



ProDAT 1

electronic gas volume, pressure and temperature data logger

ProDAT 1 is a complete data logger solution designed to record and inspect the performance and stability of the whole Pressure Regulating and Metering Stations. It can work supplied from internal batteries or be connected to the external power source, what converts it to online station monitor for SCADA systems.

Design of the device allows for its work directly on the metering station even in Class 1 Div 1. Device equipped with pressure and temperature sensors can work as a remote pressure regulator maintenance device.

Installed internal modem working in various modes can inform immediately station service about malfunction or predict and prevent upcoming replacement of pressure regulators.

key benefits

- configurable bar graphs with historical records of pressure allowing for instant pressure regulator inspection on site, showing unwanted pressure fluctuations
- significance level of the alarms - thresholds with flag of alarm and warning possibility to add any sensor
- communicating in Modbus protocol

accessories

- eWebtel - measuring data acquisition system
- ConfIT! - configuration software for PC
- ConfIT! data loggers - mobile application
- OptoBTeX - optical interface

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technical data

housing material	poycarbonate				
dimensions/ weight	8.5 x 7.6 x 3 in/ 2.9 lb				
relative humidity	maximum 95% at temperature of 160 °F				
ambient temp. range	from -40 °F to 160 °F				
housing protection class	IP66 for outdoor installations				
keyboard	6 pushbuttons				
display	graphical, 4", backlight, operation in the full range of operating temperatures				
Ex feature	II 1G Ex ia IIB T4 Ga, certificate: FTZÚ 17 ATEX 0047X				
internal power supply	3 lithium D-size batteries: • 1 battery to supply data logger • 2 batteries to supply internal modem				
transmission protocols	Modbus RTU, Modbus TCP (available in version with integrated modem), Modbus RTU MASTER MODE, GAZ-MODEM 1, 2, 3 (other protocols per request)				
transmission ports	• three independent serial transmission ports (COM1 - RS485 or optional RS232, COM2 - RS485 - shared with Modbus MASTER input baud rate up to 256 kb/s, optical interface • NFC IEC 14443 interface • optional integrated modem 4G LTE/ 2G				
resistance to mechanical and electromagnetic conditionse	M2/ E2				
horizon of data registration	• data registered in period 1-60 minutes – 55000 records (over 6 years @60min) • hourly data – over 2 years • daily data – over 4 years • monthly data – over 10 years • momentary data (triggered 1-second logging) • alarms/ events memory – over 6000 records				
inputs	• up to 6 intrinsically safe, configurable, binary digital inputs, shared with: - 2 LF inputs, frequency 0÷2 Hz, WIEGAND standard 0÷60 Hz (option), flow direction detection • up to 10 intrinsically safe, configurable digital inputs NAMUR type (EN60947-5-6): - 2 binary inputs, work with NAMUR proximity sensors on battery mode - 8 additional NAMUR inputs realized by extension module EM-2Ex • temperature sensor Pt1000 class A or B with cable length compensation, four wires, diameter 0.22 in or 0.24 in; <table border="1" data-bbox="521 1362 1287 1457"> <tr> <td>68 °F (± 5 °F)</td><td>(-40 ÷ 160) °F</td></tr> <tr> <td>± 0.1%</td><td>± 0.2%</td></tr> </table> typical error of temperature measurement: 0.08% • RS485 Modbus MASTER input (shared with COM2 port; with 3.6 V power supply output) for readout of up to 16 external devices with Modbus RTU output (e.g. digital pressure or temperature transducers), capable to operate on battery	68 °F (± 5 °F)	(-40 ÷ 160) °F	± 0.1%	± 0.2%
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features

- optional built-in modem for 4G LTE and 2G networks
- support for NFC communication standard, optical connection and two RS485 serial ports
- graphical 4" display with backlight works in temperatures down to -22 °F
- configurable main screen widgets with pressure stability trends and other configured values as bar graphs
- EX-certified for operation in any explosion hazardous zone (up to Class 1 Div 1), also with integrated modem
- internal or external pressure sensors
- configurable two LF pulse inputs for gas meters
- possibility of reading/controlling in Modbus MASTER mode up to 16 external devices in Modbus RTU protocol via RS485