Low power with integrated battery

GSM/GPRS - 3G/4G/LTE

Bayonet coupling and reliable measurements

DOT: TELEMETRY DATA LOGGER

DOT is a battery-operated data logger for AC and DC electrical measurements.
It can relay data to a remote datacenter over the cell network (GSM/GPRS-3G/4G/LTE) and over RS232 (or Bluetooth on request) local connection.
Specifically for Cathodic Protection measurements, it integrates a timed switch for measurements of potential on a buried coupon, as described in the latest current standards.

GENERAL DESCRIPTION

The DOT unit is equipped with 2 high precision analog inputs, for voltages in the ±20V and ±150mV range, measuring continuous (DC) or alternating (AC) current using a TrueRMS algorithm.
The analog input channels are galvanically separated up to a peak rated voltage value of 500V. Both channels can measure simultaneously.
The unit is battery operated with “Low Power” engineering to guarantee a standard operating life of 4 years.

Three buttons and corresponding LEDs provide access to basic installation and diagnostic operations.
It comes with two options for field terminal connections: screw clamp terminal connector or 10 pin IP68 bayonet coupling.

Logged data and configuration are stored internally on Flash memory. No data is lost if the batteries wear out or need replacing.

APPLICATIONS AND BENEFITS

The DOT data logger can be used in many telemetry applications, especially where the requirement is to track a process, without investing in expensive and complicated PLCs or RTUs.

It is applied to remote monitoring of physical quantities in transport, distribution, stocking and flow-lines of Water, Oil and Gas. In particular, it is used to monitor Cathodic Protection, to which it brings the benefit of specialized functions like ON/OFF potential measurement.

ANALOG CHANNELS	
Analog inputs	2 AC+DC galvanically separated
Measurement range	+/-20V; +/-150mV
Resolution for each scale	< 0.1% FS (a 24 bit – 500µs converter)
Input impedance	> 10MΩ
CP functions	OFF potential measurement on coupon with timed switch

COMMUNICATION INTERFACES	
Local cabled connection	RS232
Connection to datacenter	GSM/GPRS - 3G/4G/LTE

ELECTRICAL INTERFACES	
Field connector	Screw terminal connector / IP68 Bayonet coupling

SAMPLING, RECORDING and TRANSMISSION	
Sampling interval	From 1 sec to 1day configurable
Recording interval	From 1 sec to 1day configurable
Daily statistics	For each channel: min, avg., max, st.dev., time outside limit, limit crossings
Daily report transmission	1/day default - configurable
Configurable parameters	Channel enable; daily report transmission time; MIN, MAX limits for each channel;
Data transmission protocol	Proprietary protocol over TCP/IP
Sample type	Continuous, Statistical
Measurement reports	Daily, Statistical, ON/OFF
Daily report storage capacity	1 year or greater
Continuous report storage capacity	1 month or greater

ELECTRICAL AND MECHANICAL SPECIFICATIONS	
Power supply	Primary Lithium battery 3.6V 26Ah
Battery life	Up to 60 months
Certifications	2014/30/UE (EMC), 2011/65/UE (RoHS),
IP rating	IP65
Size	170x80x57mm – IP68 bayonet coupling version 120x90x57mm – screw clamp connector version
Standard operating temperature	-10°C to +70°C (extended range -40°C a +85°C)
Relative Humidity	10 to 95%
Peso	400 g

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