

TROVIS 6600 Automation System

TROVIS 6620-1 I/O Module



Application

I/O module for connection to TROVIS 6611 Control and Automation Unit or TROVIS 6610 CPU Module



The I/O module records the analog and digital input signals of connected sensors. Digital signals to be processed by the automation station are transmitted over the bus.

The data recorded by the automation station are, in turn, transmitted by the I/O module as analog or digital signals to the control valves.

The I/O module provides 20 physical channels of which 10 are universal inputs for use with either analog or binary signals.

- Analog inputs as:
 - Pt 1000 (two-wire)
 - 0 to 10 V
 - 0/4 to 20 mA
 - 0 to 2000 Ω
- Binary inputs optionally as normally closed or normally open contacts
 - Status indicated by LEDs
 - Binary inputs 1 and 2 as meter inputs
- 4 analog 0 to 10 V DC outputs
- 6 binary outputs (relays)
- Status indicated by LEDs

Interfaces

- I/O bus (RS-485)

Further properties


- Power supply and I/O bus galvanically isolated from the module
- Plug-in screw terminals
- Status LEDs for communication, malfunction, operation, and status

The TROVIS 6620-1 I/O-Module is fully compatible with the previous version (TROVIS 6620-0) and can be used to replace it.



Fig. 1: TROVIS 6620-1 I/O Module

Technical data

Auxiliary power	
Power supply	24 V DC (-10 %, +15 %)
Power consumption	Approx. 3 W
Alternatively	24 V AC, approx. 3 VA
Permissible ambient conditions	
Operating temperature	0 to 55 °C
Transportation and storage temperature	-20 to 70 °C
Relative humidity	Max. 95 %, non-condensing
Electromagnetic compatibility	
Noise emission	Acc. to EN 61000-6-3, EN 61326-1
Noise immunity	Acc. to EN 61000-6-2, EN 61326-1
Device safety	
Degree of protection	IP 20 according to IEC 60529
Class of protection	II according to EN 61140:2003
Overvoltage category	II according to EN 60664-1
Degree of contamination	2 according to EN 60664-1
Installation	
Dimensions (width x height x depth)	110 x 130 x 60 mm including terminals
Mounting	Rails (all 35 mm rails or rails according to EN 50022)
Weight	Approx. 0.4 kg
Readings	
LED status indication	Binary input and output, module operation and malfunction, communication (Rx/Tx)
Interface	I/O bus
Specification	RS-485
Galvanically isolated	Yes
Transmission rate	9600, 19200, 38400, 57600, 115200 Baud · Automatic adaptation to master Baud rate
Protocol	SAMSON
Connections	Plug-in screw terminal Max. wire cross-section 2.5 mm ²
Compliance	

10 universal inputs	
Binary inputs	
Contact input	
Power supply to binary inputs	Internally powered, approx. 10 V DC
Measuring current in short circuit	500 µA
Contact closed (LED on)	<100 Ω
Contact open (LED off)	>200 Ω
Voltage input (alternatively)	
Input 1 (LED on)	0 to 0.05 V
Input 0 (LED off)	1 to 10 V

Counter input	
Channel 1 and 2 only	
Minimum pulse length (pulse/pause 1:1)	>0.5 ms (<1 kHz)
Counter pulse	Positive edge triggered
Contact input	
Contact closed	<100 Ω
Contact open	>200 Ω
Voltage input	
Input 1	0 to 0.4 V
Input 0	4 to 10 V
LED indication	Change per counter pulse
Sensor input	
Type of sensor	Pt 1000 in two-wire connection
Measuring range	-40 to +160 °C
Resolution	0.2 K
Accuracy	<0.5 % of measuring range
Temperature influence	<0.1 % of measuring range per 10 K
Measuring current	500 µA
Resistance input	
Measuring range	0 to 2000 Ω
Resolution	0.5 Ω
Accuracy	<0.5 % of measuring range
Temperature influence	<0.1 % of measuring range per 10 K
Measuring current	500 µA
Voltage input	
Measuring range	0 to 10 V DC
Resolution	15 mV
Accuracy	<0.5 % of measuring range
Temperature influence	<0.04 % of measuring range per 10 K
Input resistance	>10 kΩ
Current input	
Measuring range	0 to 20 mA
Resolution	15 µA
Accuracy	<0.5 % of measuring range
Temperature influence	<0.1 % of measuring range per 10 K
Load	<150 Ω

Outputs	
6 binary outputs	
Power rating of relay	250 V AC, 2 A inductive load
Operation only permissible on one phase per module.	250 V AC, 3 A resistive load
LED indication	Relay (NO contact)
4 analog outputs	
Output range	0 to 10 V DC
Accuracy	<0.5 % of measuring range
Temperature influence	<0.03 % of measuring range per 10 K
Permissible load	>3.3 kΩ
Short-circuit current	Approx. 5.5 mA

Specifications subject to change without notice



SAMSON AG · MESS- UND REGELTECHNIK
Weismüllerstraße 3 · 60314 Frankfurt am Main, Germany
Phone: +49 69 4009-0 · Fax: +49 69 4009-1507
samson@samson.de · www.samson.de

T 6620-1 EN