

GSM 110_343_686

Industrial GSM devices

Highlights

- Industrial GSM/GPRS 850/900/1800/1900 MHz communication/telemetry devices
- Based on Simcom SIM900D module
- Three different platforms based on number of inputs and outputs: 6/3/0* analog voltage/current inputs, 6/3/1* relay outputs with NO contacts and 8/4/1* optocoupler inputs

*see table of hardware platforms

- RS232 DCE serial interface
- Digital inputs and relay outputs are galvanically isolated allowing easy implementation into every system
- Device state indicated by four LED diodes
- Wide power supply range 8 to 30V DC
- DIN 35mm rail mounting



Functionality of the following devices is available in three different platforms, 110, 343 and 686, with different hardware resources, shown in Table of hardware platforms.

Analog inputs can be configured to work as voltage or current inputs. Relay outputs have large current capacity, so they can be used to directly drive 220V consumers and they can also operate in pulse mode.

Devices can be configured by Decode GSM Utility free software through RS232 connection, afterwards setup of device perimeters is possible. This can also be done via SMS.

SMS REPORTER

Description

SMS Reporter is industrial GSM/SMS telemetry device which uses GSM network for transferring commands, alarms and data by using SMS messages.

Application

SMS Reporter handles remote reading of analog and digital inputs and managing relay outputs by sending SMS message. Moreover, SMS reporter can be adjusted to send SMS messages on each state change of analogue and digital input. Each analogue and digital input has SMS table for up to 8 different SMS numbers.

GPRS ROUTER

Description

GPRS Router is industrial GSM/GPRS communication device which uses GSM network for transferring commands, alarms and data. Basic function of device is to manage transfer of industrial protocols over GPRS and to connect remote PLCs to SCADA programs over the VPN/GPRS network. Therefore, in addition to classic GPRS terminals, this device enables routing of fixed IP addresses and sending data from remote locations to centre. Currently, GPRS Router supports Modbus and OMRON Hostlink protocols, but it can be adjusted to support other industrial protocols based on asynchronous serial communication. It is also possible to configure the device as MODBUS slave by allocating internal address.

Application

GPRS Router handles transfer of asynchronous serial data between two devices in point to point configuration, or between more than two devices in star configuration (replacement for master-slave RS485 network). Device can be configured to work as master or slave via command mode. Master can establish connections with slave modules by using dynamic route selection from routing table. Slave modules can have one or more fixed routes to master module (also placed in routing table), selectable by setting code combination on four digital inputs. By allocating internal address to slave device, internal MODBUS slave is activated. In other words, slave is then behaving like RTU.

GSM 110 ADDITIONAL OPTIONS

GSM key

Description

GSM Key is a GSM relay management device that uses GSM network for managing one relay output with free call. Managing of relay output is allowed to numbers defined in user list that can contain up to 200 GSM numbers.

Application

GSM key enables remote management by one free call using one relay output. Device can be configured to send SMS about status changes on digital input.

SMS gateway

Description

SMS Gateway is industrial GSM/SMS communication device that uses GSM mobile network for distribution of commands, alarms and data, using SMS messages.

Application

SMS Gateway enables remote communication with remote control stations (equipped with PLC controller) by sending SMS messages. This enables remote management of control station, and, on the other side, it enables control station to notify users about changes of states and alarms. SMS Gateway can be adjusted to send SMS messages when state on digital input is changed. It is possible to enter up to 8 different numbers for digital input. Relay output can be managed by sending adequate SMS command.

***TABLE OF HARDWARE PLATFORMS**

Platform	Relay outputs	Optocoupler inputs	Analog inputs
110	1	1	0
343	3	4	3
686	6	8	6

Technical specification

GSM	SIMCOM SIM900D Quad-Band GSM/GPRS 850/900/1800/1900 MHz Compliant with GSM phase 2/2+ standard
Output power	Class 4 (2W at 850/900MHz) Class 1 (1W at 1800/1900MHz)
SIM card	Mini SIM, 1.8V/3.0V
Serial interface RS232	DCE configuration, DB9 female
Serial baud rate in command mode	9600 bps, 8N1
Analog inputs	6/3/0* inputs with conjoint bulk, with adjustable software: - current inputs 0-20mA or 4-20mA - voltage inputs 0-5V or 0-10V
Digital inputs	8/4/1* inputs with conjoint bulk, separated with optocouplers Nominal 12V DC – 24V DC max 30V DC Logic 0 – Input voltage < 4V DC Logic 1 - Input voltage >5V DC Counting mode: 0 - 65535 pulses
Relay outputs	6/3/1* relays with NO contacts, 5A, 30V DC / 250V AC
Antenna connector	SMA female, GSM 50Ω antenna with 3m cable included
LED indication	Power ON, GSM ON, Ready, Busy
Power supply	DC power supply, from 8 to 30V
Power supply connector	Pluggable screw clamp 5mm, 2.5mm ²
Power consumption	Standby 0.2W, max 3W
Dimension	35x85x58 mm; 70 x 85 x 58 mm; 105x85x58mm (without connection blocks)
Weight	cca 150g
Protection	IP40
Temperature range	-20°C to +75°C, 0 to 95% RH (non condensed)
Mounting	DIN 35mm rail

Please check User Manual, Application notes and website for additional information

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