



TO-PASS® -FAQ-

Remote Monitoring

• What is TO-PASS® used for?

TO-PASS® modules are used as/for:

- Permanent online connection
- Fault detectors
- Remote data polling
- Data storage
- Telecontrol module

• What are the special functions of TO-PASS®?

Acknowledgement
Stand-by
Remote parameterization

Event logger
Data logger
GPRS dedicated line

- Acknowledgment of any fault message
- Automatic remote switching of the stand-by service
- Programming and process visualization conveniently performed from the office
- Saves all occurring status changes
- Saves all process values with adjustable cycle
- Permanent online connection to the process

• What are the technical data for TO-PASS®?

Technical Data

Operating voltage: 8.5 ... 36VDC
 Communication: GSM quad-band
 Number of recipients: 4 (PC, SMS, e-mail, phone, fax)
 Ambient operating temperature: -20 °C ... 70 °C

Inputs

Digital: 8 (6.5 ... 24VDC)
 Analog: 8 (4 ... 20 mA or 0 ... 20 mA)

Outputs

Digital: 4 contacts
 Analog: 2 (4 ... 20 mA or 0 ... 20 mA)

Communication Types

SMS (bidirectional)
 DFÜ selection connection (CSD)
 GPRS connection to Internet



• How do I insert a SIM card?

Insert the SIM card into the SIM card slot of TO-PASS®. Carefully push the SIM card into the slot using a pointed object (e.g., a screwdriver) until it locks into position. The SIM card is then approx. 2mm in the housing.

• How do I get the SIM card out of TO-PASS®?

Press on the upper edge of the SIM card with a flat-head screwdriver. This will spring the card upwards so you can pull it out.

• Do I need special SIM cards?

TO-PASS® communicates, just as mobile telephones do, using the mobile radio network GSM (Global System for Mobile Communication). For applications having only fault messages, a SIM card offered by SMS service is adequate. This, for example, is offered by every standard T-Mobile, Vodafone, O2 or E-plus mobile telephone card.

• Why is the "RUN" LED blinking fast?

RUN LED: Slow blinking in the first 29 seconds after system start means that TO-PASS® is logging into the GSM network.

Fast blinking means that TO-PASS® could not log into the GSM network. The following could cause this:

- Incorrect telephone number parameterized in TO-PASS®
- The PIN of the SIM card in the parameterization is deactivated, but not on the SIM CARD
- Incorrect PIN set on TO-PASS®
- Antenna not connected
- SIM card locked
- Roaming in the parameterization is not permitted on a third-party network
- Poor GSM network

Permanently-lit with 10ms pause: normal operation, TO-PASS® is logged onto the GSM network.

• Can I extend my antenna cable?

For communication with the GSM network, TO-PASS® modules need a GSM antenna. The cable to the antenna can be extended. Contact your TO-PASS® sales partner. With extensions > 10m, please check the network field strength of TO-PASS® using the "Test modem" menu item. Do this immediately after switching on TO-PASS®. The reception field strength should not drop below 35%.



• Can I also measure voltages with analog inputs?

Analog inputs can be parameterized at will for 0 to 20mA or 4 to 20mA input current. If a voltage should be measured, this is possible thanks to multipliers. The internal resistance of TO-PASS® is 250 Ohm. The maximum permissible voltage of an analog input on TO-PASS® is 5VDC. From this there arises a maximum current of 0.02A. If, for example, 10VDC should be measured, you need a multiplier of 250 Ohm according to the Ohmic law. Please note that the parameterization of the analog input in the example should be set to 0 to 10V. For the multiplier, use measurement resistances with at least 0.5% precision.

• TO-PASS® is not sending any SMS messages, why not?

Go into the TO-PASS® operating software and click the "Modem - Test Modem" field. Determine whether the reception signal (green bar) is at least at 35%. If the reception signal is poorer, select another antenna position or an amplifying antenna. Alternative: no reception address is specified in the operating software under "Addresses."

Or: no addresses are assigned on the digital and analog inputs.

Or: TO-PASS® is not logged onto the GSM network, the green LED blinks fast (see above).

Or (if you are using a pre-paid card): credit used up. Check the account status of the prepaid card and load it up again if necessary.

• Can every TO-PASS® be called remotely?

Yes, a call via the "Voice" service can be used to acknowledge messages.

The remote working on a TO-PASS® is a special function that uses the "CSD" service and is only implemented for devices with the "Web" add-on (e.g., 761-102, 761-103, 761-205, 761-206).

• Does TO-PASS® also work with a pre-paid card?

Yes. Each TO-PASS® can be operated with a pre-paid card. However, please note the services that are activated on this card. At a minimum, TO-PASS® requires the SMS service, "CSD" for remote parameterization, and "GPRS" for Internet use.

Please note that there must always be sufficient credit on the pre-paid card, since TO-PASS® currently does not support the querying of the account of the pre-paid card. Therefore, TO-PASS® also does not provide any SMS messages about the account status. A series of providers offer account query of the pre-paid card via Internet.

• With what operating voltage can TO-PASS® be operated?

TO-PASS® requires a direct voltage of at least 8.5VDC to max. 36VDC.



• Can TO-PASS® be operated with 230VAC?

No, TO-PASS® is essentially designed for a direct voltage of 8.5 to 36VDC.

• Starting at what voltage do the digital inputs react?

To trigger a message from TO-PASS® on a digital input, min. 6.5VDC is required.

• How do I mount TO-PASS®?

Mounting occurs as usual for control systems on DIN/EN 35 rails. No screwing on is necessary, TO-PASS® is just "clicked on."

• What is required with a poor GSM network?

The network strength must be at least 35%. You can measure this easily directly with the TO-PASS® by selecting the "Modem - Test Modem" menu item in the interface directly after switching on.

For field strengths < 35%, you can:

- change the position of the antenna
- use an amplifying GSM antenna
- remove an existing antenna extension

• Can bus solutions also be connected?

Yes! With TO-PASS®, various buses can be integrated. Ask your TO-PASS® distribution partner about this. It is possible to connect Modbus RTU slaves directly to the RS-232 interface of TO-PASS®.

Here, TO-PASS® is the Modbus RTU Master, which can read up to 64 registers. Using RS-232/RS-485 converters, several Modbus RTU slaves can also be connected. Additional bus systems such as M-Bus, AS-Interface, PROFIBUS, ETHERNET can be connected via the construction of gateways; e.g., with programmable WAGO fieldbus controllers and the RS-232 interface card 750-650/003-000.

• Are there expansion possibilities with TO-PASS®?

Yes! By connecting TO-PASS® to the WAGO-I/O-SYSTEM 750 via the Modbus RTU protocol there is a great variety of different expansion possibilities that can be plugged into the carrier rail as easily as possible.

The TO-PASS logo is displayed in a bold, white, sans-serif font against a blue background.The WAGO logo features the word "WAGO" in a large, bold, green font with a stylized arrow pointing upwards through the letter 'A'. Below it, the tagline "INNOVATIVE CONNECTIONS" is written in a smaller, green, sans-serif font.

• Can the SIM card lock itself? How can I avoid this?

Essentially it applies that if a SIM card is used and the incorrect PIN is entered three times in a row, the SIM card locks itself. An unlocking is only possible via the "PUK," which is also in the documents for the SIM card.

When switching on, TO-PASS® initializes with the SIM card and logs itself onto the GSM network automatically. If the incorrect PIN code was entered by the operating software or the PIN on the card was not deactivated but it was deactivated in the user interface, TO-PASS® tries to log in by itself with the incorrect PIN.

In order to avoid all these complications, please deactivate the PIN on the SIM card with your mobile telephone. Also deactivate the PIN in TO-PASS® with the TO-PASS® operating software.

• What do I need in order to read TO-PASS® data remotely?

Essentially you need the special function „remote parameterization.“ This function can also be loaded onto every TO-PASS® worldwide after the fact.

To establish a connection, you only need online access to the telephone network with your PC and the TO-PASS® operating software. The PC should have an analog modem, GSM modem or ISDN modem. Then, in the operating software, select the "File - Settings Connection" menu item and specify the type of connection.

Please note that with connections via an analog modem or ISDN modem, the data telephone number is required to dial. It must be entered under "Identity." For use of a GSM modem, the normal GSM telephone number of TO-PASS® is sufficient.