

Intrinsically Safe Controller

MDJ 6001

CE 1453

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KDB 05ATEX217



The intrinsically-safe controller MDJ6001 is meant to monitor and control technological processes in the underground areas of mines. It can be operated in spaces with potential hazards of methane or coal dust explosion as well as in areas with no such hazards.

Its application scope includes operation as a PLC module to control relatively less sophisticated technological systems whilst the accompanying tools are provided to develop the control program in the C language. The device can be also used as a slave controller or as a remote I/O module for more complex control or data acquisition systems. In particular the MDJ6001 controller is suitable to control mining cooling devices, pumping stations, systems for water drainage from shaft sumps, shaft auxiliary devices, traffic of underground railways and skip loading devices.

Rich communication facilities, including two optical ports and one intrinsically safe RS485 port enable communication with intrinsically safe ET2000Ex or MDJ315-2DPEx controllers as well as other systems for equipment automation and /or data acquisition. The MDJ6001 controller can be also operated as a converter from the intrinsically safe RS485 network to a fiber optic signal or as an interface module for the conversion of various network protocols.

The LCD display and a keypad fitted on the device enclosure perform the role of the Human-Machine Interface for operators.

Technical Information:

1.	Power supply unit:	From intrinsically safe power units: 10V-24V
2.	Supply voltages: For the power supply unit type ZIISN U=10V-24V For the power supply unit type IPS-12N U=11V-14V For the power supply unit type IPS-15N U=13V-17V	Ui=24V, li=2A, Pi – not limited Ui=14V, li=2A, Pi – not limited Ui=17V, li=2A, Pi – not limited
3.	Power consumption	ca .100mA for U=24V
4.	Number of binary inputs	max 128
5.	Number of transistor binary outputs	max 256
6.	Number of relay AP x8 outputs	max 64
7.	Number of analogue inputs for PT100	max 64
8.	Number of analogue inputs Clx8 0-20mA, 4-20mA	max 64
9.	Number of analogue inputs Aix8 0-5V, 0-10V	max 64
10.	Number of all input and output modules	max 8
11.	Number of elements on the enclosure (switches, buttons, Signal lamps)	max 16
12.	Number of optical ports	2
13.	Number of RS485 ports	1
14.	Protocols	Modus RTU, ASCII or others
15.	Transmission speed for RS485 port	19200bit/s
16.	Transmission speed for optical ports	500 000bit/s
17.	Range of ambient temperatures	-20°C - +40°C
18.	Mass	max 20kg
19.	Dimensions	height: 400 - 800 mm width: 400 - 800 mm depth: 200 - 300 mm
20.	Protection class of the enclosure	IP54