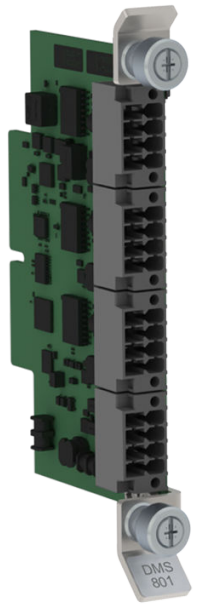
VAISALA

Serial Module DMS801



Vaisala Serial Module DMS801 extends the number of serial ports in Vaisala Data Management Unit DMU801. Each DMS801 provides interfaces for 4 serial connections.

For serial sensor interfaces

Vaisala Serial Module DMS801 provides interfaces for serial sensors. With 3 isolated RS-485 ports and 1 multipurpose port, each DMS801 allows connecting 4 additional sensors to Vaisala Data Management Unit DMU801. Depending on the size of your DMU801 base unit, you can connect up to 8 DMS801 serial modules to the system.

Rugged solution with internal protection

DMS801 operates in a wide temperature range and withstands fast temperature changes. Because of its internal rugged surge protection (up to 3 kA), external surge protection is not required.

Easy expansion when needed

DMS801 is easy to install during initial system setup and can also be plugged in later to expand the selection of sensors. DMS801 can be configured with the intuitive, node-based Vaisala Kaiku Designer.

Features

- Allows connecting additional sensors to Vaisala Data Management Unit DMU801
- Sophisticated, software controllable sensor power control
- Heating power connection with overcurrent and surge protection (surge protectors on baseboard)
- 3 isolated RS-485 ports
- 1 multipurpose port that supports 2-wire RS-485, RS-232, and SDI-12
- Rugged lightning surge protection for all sensor connections

Technical data

Operating environment

Operating temperature	−40 … +85 °C (−40 … +185 °F)
Extended operating temperature (available on request)	−60 … +85 °C (−76 … +185 °F)
Storage temperature	−60 … +85 °C (−76 … +185 °F)
Operating humidity	0–100 %RH, non-condensing

Inputs and outputs

Ports	• 3 × serial ports for isolated RS-485 • 1 × multipurpose serial port supporting 2-wire RS-485, RS-232, and SDI-12
Mating connectors	4 × Phoenix Contact DFMC 1,5/4-ST-3,5-LR (included)
Supported bit rate	1200–115 200 bps
Power output	Each serial port has a separate, software controllable power output pin
Heating output	Each serial port has separate heating power supply pins
Signals, RS-232	RXD, TXD, GND
Signals, RS-485 serial	D+/D−
Signals, RS-485 serial, isolated	D+/D−
Note: 4-wire RS-485/RS-422 is supported by using 2 × 2-wire RS-485.	

Powering specifications

Sensor supply voltage	3–26 V, software controllable
Current limit	1.4 A, −25 % … +20 % per port
Sensor heating current limit	2 A per plug-in module

Mechanical specifications

Dimensions (H x D)	123 × 79 mm (4.84 × 3.11 in)
Distance between 2 plug-in module slots in DMU801 frame	18 mm (0.71 in)
Weight	68 g (2.4 oz)
Material	UL-rated fire-resistive FR4
Handles	Stainless steel
Coating	Conformally coated against humidity

Compliance

EU directives and regulations	EMC, RoHS	
EMC immunity	EN 61326-1, industrial environment	
EMC emissions	CISPR 32 / EN 55032, Class B FCC part 15 B, Class B ICES-3 / NMB-3 (Class B)	
Cybersecurity	Developed in accordance with ISO/IEC 27001 and IEC 62443-4-1 for secure product development practices	
Compliance marks	CE, FCC, ICES, RCM, UKCA	
Test	**Applied standard**	**Description/Value**
Maritime	IEC 60945	–
Vibration (sinusoidal)	IEC 60068-2-6	5–13.2 Hz, 1 mm (0.04 in) amplitude 13.2–200 Hz, 0.7 g
Rough handling	IEC 60068-2-31	Drop height 100 cm (39.37 in)
Shock	IEC 60068-2-27	15 g, 11 ms, saw-tooth
Dry heat	IEC 60068-2-2	+85 °C (+185 °F)
Damp heat	IEC 60068-2-78	+40 °C (+104 °F), 95 %RH
Cold	IEC 60068-2-1	−60 °C (−76 °F)

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