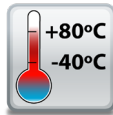


ED-588 Ethernet to Digital I/O

8 Digital Inputs and 8 Digital Outputs

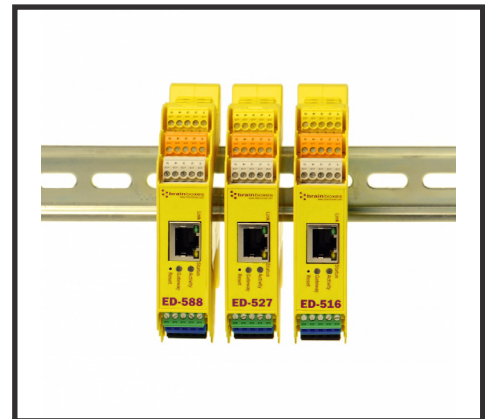
- 8 Digital Inputs and 8 Digital Outputs
- Supports simple ASCII or industry standard Modbus TCP
- 1 Ethernet Port
- -40°C to +80°C / -40°F to +176°F Temperature range
- Software APIs for VB, C# and more



Non conducting polyamide casing with removable numbered terminal blocks for easy wiring



+5 to +30 Volt Power Input enables the device to be run from USB, a vehicle battery or the factory floor



Integral DIN mount and slim design takes up minimal cabinet space



ED-588

Ethernet to Digital I/O

Integrate with popular software packages or use with our free APIs

Easy Wire Removable screw terminal blocks

Supports Modbus TCP or ASCII commands

8 Digital Output Lines

Serial Expansion Port suitable for ADAM modules

Integral DIN rail clip with earth



Ethernet Port

View from webpage - no software required

-40°C to +80°C / -40°F to +176°F temperature range

IP20 Non-conducting polyamide case with vents

8 Digital Input Lines

Wide Range Input Power: +5VDC to +30VDC

Connectors

Screw Terminals	3.5mm pitch
Wire Thickness	#22 - #14, 0.5mm ² -2.5mm ²

Power Supply

Power Supply input	Unregulated +5V to +30Volts DC, reverse polarity protection
Isolation	1500VRMS Magnetic isolation from Ethernet

Environmental

Operating Temperature	-40°C to +80°C / -40°F to +176°F
Storage Temperature	-40°C to +85°C / -40°F to +185°F
Ambient Relative Humidity	5 to 95% (non-condensing)

Magjack LED Information

Link/Activity LED	Solid green	Connection established
	Flashing Green	Data communication
Speed LED	Green	100Base-Tx
	Unlit	10Base-T

Ethernet

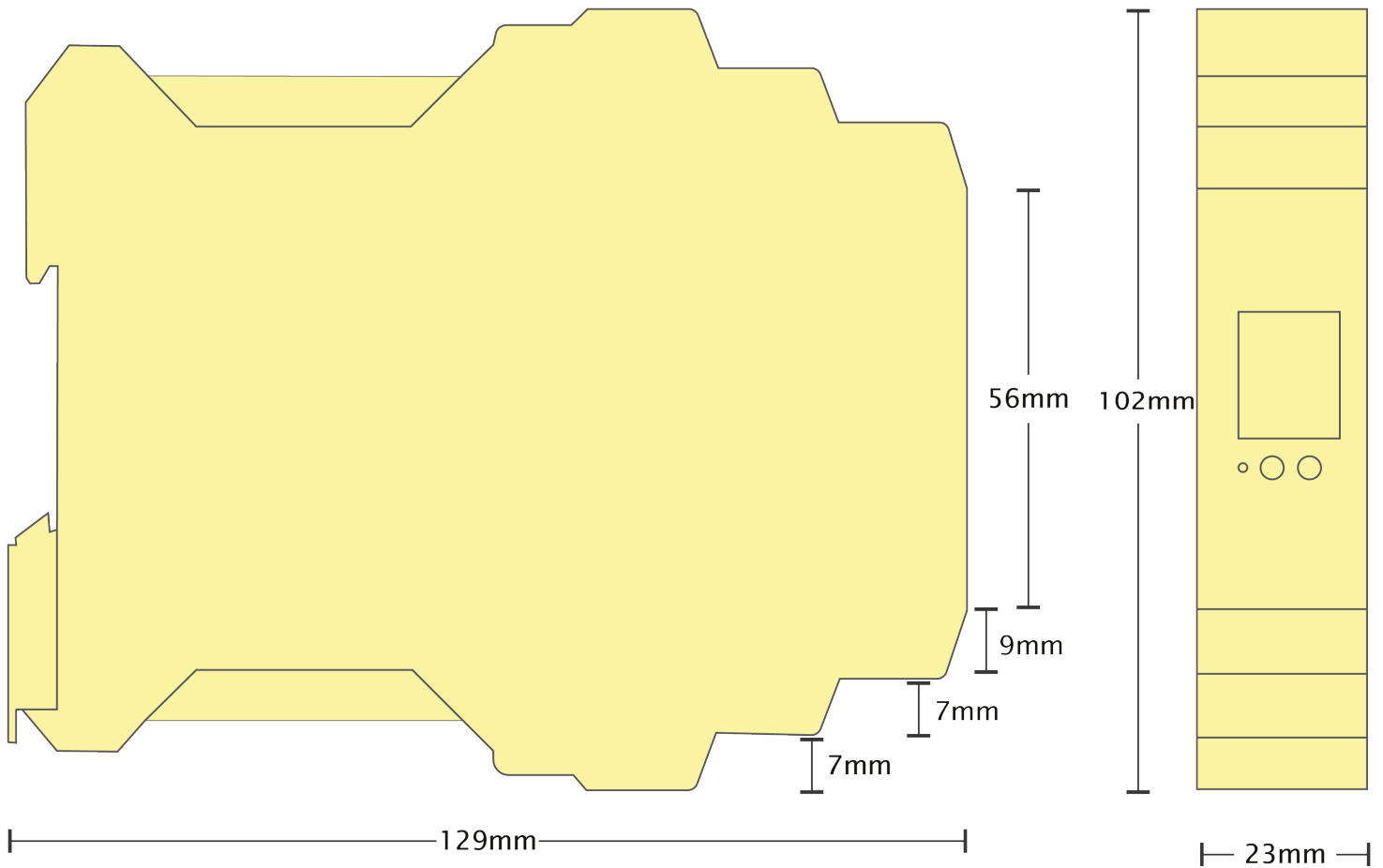
Ethernet Port	RJ45 jack, 10/100Mhz autosensing, crossover auto sensing (Auto MDIX)
Protection	1,500 Volts magnetic isolation between ports

Housing

Housing	IP-20 rated non-conducting polyamide case
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ED-588

Ethernet to Digital I/O



Terminal Block Pin Outs

Terminal Block	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5
Yellow	-V	DOut 0	DOut 1	DOut 2	DOut 3
Orange	-V	DOut 4	DOut 5	DOut 6	DOut 7
Grey	SIG GND	RS-485 D-	RS-485 D+	RS-485 D+	RS-485 D-
Green	-V	DIn 0	DIn 1	DIn 2	DIn 3
Blue	-V	DIn 4	DIn 5	DIn 6	DIn 7
Black	-V	+VA	+VB	-V	Func GND
Power Input +5V to +30V DC 100mA@24V 2.5W Max					

Ethernet Port Pin Outs

PIN	FUNCTION
1	RD+ / TD+
2	RD- / TD-
3	TD+ / RD+
4	NC
5	NC
6	TD- / RD-
7	NC
8	NC

Lifetime Warranty and Support:

We can help with every aspect of your project, from getting you up and running to custom application.

ED-588

Ethernet to Digital I/O

Digital Channels - 8 Inputs and 8 Outputs

Inputs

NPN/PNP	One jumper configures all inputs with either pull-up for NPN (contact closes to 0V) type sensors, or pull-down for PNP (close to V+) type sensors
Logic Level 0:	0V to +1V
Logic Level 1:	+2.0V to +30V
Input counting	User programmable - counts positive or negative transitions Up to 250Hz count rate 16-bit (65335 count) or 32-bit (4.2 billion count) counters Counter values persist over power-off periods
Input latching	Triggered by user programmable positive or negative edges, stays true until acknowledged
Debouncing	User programmable debouncing for noisy contact inputs

Outputs

Maximum output current	0.85A on all outputs simultaneously (ambient temperature $\leq 70^{\circ}\text{C}$, 1 m/s airflow) 0.5A on all outputs simultaneously ambient temperature $70\text{-}80^{\circ}\text{C}$, 1 m/s airflow Outputs can be paralleled for higher current loads
Output Type	Current sink to 0V (low-side switch, open-drain MOSFET output), allowing loads at multiple voltages
Maximum output load Voltage	36V
Production	Intelligent short circuit protection up to 36V Over-temperature shutdown ESD Protection to 16kV
Quick-Stop function	When a user programmable input transitions to a preconfigured high or low state then all outputs go to a user programmable known good state

Serial Expansion Port - RS485

Half Duplex RS485 port allows connection and control of industry standard NuDAM, eDAM and ADAM modules using ASCII protocols.

Power Supply

Power Supply input	Unregulated +5V to +30Volts DC, reverse polarity protection
Isolation	1500VRMS Magnetic isolation from Ethernet
Power Consumption	2.5 Watts Max : 220 mAmps@+5VDC/36mAmps@+30VDC

ED-588

Ethernet to Digital I/O

Packaging Information

Packaging	Microsoft signed drivers & utilities, Quick Start Guide, Device
Packaged Weight	0.234 kg, 8.25 ounces
Packaged Dims	160x135x49 mm, 6.3x5.3x1.9 inches
GTIN Universal Code	837324003178

Approvals

Industry Approvals	Microsoft Certified Gold Partner, WEEE, RoHS, AEO (C-TPAT), CE, UKCA
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Product Support

Warranty	Lifetime - online registration required
Support	Lifetime Web, Email and Phone Support from fully qualified, friendly staff who work in and alongside the Product Development Team

Additional Information

OEM option	Available for bulk buy OEM
Made In	Manufactured in the UK by Brainboxes Winner 2005 European Electronics Industry Awards 'Manufacturer of the Year'
Customisable	Brainboxes operate a 'Perfect Fit Custom Design' policy for volume users. More info:sales@brainboxes.com



ED Range

Remote I/O products available in a range of formats and specifications

www.brainboxes.com



PW-600

Power supply with connectors for UK, USA, EU and AUS mains socket. 'Tails' are suitable for connecting to screw terminal blocks.



PW-650

Power supply with USB connector and pre-wired screw terminal block. Suitable for use with 5V USB ports.



MK-588

6 coloured PCB connectors. Individually numbered pins; 5 x 3.5mm pitch screw connections with tension sleeve.