

DRST-TC

Single-channel, Thermocouple DIN Rail Signal Transmitter

INSTRUCTION SHEET

M-DRST-TC/0319

Shop online at omega.com e-mail: info@omega.com
For latest product manuals: www.omegamanual.info

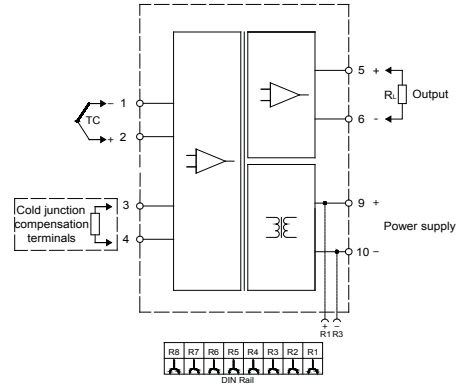
Introductions

This temperature transmitter converts the thermocouple signals to current or voltage signals by isolation. DIN rail power supply function can be selected in ordering.

The input, output, and power supply are galvanically isolated from each other. You can use handheld programmer to modify parameters or to calibrate the apparatus.

Parameters

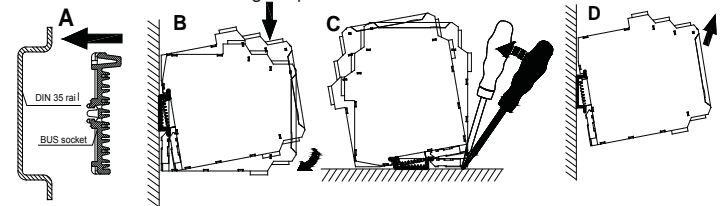
Power supply	
Connection type:	Terminals (9+, 10-) or DIN rail connector
Rated voltage:	18 ~ 60 V DC (Recommended voltage: 24 V DC)
Input	
TC:	K, E, S, B, J, T, R, N, WRe3 - WRe25, WRe5 - WRe26, etc
Output	
	DC current: 0(4) ~ 20 mA, 0 ~ 10 mA
	DC voltage: 0(1) ~ 5 V, 0 ~ 10 V
Load resistance	
	0(4) ~ 20 mA: $\leq 550 \Omega$
	0 ~ 10 mA: $\leq 1.1 K\Omega$
	0(1) ~ 5 V: $\geq 1 M\Omega$
	0 ~ 10 V: $\geq 2 M\Omega$
Transmission characteristics (25 C \pm 2 C)	
K/E/J/N/T	Range < 300 C: $\pm 0.3 C$ Range $\geq 300 C$: $\pm 0.1\%$ F.S
S/B/R/WRe-series	Range < 500 C: $\pm 0.5 C$ Range $\geq 500 C$: $\pm 0.1\%$ F.S
Temperature drift	30 ppm/C
Response time	$\leq 0.5s$
Cold junction compensation accuracy	$\pm 1 C$ (Preheated for 10 minutes)
Electromagnetic compatibility	Accordance to IEC 61326-3-1
Dielectric strength	$\geq 1500 V AC$ (Input /Output/Power supply)
Insulation resistance	$\geq 100 M\Omega$ (Input /Output/Power supply)
Ambient conditions	
Operation temperature:	-20 C ~ +60 C
Relative humidity:	10% RH ~ 90% RH(40 C)
Atmosphere pressure:	80 kPa ~ 106 kPa
Storage temperature:	-40 C ~ +80 C
Dimension	12.8 mm (W) \times 110 mm (H) \times 117 mm (D)
Degree of protection	IP 20
Power dissipation	0.8 W (24 V DC, single output)



Installation

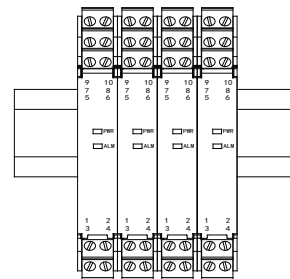
1. The apparatus can be installed on the DIN 35 mm standard rail which is corresponding to DIN IEC 60715. The must be snapped onto the rail, and never slanted or tipped to the side.

2. Installation and removing steps are as follows:



- Snap the BUS socket on the DIN 35 rail, as figure A;
- Snap metal lock onto mounting rail, then rotate the devices, as figure B, press down the devices onto mounting rail, make sure that the BUS connector pins of devices and BUS socket are in close contact.
- Pry the metal lock off the rail with screwdriver as arrow shown, pull downward the springs, and rotate the devices.
- Remove the devices as arrow shows.

3. As far as possible to mount it vertically, In order to dissipation the heat of the apparatus.



Vertically installation

Light indication

PWR: Power indicator light shows green, it means work normally.

ALM: Input signal state indicator (red), it is off during normal operation, remain bright when input over-range. It is glitter when input line breakage.



omega.com info@omega.com

Servicing North America:

U.S.A. Headquarters:

Omega Engineering, Inc.
800 Connecticut Ave, Suite 5N01, Norwalk, CT 06854
Toll-Free: 1-800-826-6342 (USA & Canada only)
Customer Service: 1-800-622-2378 (USA & Canada only)
Engineering Service: 1-800-872-9436 (USA & Canada only)
Tel: (203) 359-1660 Fax: (203) 359-7700
e-mail: info@omega.com

For Other Locations Visit omega.com/worldwide

The information contained in this document is believed to be correct, but OMEGA accepts no liability for any errors it contains, and reserves the right to alter specifications without notice.

WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA's WARRANTY adds an additional one (1) month grace period to the normal **one (1) 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. OMEGA is a trademark of OMEGA ENGINEERING, INC.

© Copyright 2019 OMEGA ENGINEERING, INC. All rights reserved. This document may not be copied, photocopied, reproduced, translated, or reduced to any electronic medium or machine-readable form, in whole or in part, without the prior written consent of OMEGA ENGINEERING, INC.