

Basic unit SIMOCODE pro V PB PROFIBUS DP interface 12 Mbit/s, RS 485, 4I/3O freely parameterizable, Us: 110...240 V AC/DC, input for thermistor connection Monostable relay outputs, expandable by extension modules



product brand name	SIRIUS
product designation	Motor management system
design of the product	basic unit 2
product type designation	SIMOCODE pro V PB

General technical data

product function	
• bus communication	Yes
• data acquisition function	Yes
• diagnostics function	Yes
• password protection	Yes
• test function	Yes
• maintenance function	Yes
product component	
• input for thermistor connection	Yes
• digital input	Yes
• input for analog temperature sensors	No
• input for ground fault detection	No
• relay output	Yes

• product extension temperature monitoring module	Yes
• product extension current measuring module	Yes
• product extension current/voltage measuring module	Yes
• product extension fail-safe digital I/O module	Yes
• product extension ground-fault monitoring module	Yes
• product extension control unit with display	Yes
• product extension control unit	Yes
• product extension analog I/O module	Yes
apparent power consumption	8.3 V·A
consumed active power	3.6 W
insulation voltage	
• with degree of pollution 3 at AC rated value	300 V
surge voltage resistance rated value	4 000 V
protection class IP	IP20
shock resistance	
• acc. to IEC 60068-2-27	15g / 11 ms
vibration resistance	1-6 Hz / 15 mm; 6-500 Hz / 2 g
switching capacity current of the NO contacts of the relay outputs at AC-15	
• at 24 V	6 A
• at 120 V	6 A
• at 230 V	3 A
• switching capacity current of the NO contacts of the relay outputs at DC-13 at 24 V	2 A
• switching capacity current of the NO contacts of the relay outputs at DC-13 at 60 V	0.55 A
• switching capacity current of the NO contacts of the relay outputs at DC-13 at 125 V	0.25 A
mechanical service life (switching cycles)	
• typical	10 000 000
electrical endurance (switching cycles)	
• typical	100 000
buffering time in the event of power failure	0.2 s
reference code acc. to IEC 81346-2	F
continuous current of the NO contacts of the relay outputs	
• at 50 °C	6 A
• at 60 °C	5 A
type of input characteristic	Type 1 in accordance with EN 61131-2
certificate of suitability	

• IECEx • according to ATEX directive 2014/34/EU	Yes; IECEx PTB 18.0004X BVS 06 ATEX F001, PTB 18 ATEX 5003 X
explosion device group and category according to ATEX directive 2014/34/EU	II (2) G, II (2) D, I (M2) / I (1G/M2), II (1/2) G, II (1G/2D)

Electromagnetic compatibility

EMC emitted interference	
• acc. to IEC 60947-1	class A
EMC immunity acc. to IEC 60947-1	corresponds to degree of severity 3
conducted interference	
• due to burst acc. to IEC 61000-4-4	2 kV (power ports) / 1 kV (signal ports)
• due to conductor-earth surge acc. to IEC 61000-4-5	2 kV
• due to conductor-conductor surge acc. to IEC 61000-4-5	1 kV
• due to high-frequency radiation acc. to IEC 61000-4-6	10 V
field-based interference acc. to IEC 61000-4-3	10 V/m
electrostatic discharge acc. to IEC 61000-4-2	6 kV contact discharge / 8 kV air discharge
conducted HF interference emissions acc. to CISPR11	corresponds to degree of severity A
field-bound HF interference emission acc. to CISPR11	corresponds to degree of severity A

Inputs/ Outputs

product function	
• parameterizable inputs	Yes
• parameterizable outputs	Yes
number of inputs	4
• for thermistor connection	1
number of digital inputs	
• with a common reference potential	4
digital input version	
• type 1 acc. to IEC 61131	Yes
input voltage at digital input at DC rated value	24 V
number of outputs	3
number of semiconductor outputs	0
number of outputs as contact-affected switching element	3
switching behavior	monostable
type of relay outputs	Monostable
wire length for digital signals maximum	300 m
wire length for thermistor connection	
• with conductor cross-section = 0.5 mm² maximum	50 m

- with conductor cross-section = 1.5 mm²
maximum
- with conductor cross-section = 2.5 mm²
maximum

150 m

250 m

Protective and monitoring functions

product function

- asymmetry detection
- blocking current evaluation
- power factor monitoring
- ground fault detection
- phase failure detection
- phase sequence recognition
- voltage detection
- monitoring of number of start operations
- overvoltage detection
- overcurrent detection 1 phase
- undervoltage detection
- undercurrent detection 1 phase
- active power monitoring

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

product function

- current detection
- overload protection
- evaluation of thermistor motor protection

Yes

Yes

Yes

total cold resistance number of sensors in series maximum

1.5 kΩ

response value of thermoresistor

3 400 ... 3 800 Ω

- of the short-circuit control

9 Ω

release value of thermoresistor

1 500 ... 1 650 Ω

Motor control functions

product function

- parameterizable overload relay
- circuit breaker control
- direct start
- reverse starting
- star-delta circuit
- star-delta reversing circuit
- Dahlander circuit
- Dahlander reversing circuit
- pole-changing switch circuit
- pole-changing switch reversing circuit
- slide control

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

- valve control

Yes

Communication/ Protocol

- protocol is supported PROFIBUS DP protocol
- protocol is supported PROFINET IO protocol
- protocol is supported PROIsafe protocol
- protocol is supported Modbus RTU
- protocol is supported EtherNet/IP
- protocol is supported OPC UA Server
- protocol is supported LLDP
- protocol is supported Address Resolution Protocol (ARP)
- protocol is supported SNMP
- protocol is supported HTTPS
- protocol is supported NTP
- protocol is supported Media Redundancy Protocol (MRP)
- product function is supported Device Level Ring (DLR)

Yes
No
Yes
No
No
No
No
No
No
No
No
No
No

number of interfaces

- acc. to PROFINET
- acc. to PROFIBUS
- according to Ethernet/IP

0
1
0

product function

- web server
- shared device
- at the Ethernet interface Autocrossover
- at the Ethernet interface Autonegotiation
- at the Ethernet interface Autosensing
- is supported PROFINET system redundancy
- supports PROFIenergy measured values
- supports PROFIenergy shutdown

No
No
No
No
No
No
No
No

transfer rate maximum

12 Mbit/s

identification & maintenance function

- I&M0 - device-specific information
- I&M1 – higher level designation/location designation
- I&M2 - installation date
- I&M3 - comment

Yes
Yes
Yes
Yes

type of electrical connection

- of the communication interface

9-pin SUB-D socket (12 Mbit) / screw terminal (1.5 Mbit)

Installation/ mounting/ dimensions

mounting position	any
fastening method	screw and snap-on mounting
height	111 mm
width	45 mm
depth	124 mm
required spacing	
• top	40 mm
• bottom	40 mm
• left	0 mm
• right	0 mm

Connections/ Terminals

product function	
• removable terminal for auxiliary and control circuit	Yes
type of connectable conductor cross-sections	
• solid	1x (0.5 ... 4.0 mm ²), 2x (0.5 ... 2.5 mm ²)
• finely stranded with core end processing	1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.5 mm ²)
• at AWG cables solid	1x (20 ... 12), 2x (20 ... 14)
• at AWG cables stranded	1x (20 ... 14), 2x (20 ... 16)
tightening torque	
• with screw-type terminals	0.8 ... 1.2 N·m
tightening torque [lbf·in]	
• with screw-type terminals	7 ... 10.3 lbf·in
type of connectable conductor cross-sections for PROFIBUS wire	2x 0.34 mm ² , AWG 22

Ambient conditions

installation altitude at height above sea level	
• 1 maximum	2 000 m
• 2 maximum	3 000 m; max. +50 °C (no protective separation)
• 3 maximum	4 000 m; max. +40 °C (no protective separation)
environmental category	
• during operation acc. to IEC 60721	3K6 (no formation of ice, no condensation, relative humidity 10 ... 95%), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6
• during storage acc. to IEC 60721	1K6 (no condensation, relative humidity 10 ... 95%), 1C2 (no salt mist), 1S2 (sand must not get into the devices), 1M4
• during transport acc. to IEC 60721	2K2, 2C1, 2S1, 2M2
relative humidity	
• during operation	5 ... 95 %
contact rating of auxiliary contacts according to UL	B300 / R300

Short-circuit protection

design of short-circuit protection	
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- per output

Fuse links: gG 6 A, quick-response 10 A (IEC 60947-5-1),
miniature circuit-breaker C char.: 1.6 A (IEC 60947-5-1) or 6 A
(I_K < 500 A)

Safety related data

touch protection against electrical shock

finger-safe

Galvanic isolation

(electrically) protective separation acc. to IEC 60947-1

All circuits with protective separation (double creepage paths and clearances), the information in the "Protective Separation" test report, No. A0258, must be observed (link see further information)

Control circuit/ Control

product function soft starter control

Yes

type of voltage of the control supply voltage

AC/DC

control supply voltage at AC

- at 50 Hz rated value
- at 60 Hz rated value

110 ... 240 V
110 ... 240 V

control supply voltage frequency

- 1 rated value
- 2 rated value

50 Hz
60 Hz

relative symmetrical tolerance of the control supply voltage frequency

5 %

control supply voltage at DC

- rated value

110 ... 240 V

operating range factor control supply voltage rated value at DC

- initial value
- full-scale value

0.85
1.1

operating range factor control supply voltage rated value at AC at 50 Hz

- initial value
- full-scale value

0.85
1.1

operating range factor control supply voltage rated value at AC at 60 Hz

- initial value
- full-scale value

0.85
1.1

Certificates/ approvals

General Product Approval	EMC	For use in hazardous locations
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CSA



CCC



UL



RCM



ATEX

For use in hazardous locations	Declaration of Conformity	Test Certificates	Marine / Shipping
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IECEX



EG-Konf.

[Miscellaneous](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



ABS

Marine / Shipping	other
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LRS



RMRS



DNVGL.COM/AF

[Confirmation](#)



Profibus

[PROFINET-Certification](#)

Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

<https://www.siemens.com/ic10>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3UF7010-1AU00-0>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UF7010-1AU00-0>

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

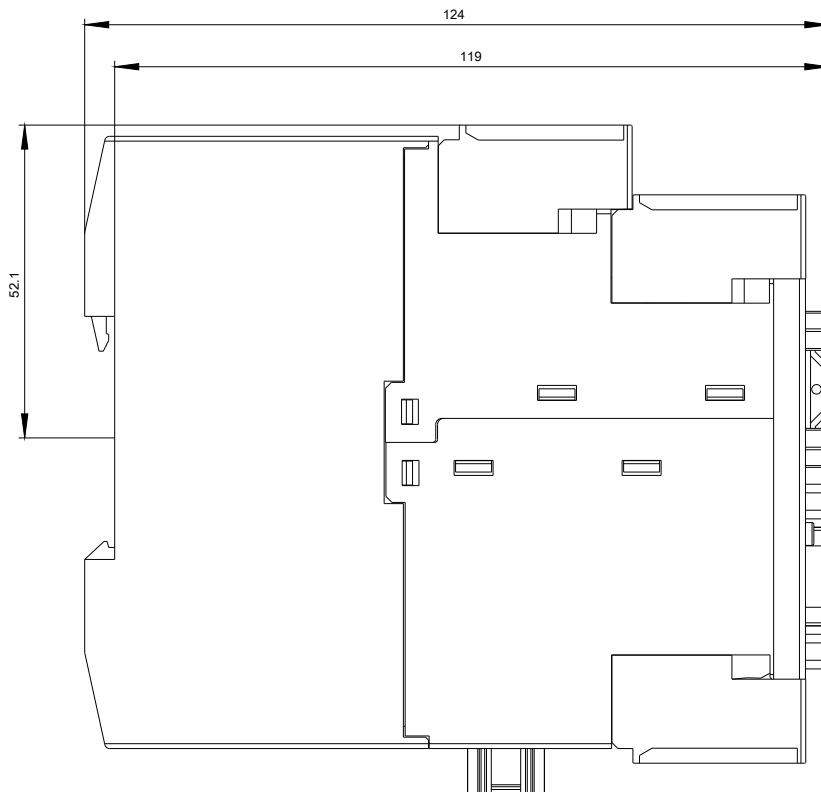
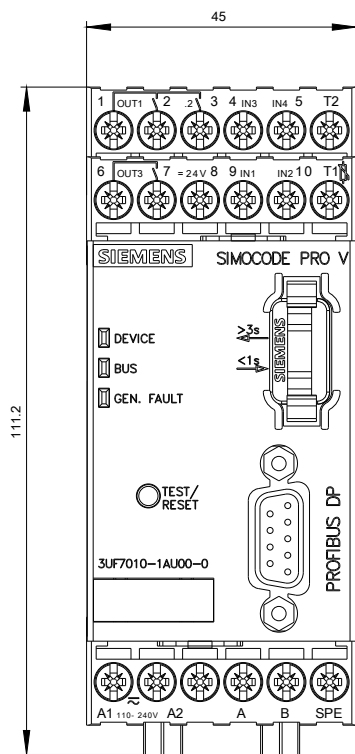
<https://support.industry.siemens.com/cs/ww/en/ps/3UF7010-1AU00-0>

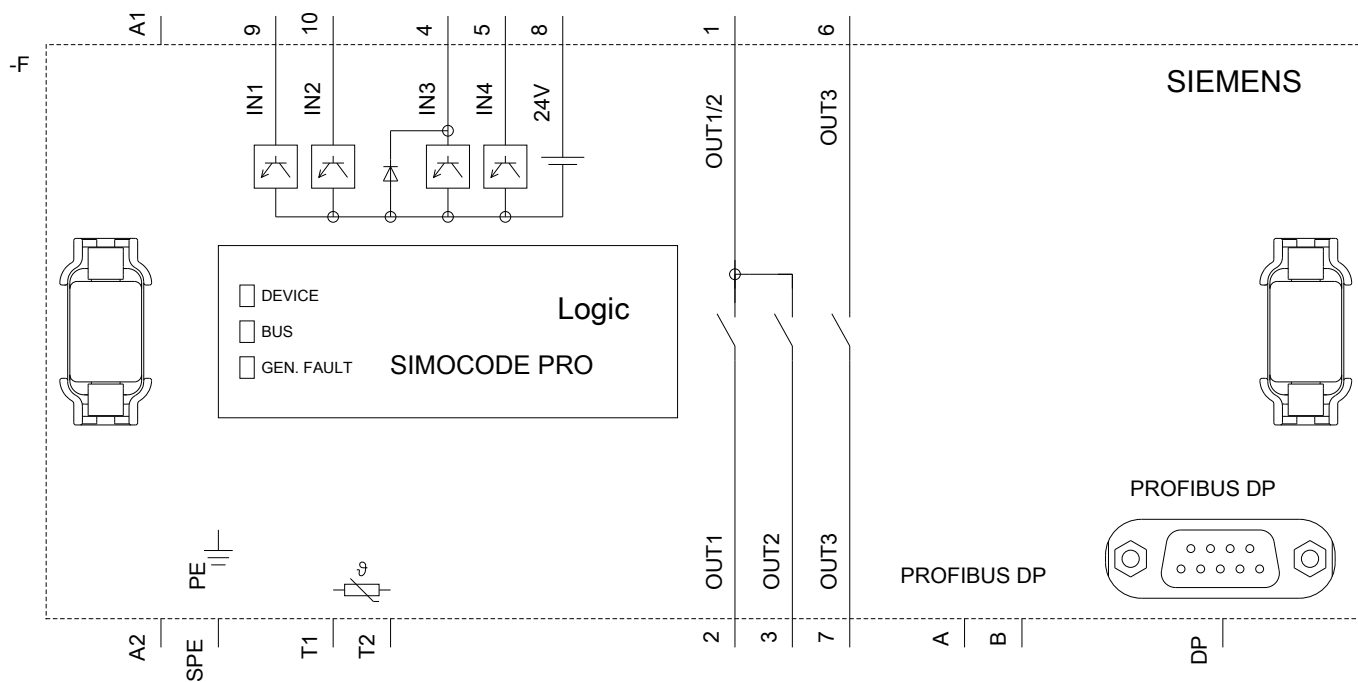
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UF7010-1AU00-0&lang=en

Test report No. A0258, protective separation

<https://support.industry.siemens.com/cs/ww/en/view/109748152>





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