



esco Fieldbus Module

- I/O modules for Modbus®-RTU and SAIA® S-Bus
- Proven I/O configurations for analog and digital signals as well as PT/Ni



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Specifications

Communication	
Bus interface	RS-485
Bus protocol	Modbus®-RTU and SAIA® S-Bus (Data-Mode)
Signal inputs	
Digital inputs	24 V DC, 5 mA
PT/Ni inputs	Measuring ranges: 0,0 ... 6553,5 Ohm, resolution 0 ... 65535 -100 °C ... +555 °C, resolution 0 ... 65535 -200 °C ... +280 °C, resolution -2000 ... +2800 -200 °C ... +800 °C, resolution -2000 ... +8000 -200 °C ... +327,67 °C, resolution -20000 ... +32767 -60 °C ... +250 °C, resolution -600 ... +2500
Analog inputs voltage	0 ... 10 V, resolution 0 ... 10000
Analog inputs current	4 mA ... 20 mA, resolution 4000 ... 20000
Signal outputs	
Digital, open collector	24 V, 50 mA, short-circuit-proof
Digital, relay	24 V DC, 0,5 A, 250 V AC / 6A-AC1 / 2A-AC3, isolated
Analog, voltage	0 ... 10 V, resolution 0 ... 10000
Analog, current	4 mA ... 20 mA, resolution 4000 ... 20000
Resolution A/D converter	0 ... 65535 steps (16 bit)
Power requirements	
Supply voltage	24 V DC, ±20%
No-load current	20 mA
Environmental conditions	
Ambient air temperature, humidity	-10 °C ... +50 °C (tolerance <0,1%), < 95% relative humidity, not cond.
Housing	
Protection class	IP20
Form factor, dimensions (H x W x D)	45 mm side-by-side mounting. 90 mm x 88 mm x 58 mm
Mounting	DIN rail TS35 or wall fastening
Connections	Spring-cage connection terminal up to 1,5 mm² Screw connection terminal up to 1,5 mm² on I/O-module 7737
Standards	
EMC / CE certification	According to EN 61326 / yes

Available Modules and I/O Configurations

Model number	Digital inputs	Analog Inputs	Digital Outputs	Analog Outputs
I/O module 7532	4 x 24 V	4 x 4 mA ... 20 mA	4 x relay	2 x 4 mA ... 20 mA
I/O module 7737	2 x 24 V	4 x PT/Ni	6 x relay	---
I/O module 7738	16 x 24 V	---	---	---
I/O module 7740	---	---	10 x relay	---
I/O module 7741	---	10 x PT/Ni	---	6 x 0 V ... 10 V
I/O module 7814	---	4 x PT/Ni 3 x 0 V ... 10 V	---	4 x 0 V ... 10 V
I/O module 8397	8 x 24 V	8 x 4 mA ... 20 mA	---	---
I/O module 8533	8 x 24 V	---	4 x relay	---
I/O module 8534	---	8 x PT/Ni	8 x relay (OC)	---
I/O module 8553	---	---	10 x relay (NC)	---
I/O module 8604	2 x 24 V	6 x 0 V ... 10 V	---	6 x 0 V ... 10 V

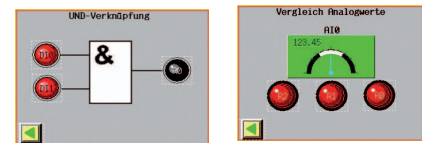
Modules with Manual Output Mode and Status Display

Model number	Digital Inputs	Analog Inputs	Digital Outputs	Analog Outputs
I/O module 7738-1	16 x 24 V	---	---	---
I/O module 7740-2	---	---	10 x relay	---
I/O module 8533-2	8 x 24 V	---	4 x relay	---
I/O module 8553-2	---	---	10 x relay (NC)	---

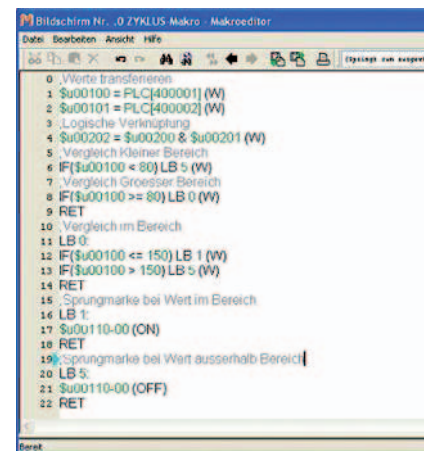
Features

esco fieldbus modules provide inputs and outputs thus acting as an interface to the fieldbus level. Different sensors and/or actuators may be connected. The signals are transmitted using the RS-485 standard for electrical interconnection and the MODBUS®-RTU or SAIA® S-Bus (data mode) protocol to a higher level PLC, to a DDC, to a control panel or a display unit. The fieldbus modules do not provide internal data processing or intelligence, they just combine the input and output signals in order to distribute these to the connected devices.

When connected to an HAKKO touch panel the fieldbus modules can be used to set up a simple PLC functionality. The HAKKO touch panels provide macro functions which allow to program basic PLC functions such as AND/OR operations or simple sequence control systems. Logging data such as data of the analog inputs may be stored on CF card in the touch panel.



Visualization of the functional blocks as well as input and output data on the touch panel. Logging data may be stored on a CF memory card which can be installed in the HAKKO touch panel.



Easy to do in connection with a HAKKO touch panel: programming of basic PLC functions using the macro commands of the HAKKO V-SFT programming software.

