



Vodafone Modbus Cloud Connect Datasheet

The „all-in-one“ product from one of the IoT world market leader for direct connection of Modbus devices via Narrowband IoT & LTE-M to your cloud.



Product-Modules



Hardware

The CE-certified and in-house developed gateway with Modbus RTU master is suitable for DIN rail mounting and can be connected through a serial RS-485 2-wire interface. The integrated mobile radio modem (Nordic nRF9160) and the enclosed antennas take care of receiving and sending data via mobile radio.



Connectivity

The product includes a factory-installed and tested Vodafone Global SIM card (chip) to enable data transmission via Narrowband-IoT (NB-IoT) and LTE-M already in over 25 countries. The necessary data plan for connectivity tariffs is also included to directly take advantage of LPWA (low-power-wide-area) network technologies.



Self-Service Portal

To facilitate device management, a self-service portal (backend & frontend) is included. This includes configuration of Modbus RTU devices as well as bus systems, an online live monitor and flexible data connection through provided cloud adapters (MQTT, HTTP).



Support

Initial support for commissioning (device onboarding) with a personal contact person makes it easier to get started. In addition to the self-service portal as a low-code application, permanent support with a service desk and ticket system is also available for operating the solution.



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Product details

Interface	Modbus RTU (RS-485, 2 wire) Interface max. 32 Modbus-Devices (BUS-Members); up to 1200 m line length; adjustable baud rate and parity
	NB-IoT/LTE-M Modem (Nordic nRF9160 SiP)
	Power supply (pluggable terminal strip 3-pole*)
Serial data rate	Max. 115 kbps
LED	1 × LED for status display
Supply	5-24 V (DC)
Power consumption	1,5 W
Network/Frequency band	LTE Cat M1/Cat NB1 B8, B20: 23 dBm
Operating temperature	-20 °C - +55 °C
Storage temperature	-25 °C - +60 °C
Housing	PC (Polycarbonate)
Dimensions (B × H × T)	18 × 90 × 58 mm
Weight	41 g without Antenna
Mounting	Mounting on DIN-Rail
SIM-Card	Vodafone Global IoT MFF2 SIM
Protection class	IP20
Humidity	max. 95 % r. H. (non-condensing)
Antenna*	2 Versions (2 m line length): • Rod antenna with magnetic base • Flat antenna with adhesive base

Ports

Modbus	(PIN A+B)
Connector*	FMC 1,5/ 3-ST-3,5 pluggable terminal strip 3-pole
Conductor cross-section	0,14 - 0,5 mm ² AWG 26 - AWG 20
Modem	1x SMA Antenna socket
Power Supply	(PIN VDC/GND)
Connector*	FMC 1,5/ 3-ST-3,5 pluggable terminal strip 3-pole
Conductor cross-section	0,14 - 0,5 mm ² AWG 26 - AWG 20

Order no. Products

Gateway	MOC-GW1
Rod antenna with magnetic base	MOC-AN1
Flat antenna with adhesive base	MOC-AN2
Connector	MOC-ST1

Installation/Onboarding/Configuration

Installation

The device may only be connected or installed by a qualified electrician. Onboarding is performed by scanning the QR code on the device in the Self-Service Portal (account required).

Onboarding/configuration

The self-service portal for all onboarding and configuration options can be reached at www.modbuscloudconnect.net.

If you have any questions or problems, you can reach our service desk at <https://service.grandcentrix.net>.

Norms and Standards



RED 2014/53/EU
IEC62368-1
RoHS

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Data sheet Modbus Cloud Connect. All information without guarantee, errors and changes excepted. Page 1 of 1 Doc.ID: MOCCDB5, published: 05/2023



*included in scope of delivery