ITPR GSM Modem Interface Module

The ITPR01 is a low voltage two-way GSM interface that sends and receives mobile phone messages when operating. This device incorporates a latest generation GSM dual band engine.

The interface has a single 125Vac rated relay output than can be used to switch on and off electrical loads as well as setting electronic thermostats to the night setback mode.

The unit is controlled using text messages from any mobile phone.

Model Types

Model	Description
ITPR-011	GSM Interface Module for Remote Activation

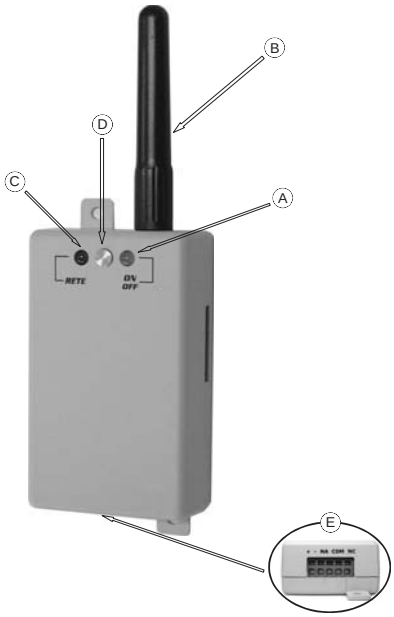
Technical Data

Power supply	9..12Vdc, 500mA max. (separate mains adapter required)
Output	1 x Relay 0.3A @ 125Vac SPDT
Power Consumption	Standby: 40mA Transmitting: 100mA
Indication	Dual Colour LED: Output Closed/Open Red LED: Device State
Button	Manual Toggle of Output
Installation	Wall Mounting
Operating Temperature	0..45°C
Storage Temperature	0..+50°C
Humidity Limits	20..80% rH (non-condensing)
Weight	120 gr
Size	150W x 72H x 34D mm

Overview

The ITPR is a low voltage two-way GSM modem that sends and receives text messages when operating, This device incorporates a latest generation GSM dual band engine. Follow the instructions in this handbook carefully to install and use the device correctly. The device may cause interference when used near radios, TVs, telephones or electronic devices in general.

The ITP R01 1 may be subject to interference that can affect its performance. Do not place the ITP R01 1 near medical equipment. Do not use the ITP R01 1 in contact with the body. Do not touch the antenna unless strictly necessary.



Installation

Make sure temperatures are within **0°C .. +45°C** when you install the product you've purchased. Put the product on a stable surface. Make sure there is a good GSM network signal.

Programming the SIM Card

To make the device work correctly, you must insert the Plug-In SIM Card for receiving and sending text messages. First you must program the SIM card.

Programming the SIM card:

- Insert the SIM card in a mobile phone.
- Disable the "Enter PIN code".
- Delete all phone numbers in the SIM address book.
- Enter the four-number password you want to use in position number one in the SIM address book (and not in the mobile phone memory), e.g.: name: PW; number: 1234 (this is the password).
- Remove the SIM card from the mobile phone.

Note: to make sure the password is in the right position, delete all phone numbers in the SIM address book.

Inserting the SIM card:

- Make sure the device is turned off.
- Locate the SIM card slot, and gently press the (yellow) button to with a pencil open the SIM slot.
- Insert the SIM card in the slot, making sure it's the right way round.
- Push the SIM card slot (gently) to close.

Note.: to make sure you've programmed the SIM card correctly, turn on the device (after putting the SIM card in and connecting the antenna), wait one minute, then press the button to manually change output. If this doesn't work, the SIM card has not been programmed correctly.

Installation Cont'd…

Power supply
The device must have a power supply from 9..12V DC with a current from 300..500 mA DC. Check the polarities as shown on the device.

Note: a short-circuit protected power supply must be used.

Connecting the antenna
To connect the antenna:
- Make sure the device is off.
- Screw the antenna onto the connector (gently).

Checking reception
You can check GSM reception and connection to the GSM network (after powering the device) in one of the following ways:
- Call the phone number of the SIM card in the device. The device is connected to the GSM network if there is a ring tone.

When the device is being turned on, and when it is operating, the Network LED may:
- Flash on and off slowly (i.e. the LED is on for longer). This means the device is not connected to the GSM network and is searching for a mobile phone frequency, or the SIM card has not been inserted correctly. If the device has just been turned on, wait a few moments. If this slow pulse continues, make sure the device is in the right position and the SIM card has been inserted correctly.
- Flash on and off quickly (i.e. the LED is nearly always off). This means the device is connected to the GSM network.

Controls

You can text message the following commands to the device. This will affect output as follows:
- **A**: Turn on. Dual-colour LED is GREEN →The NC contact is short-circuited with the COM, the NO contact is open.
- **S**: Turn off. Dual-colour LED is RED → The NO contact is short-circuited with the COM, the NC contact is open.
- **D**: Request current status. No effect on output.

The text message with the command to send to the phone number of the SIM card inserted in the device is as follows:

Password#COMMAND **(CAPITAL LETTERS)**
(The SMS text must be input without blank spaces)

The device will then carry out the command (if correct) and will send a text message to the sender's mobile phone number to confirm. The device will send one of the following messages:
- Remote control: Device off
- Remote control: Device on
- Remote control: ERROR!

For example, if the password is 1234, the command: **1234#A** Will short-circuit the NC contact with the COM, and will open the NO contact.

The return text message will be:
Remote control: Device on

The device will send an error message:
Remote control: ERROR!

If the text message command is wrong:
wrong password, non-existent command, wrong format.

Note.: text messages may sometimes be delayed.

Manually Changing Output

Besides text message operation, the device's output can be manually changed using the button between the two LEDs. When the button is pressed, after a few seconds, the output status is inverted (i.e. from on to off or from off to on).

The dual-colour LED shows the current output status:
- **Green:** NC contact short-circuited with the COM, NO contact open.
- **Red:** NO contact short-circuited with the COM, NC contact open.

External Devices

The ITPR has been specifically designed for the remote control of systems connected to it (irrigation systems, timer thermostats, boilers, etc.). These systems must have a control line that can be connected to the product you've purchased (see the device's relay output rating).

Note: the ITPR has not been designed for use as a switch to install on the power line of the system to be controlled.

To ensure a correct association between output status, external device status (on or off) and the dual-colour LED status, when you install the device, make sure you take the following steps:
- If the external device you want to control comes on when the control line is closed, connect this line to the NC and COM terminals.
- If the external device you want to control comes on when the control line is open, connect this line to the NO and COM terminals.

Note: the connector is made with spring terminals. In order to wire the cables please insert a small screwdriver blade into the visible rectangular slot, then apply a slight pressure directed to the top side. By doing this the contact is opened and the cable terminal is fit inside the relevant hole.

If you follow these instructions, the association between the status of the connected device and the dual-colour LED will be:
- Green LED → External device on.
- Red LED → External device off.