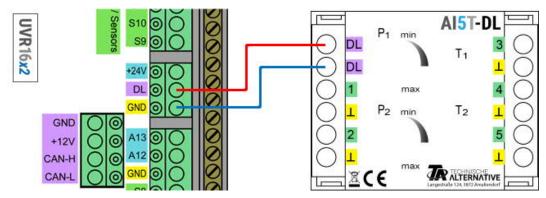# AI5T-DL

INPUT EXPANSION

Version 1.02

Mode of operation
Programming

The AI5T-DL (= "**A**nalogue **I**nput", button) translates signals for the data link (DL bus). These can originate from the two potentiometers, the 2 buttons (pulse/flip-flop in each case) or from up to 5 different external 0-10 V sources. It is recommended, that the 0-10V sensors that are being read out be connected to the same controller as the AI5T-DL itself.

Electrical Connection
Example: Connection to a UVR16x2 controller

The principles of DL bus cabling are described extensively in the installation instructions for the freely programmable controllers. The polarity of the data link is interchangeable.

Index
The AI5T-DL forwards values to the data link via 12 indices. These are either measured via the inputs or set on the device with the potentiometers or manually with the DIP switch.
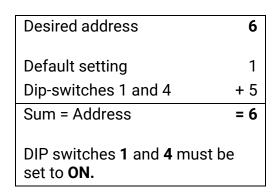
Index	Unit	Source	
1	Volt	External sensor	Channel 1
2	Volt	External sensor	Channel 2
3	Volt	External sensor	Channel 3
4	Volt	External sensor	Channel 4
5	Volt	External sensor	Channel 5
6	Percent	Potentiometer	P1
7	Percent	Potentiometer	P2
8	Dimensionless	DIP-switch*	-
9	Dimensionless	Button	T1
10	Dimensionless	Button	T2
11	Dimensionless/Flip-Flop	Button	T1
12	Dimensionless/Flip-Flop	Button	T2
13	Not relevant for AI5-DL		
14	Dimensionless	Serial number of the module	
15	Dimensionless	Software version (without decimal points)	

*DIP switches only on version AI5S-DL.

DL adress

The AI5T-DL has a default address of 1. This address can be changed using the DIP switches in the device. The final address is made up of the default 1 and the sum of the DIP switches that are switched to „ON".

Example

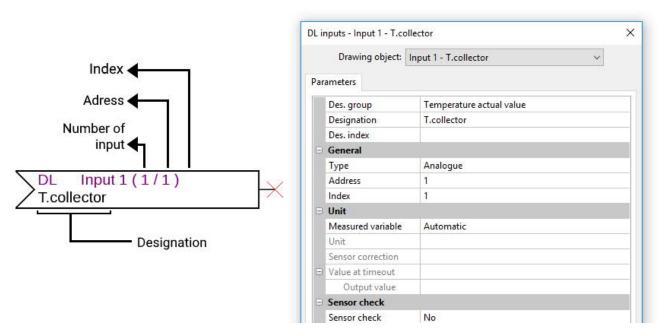|	
Desired address	**6**
Default setting	1
Dip-switches 1 and 4	+ 5
Sum = Address	**= 6**
DIP switches **1** and **4** must be set to **ON.**	

Position of DIP switches acc. to example.

Programming in TAPPS2

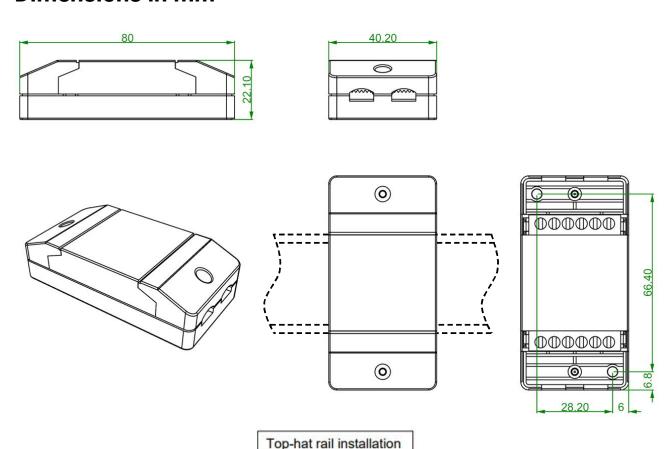In the following examples, the default DL bus address of 1 is used.

The most important settings can be found under **General.** Here state the DL bus address (WE = 1) set on the AI5-DL as well as the index of the desired value.

If the Measured variable is set to **Automatic**, it is not possible to perform any further settings under Unit. However, other values can be simulated by changing the measured variables: if, for example, the measured variable "Temperature" is assigned to one of the potentiometers (indices 6 and 7), this can be used to simulate a temperature for a controller for further calculations.

The table found under **Index** (page 2) provides information about which index outputs which value with which measured variable.

On this model, Index 8 is surplus to requirements, as the device does not have a DIP switch (see AI5**S**-DL).

Dimensions in mm

Top-hat rail installation
(support rail TS35 to
standard EN 50022)

Technical Data	
DL bus load	15%
IP rating	IP40
Terminal	max. 1,5 mm^2
Max. ambient temperature	45 °C
Input voltage range	0-10 V

Subject to technical modifications.   ©2018