

Vaisala RWS200 Digital Road Interface DRI701

Vaisala Digital Road Interface DRI701 is an optional component of Vaisala Road Weather Station RWS200. DRI701 provides the connection for Vaisala DRS511 and FP2000 embedded road sensors, Vaisala DTS12G and DTS210 subsurface temperature sensors, and a global radiation sensor.

Each DRI701 provides an interface for two embedded road sensors and two subsurface temperature sensors. One of the subsurface temperature sensors can be replaced with a global radiation sensor.

If the application requires more sensors of either type, another DRI701 can be added to the road weather station. One station houses a maximum of two DRI701 cards.

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



RWS200 Digital Road Interface

Benefits of RWS200 DRI701

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

Technical Data

General

Operating temperature range	-40 ... +60 °C (-40 ... 140 °F)
Storage temperature range	-60 ... +80 °C (-58 ... 176 °F)
Operating humidity range	5 ... 93 %RH non-condensing

MATERIALS

Screws, washers, DIN rail locking piece	Stainless steel AISI 316
Frame profile	Aluminum EN AW-6060 T6
Side plates	Plastic PC/ABS
Size (H × W × D)	126 × 37 × 127 mm (5.0 × 1.5 × 5.0 in)
Weight	0.3 kg (0.7 lb)
Mounting	DIN rail 35 mm (1.4 in)

Power

Powering	8 ... 32 VDC
Connector	Phoenix Contact DFMC 1,5/3-ST3,5-LR

TYPICAL AVERAGE POWER CONSUMPTION

With two DRS511 sensors	0.76 W
With two FP2000 sensors	1 W
LEDs	Status

Connectors

Service connection	RS-232
Connector	Phoenix Contact DFMC 1,5/3-ST3,5-LR
System connectors	2 × Ethernet 10/100 RJ45 with link LEDs, IEEE 802.3

Test Method Standards

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
Corrosion and salt mist	VDA 621-415
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

Standard Sensor Options

Road state and temperature, embedded	2 × DRS511 or 2 × FP2000
Connectors	2 × Phoenix Contact DFMC 1,5/8-ST3,5-LR
Subsurface temperature	2 × DTS12G or 2 × DTS210
Connector	1 × Phoenix Contact DFMC 1,5/4-ST3,5-LR
Global radiation	1 × global radiation sensor ¹
Connector	1 × Phoenix Contact DFMC 1,5/4-ST3,5-LR

¹ With one DTS12G or DTS210 sensor

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