BSC-50-E

Battery powered GSM RTU/Data Logger

- Low cost, power network independent RTU/data logger
- Maintenance free operation for up to 10 years
- Quick and easy installation
  4 digital inputs, 2 analog inputs and transducer excitation output

Applications

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- Environmental telemetry
- Power network fault monitoring
- Waste water management
- Security systems
- Asset management
- Greenhouse controls & irrigation systems
- M2M systems

Introduction

BSC-50 is a low cost, battery powered RTU/data logger for data transfer and alarm annunciation using SMS. The unit incorporates a quad band GSM/GPRS modem and a serial RS-232 port. The unit incorporates 4 digital inputs, 2 analog inputs and an excitation output for powering external transducers. An ultra low power microcontroller is utilized for alarm condition detection, subsystem power switching and overall system control. The unit incorporates a Lithium Thionyl battery supplying system operation for up to 10 years.

Modes of operation

Modes of operation include power network independent battery operation and external power adaptor supply operation for operation parameter setup.
During battery supplied operation, only the low power microntroller is awake. The microcontroller switches (on/off) the power consuming GSM modem in case of an alarm occurrence or during periodical data transfer and other subsystems as the external sensor excitation and analog conditioning circuits for sampling the analog inputs.

Technical characteristics

Power supply	internal 13.0 Ah Lithium Thionyl battery or external 12-30V power adaptor
Consumption	40uA (normal operation) AV 200mA (alarm messaging)
Digital inputs	potential free contact inputs
Analog inputs	0-1V, 0-20mA differential input, 10 bit resolution
Transducer excitation	Step up converter 12V/200mA
Serial port	RS232C, 9600 to 115200 bps
GSM modem	Quad band (850/900/1800/1900MHz) GSM CSD 14.4kbps GPRS Multislot Class 10, Class B
Indications	2 LED, GSM network status, external power supply indication
Temperature	-20°C, +55°C operating
Protection	IP66
Dimensions	130 x 130 x 75 mm

RoHS Compliant Directive 2002/95/EC

CE

Measurements

The digital inputs are scanned in closed loop by the microcontroller for detecting an alarm condition. Analog input scaling, alarm limits, sampling period, logging rate, data send rate are user definable.

Transducer excitation

The switched step up converter excitation supports 0-1V and 0-20/4-20mA transducers.

Alarming & messaging

SMS announcements include alarm induced messages and periodical messages for sending logged data. The unit supports discrete recipient alarming for several users. Alarm message texts are user definable.

Setup and programming

The unit can be programmed locally through the serial port or remotely via SMS by using simple ASCII configuration commands. The command set features commands for configuring input alarm parameters, scaling parameters and alarm limits, timing parameters and defining user groups. Remote setup SMS messages are accepted during the periodical message processing.

Enclosure

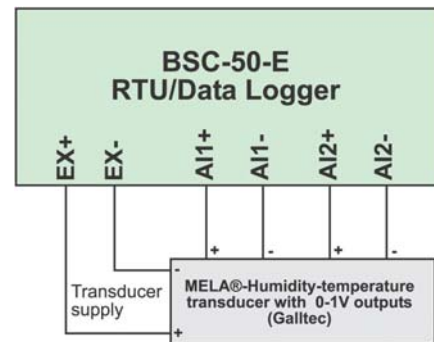Polystyrol enclosure (IP66) for in- and outdoor use.

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Firmware features

Digital input alarm state	Open or closed contact selection
Analog input	Scale, alarm limits selection
Analog sample interval	1-9999 minutes
Logging Rate	0-255 samples
Sending Rate	0-255 hours
Alarming	on alarm state of a digital input, 2 alarm limits on each analog input
Alarm delay	1-255 sec
Message texts	1-64 characters
Messaging	ASCII Alarm SMS ASCII Data SMS
Messaging Retries	1-99
Retry intervall	1-255 sec
Programming	ASCII command set
Remote setup	via SMS
Local setup	via serial port
User setup	1-20 users, discrete recipient alarming

Ordering information

Code   **BSC-50-E-X**

Typical application

Representative - authorized dealer

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