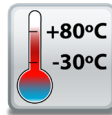


# ED-582 Ethernet to RTD

4 Channel RTD Input

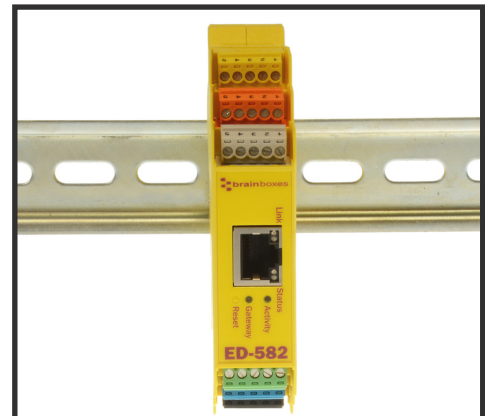
- 4 Channel RTD Inputs
- Supports simple ASCII 1 Ethernet Port
- -30°C to +80°C / -22°F to +176°F Temperature range
- Software APIs for VB, C# and more



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-582

## Ethernet to RTD

Integrate with popular software packages or use with our free APIs

Easy Wire Removable screw terminal blocks

Supports ASCII commands

4 channel RTD

Integral DIN rail clip with earth

Serial Expansion Port suitable for ADAM modules

View from webpage - no software required



Ethernet Port

-30°C to +80°C / -22°F to +176°F temperature range

IP20 Non-conducting polyamide case with vents

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

### Connectors

|                 |   |
|-----------------|---|
| Screw Terminals | 3.5mm pitch                                       |
| Wire Thickness  | #22 - #14, 0.5mm <sup>2</sup> -2.5mm <sup>2</sup> |

### Power Supply

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

### Environmental

|                           |                                  |
|---------------------------|----------------------------------|
| Operating Temperature     | -30°C to +80°C / -22°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

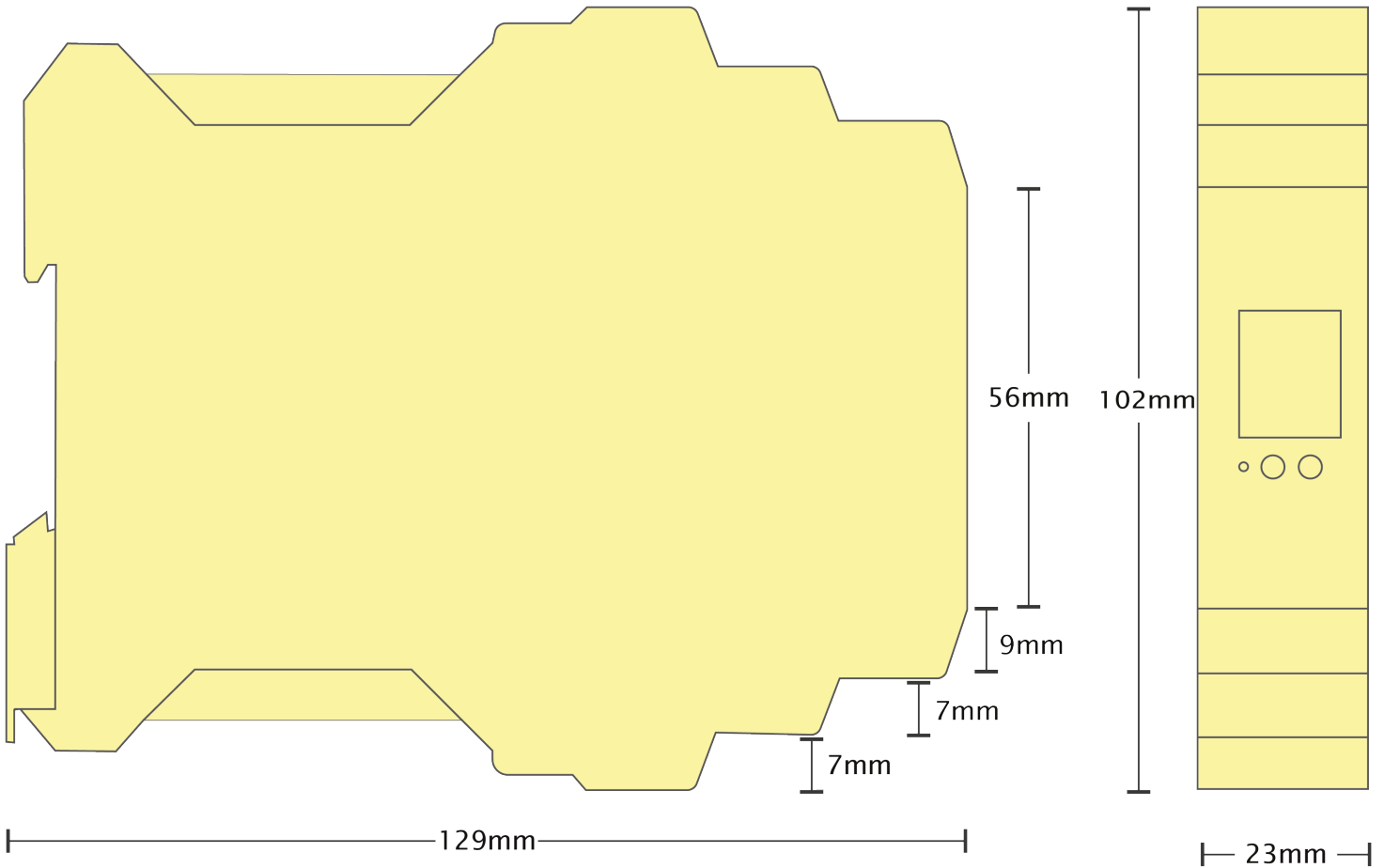
|                   |                |                        |
|-------------------|----------------|------------------------|
| Link/Activity LED | Solid green    | Connection established |
|                   | Flashing Green | Data communication     |
| Speed LED         | Green          | 100Base-Tx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

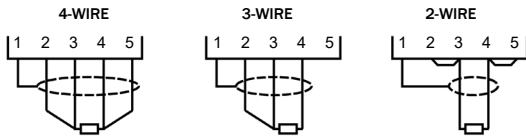
### Ethernet

|               |  |
|---------------|--|
| 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 |
|---------|---|

**ED-582**
**Ethernet to RTD**

**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 |   |           |           |           |

**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, RTD inputs are isolated from the power, network and RS-485 ports  |
| 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 to +600°C   |
| Input Resolution     | 16 bit resolution  |
| Measurement Accuracy | 2/4 wire:-<br>$\pm 0.2^{\circ}\text{C}$ with ED-582 at 25°C<br>$\pm 1.2^{\circ}\text{C}$ with ED-582 at -30 to +80°C<br>(NOTE: 2-wire mode accuracy will be affected by customer's choice of RTD cable connection)<br>3-wire:-<br>$\pm 0.5^{\circ}\text{C}$ with ED-582 at 25°C<br>$\pm 1.2^{\circ}\text{C}$ 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.

#### 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              |



## 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

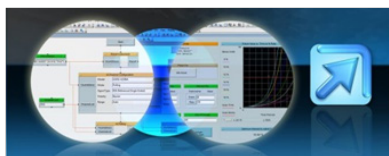
**Other** TCP and web browser interface for other OSs & Linux, e.g. Android, Raspberry Pi



**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

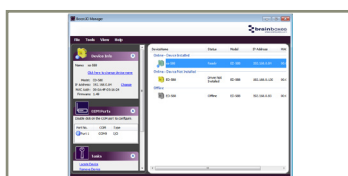
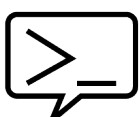


## ASCII

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   | Installation CD including manual, 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 UL60950-1, CSA C22.2, No. 60950-1<br>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<br>More info:sales@brainboxes.com                              |



### ED Range

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

[www.brainboxes.com](http://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.