GSM
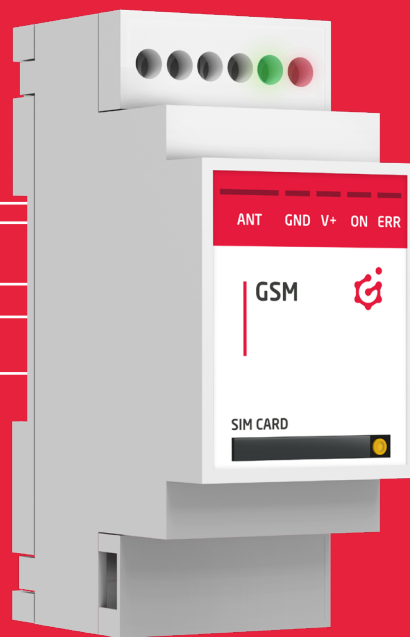## MUL-036-T-06

GSM COMMUNICATION MODULE FOR DIN RAIL ASSEMBLY

Enables bidirectional connection of the user with the system using a mobile telephone network.

- sends information and receives requests
- "Ask" function – if any events occur, a text message is sent with a request for response
- enables you to divert a voice call to a mobile telephone

CONFIGURATION PARAMETERS

CHARACTERISTICS

Name	Description
Inbox	Inbox containing the last text message received. Does not apply to Y/N text messages sent in response to queries made using the Ask() method
Outbox	Outbox containing the outgoing buffer
AccessList	List of numbers which can be used for sending requests, e.g. 555555555; 666666666; A semi-colon must be included at the end!
ScriptList	List of scripts (scenes) which can be requested by text messages. List format: script1;script2;script3; etc. In practice, this will look as follows: waterplants;switchonboiler;switchoffboiler; A semi-colon must be included at the end!
Password	Password which must be included in a text message sent to the address of the gateway (if PassMandatory is set to 1)
PassMandatory	If set to 0, password is not required. If set to 1, password is required
ConfirmMessage	A confirmation text message. If defined, it will be sent after each correct activation of a script whose name was sent via a text message
RefuseMessage	A refusal text message. If defined, it will be sent after each correct activation of a script whose name was sent via a text message
SignalLevel	Mobile network signal level in the range of 0 - 32
AskConfirm	Text specifying the form of a confirmation message for the Ask() method, e.g. "y", "yes"
AskRefuse	Text specifying the form of a refusal message for the Ask() method, e.g. "n", "no"
PIN	PIN code of SIM card

METHODS

Name	Description
ClearInbox	Clears the incoming buffer (inbox). The incoming buffer is cleared automatically when a new text message is received. This does not apply to text messages with Y/N confirmations.
ClearOutbox	Clears outgoing buffer (outbox)
AddToOutbox	Adds text to outgoing buffer (outbox)
SendOutboxTo	Sends outbox content to the specified number
Ask	A method which sends an enquiry to a telephone number. It returns 1 if the user received the message with a confirmation response and 0 if the response was a refusal or if the user did not respond in the required time (timeout). Parameters: Ask (tel. number; enquiry; timeout in s). At the end of the enquiry, the following text form is always added: [AskConfirm/AskRefuse] so for instance: [Y/N] or [yes/no].
Call	Calls the specified number. The method returns 1 if the connection is established or 0 when there is no connection
Drop	Drops the voice call

EVENTS

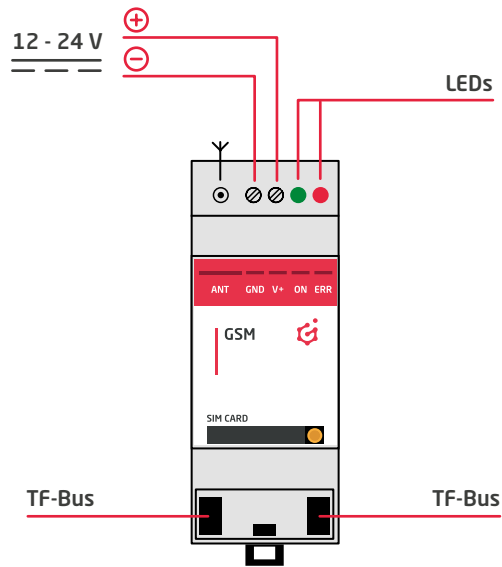| Name	Description
OnReceive	Occurs immediately after receiving a text message.
OnSend	The user can read an Inbox characteristic to check the text message content
OnStatus	Occurs immediately after sending a text message
OnCall	Occurs immediately after receiving a text message with the status command
OnScript	Occurs when a voice call is answered (only AccessList number calls are answered – the remainder are rejected)

TEXT MESSAGE COMMANDS

Name	Description
"Help" or "password:Help"	If the number is included on the AccessList (if created) and when the password is correct (if required), it returns a list of the available scripts (ScriptList characteristic)
"Status" or "password:Status"	Generates the OnStatus event
Name of script with or without password	When the user sends the following text message to the number of the gateway: lamp1, the OnScript event will be generated when the following conditions are met: - no password is required; - the number is on the AccessList (AccessList characteristic); - "lamp1" is on the list of available scripts (ScriptList characteristic). If the password is required, the text message should be as follows: "password:lamp1", so the command must be preceded by the password. A colon, semi-colon, comma, period or slash can be used as the separator (i.e. any non-letter character).

TECHNICAL SPECIFICATIONS

DC supply	12 - 48 V
average current input (with 12V)	17 mA
max. current input (with 12V)	1000 mA
weight	72 g
dimensions (H/W/D)	58/36/90 mm
max. connection wire section	≤ 2.5 mm^2
size [DIN]	2
operating temperature range	0 to +40°C

WIRING DIAGRAM

LED – status indication:

- Green diode flashes every 500 ms – no errors in the module, correct reception
- Red diode flashes every 500 ms – no reception
- Red diode is illuminated continuously – module not connected
- Red diode flashes ever 200 ms – no SIM card or card error
- Green diode flashes every 200 ms, for t = time – the module sent an enquiry with the Ask function and is awaiting response; t = time for awaiting response