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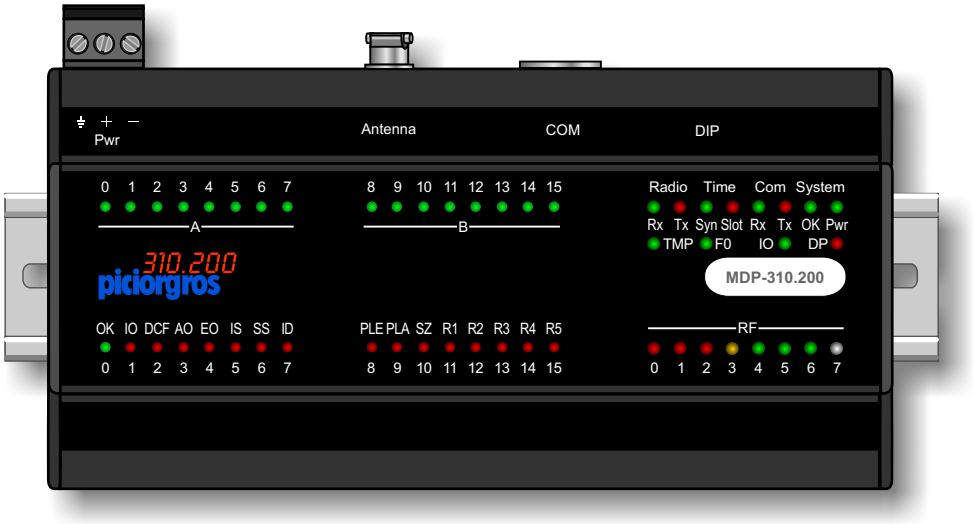
GMBH

MDP-310.200H Radio Modem-Server



The MDP-310.200H acts as a radio modem and master station for radio networks with up to 64 slave stations: RTU-710 Radio Remote I/O Modules, TRM-710 Serial-Interface Radio Modems, SS20F Solar Powered RTU Stations, and Local I/O Extension Modules (LIO's). The master station cyclically interrogates the slave stations, storing the received data until it is collected by a locally interfaced central control system. The MDP-310 also acts as a radio gateway that allows its host control system to set outputs and read inputs at remote slave stations. The MDP-310 does all this transparently so that the control system is relieved of the complexities of radio communications, slave station polling and radio network management.

Extended routing: The MDP-310 can communicate with any slave station directly or indirectly via a chain of up to 31 other slave stations additionally functioning as radio repeaters.

Virtual I/O Linking Function: The MDP-310 can act as a "virtual I/O patch panel" through which up to 300 dedicated virtual links can be set up for autonomous transfer of I/Os among slave stations. Each link enables an input at one station to be reproduced as an output at another station, autonomously of the host control system. I/O information is at the same time made available to the control system for display, monitoring, supervisory control and alarm management functions.

Integrated Communications Logger: The MDP-310 features an integrated communications logging function that automatically records all occurrences of irregularities in radio traffic [e.g., lack of slave station response, radio reception loss, etc.].

Integrated Radio Monitor: This function records all radio data traffic, by which faults and errors can be diagnosed conveniently and precisely.

Interfaces and Protocols: The MDP-310 has two serial data interfaces (COM and AUX), user-configurable as RS-232 or RS-485/422. It also has an interface for PEM I/O Extension Modules. A Profibus DP interface is optionally available. Radio communication data is accessed using the MODBUS or MoP/MoP2 protocol. 3964R or the timeout protocol can be used as a Layer-1 protocol.

OPC Server software is available to enable Windows based SCADA and other applications to access data from the radio network.

MDP Config: This Windows based configuration and programming software tool is supplied as standard with each unit. It allows radio communication parameters (frequency, RF power output level, etc.) to be easily set up in the MDP-310 from a PC.

PiRangia: This PC Windows based software tool allows easy configuration of the MDP-310 from a PC, to set up autonomous I/O transfer linkages among stations.

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Specifications

Functions:	Radio modem-server with two serial data interfaces plus a serial interface for PEM I/O Extension Modules
RF transmit power level:	User selectable from 0.1 watt to 6.0 watts
Server functions:	Automatic handling of up to 64 radio slave stations: any mix of Types RTU-710, SSF20 or TRM-710. Slave stations can be interrogated at any time irrespective of time-slots
Interfaces:	Standard: • Two serial data interfaces: RS-232 or RS-485/422 (selectable) • Local Bus for connecting up to 16 Type PEM I/O Extension Modules Optional: • Profibus DP
Protocols supported:	• MODBUS-RTU • MoP • MoP2 • 3964R • Profibus DP
Special features:	• Communication logger for up to 400 events, time-stamped • Monitoring of data / radio communication traffic through the two serial data interfaces possible during normal operation • Local Bus for interfacing of PEM I/O Extension Modules to the MDP-310, enabling selected on-off and analog inputs of slave stations to be reproduced as corresponding on-off and analog outputs at the MDP-310 master station • Alarm signals from slave stations can be reproduced at the master station, autonomously of the central control system: e.g., for direct connection of GSM alarm monitors. • Up to 300 linkages can be set up for "virtually wired" transfer of on-off and analog I/Os among slave stations, and/or for output through master station I/O Extension Modules
RF field strength indication:	LED bar-graph display of received RF signal strength. RF field strength fluctuations can be recorded by the integrated communication logger function
Radio repeater operation:	Transparent over max. 31 repeater stations
Power supply voltage:	12-24 VDC nominal (9.6 - 28.8 VDC operating)
Enclosure:	Aluminum pressure die-cast housing, DIN rail mounting
Operating temperature:	-20C to +70C