



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, you can add up to four DRI701 cards to the road weather station.

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	9 ... 32 V DC
Average power consumption	
With two DRS511 sensors	0.76 W
With two FP2000 sensors	1.06 W

Compliance

EU directives and regulations	EMC Directive (2014/30/EU) RoHS Directive (2011/65/EU) as amended by 2015/863
EMC immunity	EN 61326-1, industrial environment FCC part 15 B, Class B ICES-3 / NMB-3 (Class B)
EMC emissions	CISPR 32 / EN 55032, Class B
Electrical safety	EN 61010-1
Dry heat	IEC 60068-2-2
Vibration	IEC 60068-2-6
Shock	IEC 60068-2-27
Rough handling	IEC 60068-2-31
Damp heat	IEC 60068-2-78
Compliance marks	CE, FCC, ICES, RCM

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

Spare parts and accessories

Spare part or accessory	Order code
DRI701 with:	DRI701SP
<ul style="list-style-type: none">Power cable 30 cm (11.81 in)Ethernet cable 30 cm (11.81 in)Phoenix Contact DFMC 6-pin cable connector (1 pc)Phoenix Contact DFMC 8-pin cable connector (1 pc)Phoenix Contact DFMC 16-pin cable connector (2 pcs)	
Phoenix Contact DFMC 8-pin cable connector set (10 pcs)	262923
Phoenix Contact DFMC 16-pin cable connector set (10 pcs)	262925
Insulated ferrules 0.5 mm ² , length 10 mm, white (100 pcs)	237754SP

Supported sensors

Road state sensors, embedded	2 × DRS511
Subsurface temperature sensors	2 × DTS12G
Global radiation sensor	For example, SP Lite2 ¹⁾

¹⁾ The first DRI701 supports one global radiation sensor and one subsurface temperature sensor or two subsurface temperature sensors.