HIMatrix

Safety-Related Controller

F35 Manual

HIMA Paul Hildebrandt GmbH + Co KG

Industrial Automation

Rev. 1.01

HI 800 149 E

3.2 Equipment, Scope of Delivery

The available components and their part numbers are listed below:

Designation	Description	Part no.
F35 01	Compact controller with 24 digital inputs, 8 digital outputs, 2 counters and 8 analog inputs, operating temperature 0...+60 °C, for ELOP II Factory programming tool	98 2200416
F35 011 (-20 °C)	Compact controller with 24 digital inputs, 8 digital outputs, 2 counters and 8 analog inputs, operating temperature -20...+60 °C, for ELOP II Factory programming tool	98 2200453
F35 012 (subsea / -20 °C)	Compact controller with 24 digital inputs, 8 digital outputs, 2 counters and 8 analog inputs, operating temperature -20...+60 °C, designed for subsea-use according to ISO 13628-6: 2006, for ELOP II Factory programming tool	98 2200454
F35 01 SILworX	Compact controller with 24 digital inputs, 8 digital outputs, 2 counters and 8 analog inputs, operating temperature 0...+60 °C, for SILworX programming tool	98 2200473
F35 011 SILworX (-20 °C)	Compact controller with 24 digital inputs, 8 digital outputs, 2 counters and 8 analog inputs, operating temperature -20...+60 °C, for SILworX programming tool	98 2200476
F35 012 SILworX (subsea / -20 °C)	Compact controller with 24 digital inputs, 8 digital outputs, 2 counters and 8 analog inputs, operating temperature -20...+60 °C, designed for subsea-use according to ISO 13628-6: 2006, for SILworX programming tool.	98 2200477

Table 6: Part Numbers

3.2.1 IP Address and System ID (SRS)

A transparent label is delivered with the device to allow one to note the IP address and the system ID (SRS for system rack slot) after a change.

IP___.___.___.___SRS____.__.__

Default value for IP address: 192.168.0.99

Default value for SRS: 60000.0.0

The label must not be affixed such that the air vents on the cabinet are covered.

Refer to the First Steps manual of the programming tool for more information on how to modify the IP address and the system ID.

Digital outputs	
Number of outputs	8 (non-galvanically isolated, common ground L-)
Output voltage	L+ minus 2 V
Output current	Channels 1...3 and 5...7: 0.5 A at 60 °C Channels 4 and 8: 1 A at 60 °C (2 A at 50 °C)
Minimum load	2 mA for each channel
Internal voltage drop	max. 2 W at 2 A
Leakage current (with low level)	max. 1 mA at 2 V
Behavior with overload	The affected output is switched off and cyclically switched on again
Total output current	max. 7 A, upon overload, all outputs are switched off and cyclically switched on again

Table 28: Specifications for the Digital Outputs

Counter	
Number of counters	2 (non-galvanically isolated)
Inputs	3 on each (A, B, Z)
Input voltages High level (5 V) High level (24 V) Low level (5 V) Low level (24 V)	5 V and 24 V 4...6 V 13...33 V 0...0.5 V -3...5 V
Input currents	1.4 mA at 5 V 6.5 mA at 24 V
Input impedance	3.7 kΩ
Input line	max. 500 m, shielded, twisted pairs of wires
Counter resolution	24 bit
Min. pulse length	5 µs
Max. input frequency	100 kHz (at 5 V and 24 V input voltage)
Triggered	on negative edge
Edge steepness	1 V/µs
Pulse duty factor	1 : 1 (for 100 kHz)

Table 29: Specifications for the Counters

3.5.1 Product Data HIMatrix F35 011 (-20 °C)

The HIMatrix F35 011 model variant is intended for use at the extended temperature range of -20…+60 °C. The electronic components are coated with a protective lacquer.

HIMatrix F35 011 (-20 °C)	
Operating temperature	-20…+60 °C
Weight	1.2 kg

Table 30: Product Data F35 011 (-20 °C)