# MOD102

MOD-BUS-protocol

## Application

The ETSI standard TETRA provides a multifunctional radio system which enhances existing applications or enables new ones. It is a frequent requirement to link automation control systems over a wide distance of several kilometres. With TETRA you link these systems quickly and easily for the exchange of shorter data packets (SDS - short data service). The SDS service allows to transmit data of up to 140 bytes in one packet.
The TETRA product MOD102 enables communication in the TETRA network. TOM100 TETRA modem is used to access the TETRA network. MOD102 will lead to significant cost reduction in telecontrol. MOD102 developed by ATS Elektronik GmbH is a TETRA gateway which opens up a variety of new options when connected to the master of Phoenix Contact Radioline modules. By simply attaching MOD102 to the master module all commands are transferred over the Modbus protocol to the respective control or slave unit. Radioline modules use Trusted Wireless 2.0 radio technology to communicate with different peripheral devices. MOD 102 can also integrate Phoenix Contact Trusted Wireless 2.0 radio technology into a TETRA infrastructure.

Apart from telecontrolling or controlling different kinds of processes, the module also monitors diagnostics parameters as for instance radio signal reliability of individual subscribers.

Via Modbus protocol I/O modules can be directly connected by radio to the control unit with Radioline over the integrated RS232 or RS485 interfaces. I/O expansion modules can be connected to each slave or repeater slave. The I/O signals are stored in the master radio module in an integrated Modbus register and from there they can be retrieved at any time over the MOD102 by a control unit located in a TETRA network.

Communication uses the master-slave principle. The master always starts communication with a query. Each slave has a unique address to be defined via I/O mapping. When a slave detects that its address was called by a master, it will react appropriately: it will always send an answer. Slaves will never communicate among one another. In addition, they are not able to initiate communication with the master.

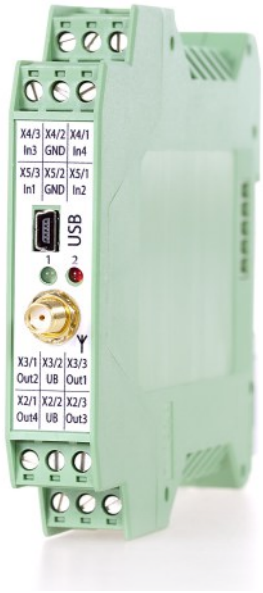


*fig. MOD102*

## Phoenix-Contact-Modules

The following Phoenix Contact modules can be combined with MOD102:

- RAD-DAIO6-IFS
- RAD-DI4-IFS
- RAD-DOR4-IFS
- RAD-DI8-IFS
- RAD-DO8-IFS
- RAD-AI4-IFS
- RAD-AO4-IFS
- RAD-PT100-4-IFS

## Technical Specification

- Dimensions: 18 x 99 x 123 mm (L x W x H)
- Power supply: 12-24 V DC
- Max. power input: 12 W
- Ambient temperature: -20°C to 60°C non-condensing
- Expandable up to 8 Phoenix Contact modules
- Motorola TETRA modem TOM100 (without CPS programming software)
- SMA antenna connection
- Hutschienenmontage nach DIN EN 50022
- Rail mounting according to DIN EN 50022

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