

**5 YEAR**  
WARRANTY



# **Ω OMEGA™** **User's Guide**



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## **TXDIN1600S** **Smart Powered Strain Bridge/ Load Cell Conditioner**



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# SMART POWERED STRAIN GAUGE / LOAD CELL CONDITIONER

## ⚠ IMPORTANT - CE & SAFETY REQUIREMENTS

Important - Potentially Hazardous situations. Persons responsible for the installation and operation of this equipment must be fully aware of all aspects of this guide. Failure to follow the instructions can cause severe injuries and damage.  
 This product is suitable for environment installation category II pollution degree. The product is classed as "PERMANENTLY CONNECTED EQUIPMENT", and must be DIN rail mounted, inside a suitable enclosure providing environmental protection to IP65 or greater.  
 DC supply must be derived from a local supply and not a distribution system.  
 To maintain CE EMC requirements, input and DC supply wires must be less than 30 meters. The product contains no serviceable parts, or internal adjustments. No attempt must be made to repair this product. Faulty units must be returned to supplier for repair. This product must be installed by a qualified person. All electrical wiring must be carried out in accordance with the appropriate regulations for the place of installation. Before attempting any electrical connection work, please ensure all supplies are switched off.

**ABSOLUTE MAXIMUM CONDITIONS (To exceed may cause damage to the unit):-**  
 Supply Voltage  $\pm 50$  V dc (Protected for over voltage and reverse connection)  
 Current with over voltage  $\pm 200$  mA  
 Input Voltage  $\pm 10$  VDC, 10 V rms between any terminals  
 Input Current  $\pm 100$  mA between terminals  
 Ambient Temperature (-30 to 75) °C Humidity (10 to 95) % RH (Non condensing)

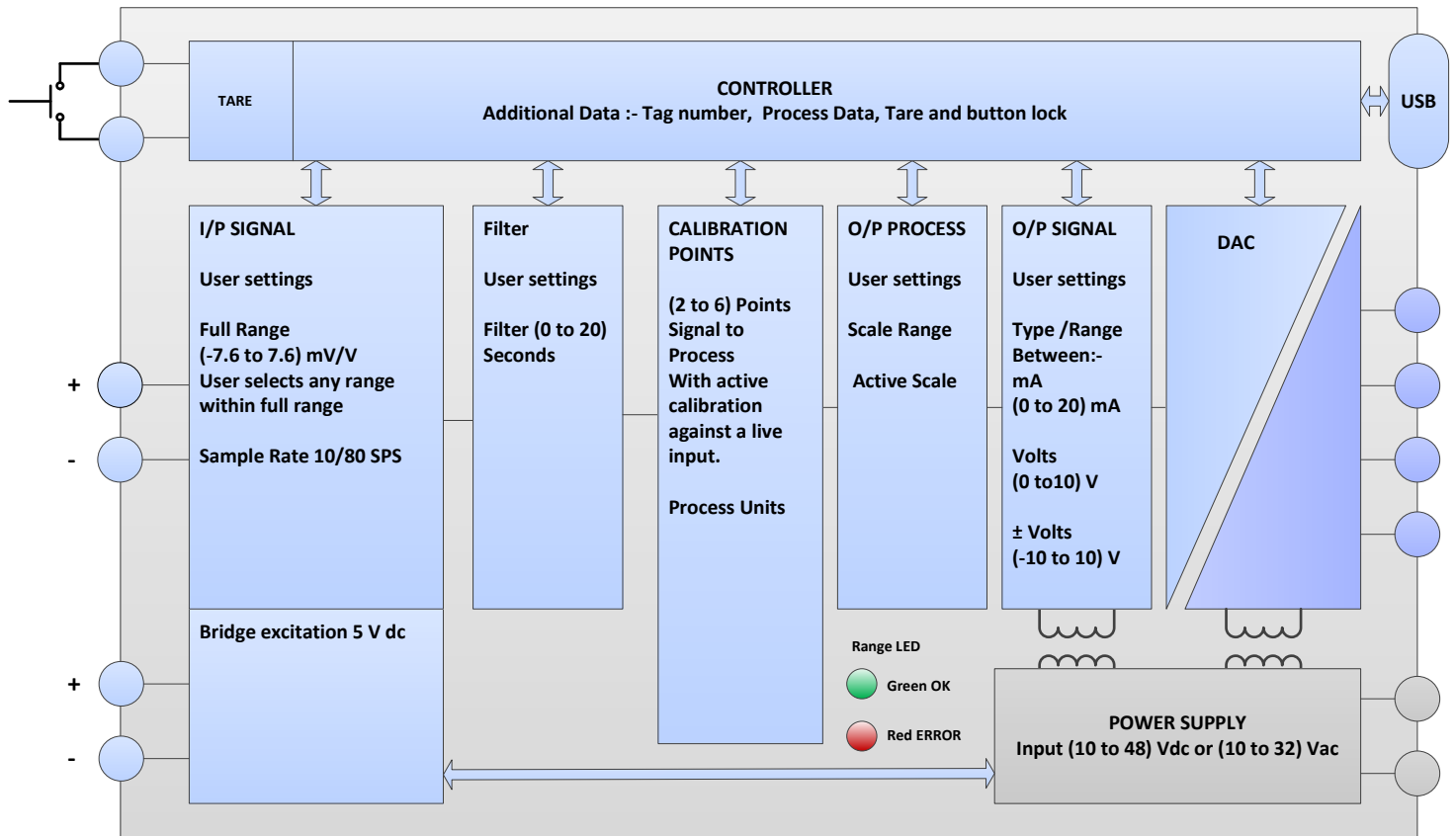


Every effort has been taken to ensure the accuracy of this document, however we do not accept responsibility for damage, injury, loss or expense resulting from errors and omissions, and we reserve the right of amendment without notice.

## RECEIVE AND UNPACKING

Please inspect the packaging and instrument thoroughly for any signs of transit damage. If the instrument has been damaged, please notify your supplier immediately.

## OPERATION



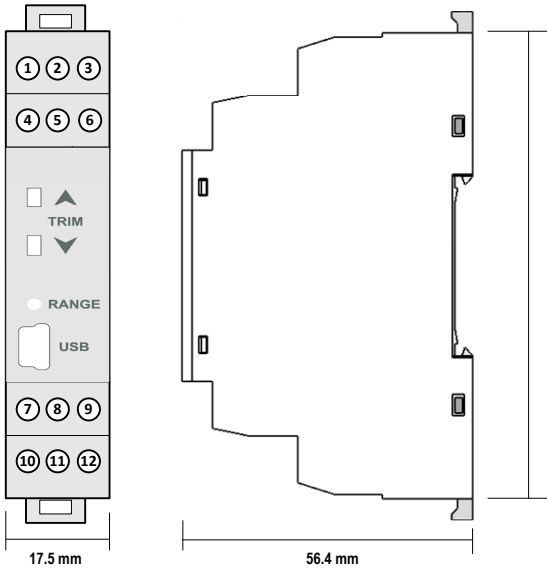
## CONFIGURATION ⚠ ? CLICK USB\_SPEEDLINK HELP BUTTON FOR FULL GUIDE TO CONFIGURATION

This product is configured using the USB port of a PC running USB\_Speed\_Link software, available from your suppliers. During configuration the product is powered direct from the usb port, removing the need for additional power. If the user wishes to monitor live process data during configuration, then power must be applied. Note the input and USB port of the device share the same ground, therefore care must be taken to ensure isolation between PC and input circuit. This is best achieved by using a portable laptop or notebook PC. USB\_Speed\_Link software is provided with detailed help menu to guide the user through the simple configuration procedure. Unless specified at the time of order this product is supplied with the default configuration listed below.



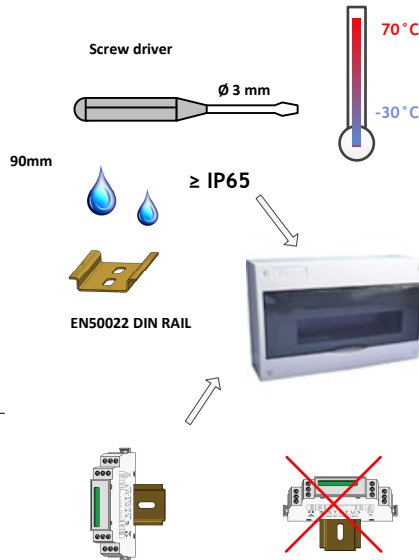
Factory default:	
Model (sensor)	= " "
Calibration Factor	= 2 mV/V
Balance	= 0.0
Sample Rate	= 10 SPS
Filter	= 0 (off)
Scale	= 2 points
Process Range	= (0 to 100)
Units	= "pV"
Process Output	= (0 to 100)
Output range	= (4 to 20) mA
Tare Setpoint	= 0.0
Tare Offset	= 0.0
Tag	= " "
Button Tare	Lock off
Trim Buttons	Lock off

## MECHANICAL INSTALLATION

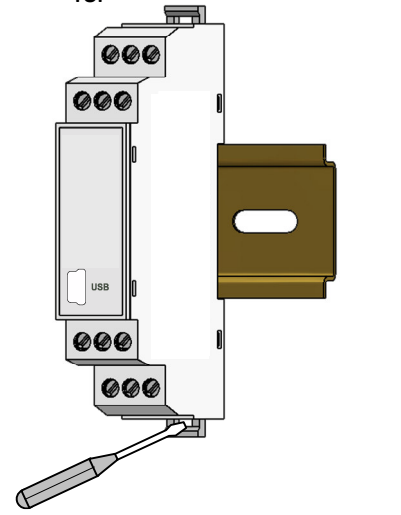


**Style** DIN 43880 (1 module width)  
**Material** Polyamide 6.6 self extinguishing  
**Terminals** Screw terminal  
**Cable** 2.5 mm Max  
**Color** Gray

## MOUNTING



## TOP



To fit or release module  
Insert screw driver into slot and lever latch away from body

## ELECTRICAL INSTALLATION

- 1.0 TURN OFF SUPPLY BEFORE WORKING ON ANY ELECTRICAL CONNECTION.
- 2.0 SUPPLY IS OVER VOLTAGE PROTECTED AND FUSED WITH INTERNAL RESETTABLE FUSE.

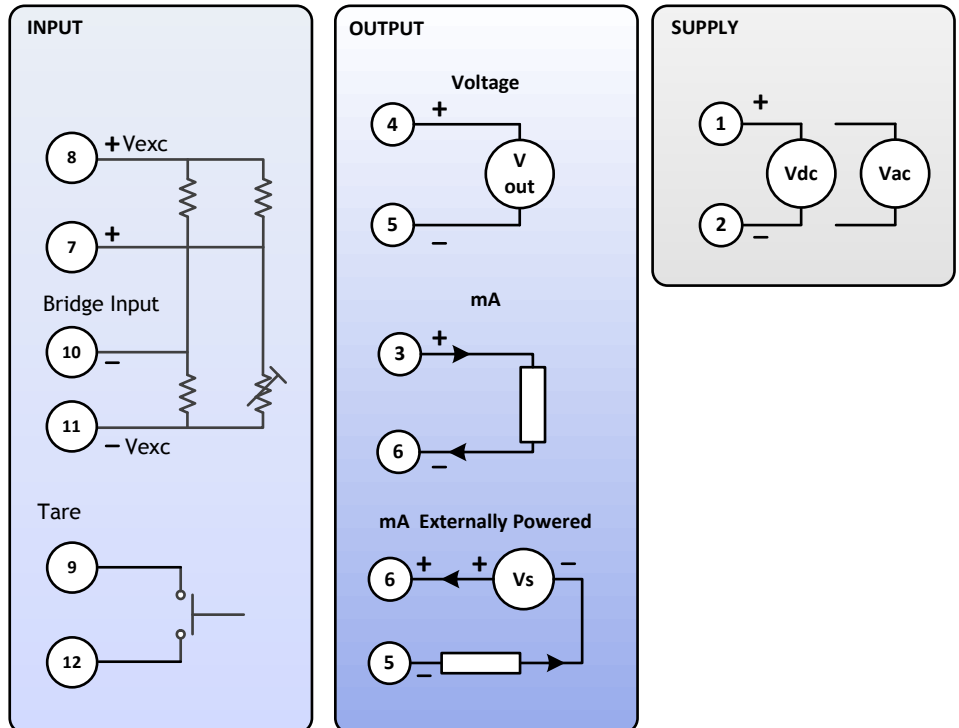
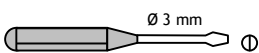
Screened Cable



### CONNECTION

For cable length < 3 Meters no screen or twist pair required.  
Use recommended types for cable length (3 to 30) meters.

Screw Driver



## PUSH BUTTON CONFIGURATION

Two trim buttons are provided on the front panel - blue = low trim, red = high trim. The trim buttons allow the operator to trim the device against a live input signal (similar to the "Active Range" range buttons available in the configuration software). The trim buttons operate as follows, please note both trim points operate independently, if desired only one trim point may be set, for example the low (blue) to correct a zero offset :-

With the input settled at the required high or low trim point, press and keep button pressed - the range light will go off for a few seconds then flash at a fast rate before returning to a steady state. Release button. Trim operation complete. Output trims to levels preset in the software configuration.

The tare may be set remotely by using contacts 9 and 12 connected to a volt free contact. The actual tare setpoint can be pre-programmed into the device during configuration.

On tare contact closure corrections within the device in the form of an offset to set the present input signal to represent the preset tare setpoint value.

## WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **61 months** from date of purchase. OMEGA's WARRANTY adds an additional one (1) month grace period to the normal **five (5) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

**OMEGA is pleased to offer suggestions on the use of its various products. However, OMEGA neither assumes responsibility for any omissions or errors nor assumes liability for any damages that result from the use of its products in accordance with information provided by OMEGA, either verbal or written. OMEGA warrants only that the parts manufactured by the company will be as specified and free of defects. OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. LIMITATION OF LIABILITY: The remedies of purchaser set forth herein are exclusive, and the total liability of OMEGA with respect to this order, whether based on contract, warranty, negligence, indemnification, strict liability or otherwise, shall not exceed the purchase price of the component upon which liability is based. In no event shall OMEGA be liable for consequential, incidental or special damages.**

CONDITIONS: Equipment sold by OMEGA is not intended to be used, nor shall it be used: (1) as a "Basic Component" under 10 CFR 21 (NRC), used in or with any nuclear installation or activity; or (2) in medical applications or used on humans. Should any Product(s) be used in or with any nuclear installation or activity, medical application, used on humans, or misused in any way, OMEGA assumes no responsibility as set forth in our basic WARRANTY/DISCLAIMER language, and, additionally, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the Product(s) in such a manner.

## RETURN REQUESTS/INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.

The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:

1. Purchase Order number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

1. Purchase Order number to cover the COST of the repair,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

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