ABSOLUTE PRESSURE SENSOR

Barometers

SS-PS is designed for accurate measurement of barometric pressure. It is a highly accurate pressure sensor with an accuracy of ±0.15 hPa and having a resolution of 0.01 hPa. To connect with the data loggers SS-PS supports all kinds of anolog and digital communication interfaces including RS232 and USB. SS-PS is widely used in meteorology, agriculture, civil aviation etc.

Features

- Low power dissipation
- High accuracy
- Analog and Digital outputs
- IP66

Technical Specifications

	SS-PS
Measurement Range	500 to 1100 hPa
Accuracy	± 0.15 hPa
Resolution	0.01 hPa
Output	RS232/485
Stability	<0.2 hPa/year
Response Time	< 20Sec
IP Class	IP66
Dimensions	130x62x32 mm
Weight	300g
Power	85mA @12V DC
Operating voltage	7 to 24 VDC
Operating temperature	-40 to +50 °C
Operating humidity	5% to 95% RH
Cable	5m Standard

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Barometers

Environmental Monitoring Solutions

- Wide range of models with technical specifications for meteorological applications.
- Analogue outputs (DQA240.1, DQA801).
- RS485, Ethernet digital output s(DQA251).
- Very good accuracy: ±0.15 hPa (@20°C) ±0.20 hPa (-40÷60 °C) (DQA251).
- QNH, QFE, QFF measurements (DQA251, Alpha-Log, Pluvi-ONE.
- Alpha-Log and Pluvi-ONE data loggers are equipped with internal pressure sensor. In this document, technical specification of this sensor are described (Read Alpha-Log/Pluvi-ONE column).

Sensors designed for accurate measurement of barometric pressure. DQA240.1 is more suitable for LSI-LASTEM data acquisition systems (0-1Vdc output). DQA801 is also suitable for integration in third part systems (0/4-20 mA output), its range is locally selectable by trimmer DQA251 is a high precision instrument for absolute pressure, QNH, QFE, QFF. Long-term stability and a web interface make it the perfect instrument for professional acquisition systems and meteorology, aviation. Heavy duty enclosure IP67, allows an easy installation also in harsh environmental conditions. This sensor is built according WMO and ICAO standards.

Technical Specifications

PN	DQA240.1	DQA801	DQA251	Alpha-Log Pluvi-ONE
				
Output	0÷1 V	0/4÷20 mA	Modbus on RS485; Modbus on TCP-IP, Lan-Ethernet; autosending on RS232, socket, FTP (SDI12 Optional)	Read Data-Logger spec.
Measurement	Absolute Pressure		Absolute Pressure QNH, QFE, QFF according to CIMO/ET-Standard-1/Doc.10 (20.XI.2012) WMO -2012	
Memoria	NO		128 Mb (about 3 years measurements)	Read Data-Logger spec.
Data display	NO		-by built-in LCD 2x24 chr display - by web-browser on a connected PC (charts and numeric values)	Read Data-Logger spec.
Data download	NO		Last 30 days measurements in Excel and ASCII files by Ethernet port	Read Data-Logger spec.

PN	DQA240.1	DQA801	DQA251	Alpha-Log Pluvi-ONE
Power supply	10÷14 Vdc	10÷30 Vdc/ac	10÷30Vdc	Read Data-Logger spec.
Power consumption	0,25 W	0,5 W	<0,6 W (~45mA @ 12Vdc)	Read Data-Logger spec.
Accuracy	±0,5 hPa		±0.15 hPa (@20°C) ±0.20 hPa (-40÷60 °C);	±0,3 hPa
Thermal drift	Compensated into the range: 10÷60°C. Drift in the range-20÷10°C: -0,025 hPa/°C		Compensated into the range: -40÷60°C.	Compensated into the range: -20÷85°C.
Range	800÷1100 hPa	Default: 800÷1100 hPa (selectable 600÷1100 hPa, 700÷1100 hPa)	500÷1.200 hPa	500÷1100 hPa
Linearity	NA	NA	±0.1hPa / <0.05hPa	NA
Resolution	0.1 hPa		0.01 hPa	0.1 hPa
Time constant	2 s.			
Response time	0,5 s.		0,1 s.	0,1 s
Long term stability	<±0.5hPa/year		<±0.1hPa/year	
Calibration	Data Logger setup	By trimmer	By internal software	
Calibration certificate	Not included		Included	Not included
Maximum pressure limit	2000 hPa		3000 hPa	
Principle	Piezoresistor			
Protection	IP43	IP65	IP67	IP43
Weight	200 gr	300 gr	1 Kg	Read Data-Logger spec.
Installation	Inside ELFxxx enclosures	On DYA078 bracket	On DIN bar	Read Data-Logger spec.
Operative temperature	-40÷85°C		-30÷80°C	-40÷80°C
Data logger compatibility	M-Log (ELO008) R-Log (ELR515) E-Log Alpha-Log		Alpha-Log Using RS232->485 converter: M-Log (ELO008) R-Log (ELR515) E-Log	NA

Accessories

	**DWA505**	Cable L. = 5 m. for DQA801
	DWA510	Cable L. = 10 m. for DQA801
	DWA525	Cable L. = 25 m. for DQA801
	DWA526	Cable L. = 50 m. for DQA801
	DWA527	Cable L. = 100 m. for DQA801
	**MG2251**	7 pin free female connector
	**DYA078**	Support for DQA801 with radiant shield. Connection to DYA049 collar
	DYA049	Mast-mounting device for Ø 45÷65 mm. Pipe
	SVICA5001	Calibration certificate/tipo ISO9001/Absolute pressure
	SVACA5006.1	Calibration certificate/ISO17025 type/Absolute pressure/N.6 points

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