



MDA-8001



MDA-8316



MDA-8416



MDA-8508



MDA-8708

MDA-8000 Series Remote Data Acquisition Module



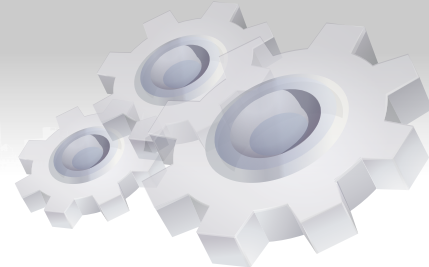
USB to RS-485 Converter



Remote I/O Module



Specification



MDA-8001 USB to RS-485 Converter

Communication		Isolation	
USB	USB 1.1 and 2.0 standards	Voltage	3000V DC
	Type B Connector	Power	
RS-485	Data+, Data-	Input Range	+5 VDC from USB
	5-Pin Terminal Block	Consumption	Approx. 0.4W
Baud Rate	300 ~ 115200 bps	Environment	
Transfer Distance	Max. 1,200 m at 9.6 kbps Max. 400 m at 115.2 kbps	Operating Temperature	-25 ~ +75 °C
		Storage Temperature	-40 ~ +85 °C
Max. Devices Supported	256	Humidity	10 ~95% RH, Non-condensing
LED Indicator			
Power Indicator	1		
Communication Indicator	1		

MDA-8316 Digital Input Module

Communication		Consumption	Approx. 1W
Interface	RS-485	Reverse Polarity Protection	Yes
Format	N, 8, 1	Environment	
Baud Rate	9600 ~ 115200 bps	Operating Temperature	-25 ~ +75 °C
Protocol	Modbus RTU	Storage Temperature	-40 ~ +85 °C
LED Indicator		Humidity	10 ~95% RH, Non-condensing
Power Indicator	1	Digital Input	
Communication Indicator	1	Channels	16 (Sink / Source)
I/O Indicator	16	Input Type	Isolated with Common Power or Ground
Isolation			
Voltage	3000V DC	Off Voltage Level	+1 V Max.
Power		On Voltage Level	+4 to +30 V
Input Range	24V DC ±10%	Input Impedance	3 KΩ

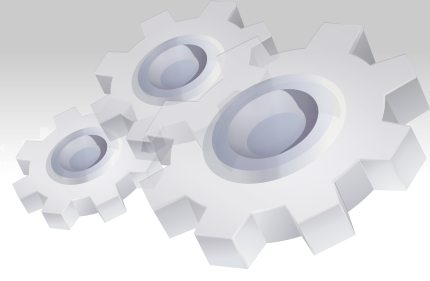


MDA-8416 Digital Output Module

Communication		Consumption	Approx. 1W
Interface	RS-485	Reverse Polarity Protection	Yes
Format	N, 8, 1	Environment	
Baud Rate	9600 ~ 115200 bps	Operating Temperature	-25 ~ +75 °C
Protocol	Modbus RTU	Storage Temperature	-40 ~ +85 °C
LED Indicator		Humidity	10 ~95% RH, Non-condensing
Power Indicator	1	Digital Output	
Communication Indicator	1	Channels	16 Sink
I/O Indicator	16	Output Type	Open Collector (NPN)
Isolation		Load Voltage	+3.5V~ +50 V
Voltage	3000V DC	Max Load Current	100mA per channel
Power		Surge Protection	±3 kV for Power Input
Input Range	24V DC ±10%		

MDA-8508 Digital Input & Digital Output Module

Communication		Storage Temperature	-40 ~ +85 °C
Interface	RS-485	Humidity	10 ~95% RH, Non-condensing
Format	N, 8, 1	Digital Input	
Baud Rate	9600 ~ 115200 bps	Channels	8 (Sink / Source)
Protocol	Modbus RTU	Input Type	Isolated with Common Power or Ground
LED Indicator			
Power Indicator	1	Off Voltage Level	+1 V Max.
Communication Indicator	1	On Voltage Level	+4 to +30 V
I/O Indicator	16	Input Impedance	3 KΩ
Isolation		Digital Output	
Voltage	3000V DC	Channels	16 Sink
Power		Output Type	Open Collector (NPN)
Input Range	24V DC ±10%	Load Voltage	+3.5V~ +50 V
Consumption	Approx. 1W	Max Load Current	100mA per channel
Reverse Polarity Protection	Yes	Surge Protection	±3 kV for Power Input
Environment			
Operating Temperature	-25 ~ +75 °C		



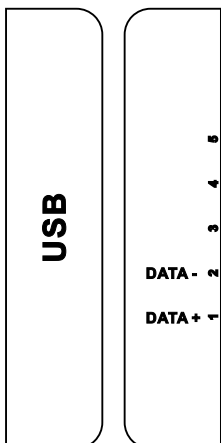
MDA-8708 Relay Output Module

Communication		Consumption		Approx. 2.5W	
Interface	RS-485	Reverse Polarity Protection		Yes	
Format	N, 8, 1	Environment			
Baud Rate	9600 ~ 115200 bps	Operating Temperature		-25 ~ +75 °C	
Protocol	Modbus RTU	Storage Temperature		-40 ~ +85 °C	
LED Indicator		Humidity		10 ~95% RH, Non-condensing	
Power Indicator	1	Relay			
Communication Indicator	1	Channels		RL0~RL2	RL3~RL7
I/O Indicator	8	Contact Type		1 Form C	1 Form A
Isolation		Rated Voltage		250V AC	250V AC
Voltage	3000V DC	Rated Current		5A	3A
Power		Mechanical Endurance		15 x 10 ⁶ ops.	10 x 10 ⁶ ops.
Input Range	24V DC ±10%	Electrical Endurance		10 ⁵ ops.	10 ⁵ ops.

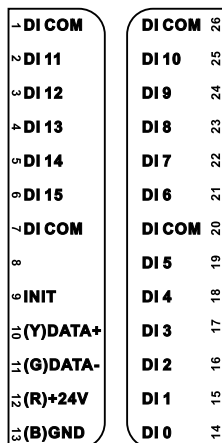


Pin Assignments

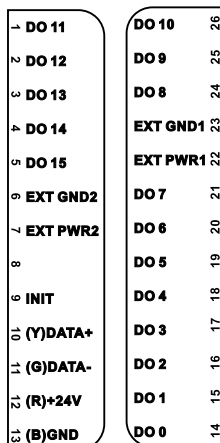
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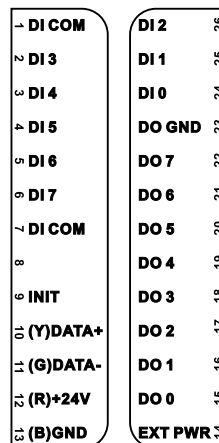
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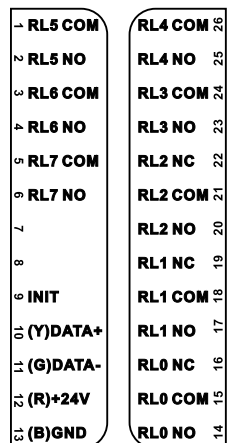
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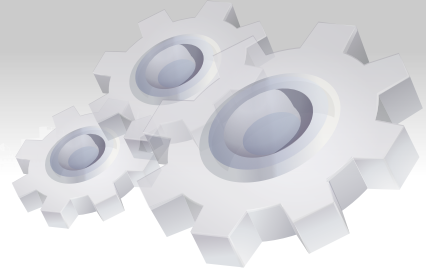


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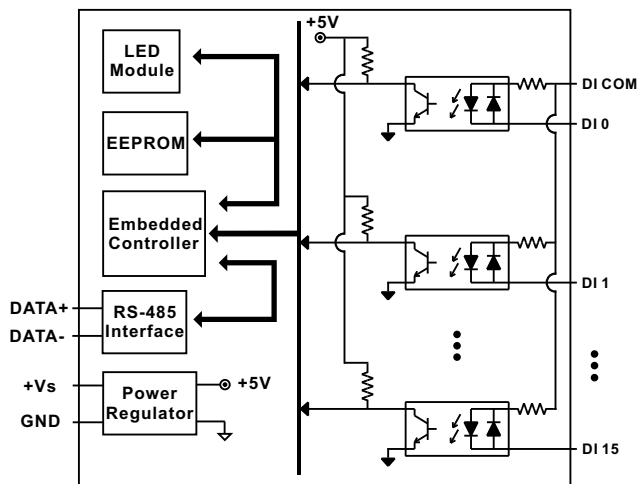
Internal I/O Structure



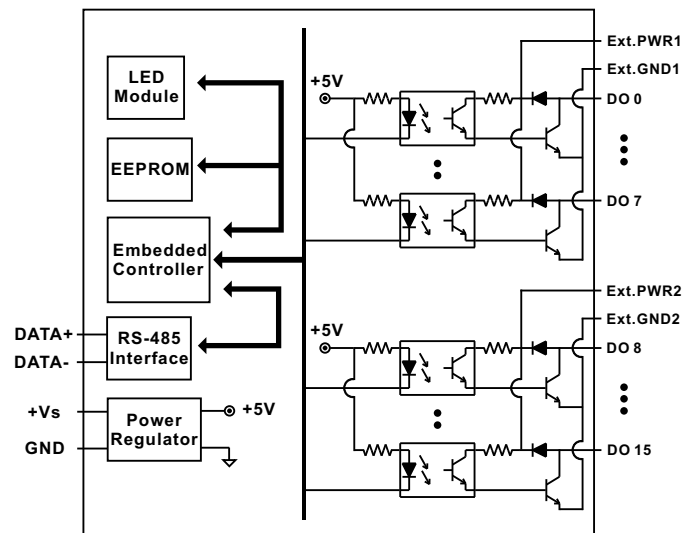
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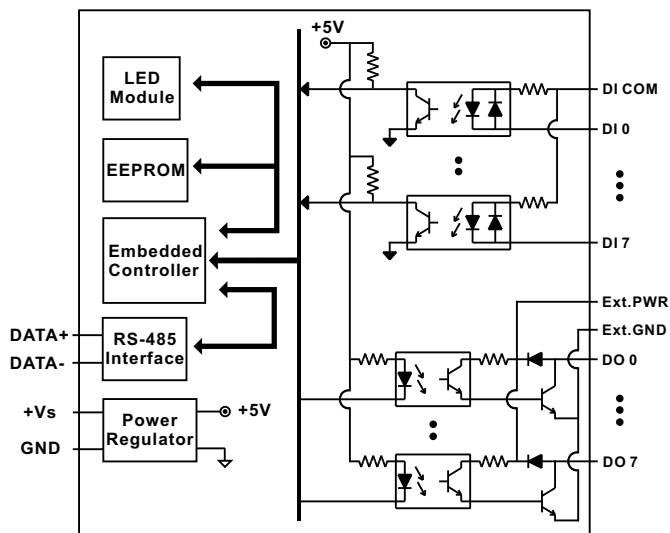
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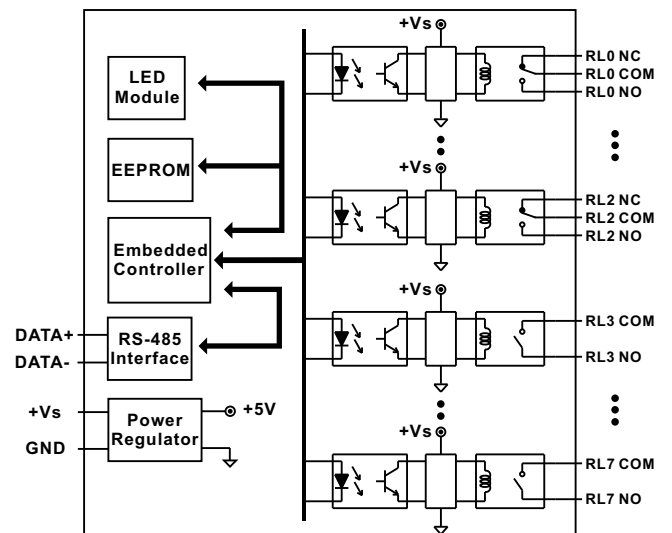
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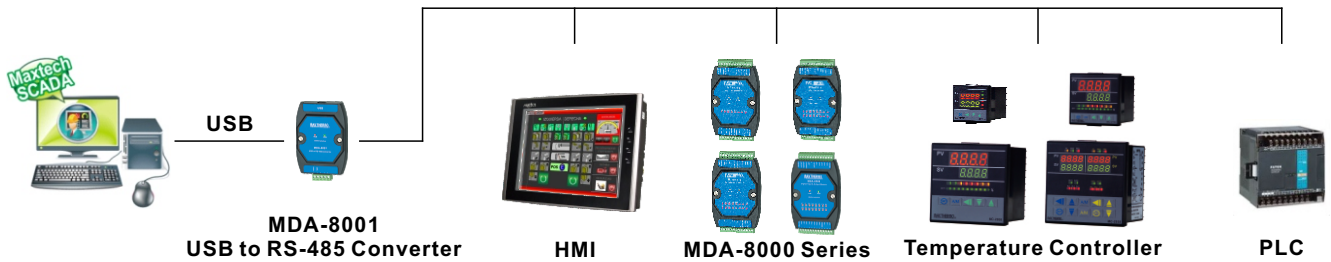


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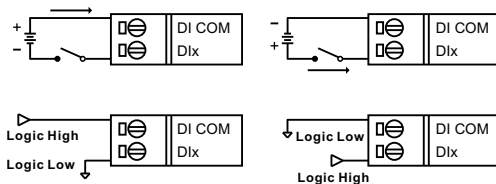
Application



Terminal Assignment

MDA-8316:

Dry Contact

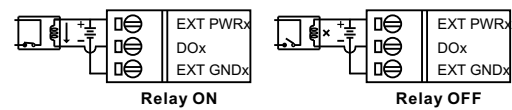


TTL/CMOS

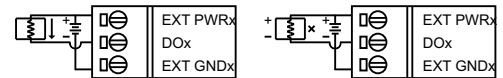


MDA-8416:

Drive Relay

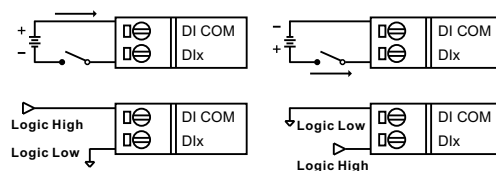


Resistance Load



MDA-8508:

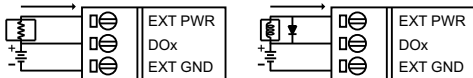
Dry Contact Signal Input



TTL/CMOS Signal Input

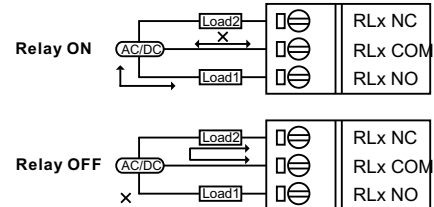


Open Collector

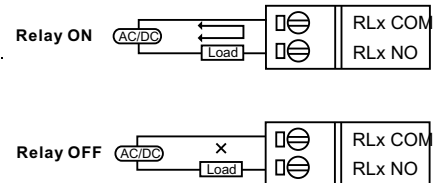


MDA-8708:

Relay Output in RL0~RL2



Relay Output in RL3~RL7



Order Information

MDA- 8 3 1 6

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MDA-8316 Digital Input Module
MDA-8416 Digital Output Module
MDA-8508 Digital Input & Output Module
MDA-8708 Relay Output Module

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Head Office

Add: 11F., No.168, Jiankang Rd., Zhonghe Dist., New Taipei City 235, Taiwan (R.O.C.)

Tel: +886-2-2228-7950 Fax: +886-2-2228-6140 E-mail: maxth.tapei@msa.hinet.net

Thailand Office-Thai Maximum Electronic Co., Ltd.

Add: 86/132-133 m.7 Samaedum Bangkoontien 10150 Thailand.

Tel: +662-415-8318, +662-417-2548-49 Fax: +662-415-8798

Web: www.thaimaximum.com