TROVIS 5500 Automation System
TROVIS 5571 Programmable Logic Controller (PLC)

Application

Freely programmable plants and applications for HVAC systems. Modbus master interface for communication with other Modbus devices (e.g. TROVIS 5576, 5579). Inputs and outputs extendable using Modbus I/O module (accessories)

Functions

- Freely programmable according to IEC 61131 using ISaGRAF®
- Six programming languages
  - Ladder Diagram (LD)
  - Function Block Diagram (FBD)
  - Structured Text (ST)
  - Instruction List (IL)
  - Flow Chart (FC)
  - Sequential Function Chart (SFC)
- Fully graphic, illuminated display with user-friendly operation and plain text display
- Ready-programmed standard applications:
  - Boiler control (Kes71)
  - Ventilation control (Luft71)
  - Heat exchanger sequence control (WT71)
- Ready-programmed default functions/function modules (see ISaGRAF® documentation)
- Over 50 special functions/function modules for extensive program generation in HVAC applications
  - Boiler plants
  - Heat exchanger sequence control
  - Ventilation systems
  - Hot water generation
  - Heating circuits etc.
- Simple operation in various levels
  - Operating level:
    Application from ISaGRAF® (user configurable)
  - Information level:
    Analog inputs, binary inputs, analog outputs, binary outputs and meter bus
  - Setting level:
    Date/time levels, Modbus slave, Modbus master, meter bus and universal input type
- Individually configurable universal inputs

TROVIS® Electronics from SAMSON

Fig. 1: *TROVIS 5571 Programmable Logic Controller (PLC)*

- Sensor calibration for each sensor input
- Binary inputs can be added to the error status register
- Modbus communication over Modbus master function and Modbus slave function
- Modbus slave connection, also over modem (RS-232)
- Alarm notification by fax or text message
- Meter bus communication with a maximum of three meters
- Flash memory (operating system can be updated over RS-232)

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Data Sheet **T 5571 EN**

Technical data

Inputs	17 universal inputs, individually configurable as – Resistance input (Pt 100, Pt 500, Pt 1000, Pt 2000, Ni 200, Ni 1000, Ni 2000, PTC, NTC, 1–2 kΩ) – Current input (0/4 to 20 mA) with 50 Ω parallel resistor – Voltage input 0 to 10 V – Binary input, floating
Outputs	10 binary relay outputs, non-floating in pairs, 2 A/250 V AC, switch-on surge, max. 16 A 2 low-voltage binary outputs, 100 mA/50 V DC 4 analog outputs (0 to 10 V), max. load > 4.7 kΩ
Interfaces	
Modbus slave interface	RS-232 for modem or point-to-point communication with PC (RJ-12 connector socket at the back) Optional: Modbus interface RS-485 over cable converter (1400-7308)
Modbus master interface	RS-485 for communication with other Modbus instruments (connected over terminals 1/2)
Meter bus	Connected over terminals 48/49/50
Programming interface	For installing an application created in ISaGRAF® and data logging (RJ-45 connector socket at the front)
Supply	230 V AC, 48 to 62 Hz
Power consumption	8 VA
Temperature	0 to 40 °C (ambient) · −20 to 60 °C (storage)
Degree of protection	IP 40 according to IEC 60529
Class of protection	II
Degree of contamination	2
Overvoltage category	II
Humidity rating	F
Noise emission	According to EN 61000-6-3
Noise immunity	According to EN 61000-6-1
Noise suppression	According to DIN VDE 0875
Weight	Approx. 0.6 kg

Electrical connection and installation

The controller consists of the housing and the back panel. The electronics are integrated into the housing. The back panel contains the terminal block. Two wires of 0.75 mm² may be connected to each terminal. For wall mounting, fasten the back panel with the terminal block to the wall. After installing the connecting lines, attach the housing.

For panel mounting, insert the housing into the prepared panel cut-out and secure it. After installing the connecting lines, attach the housing.

Ordering text

Programmable Logic Controller (PLC)	TROVIS 5571

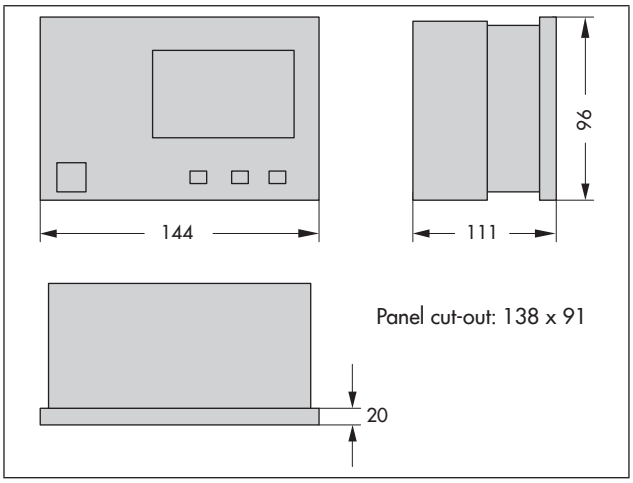
Accessories

Default application	
Boiler control (Kes71)	1402-0048
Ventilation control (Luft71)	1402-0035
Heat exchanger sequence control (WT71)	1402-0049
ISaGRAF® programming environment 1400-7621	
Programming cable	1400-7620
RS-232 communication cable	1400-7419
RS-232/RS-485 four-wire cable converter	1400-7308
Modbus I/O module	1402-0328

The communication cable is connected to the RS-232 interface to download the operating system.

The programming cable is connected to the RJ-45 interface integrated into the front panel to download the application.

Dimensions in mm



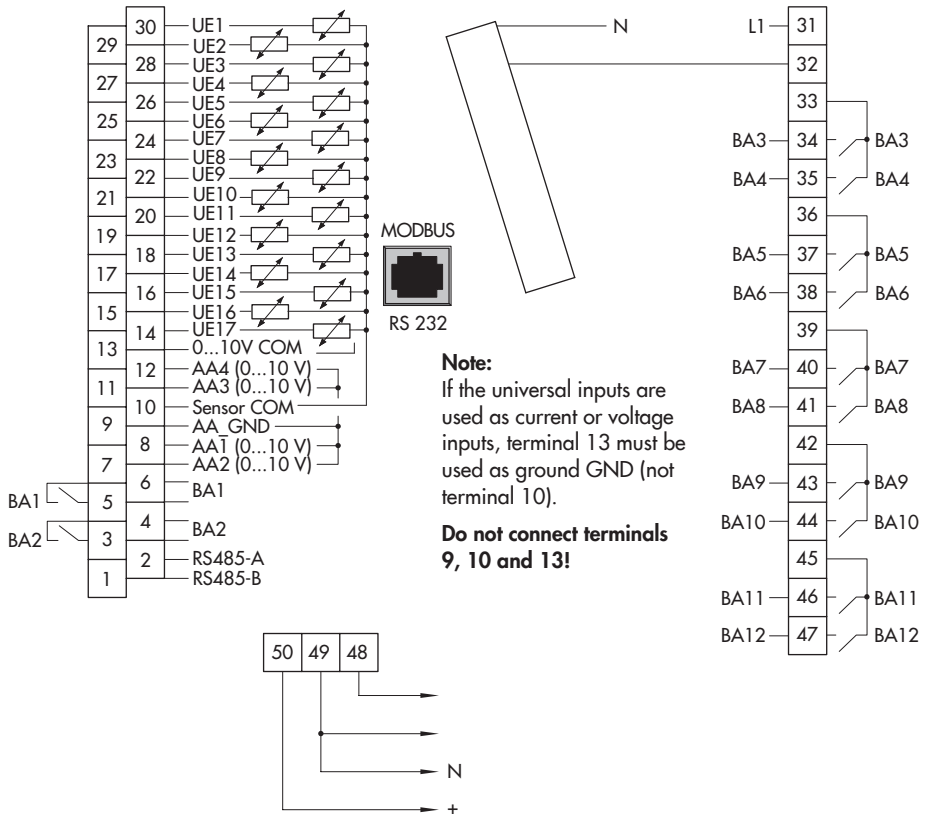


Fig. 2: *Terminal assignment of TROVIS 5571 Programmable Logic Controller (PLC)*

Modbus I/O module (1402-0328)

Extension of inputs and outputs at the programmable logic controller (PLC)

Technical data	
Inputs	
Binary inputs	6 · Optionally can be used as: – 0 to 10 V input (inputs 1, 2, 5, 6) – Pt 1000 input (inputs 3, 4) – 0 to 1000 Ω input (inputs 3, 4) – Counter inputs, max. 1 kHz (inputs 1, 2, 3, 4) – 0 to 10 V **outputs** (inputs 5, 6)
Outputs	
Binary outputs	4 · Max. 250 V AC/100 V DC, 2 A (relay) Switch-on surge, max. 16 A
Interfaces	Modbus RS-485
Operating voltage	230 V AC
Dimensions [mm]	
Width	94
Height	96
Depth	60

Terminal assignment			
1	BA1	Binary output 1	Max. 250 V AC, 2 A 100 V DC, 2 A
2	BA2	Binary output 2	
3	COM1/2	COM binary output 1/2	
4	BA3	Binary output 3	Max. 250 V AC, 2 A 100 V DC, 2 A
5	BA4	Binary output 4	
6	COM3/4	COM binary output 3/4	
7	AC1	Operating voltage 85 to 250 V AC	AC 1
8	AC2		AC 2 has GND reference
9	BE1 ZE1 AE1	Binary input 1 or counter input 1 or 0 to 10 V input	
10	BE2 ZE2 AE2	Binary input 2 or counter input 2 or 0 to 10 V input	
11	GND	GND input 1/2	
12	BE3 AE3	Binary input 3 or Pt 1000 or 0 to 1000 Ω	Temperature measurement with Pt 1000: –40 to 160 °C or Resistance measurement: 0 to 1000 Ω
13	BE4 AE4	Binary input 4 or Pt 1000 or 0 to 1000 Ω	
14	GND	GND input 3/4	
15	BE5 ZE3 AE5 AA1	Binary input 5 or counter input 3 or 0 to 10 V input or 0 to 10 V output	AE5 and AA1: Max. 2.5 mA
16	BE6 ZE4 AE6 AA2	Binary input 6 or counter input 4 or 0 to 10 V input or 0 to 10 V output	AE6 and AA2: Max. 2.5 mA
17	GND	GND input/output 5/6	
18	A1	RS-485/Modbus (slave)	Connection to TROVIS 5571, 5572, or Modbus I/O module
19	B1		
20	A2	RS-485/Modbus	Intended as extension
21	B2		

Specifications subject to change without notice

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