PMH-1 and PMH-2 Pressure Module

The *PMH-1* is a highly accurate absolute pressure module that provides pressure and altitude data over a digital RS-485 data interface. The PMH-1 uses an aviation grade pressure sensor with microprocessor based signal compensation over the full temperature range.

The *PMH-2* is more cost effective solution with an industrial type absolute pressure sensor.

Key Features PMH-1

- Small, robust, simple
- Aviation grade absolute pressure sensor with high accuracy and low drift
- RS-485 half-duplex data interface, suitable for use in high-noise environments on long cables
- Compatible with Swiss-Airdata line of Air Data Systems
- Fully temperature compensated from -55°C .. +80°C (power up above -40°C)
- Very low transport delay
- Easy configuration of output rate, digital filters, baud-rate via maintenance software

Key Features PMH-2

- Same design as the PMH-1
- Industrial grade absolute pressure sensor with high accuracy and low drift

Typical Application

- Altimeters
- Air Data
- Flight Testing
- UAV, Drones
- Meteorological Applications
- Weather Stations

Performance

	PMH-1	PMH-2	Details
Pressure Range	30..1'100hPa abs.		
Accuracy	0.05%FS [1]	0.10%FS	PMH-1 target <0.025%FS (RVSM)
Long-term Drift	0.05%FS/5 year	N/A	target <0.04%FS for serial production
Temperature Range	-40°C..+80°C -55°C..+80°C -55°C..+80°C		Power Up Operating Storage
Output Rate	100, 50, 25, 20, 10, 5, 1Hz		Alternatively the output can be triggered by sending a command
Transport Delay	10ms + (1000ms/rate) + (0.24ms x labels)		Valid at 460'800bps Example at 100Hz, 2 data labels activated: 10ms + (1000ms/100 Hz) + (0.24 x 2) = 20.5ms
Resolution	24 bit		at pressure level
Units	Pa, hPa, kPa, psi, inHg, mmHg m, ft m/s, km/h, kts, mph, ft/min		Pressure Altitude Climb-Rate
Data Labels	Static Pressure (Ps) Pressure-Altitude (Hp) Baro-Altitude (Hb) Climb-Rate (CR)		
Media Compatibility	Clean Air		Non-condensing and non-corrosive gases

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Mechanical

	PMH-1	PMH-2	
Mass	0.070kg	0.075kg	
Dimensions (LxWxH)	59 mm x 29 mm x36 mm	59 mm x 29 mm x41.5 mm	excluding connector and pressure fitting
Pressure Fitting	Ø4 mm ID tube		

Electrical

	Value	Details
Interface	RS-485 Half-Duplex	USB via FTDI converter cable
Power Supply	7..36 VDC	
Power Consumption	9 V: 40 mA 28 V: 15 mA	
Baud-Rate	57'600 bps 115'200 bps 230'400 bps 460'800 bps	
Connector	Binder 711/4P 09-0082-32-04	PIN-1: 7..36 VDC PIN-2: Common Ground PIN-3: RS-485 B PIN-4: RS-485 A

Ordering Information

Part-Number	Acronym	Range	Details
SIM-D33-9D8-1100HPA-ABS	*PMH-1*	30..1'100 hPa abs. (3..110 kPa)	
SIM-19B-8FE-1100HPA-ABS	*PMH-2*	30..1'100 hPa abs. (3..110 kPa)	

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[1] Accuracy is the sum of repeatability, hysteresis, thermal effects in the specified temperature range, the calibration is traceable to DAkkS.