Protos® 3400 (X)

Specifications OXY 3400 (X)-065 module

Oxy input**) (Ex ia IIC)	for sensor models SE 706, InPro 6800 (i) (Mettler Toledo), OXYFERM (Hamilton), and others control and evaluation of ISM sensors	
Measuring range	meas. current 0 … 1800 nA, resolution 30 pA	
Measurement error	< 0.5 % meas. val. + 0.1 nA + 0.005 nA/K	
Saturation (–10 … +80 °C)	0.0 … 199.9/200 … 600 % Air 0.0 … 29.9/30 … 120 % O_2	
Concentration (–10 … +80 °C)	0000 … 9999 µg/l (overrange up to 19.99 mg/l) 0000 … 9999 ppb (overrange up to 19.99 ppm) 0.00 … 200.00 mg/l 0.00 … 200.00 ppm	
Volume concentration in gas	0000 … 9999 ppm/0.0 … 120 %	
Partial pressure	0 … 5000 mbars	
Pressure correction	air pressure manual correction externally via current input	700 … 1100 mbars 0 … 9999 mbars 0 … 9999 mbars
Salinity correction	0.0 … 45.0 g/kg	
Polarization voltage	0 … –1000 mV, default –675 mV (resolution 5 mV)	
Permissible guard current	≤ 20 µA	
ISM	Intelligent Sensor Management display of sensor data: manufacturer, serial number, calibration record, load matrix, sensor wear, …	
Sensoface®	provides information on the sensor condition: zero/slope, response time, calibration timer, Sensocheck®, sensor wear	
Sensor network diagram	graphical representation of current sensor parameters in a network diagram on the display: slope, zero point, response time, calibration timer, Sensocheck®	
Sensor monitoring*)	Sensocheck® (not for sensors with guard) monitoring of membrane and electrolyte	
Sensor monitor	display of measured values from sensor for validation: sensor current/barometric pressure/temperature	
Sensor standardization*)	operating modes: – automatic calibration in air – automatic calibration in air-saturated water – product calibration for saturation – product calibration for concentration – data entry of zero slope – zero calibration – adoption of calibration data from digital sensors	
Calibration record/statistics	recording of: zero, slope, response time, calibration method with date and time of the last three calibrations and the first calibration	
Output curve*)	– linear – trilinear – function – as desired via table	

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Specifications OXY 3400 (X)-065 module – continued

Temperature input**) (Ex ia IIC)	temperature detector: NTC 22 kohms, NTC 30 kohms 2-wire connection, adjustable
Measuring range	–20 … +150 °C/–4 … +302 °F
Resolution	0.1 °C
Measurement error[1) 2) 3)]	0.2 % meas. val. + 0.5 K (< 1 K with T > 100 °C)
Current input (Ex ia IIC)	pressure transmitter
Pressure range	0 … 9999 mbars
Current range	0(4) … 20 mA/50 ohms start/end user-defined within pressure range
Resolution	< 1 %
Explosion protection	IECEX: Ex ib [ia] IIC T4 ATEX: II 2 (1) G Ex ib [ia] IIC T4 FM: IS, Class 1, Div 1, GRP A, B, C, D, T4, Entity Class I, Zone 1, A Ex ib [ia], GRP IIC, T4 CSA: NI, Class I, Div 2, GRP A, B, C, D, with IS circuits extending into Div 1 AIS, Class I, Zone 1, Ex ib [ia] IIC T4 NI, Class I, Zone 2, Ex nA [ia] IIC GOST: 1 Ex ib [ia] IIC T4 NEPSI: Ex ib [ia] IIC T4
EMC	NAMUR NE 21 and EN 61326
Emitted interference	Class B
Immunity to interference	Industry
Lightning protection	EN 61000-4-5, Installation Class 2
Nominal operating conditions	ambient temperature: –20 … +55 °C (Ex: max. 50 °C) relative humidity: 10 … 95 % not condensing
Transport/Storage temperature	–20 … +70 °C
Module enclosure	material: PC/ABS blend
Color	black
Protection	IP 20
Dimensions (mm)	w x h x d: 118 x 91 x 21
Terminals	screw clamp connection, single wires and flexible leads up to 2.5 mm^2

*) user-defined
1) to IEC 746 Part 1, at nominal operating conditions
2) ±1 count
3) plus sensor error
**) Oxy input, temperature input galvanically connected, galvanically isolated up to 60 V against the other inputs, outputs, relay contacts (protective separation due to double insulation in accordance with EN 61010-1).

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Terminal Assignments OXY 3400 (X)-065 module