

# M=BUS InDummy Logger for Voltage and Ratiometric Transducers

Miniaturized shockproof data logger for signal conditioning, processing and data storage that can be integrated in any common crash dummy or pedestrian safety impactor.

- Smallest and lightest
- Data loggers for 3 or 6 analog channels
- One-wire bus system
- Lowest heat dissipation
- Automatically activated built-in backup system
- Compliant to SAE J211 / ISO 6487



## TECHNICAL SPECIFICATIONS

Supported channels	3 or 6
Power consumption (unloaded)	0.65 W
Supported instrumentation	Active sensors / Potentiometer (channel 1...3) Ratiometric sensors (channel 4...6)
Sensor excitation voltage	3.3 VDC
Signal accuracy	0.1 %
Max. output current per channel	All sensors max. 66 mA
Sensor input voltage	$\pm 1.65$ V (channel 1...3) $\pm 825$ $\mu$ V... $\pm 38$ mV (channel 4...6)
Trigger	M=BUS system trigger via gateway Autotrigger at cable disconnect
Conformity	SAE J211 / ISO 6487
Analog bandwidth (-3 dB)	2.4 kHz, Bessel 4-pole (channel 1...3) 2.4 kHz, Bessel 6-pole (channel 4...6)
Resolution	16 bit
Sampling rate	20 kHz
Max. recording time	17 s per channel (349.520 samples per channel)
Internal shunt	Yes (100 k $\Omega$ )
Offset adjustment	Full range sensor input voltage, 12 bit (channel 1...3) Full range sensor input voltage, 8 bit (channel 4...6)
Sensor-ID	1-Wire <sup>®</sup> compatible (Dallas)
Battery capacity	50 mAh, 3.7 VDC (Lithium-Polymer) Yearly maintenance mandatory
Data storage	SRAM 4 MB
Battery data storage time	2 weeks (battery buffered)
Dimensions (L x W x H)	40 mm x 25 mm x 14 mm
Weight	16 g

M=BUS connectors	MMCX female
Sensor connectors	Adapter-PCB
Operating temperature	0...50°C
Shockproof	200 G @ 10 ms 1000 G @ 1 ms
Humidity range	10...70 % RH

- Scope of supply**
- M=BUS InDummy Logger for Ratiometric Transducers
  - Adapter-PCB
  - Calibration certificate

- Required equipment**
- M=BUS Ethernet Gateway or M=BUS USB Gateway
  - M=BUS InDummy Active Terminator (per Line)
  - M=BUS system cable

- Optional equipment**
- M=BUS Toolset

## ADAPTER-PCB

Pad name	Description	Default cable color
Ub +	Positive excitation voltage (3.3 V)	White
Ub -	Negative excitation voltage (ground)	Brown
Sig +	Positive sensor input for channel x	Green
Sig -	Negative sensor input for channel x	Yellow
IDx	1-Wire® (Dallas)	Orange

Table 1: Adapter-PCB with cable

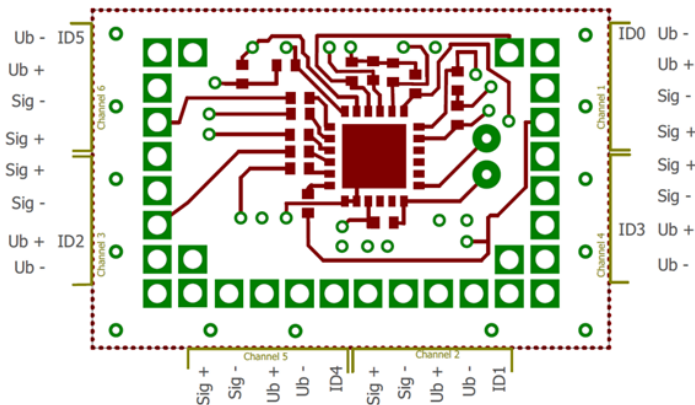


Figure 1: Layout of the Adapter-PCB