

Data Sheet

Gateway for Controller **RS 485 - 148H6228**

Rugged, industrial router, used as a Modbus TCP/IP coupler



The gateway for controller is a rugged, industrial router, used as a Modbus TCP/IP coupler.

The device makes it possible to communicate the GD controller unit to third party devices (e.g. central PLC) via Modbus TCP/IP.

Features:

- Software and hardware watchdog
- Long lifetime, MTBF time: 230000 hours
- LED indication for signal strength / LAN / WAN / Power
- Remote configuration / FW upgrade

Application

ModBus-TCP/IP coupler.

Product specification

Electrical

Table 1: Electrical

Features	Description
Power supply	9 – 30 V DC, reverse polarity protection
Power consumption	300 mA @24 V DC (max. 7 VA)
Digital input (2)	0 – 3 V digital input
	0 – 30 V digital input, galvanically isolated
Analog input (1)	0 – 24 V
Digital output (1)	30 V, 250 mA Open-Collector
Relay output (1)	40 V, 4 A, single-pole, NOC

Wireless (2)

Table 2: Wireless (2)

Features	Description
Modus	IEEE 802.11 b/g/n Access Point, Station
WiFi security	WPA2, TLS, TTLS, AES-CCMP, TKIP

Ethernet

Table 3: Ethernet

Features	Description
WAN (1)	10/100 Mbps
LAN (3)	10/100 Mbps

Serial interface

Table 4: Serial interface

Features	Description
RS232	DB9, with RTS, CTS
RS485	Full / Half-Duplex, 4/2-Draht, 300 - 115200 Baud rate

Environmental conditions

Table 5: Environmental conditions

Features	Description
Temperature range	-40 °C – +75 °C (-40 °F – 167 °F)
Humidity range	10 – 90 % RH, non-condensing
Storage	Unlimited

Physical

Table 6: Physical

Features	Description
Housing material	Polycarbonate
Housing colour	Light gray
Dimensions housing (W x H x D)	182 x 180 x 90 mm (7.17 x 7.09 x 3.54 in.)
Installation	Wall (surface) mounting
Protection class	IP65
Weight	700 g (1.54 lb.)
Warranty	12 months

Connections

RS 485 Connection

Figure 1: RS 485 Connection

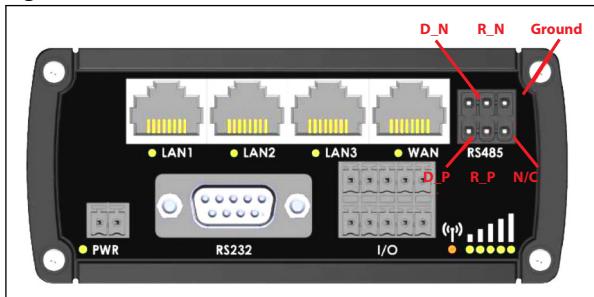
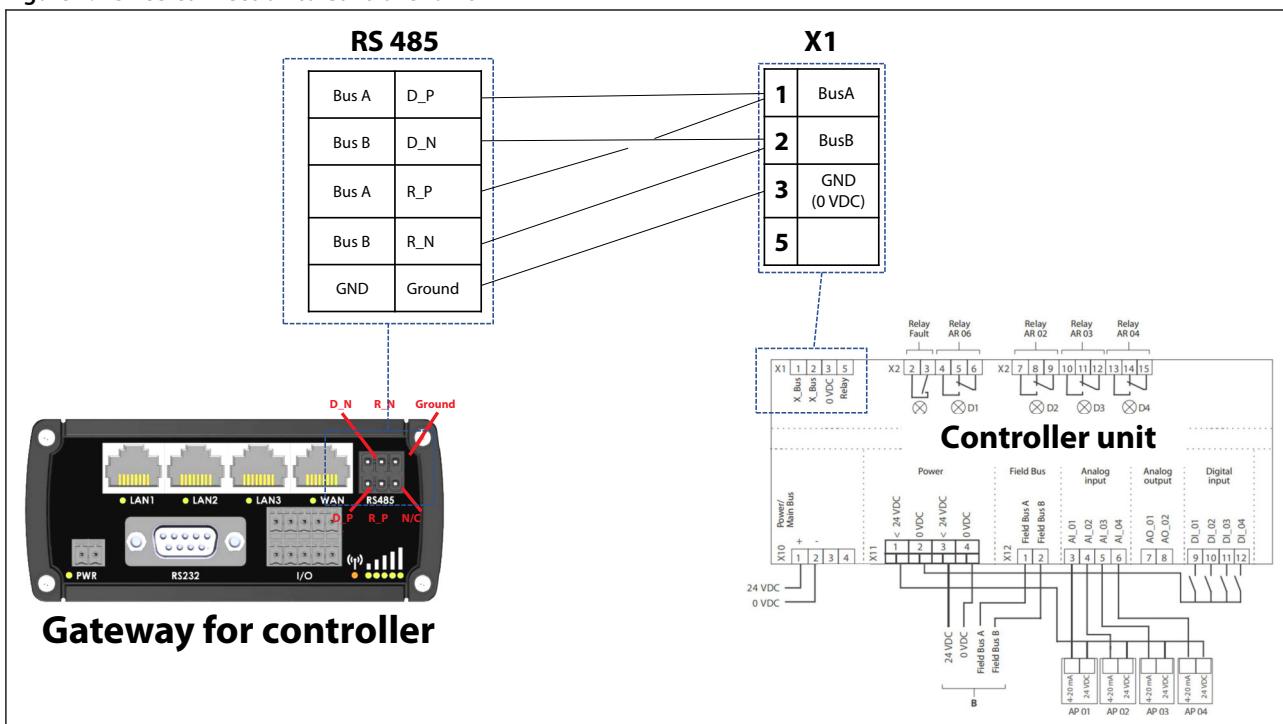


Table 7: RS 485 Connection

Table 7: RS-485 Connection			
Terminal Name-Gateway	Description	Type	RS485-2-Wire
D_P	Driver positive signal	Differential Output	Bus-A
D_N	Driver negative signal	Differential Output	Bus-B
R_P	Receiver positive signal	Differential Input	Bus-A
R_N	Receiver negative signal	Differential Input	Bus-B
Ground	Device ground	Differential Output	GND

RS 485 connection to Controller unit

Figure 2: RS 485 connection to Controller unit



Modbus Communication

For details on the Modbus communication and information please refer [Modbus communication user guide](#)

Certificates, declarations, and approvals

The list contains all certificates, declarations, and approvals for this product type. Individual code number may have some or all of these approvals, and certain local approvals may not appear on the list.

Some approvals may change over time. You can check the most current status at danfoss.com or contact your local Danfoss representative if you have any questions.

Valid approvals

Table 8: Directives

Features	Approvals
Immunity	EN 55024:2010
Radio disturbance	EN 55022:2010
ESD	EN 301 489 V2.1.1 (EN61000-4-2:2009)
RF	EN 301 489 V2.1.1 (EN 61000-4-3:2006, A1:2008 und A2:2010)
EFT	EN 301 489 V2.1.1 (EN 61000-4-4:2013)
Surge protection	EN 301 489 V2.1.1 (EN 61000-4-5:2014)
RC	EN 301 489 V2.1.1 (EN 61000-4-6:2014)
Antishock/Drop/Vibration	IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013, EN 60950-1:2006 + A1:2010 + A2:2013 + A11:2009 +A12:2011
Impact strength	IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013, EN 60950-1:2006 + A1:2010 + A2:2013 + A11:2009 +A12:2011

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