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Digital Road Interface DRI701

Vaisala Digital Road Interface DRI701 is an optional component of Vaisala Road Weather Station RWS200. DRI701 is also required whenever an analog sensor, such as DRS511, is integrated to the RWS200 system.

Sensor Interfaces

Each DRI701 provides an interface for two Vaisala Embedded Road Sensors DRS511 and two Vaisala Subsurface Temperature Sensors DTS12G. One of the subsurface temperature sensors can be replaced with a global radiation sensor.

If the application requires more sensors, another DRI701 card can be added to the road weather station. Each station can house a maximum of two DRI701 cards.

Functionality

DRI701 provides power to the sensors, and converts analog and frequency signals from these sensors to a message for internal system communication.

Features

- Provides connection for analog road sensors
- Provides connection for analog subsurface temperature sensors
- Provides connection for an analog global radiation sensor

Technical Data

Operating Environment

Operating temperature	−40 ... +60 °C (−40 ...+140 °F)
Storage temperature	−60 ... +80 °C (−76 ...+176 °F)
Operating humidity	5 ... 95 %RH, non-condensing

Inputs and Outputs

Operating voltage	8 ... 32 VDC
Average Power Consumption	
With two DRS511 sensors	0.76 W
With two FP2000 sensors	1.06 W

Compliance

Vibration	IEC 60068-2-6
Rough handling	IEC 60068-2-31
Shock	IEC 60068-2-27
Dry heat	IEC 60068-2-2
Damp heat	IEC 60068-2-78
EMC (industrial environment)	EN/IEC 61326-1
Conducted emissions	CISPR22/EN 55022/Class B
Radiated emissions	CISPR22/EN 55022/Class B
Electrical safety	EN/UL/IEC 60950-1/-22

Mechanical Specifications

Dimensions (H × W × D)	126 × 37 × 127 mm (5.0 × 1.5 × 5.0 in)
Weight	0.3 kg (0.7 lb)
Materials	
Screws, washers	Stainless steel AISI 316
DIN rail locking piece	Stainless steel AISI 630
Frame profile	Aluminum EN AW-6060 T6
Side plates	Plastic PC/ABS

Supported Sensors

Road state sensors, embedded	2 × DRS511 / 2 × FP2000 [1]
Subsurface temperature sensors	2 × DTS12G / 2 × DTS210 [2]
Global radiation sensor	For example, SP Lite 2 [3]

[1] For FP2000 availability, contact Vaisala.
[2] DTS210 only in retrofit installations.
[3] The first DRI701 supports 1 global radiation sensor and 1 subsurface temperature sensor or 2 subsurface temperature sensors.

Spare Parts and Accessories

Spare Part or Accessory	Order Code
DRI701 with: • Power cable 30 cm (11.81 in) • Ethernet cable 30 cm (11.81 in)	DRI701SP

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