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Data Sheet Universal-Display TAR 1004

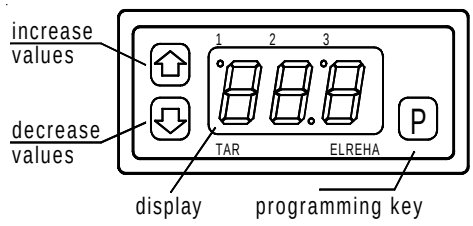
No. 5310923-16/06 E

General The scalable Universal Display TAR 1004 is usable for applications where transmitters or controller units convert physical dimensions into standardized voltage or current signals. Additionally it can be used as remote display for controller systems with analog outputs.

Examples Remote display for controllers series TMP/TMC/TKP/TKC (as temperature display 0-10V), remote display for pressures (loop in a 4-20mA wiring), humidity display for FF 25xx humidity transmitters (relative humidity 0-5V / 0-10V)

Operating Operating the TAR is very easy since all parameters can be shown and edited by means of only three keys.

Operating Elements



Three seconds after applying voltage to the controller the measured actual value will be displayed.

Calling up parameters
- Push 'P'-key, one of the parameter numbers appear
- Use up/down keys to select desired parameter
- Push 'P'-key again, parameter value becomes visible.

Change parameter value
If you can see the parameter value on the display you can adjust it by using the up/down keys. Hold down the key effects a continuous value change. Pressing the 'P'-key now stores the new value and brings you back to the parameter number.

Unlock Keys
To prevent unauthorized persons from editing parameter values, there is a locking function available. To unlock edit function set parameter P08 value to (--88--):

Press key "P" ..... parameter number appears
Use "⇧/⇩" ..... select code parameter (P08)
Press "P" again ..... parameter value appears
Use "⇧" ..... set value to --88--
Press "P" again ..... value is stored, back to parameter number.

If no key is hit for about one minute, the access code is cancelled and the editing function is locked automatically.

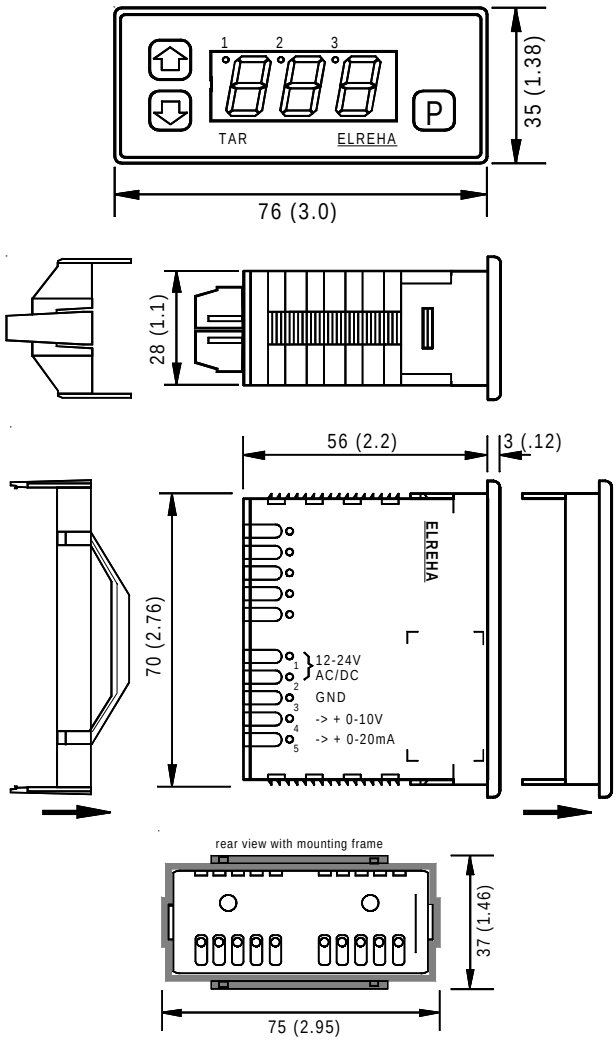
Parameters

P01 ..... **Actual value** of input 1 or input 2
P02 ..... = 1, P01 is the **value of input** 1 (0-10V)
= 2, P01 is the value of input 2 (0-20mA)
P03 ..... = 0, **resolution** of 1/10 between -19,9 and +99,9
= 1, resolution is 1
P04 ..... **Lower actual value** at 0V resp. 0mA
P05 ..... **Upper actual value** at 10V resp. 20mA
P06 ..... **Display adjust**, range +/- 10
P07 ..... **Actual value trend** = 1, value rises with increasing input signal
= 2, value rises with falling input signal
P08 ..... **Code input**, Codenumber is -- 88 --

Technical Data

Supply Voltage ..... 12-24V AC/DC, appr. 2 VA
Operating Temperature ..... -10...+55°C (+14...+131°F)
Storage Temperature ..... -30...+70°C (-22...158°F)
Data Storage ..... unlimited (EEPROM)
Display ..... LED red, character height 10mm (.39)
Display Range ..... scalable -99 thru +999
Resolution ..... 8 bit, between -20 / +99 = 0.1
Input 1 ..... 0 - 10V, Ri >= 10 kohms
Input 2 ..... 0 - 20 mA, Ri <= 250 ohms
Electrical Connection ..... Screw Terminals 2,5mm (.1)
Protection ..... IP 54 from front

Dimensions / Wiring



Installation / Run-up

Before applying voltage to the controller make sure that all wiring has been made in accordance with the wiring diagram in this manual and fits the application. The leads may be up to some hundred meters, but should be shielded cable with one end of the shield connected to ground. To avoid irregular function caused by electro-magnetic interference, do not run wires in the same conduit together with mains voltage cables. Keep a distance at least 1 meter (3 ft.) from high voltage wiring, big transformers and fluorescent lights.
For run-up you need informations about the kind of signal provided by transmitter/controller and which values should correspond to this.

Example 1:

You want to use the TAR as a humidity display for a transmitter which provides 0-5V, corresponding to a range of 0 - 100% r.H.

- You have to use input 1 (0-10V, set parameter 02 to 1)
- P03 = 1 (resolution 1%),
  P04 = 0 (lower value),
  P05 = 200 (= display at 10V, corresponds to 100 at 5V),
  P07 = 1

Example 2:
You want to display values of a source which delivers a 0-20 mA current corresponding to a display range of 0 thru 500.

- You have to use input 2 (0-20mA, set parameter 02 to 2)
- P03 = 0,
  P04 = 0,
  P05 = 500,
  P07 = 1

Example 3:
You want to constitute the TAR as a display for a pressure transmitter which delivers 4-20 mA corresponding to -0,5 thru +7,0 bar.

- You have to use input 2 (0-20mA, set parameter 02 to 2)
- P03 = 0,
  P04 = -2.4 (results from calculating the rated measuring value of the transmitter at 0mA output current),
  P05 = +7,0,
  P07 = 1

If the run-up has been completed you can adjust the display individually by using parameter.

EG-Konformitätserklärung

Für das beschriebene Erzeugnis wird hiermit bestätigt, daß bei bestimmungsgemäßem Gebrauch die Anforderungen eingehalten werden, die in der Richtlinie des Rates zur Angleichung der Rechtsvorschriften der Mitgliedsstaaten über die elektromagnetische Verträglichkeit (89/336/EWG) festgelegt sind. Diese Erklärung gilt für alle Exemplare, auf die sich die vorliegende Bedienungsanleitung (die selbst Bestandteil dieser Erklärung ist) bezieht. Zur Beurteilung des Erzeugnisses hinsichtlich elektromagnetischer Verträglichkeit wurden folgende Normen herangezogen:

IEC 1000-4-1, IEC 1000-4-2, IEC 1000-4-3*, IEC 1000-4-4, IEC 1000-4-5, EN 55011 B, EN 50081, Teil 1 und 2; EN 50082, Teil 1 und 2

Diese Erklärung wird verantwortlich vom Hersteller/Importeur

ELREHA Elektronische Regelungen GmbH
68766 Hockenheim

abgegeben durch:

Klaus Birkner, Entwicklung und Leiter.....
des EMV-Labors
Hockenheim.....**18.2.1995**.....
Ort Datum Unterschrift

*Die Einhaltung des Grenzwertes nach IEC 1000-4-3 wird aus den vorgenommen Messungen nach IEC 1000-4-2 und IEC 1000-4-4 abgeleitet. Die Korrelation auf IEC 1000-4-3 basiert auf entsprechenden Versuchsmessungen, deren Ergebnisse beim Hersteller hinterlegt sind.

Dokument erstellt am: 6.5.04	geprüft am: 6.5.04	freigegeben am: 6.4.04
von: tsd/jr	von: mv/mh	von: mv/sha