



TDS12310

Universal analog input interface

AUTOBUS Interface with 8 inputs for universal analog sensors. Using this interface you are able to integrate any industrial sensor like temperature measuring for the sauna, water level measuring of the swimming pool, wind metering... with the TELETASK domotic system.

Signals 0-5V, 0-10V, 0-20mA, 4-20mA and TELETASK analog sensors are applicable.

APPLICATION

Used for domestic and office purposes. Measuring analog parameters. This interface is not suited for measurement or control of such processes, which could lead to danger when controlling fails. Neither is this interface suited for controlling industrial processes.

APPLICATION EXAMPLE

(1) A wind sensor measuring from 0V to 10V. Output, 0,7m/sec (2,52km/h) for 0V up to 40m/sec (144km/h) for 10V .
 (2) A rain water tank (content 10.000L) with an ultrasonic sensor (4-20mA output), ex. Type Sontay LS-UL3)
 The total range of 10.000L divided with a resolution of 720 steps, gives $10.000/720 = 13,9L$ (see table below).
 On the display of the AURUS-OLED there is a limit of characters (6) which lead to the following result as a maximum: 99999L.

! Remark: This is only true when the signal has a linear resolution with the tank content. This is correct in case of a rectangle tank. When used with a circular tank, the signal won't be linear. In this case it is advised to represent the value in percent or meter.

! IMPORTANT: Failure of the measurement (ex. Wind sensor is broken or cables are cut) could cause dangerous situations. For example, in case of a wind speed sensor, if broken, your sunshades won't be withdrawn automatically by high wind speeds. To prevent damage you will have to withdraw the shades manually. TELETASK is in no way responsible for damage caused by bad working or broken components of the system.

DISPLAY POSSIBILITIES

On the AURUS-OLED (TDS12022xx) there is a maximum of digits available for text to be displayed: 6 digits including the optional “-”, “.” Or unit symbol.
 Ex. “999999”, “-16.4C”, “-16.66”, “105kmh”

CHARACTERISTICS

Up to 8 universal analog sensors can be connected:
 TELETASK analog sensors (TDS12250xx/TDS12251/12260xx/12270xx) and sensors with 0-5V, 0-10V, 0-20mA, 4-20mA output signals.
 Input impedance 0-5V: 15kOhm
 Input impedance 0-10V: 25kOhm

SETTINGS

Functions

Via PROSOFT (starting from 3.0.0.70)

AUTOBUS address

Via rotary switches 'Tens' + 'Units':

Jumpers

Terminating resistor (supplied with the interface). To be used when the interface is at the physical end of the AUTOBUS cable.

Input

For every input you have to set two dip switches to define the type of sensor which is connected with that particular analog TDS input.

Consult the schematic drawing for the correct dip switch settings.

!!! Be very careful with the dip switch setting. A wrong sensor type setting causes improper functioning or it can even damage the input.

INSTALLATION

DIN-rail mounting

4 modules wide

CONNECTIONS

AUTOBUS

AUTOBUS connector set + patch cable supplied with this unit

Inputs

Screw terminals for wires max 1mm²; always connect each sensor with an individual shielded cable (three wires) only. Connect shielding with the AUTOBUS shielding at the interface. Maximum cable length between sensors and interface is 50 meters, except for 0-20A and 4-20mA where it is 100 meter.

POWER CONSUMPTION

Max. 52 mA

DIMENSIONS

72 B x 90 H x 60 D (mm)

GROSS WEIGHT

0,180 kg

IP PROTECTION RATE

IP20

POSSIBLE ERROR MESSAGES ON DISPLAYS (EX. AURUS-OLED TOUCH PANEL)

“data?”

No information from interface (check AUTOBUS connection)

“sens?”

Sensor not connected (TDS temperature & TDS humidity only)

“wait.”

Interface is calculating first measurement

“loop?”

Broken cable (4-20mA only)

“pow?”

Sort circuit in the power of the sensors

“error”

Wrong signal (ex. Wrong sensor)

15% to 85%

PACKAGING CONTENT

TDS12310 interface
 AUTOBUS connector set + terminating resistor
 AUTOBUS Patch cable

IP PROTECTION RATE

IP20

OPERATING RANGE

Temperature

0°C to +50°C max.

Relative humidity

5% to 80% at 25°C (no humidity/condense)

STORAGE

Temperature

-20°C to +65°C

Relative humidity

SCHEMATIC DRAWING

TABLE OF MEASUREMENT RESOLUTION AND PRECISION

Signal:	Resolution:	Precision(@25°C):	Non Linearity:
0 – 5V	1024	± 3%	< ±1%
0 – 10V	1024	± 3%	< ±1%
0 – 20mA	900	± 3%	< ±1%
4 – 20mA	720	± 3%	< ±1%
TDS Temp sensor	1200 (0,1°C)	± 1%	< ±1%
TDS Light sensor	200	± 10%	< ±1%
TDS Humidity sensor	100 (1%RH)	± 5%	< ±2%

