



## PMH-3 Pressure Module

The *PMH-3* is a highly accurate differential pressure module that provides pressure and airspeed data over a digital RS-485 data interface. The *PMH-3* uses a silicon based pressure sensor with microprocessor based signal compensation over the full temperature range.

### *Key Features*

- Small, robust, simple
- Silicon differential 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  $-55^{\circ}\text{C}$  ..  $+80^{\circ}\text{C}$  (power up above  $-40^{\circ}\text{C}$ )
- Very low transport delay
- Easy configuration of output rate, digital filters, baud-rate via maintenance software

### *Typical Application*

- Air Data
- Flight Testing
- UAV, Drones
- Meteorological Applications



# Swiss Air Data System

Simtec AG



Company Confidential

## Performance

	Value	Details
Pressure Range	±16 hPa dif (~95 KCAS) ±30 hPa dif (~135 KCAS) ±75 hPa dif (~210 KCAS) ±150 hPa dif (~295 KCAS)	
Accuracy	0.1% Full Scale <sup>[1]</sup> 0.2% Full Scale <sup>[1]</sup>	For all versions except the ±16 hPa range For the ±16 hPa range
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/s, km/h, kts, mph, ft/min m/s, km/h, kts, mph, ft/min	Pressure Speed Rate
Data Labels	Differential pressure (Qc) Calibrate airspeed (CAS) Climb-Rate (CR)	
Media Compatibility	Clean Air	Non-condensing and non-corrosive gases





## Mechanical

	Value	Details
Mass	0.080kg	
Dimensions (LxWxH)	59 mm x 29 mm x 41.5 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
SIM-BF8-A48-16HPA-DIF	<i>PMH-3</i>	±16 hPa dif (~95 KCAS)
SIM-BF8-A48-30HPA-DIF	<i>PMH-3</i>	±30 hPa dif (~135 KCAS)
SIM-BF8-A48-75HPA-DIF	<i>PMH-3</i>	±75 hPa dif (~210 KCAS)
SIM-BF8-A48-150HPA-DIF	<i>PMH-3</i>	±150 hPa dif (~295 KCAS)



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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.



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