



MINT Intelligent IOs

DI-16 16-Channel Digital Input Module

DO-16 16-Channel Digital Output Module

AI-08 8-Channel Analog Input Module

AO-08 8-Channel Analog Output Module

Masibus' MINT IO series are the most cost effective Field Interface for Smart Systems whether it is DAS, SCADA, PLC or DCS. The MINT IOs are available in Universal Analog Input, Analog Output, Digital Input and Digital Output with up to 16 channels.

Using MINT IOs supervisory system can read remote process values and events as well as can communicate for process control. These IOs consists of powerful processors suited for high-speed communication and enhanced hardware features.

The MINT series is best suited for plants or processes which require reliable and efficient control with high speed connectivity for system monitoring and information exchange up to the corporate network.

Features

- 2X Modbus Serial ports
- Compact DIN Rail enclosure
- High-Speed Communication
- Up to 127 Modules on RS485 Network
- LEDs for Fault, Communication and Power
- 1500V RMS Isolation
- Configuration & Troubleshooting Software

Applications

- Cost effective Field Interface to PLC/DCS
- Remote IOs for Monitoring and Control
- SCADA
- Security systems
- Building automation
- Gas Detection systems
- Infrastructure Monitoring
- Asset Management



Technical Specifications:

Communication

Interface	2 Wire, EIA RS485
Protocol	Modbus-RTU
Available Ports	2x RS485 Multi-drop Serial Communication
Baud Rate (Options)	9600, 19200, 38400, 57600, 115200
Default Settings	9600, 8 Data bits, 1 Stop bit, No Parity.
Cable Recommended	Shielded, Twisted Pair

Status Indication

LEDs	Power, Module Status, Communication, Channel Status
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Power Supply

Power Supply	24VDC \pm 10%
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Isolation

Field to System	1500VAC RMS
Supply to Serial Port	1500VAC RMS
Supply to System	1500VAC RMS

Environmental

Operating temperature	0 to 55 °C
Storage temperature	-10 to 70 °C
Humidity	30 to 95 %RH non-condensing

DI-16 Module

Input Specifications

Channels	16
Counter Frequency	1 KHz max
Counter Resolution	32 bit
Counter Mode	Up/Down
Pulse width	500uSec
Filter time (ms)	0 to 65535 mSec
De-bounce Time (ms)	0 to 65535 mSec
Chatter Filter Time	0 to 65535 mSec for.
Chatter Filter Counts	1 to 250 events
Input Impedance	2200 Ω

Power Consumption	<2W
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DO-16 Module

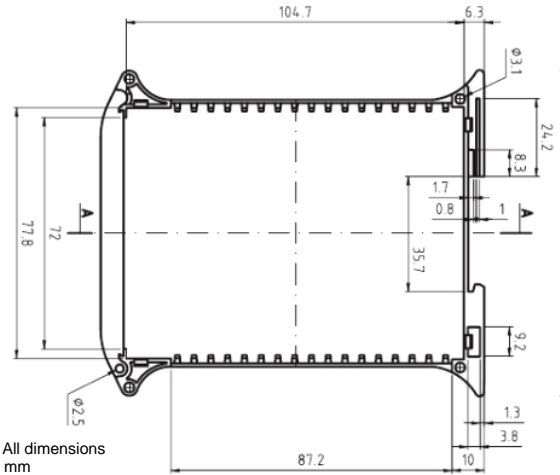
Output Specifications

Channels	16
Output type	Open collector
Default/Pre-defined Value	ON/ OFF
Pulse Width (High+Low)	10mSec to 5Sec.
Maximum Current	100mA per Output
Vce ON	1.1V max

Power Consumption	<3W
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Physical

Dimensions	22.5(W) x 101(H) x 120(D) mm
Mounting	DIN Rail
Weight	160 gms approx.
Enclosure Material	Molded ABS



AI-08 Module

Input Specifications

Channels	8	
Input Types	Thermocouple	E, J, K, T, B, R, S, N
	RTD	Pt100 (3 wire), Cu-53, NI-120
	Resistor Input	Up to 2K Ω
	Current	0-20mA, 4-20mA (External 50 Ω (\pm 0.1%) resistor)
Voltage		-10V to +10V, -100mV to +100mV, -50mV to +50mV, -250mV to +250mV, -1V to +1V
	Accuracy	0.1% of FS
Scan Rate	T/C & Voltage/Current: 50mSec/Channels RTD: 100mSec/Channels	
ADC Resolution	16 Bit	
NMRR	60dB at 50Hz	
CMRR	100dB	
Temp-Co	\leq 0.01% of span/ $^{\circ}$ C	
CJC Error	\pm 2 $^{\circ}$ C (0 to 55 $^{\circ}$ C)	
Input Impedance	>1 M Ω	
Sensor Burnout Current	0.5 μ A	
RTD Excitation Current	500 μ A	

Power Consumption	<3W
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AO-08 Module

Output Specifications

Channels	8	
Output Types	Current	0-20mA/ 4-20mA @ 1K Ω max.
	Voltage	0-5/ 1-5/ 0-10/ 2-10 VDC @ 2K Ω min.
DAC Resolution	16 Bit	
Accuracy	0.05% of FS	
Temp-Co	\leq 0.01% of span/ $^{\circ}$ C	

Power Consumption	<3W
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Ordering Code

Product	Code (Model)
16-Channel Digital Input Module	MINT DI-16
16-Channel Digital Output Module	MINT DO-16
8-Channel Analog Input Module	MINT AI-08
8-Channel Analog Voltage Output Module	MINT AOV-08
8-Channel Analog Current Output Module	MINT AOI-08

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All specifications are subject to change without notice due to continuous improvements.
Doc. Ref. MINT Intelligent IOs/R1/0812

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