1.1.1. DOSA*Sens* Bromine sensor **BR1**

Membrane-covered, amperometric potentiostatic 3-electrode system. Detects free bromine as hypobromous acid and BCDMH, also in sea water.

Product description:

- Measurand(s): free bromine, 1-bromo-3-chloro-5,5-dimethyl-hydantoin BCDMH), hypobromous acid HOBr
- Calibration:
  - at the controller
  - by means of analytic bromine determination
  - depending on the brominating agent
  - free bromine: DPD1 method
  - BCDMH: DPD4 method
- Interferences: Cl_2, ClO_2, O_3, are measured as well
- pH range: 6.5 – 9.5, greatly reduced pH dependence
- Pressure range:
  - Operation without circlip: 0 – 0,.5 bar, no pressure surges and/or vibrations
  - Operation with circlip: 0 – 1.0 bar, no pressure surges and/or vibrations
- Temperature range: 0 – 45 °C
- Integrated automatic temperature compensation
- Response time: T_{90} approx. 2 min
- Absence of the disinfectant: max. 24 h
- Flow rate: approx. 15 – 30 l/h
- Shaft length: standard 190 mm, and up to 220 mm in length (mA-Version)
- Connection: 5-pin M12 screwed plug (mV-, mA-, Modbus RTU-version), 2-pole terminal (mA-Version)
- Material: PVC, Peek, stainless steel 1.4571, microporous hydrophilic membrane

Areas of application:

- Drinking-, pool-, industrial-, process- and sea water.

Scope of supply:

- **DOSA*Sens* BR1** sensor, membrane cap, electrolyte, instruction manual

Ordering data:

Type:	Measuring range: ppm	Resolution: ppm	Output signal:	Power supply:	Item number:
BR1**H-M12**	0.005 – 2.000	0.001	0 to -2000 mV 1 kΩ	±5 to +15 VDC 10 mA	3626220
BR1**N-M12**	0.05 – 20.00	0.01			3626221
BR1**H-An-M12**	0.005 – 2.000	0.001	0 to -2000 mV (max. 2.500 mV), 1 kΩ	9 – 30 VDC, approx. 20 – 56 mA	3626230
BR1**N-An-M12**	0.005 – 2.000	0.001			3626231
BR1**H-M0c**	0.005 – 2.000	0.001	Modbus RTU		3326531
BR1**N-M0c**	0.05 – 20.00	0.01			3326530
BR1**MA-2**	0.05 – 2.00	0.1	4 – 20 mA	12 – 30 VDC R_L = 50 Ω (12 V) to 900 Ω (30 V)	3326505
BR1**MA-5**	0.05 – 5.00				3326515
BR1**MA-10**	0.05 – 10.00				3326520
BR1**MA-2-M12**	0.05 – 2.00	0.1		12 – 30 VDC R_L = 50 – 900 Ω	3326540
BR1**MA-5-M12**	0.05 – 5.00				3326541
BR1**MA-10-M12**	0.05 – 10.00				3326542

Subject to technical modifications and printing errors. Images may vary slightly from actual product.
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Additional technical data:

Type:	Slope:	Cable Connection:	Special characteristics:
BR1**H-M12**	-1000 mV/ppm	5-pin M12 screwed plug	Connection only to a controller with galvanically separated power supply.
BR1**N-M12**	-100 mV/ppm		
BR1**H-An-M12**	-1000 mV/ppm		-
BR1**N-An-M12**	-100 mV/ppm		
BR1**H-M0c**	Modbus RTU		
BR1**N-M0c**			
BR1**MA-2**	8.0 mA/ppm	2-pole terminal	Connection only to a controller with galvanically separated power supply.
BR1**MA-5**	3.2 mA/ppm		
BR1**MA-10**	1.6 mA/ppm		
BR1**MA-2-M12**	8.0 mA/ppm	5-pin M12 screwed plug	
BR1**MA-5-M12**	3.2 mA/ppm		
BR1**MA-10-M12**	1.6 mA/ppm		

Spare parts:

Spare parts:	for sensor type:	Item number:
Membrane cap **M48.2**	**BR1** all types	9026020
Electrolyte **ECP1.4 Gel**	**BR1** for measurement with / without salts <1 g/l in the water (all types)	9026074

Accessories:

Type:	for sensor type:	Item number:
Sensor simulator pH, Redox, Cl	all sensors with mV signal	21131100
Sensor simulator SIM11.1n	0 mV, -100 mV, -1000mV	9026205
Sensor simulator 4–20 mA, current sensor	all sensors with mA signal	90249000
mV Simulator and **mA Tester**	all sensors with mV signal or mA signal	21131105
Photometer for calibration	chlorine, total chlorine, isocyanuric, pH, bromine	90231020