



DATCON

INDUSTRIAL MEASUREMENT

DT9050



Intrinsically safe ExTerminal

Product features:

- Custom front panel that can be designed by the user
- 4 x 20-character alphanumeric display
- LED indicators
- RS485 or TTY serial interface, MODBUS RTU or ASCII protocol
- large, numeric and function push-buttons
- „Emergency Stop” push-button, led out directly
- Intrinsically safe
- IP 65 protection



The **DT9050 ... Intrinsically safe ExTerminal** can be installed in a potentially explosive environment Zone 1 or Zone 2 category; the device was designed to establish the contact between the process control system and the operator staff working on the field. The messages and numerical values presented on a 4x20-character display with background lighting are well visible even from great distances.

The construction of the sheet keyboard (the arrangement, the marking, and the colour of the keys), which may contain maximum 56 buttons, can be tailored to the customer's individual needs. The 30x25-mm large push-buttons can be easily handled even when the user wears protective gloves. It is possible to assign LED indicators with various colours to the push-buttons to get a feed-back on the conditions caused by the buttons.

The user terminal is connected to the process control system via an RS485 or a TTY serial interface. The communication protocol is Modbus slave, RTU or ASCII. There is an independent push-button used typically for the functionality of „emergency stop”.

The device has a protection of IP 65. Its washable and chemicals-resistant foil front-cover resists the chemicals used most frequently in the chemical or in the pharmaceutical industry.

The terminal arranges the information to be presented into a menu system with tree-structure. The user can edit the contents of the various menus, by using the auxiliary program delivered with the device. The message system of the terminal makes possible for the process control system to send various types of messages to the operators (system messages, alarms, messages to be confirmed, or commands). It is also possible to request a feedback on the implementation of such messages. Text as well as numerical values may be used in the messages. The terminal is protected against unauthorised usage by a two-level password system. All the events occurring in the terminal are traceable and archiveable, with a time stamp, through a log system of the device.

Technical specifications

Intrinsic safety data:

Certification: 04 ATEX 129 X
Protection signal: II 2 G EEx ia IIC T4 (-20 °C < Ta < 50 °C)

Safety data pertaining to intrinsic safety:

	Uo [V]	Io [mA]	Po [mW]	Co [uF]	Lo [mH]	Ui [V]	Ii [mA]	Pi [W]	Ci [nF]	Li [mH]
Power supply: interface controller unit display unit	--	--	--	--	--	15,1	273	3,1	0	0
TTY serial interface	5,88	3,1	4,6	1	5	26	200	1	13	5
RS 485 interface	5,88	70	105	1	5	15	750	3	13	0,005
Independent push-b.	--	--	--	--	--	24	150	0,1	13	0,005

Output parameters:

Digital output:

Output: SPST contact
Contact rating: 24 V, 150 mA, 100 mW

Communication interface:

Interface type: RS485 or TTY serial, galvanically isolated
Protokoll: Modbus slave, RTU vagy ASCII, 9600 Baud (max.)
Profibus DP (being under development)

Display:

Display unit: 4 x 20-character, alphanumeric LCD with background lighting, 12 mm with character height
Indicators: 28 LED-s (max.), with selectable colours and texts in the fields

Manual controls:

Push-buttons: 56 (max.), with selectable colours and texts in the fields

Power supply:

Controller unit (CPU):

Supply voltage: 8 VDC (intrinsically safe)
Supply current: 240 mA
Consumption: 2 W (max.)

Display (LCD):

Supply voltage: 8 VDC (intrinsically safe)
Supply current: 240 mA
Consumption: 2 W (max.)

Interface (Int):

Supply voltage source: inner DC/DC converter or external power supply unit
Supply voltage: 8 VDC (intrinsically safe)
Supply current: 30–240 mA (in the case of connecting several devices in series)
Consumption: 2 W (max.)

Ambient conditions:

Operating temperature range: -20–50 °C
Relative humidity: 90 % (max., non-condensing)
Place of installation: potentially explosive area

Elektromagnetic compatibility (EMC):

accordance with the standard EN 61326:2000
Immunity: -A- criterion
Noise emission: -A- class

Data in general:

Housing: field-terminal housing of the apparatus, its material is: ALMgSi05 és ALMg3
Connection: the cable is led in through a stuffing box, pluggable screw-fixed type series of connections
Cross-section of the connected cable: max. 2,5mm²
Dimensions: 596 x 364 x 140 mm (width x height x depth)
Weight: 7,5 kg
Protection: IP 65

The Manufacturer maintains the right to change the technical data.

