Protocol Converter UNIGATE® MB

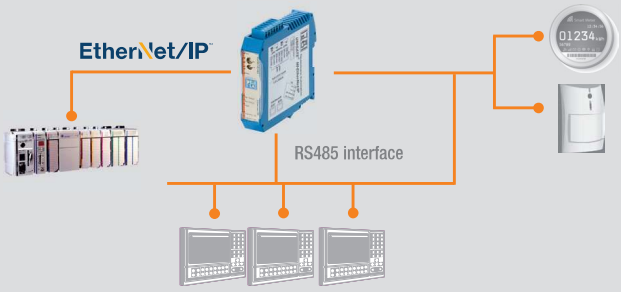
For every device with Modbus RTU interface

The Deutschmann Protocol Converter UNIGATE® MB connects your device to the desired fieldbus or Industrial Ethernet standard via a serial interface. RS232, RS485 and RS422 interfaces are on Board as a standard feature of the MB.

The communication between the chosen system and the serial side can be carried out via Modbus RTU, Modbus ASCII as well as other common bus systems such as 3964(R).
The UNIGATE® MB is available as slim DIN rail module according to IP20.

Application example for PROFIBUS Network

Application example for EtherNet/IP Network



Connect up to 31 devices with serial RS485 interface

Typical industries

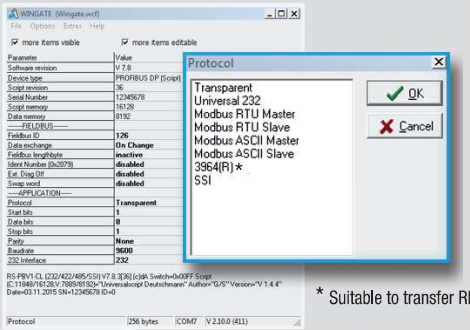
Water waste management · Display Systems · Drive Technology · Automotive · Energy · Factory Automation · Building Automation · Air Conditioning Systems · Shipping Industry · Traffic & Transportation Technology

UNIGATE® MB - Features and benefits

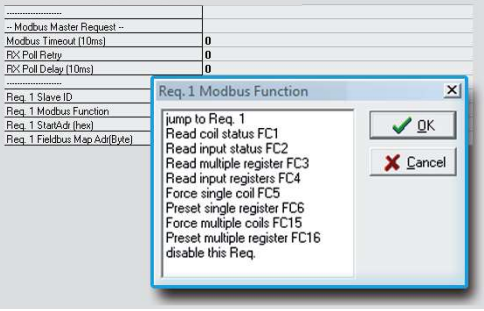
- The UNIGATE® acts as either Master or Slave on the serial network when the Modbus RTU / ASCII protocol is converted
- Easy Modbus configuration via configuration tool WINGATE
- The MB allows any automation device with a serial RS232/422/485 Modbus RTU Master or Slave interface to participate on a network
- The MB is well compatible with PLCs from the world-wide leading manufacturers. E.g. Rockwell, Schneider Electric, Siemens, Beckhoff and many more
- No PLC function blocks are needed as the protocol conversion is performed via the UNIGATE®
- Once a configuration is completed it can be re-used for other installations
- Versions with Dual Port Ethernet switches allow for daisy chaining and eliminate the need for external switches
- Wide voltage range from 10 to 33 VDC

Configuration tool WINGATE

WINGATE is a Deutschmann developed configuration software for the UNIGATE® series. The Windows™ based software with an easy- to-use interface requires no pro-gramming and the device configuration can be finished in just a few steps.



* Suitable to transfer RK512 protocol



Technical data

UNIGATE® MB		
Protocol	Modbus RTU Master/Slave, Modbus ASCII Master/Slave, 3964(R)*, Transparent, ASCII, SSI	
Max. stations	31 (with RS485/422)	
Baud rates	110 Baud - 625 KBaud	
Physical standards	RS232/422/485	
Modbus commands	0x01 Read Coils, 0x02 Read Discrete Inputs, 0x03 Read Holding Registers, 0x04 Read Input Registers, 0x05 Write Single Coil, Write Single Register, 0x0F Write Multiple Coils, 0x10 Write Multiple Registers Customized commands can be created.	
Technical Details		Standard
Weight	approx. 140 g	
Dimensions (LxWxD)	111x23x117 mm	
Protection class	IP20	Protection against foreign bodies and water to IEC 529 (DIN 40050)
Housing material	Polyamide	
Installation position	Any	
Location	Switch cabinet	
Mounting	DIN rail	EN 50022
Certifications		
CE	2014/30/EU	EN61000-6-2 Immunity EN55011 class A Emission
RoHS		RoHS II Directive 2011/65/EU
REACH	downstream user	
Electrical Characteristics		
External power supply	10..33 V DC	
Current consumption at 24 VDC	Typ. 120 mA, max. 150 mA. (At 10.8 V. typ. 350 mA)	
Hardware Characteristics		
Short-circuit protection	Yes	
Galvanic isolation on sub-network	Yes	
Environmental Characteristics		
Operating temperature	-40°C ... +85°C, variants with RJ45 socket: -25°C ... +85°C	
Storage temperature	-40°C ... +85°C	
Relative humidity	0% - 95% non condensing	
Immunity and emission for industrial environment		
Electrostatic discharge	+/- 4 kV	EN 61000-4-2
Electro magnetic RF fields	10 V/m 80 MHz - 1 GHz 3 V/m 1,4 GHz - 2,0 GHz 1 V/m 2,0 GHz - 2,7 GHz	EN 61000-4-3
Fast Transients	+/- 1 kV	EN 61000-4-4
Surge protection	+/- 1 kV	EN 61000-4-5
RF conducted interference	10 V/rms	EN 61000-4-6
Emission (at 10 m)	40 dB 30 MHz - 230 MHz 47 db 30 MHz - 1 GHz	CISPR 16-2-3

Network	Art.-No.	Network	Art.-No.
CANopen	V4025	PROFIBUS	V3978
DeviceNet	V3980	PROFINET 2Port	V3979
EtherCAT	V4026		
EtherNet/IP 2Port	V3981		
Modbus TCP	V3982		
MPI	V4027		

* Suitable to transfer RK512 protocol

Bus Network specific features

1 = Network connector, **2** = Baud rate, **3** = I/O data, **4** = other

CANopen	**1** = DSUB9F, **2** = 10 kbit/s to 1 Mbit/s, **3** = 255 Bytes IN/OUT
DeviceNet	**1** = 1x5p; 5.08 Phoenix plug, **2** = 125-500 kbit/s, **3** = 255 Bytes IN/OUT, **4** = Communications adapter, profile n. 12
EtherCAT	**1** = 2xRJ45, 100 Mbit/s
EtherNet/IP	**1** = 2xRJ45, **2** = 10/100 Mbit/s, **3** = 1060 Bytes IN/OUT, **4** = EtherNet/IP group 2 and 3 server.
Modbus TCP	**1** = RJ45, **2** = 10/100 Mbit/s, **3** = 252 Bytes IN/OUT, **4** = Class 0, 1 and partially class 2 slave functionality
MPI	**1** = DSUB9F, **3** = 255 Bytes IN/OUT
PROFIBUS	**1** = DSUB9F, **2** = Up to 12 Mb, **3** = 244 Bytes IN/OUT (488 total), **4** = PROFIBUS DP (IEC 61158)
PROFINET 2Port	**1** = 2xRJ45, **2** = 100 Mbit/s, **3** = 1024 Bytes IN/OUT, **4** = RT Communication and Cyclic data exchange
More versions on available on request.