-20 (20ppm)	1
D01-mA-10 (10ppm)	2

Output / Ex	Code
4...20 mA / LOGGER	1
4...20 mA	2
4...20 mA+HART / LOGGER	3
4...20 mA+HART	4
4...20 mA / LOGGER / Ex	5 [3]
4...20 mA / Ex	6 [3]
4...20 mA+HART / LOGGER / Ex	7 [3]
4...20 mA+HART / Ex	8 [3]
4...20 mA / LOGGER / Relay	L
4...20 mA / Relay	R
4...20 mA+HART / LOGGER / Relay	A
4...20 mA+HART / Relay	H

Function	Code
DO transmitter	D

Proc. connection / Material	Code
BSP 1 1/2 " / PP	1
BSP 1 1/2 " / PVDF	2
NPT 1 1/2 " / PP	4
NPT 1 1/2 " / PVDF	5

1 *The order code of an Ex version should end in 'Ex'*
2 *Under development*
3 *Approval is pending*

ACCESORIES

Extensions

L A ■ - ■ ■ ■

Type	Code
Pipe	R [1]
Cable	K [2]
Suspended pipe	F [3]

Material	Code
PP	1
PVDF	2

Code	Extension [4]		Code
0	0 m	0 m	0
1	1 m	0,1 m	1
2	2 m	0,2 m	2
3	3 m	0,3 m	3
4	4 m	0,4 m	4
5	5 m	0,5 m	5
6	6 m	0,6 m	6
7	7 m	0,7 m	7
8	8 m	0,8 m	8
9	9 m	0,9 m	9
A	10 m		

1 *The unit includes the cable set with connectors for the given pipe length*
2 *The cable set includes the necessary connectors*
3 *For separated versions the LAK-■■■ cable extension unit, for the entire length from the sensor to the electronics (length based on order code + distance between the suspension and the electronics) must be ordered separately*
4 *Pipe extension max. 3 m, cable extension max. 10 m*

Sliding Sleeve

L A A – 1 0 ■

Process con. / Material	Code
DN80 PN16 / PP	2
DN100 PN16 / PP	3
DN125 PN16 / PP	4
DN150 PN16 / PP	5
DN200 PN16 / PP	6
Mounting bracket 200 mm (extended version)	K
Mounting bracket (standard version)	T

Sensors

Order Code	Type
4xdo1ma20ppdo	D01-mA-20
4xdo1ma10ppdo	D01-mA-10

Display: SAP-300, HART modem: SAT-304

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