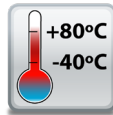# ED-582 Ethernet to RTD

4 Channel RTD Input

- · 4 Channel RTD Inputs
- · Supports simple ASCII 1 Ethernet Port
- · -40°C to +80°C/-40°F to +176°F Temperature range
- · Software APIs for VB, C# and more

IP20 +80°C -40°C 1 4 Channel R T D DIN

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-582

Ethernet to RTD

Integrate with popular software packages or use with our free APIs

Supports ASCII commands

Integral DIN rail clip with earth

View from webpage - no software required

IP20 Non-conducting polyamide case with vents

Easy Wire Removable screw terminal blocks

4 channel RTD

Serial Expansion Port suitable for ADAM modules

Ethernet Port

-40ºC to +80ºC/-40ºF to +176ºF temperature range

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

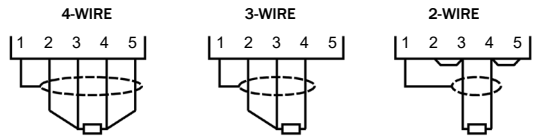| Magjack LED Information		
Link/Activity LED	Solid green	Connection established
	Flashing Green	Data communication
Speed LED	Green	100Base-Tx
	Unlit	10Base-T

Ethernet	
Ethernet Port	RJ45 jack, 10/100Mhz autosensing, crossover auto sensing (Auto MDIX)
Protection	1,500 Volts Magnetic Isolation On Port
Housing	IP-20 rated non-conducting polyamide case

ED-582   Ethernet to RTD

56mm

102mm

9mm

7mm

7mm

129mm

23mm
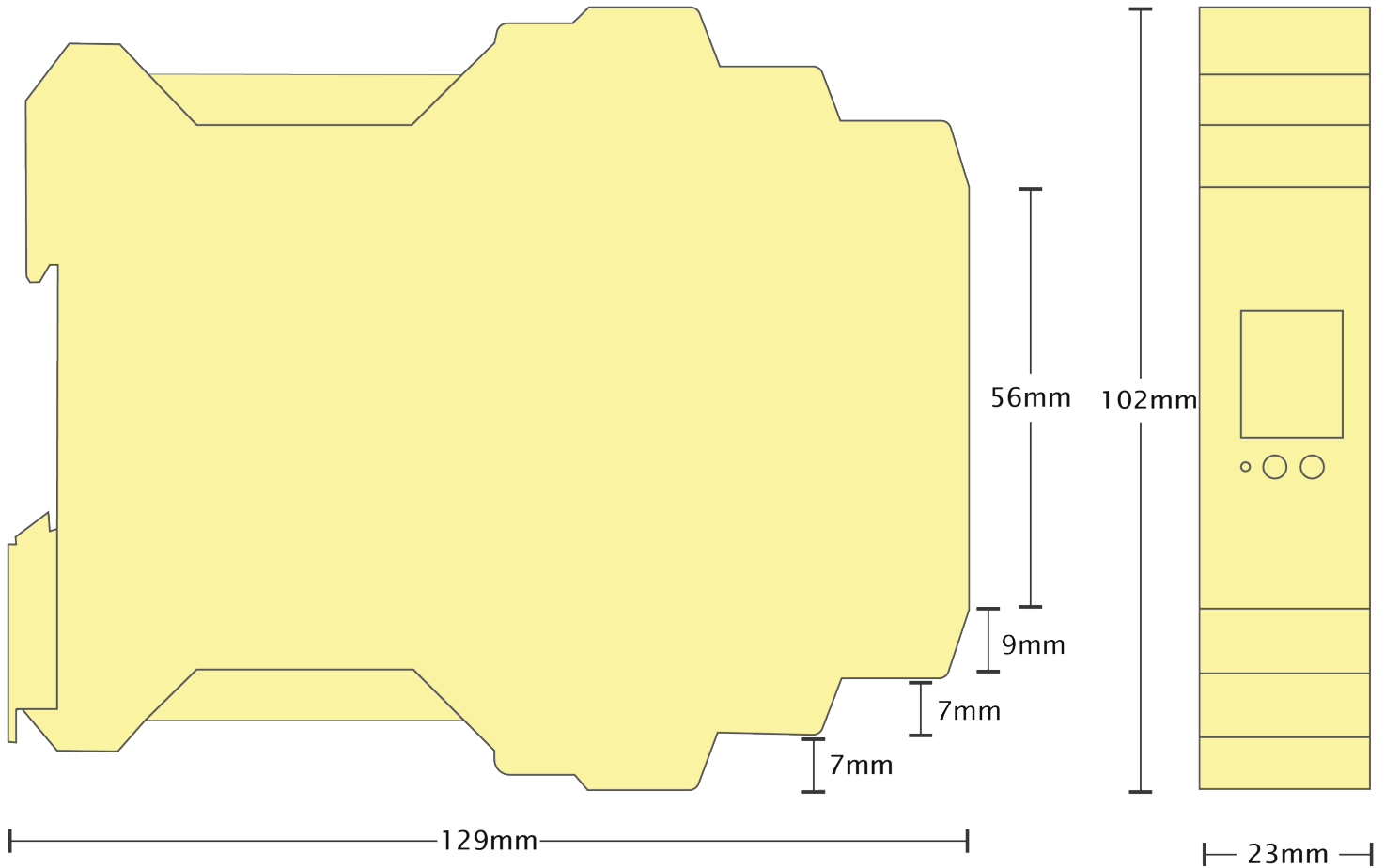
Terminal Block Pin Outs

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

4-WIRE   1 2 3 4 5

3-WIRE   1 2 3 4 5

2-WIRE   1 2 3 4 5

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-582

Ethernet to RTD

RTD Channels - 4 Inputs

Inputs

IO Protocols	DCON ASCII over TCP
Description	4 RTD sensor inputs – individually configurable for sensor type
Isolation	Yes Analogue inputs, power, network and RS-485 ports are all isolated from each other Analogue input channels are not isolated from each other
RTD types	Pt-100, Pt-1000, Ni-120
RTD connection	2, 3 or 4-wire connection
RTD Standards	IEC/EN 60751, JIS C1604-1987 , US Industrial , International, RTD1000-375 , Ni-120
Measurement range	-200°C – 600°C
Input Resolution	16 bit resolution
Measurement Accuracy	2/4 wire:- ±0.2°C with ED-582 at 25°C ±1.2°C with ED-582 at -30 to +80°C (NOTE: 2-wire mode accuracy will be affected by customer's choice of RTD cable connection) 3-wire:- ±0.5°C with ED-582 at 25°C ±1.2°C with ED-582 at -30 to +80°C
Measurement rate	5 measurements per second, divided between all enabled inputs
Low Noise	CMRR > 120dB
Rejects Mains Hum	NMRR > 75dB at 50Hz and 60Hz

Serial Expansion Port - RS485

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

Software

|	
OS Compatibility	Brainboxes' software provides a TCP or Serial COM port interface. All software versions and updates available to download from our website.
Microsoft	Windows 8, Windows 8.1, Windows 10 Windows Server 2016 Windows Server 2019
Other	TCP and web browser interface for other OSs & Linux, e.g. Android, Raspberry Pi

|	
Boost.IO Manager	Lets you find, install and upgrade devices
Industry Standard Packages	The COM port based driver means devices are compatible with popular packages such as: LabView, MATLAB, Agilent VEE. So you can continue to get value from your existing development and process control system.
Software Platforms	APIs and sample program code for: Microsoft .NET, C#, Visual Basic, C++, JavaScript, PHP, Java, Objective-C, Python and more - www.brainboxes.com
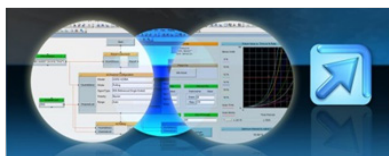
ASCII

The ED device's webpage has an interactive ASCII console where any command can be entered and it is immediately executed showing the device's response.

$01M	read the name of device address 01
!01ED-582	device 01 replies that its name is ED-582
$01F	read firmware version number of device address 01
!012.54	firmware version of device 01 is 2.54

Full command tables can be found in the device manual
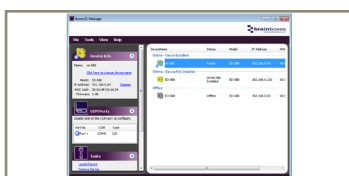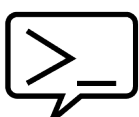
ED-582   Ethernet to RTD

Packaging Information	Microsoft signed drivers & utilities, Quick Start Guide, Device
Packaged Weight	0.225 kg, 7.94 ounces
Packaged Dims	160x135x49 mm, 6.3x5.3x1.9 inches
GTIN Universal Code	837324004021
Industry Approvals	METLABS E112324 complies with UL62368-1, CSA C22.2, No. 62368-1 Microsoft Certified Gold Partner, WEEE, RoHS, AEO (C-TPAT), CE, UKCA
HTS	8517620000
ECCN	5A991.b
CAGE	8QCY6
Warranty	Lifetime - online registration required
Support	Lifetime Web, Email & Phone Support from fully qualified, friendly staff who work in and alongside the Product Development Team
Standards	ISO9001, ISO14001
OEM option	Available for bulk buy OEM
COO (Country of Origin)	GB
Made In	Manufactured in GB by Brainboxes
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.