



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
• current measuring module	Yes
• current/voltage measuring module	Yes
• fail-safe digital I/O module	Yes
• ground-fault monitoring module	Yes
• control unit with display	Yes
• control unit	Yes
• analog I/O module	Yes
apparent power consumption	8.3 VA
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	
• according 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
- at 60 V
- at 125 V

mechanical service life (operating cycles) typical

electrical endurance (operating cycles) typical

buffering time in the event of power failure**reference code according to IEC 81346-2**

continuous current of the NO contacts of the relay outputs

- at 50 °C
- at 60 °C

type of input characteristic**Substance Prohibitance (Date)****certificate of suitability**

- IECEx
- according to ATEX directive 2014/34/EU
- acc. to Equipment and Protective System Intended for Use in Potentially Explosive Atmospheres Regulations 2016 (S.I. 2016 No.1107)
- according to UKCA

explosion device group and category according to ATEX directive 2014/34/EU

2 A
0.55 A
0.25 A
10 000 000
100 000
0 s
F

6 A
5 A
Type 1 in accordance with EN 61131-2
05/01/2012

Yes; IECEx PTB 18.0004X
BVS 06 ATEX F001, PTB 18 ATEX 5003 X
ITS21UKEX0464, ITS21UKEX0455X

ITS21UKEX0464, ITS21UKEX0455X
II (2) G, II (2) D, I (M2) / I (1G/M2), II (1/2) G, II (1G/2D)

Electromagnetic compatibility

EMC emitted interference according to IEC 60947-1

EMC immunity according to IEC 60947-1

conducted interference

- due to burst according to IEC 61000-4-4
- due to conductor-earth surge according to IEC 61000-4-5
- due to conductor-conductor surge according to IEC 61000-4-5
- due to high-frequency radiation according to IEC 61000-4-6

field-based interference according to IEC 61000-4-3**electrostatic discharge according to IEC 61000-4-2****conducted HF interference emissions according to CISPR11****field-bound HF interference emission according to CISPR11**

class A
corresponds to degree of severity 3

2 kV (power ports) / 1 kV (signal ports)
2 kV

1 kV

10 V

10 V/m
6 kV contact discharge / 8 kV air discharge
corresponds to degree of severity A

corresponds to degree of severity A

Inputs/ Outputs**product function**

- parameterizable inputs
- parameterizable outputs

number of inputs

- for thermistor connection

number of digital inputs with a common reference potential

digital input version

- type 1 acc. to IEC 61131

input voltage at digital input at DC rated value

number of outputs**number of semiconductor outputs****number of outputs as contact-affected switching element****switching behavior****type of relay outputs****wire length for digital signals maximum****wire length for thermistor connection**

- with conductor cross-section = 0.5 mm² maximum
- with conductor cross-section = 1.5 mm² maximum
- with conductor cross-section = 2.5 mm² maximum

Yes
Yes
4
1
4

Yes
24 V
3
0
3

monostable
Monostable
300 m

50 m
150 m
250 m

Protective and monitoring functions**product function**

- asymmetry detection
- blocking current evaluation
- power factor monitoring

Yes
Yes
Yes

• ground fault detection	Yes
• phase failure detection	Yes
• phase sequence recognition	Yes
• voltage detection	Yes
• monitoring of number of start operations	Yes
• overvoltage detection	Yes
• overcurrent detection 1 phase	Yes
• undervoltage detection	Yes
• undercurrent detection 1 phase	Yes
• active power monitoring	Yes
product function	
• current detection	Yes
• overload protection	Yes
• evaluation of thermistor motor protection	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	Yes
• circuit breaker control	Yes
• direct start	Yes
• reverse starting	Yes
• star-delta circuit	Yes
• star-delta reversing circuit	Yes
• Dahlander circuit	Yes
• Dahlander reversing circuit	Yes
• pole-changing switch circuit	Yes
• pole-changing switch reversing circuit	Yes
• slide control	Yes
• valve control	Yes

Communication/ Protocol

• protocol is supported PROFIBUS DP protocol	Yes
• protocol is supported PROFINET IO protocol	No
• protocol is supported PROFI-safe protocol	Yes
• protocol is supported Modbus RTU	No
• protocol is supported Ethernet/IP	No
• protocol is supported OPC UA Server	No
• protocol is supported LLDP	No
• protocol is supported Address Resolution Protocol (ARP)	No
• protocol is supported SNMP	No
• protocol is supported HTTPS	No
• protocol is supported NTP	No
• protocol is supported Media Redundancy Protocol (MRP)	No
• product function is supported Device Level Ring (DLR)	No
number of interfaces	
• according to PROFINET	0
• according to PROFIBUS	1
• according to Ethernet/IP	0
product function	
• web server	No
• shared device	No
• at the Ethernet interface Autocrossover	No
• at the Ethernet interface Autonegotiation	No
• at the Ethernet interface Autosensing	No
• is supported PROFINET system redundancy (S2)	No
• supports PROFINET energy measured values	No
• supports PROFINET energy shutdown	No
transfer rate maximum	12 Mbit/s

identification & maintenance function	
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • top • bottom • left • right 	40 mm 40 mm 0 mm 0 mm
Connections/ Terminals	
product component removable terminal for auxiliary and control circuit	Yes
type of connectable conductor cross-sections	
<ul style="list-style-type: none"> • solid • finely stranded with core end processing • at AWG cables solid • at AWG cables stranded 	1x (0.5 ... 4.0 mm ²), 2x (0.5 ... 2.5 mm ²) 1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.5 mm ²) 1x (20 ... 12), 2x (20 ... 14) 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	
<ul style="list-style-type: none"> • 1 maximum • 2 maximum • 3 maximum 	2 000 m 3 000 m; max. +50 °C (no protective separation) 4 000 m; max. +40 °C (no protective separation)
ambient temperature	
<ul style="list-style-type: none"> • during operation • during storage • during transport 	-25 ... +60 °C -40 ... +80 °C -40 ... +80 °C
environmental category	
<ul style="list-style-type: none"> • during operation according to IEC 60721 • during storage according to IEC 60721 • during transport according 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 1K6 (no condensation, relative humidity 10 ... 95%), 1C2 (no salt mist), 1S2 (sand must not get into the devices), 1M4 2K2, 2C1, 2S1, 2M2
relative humidity	
<ul style="list-style-type: none"> • during operation 	5 ... 95 %
contact rating of auxiliary contacts according to UL	B300 / R300
Short-circuit protection	
design of short-circuit protection 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 _N < 500 A)
Safety related data	
touch protection against electrical shock	finger-safe
Galvanic isolation	
(electrically) protective separation according 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	
<ul style="list-style-type: none"> • at 50 Hz rated value • at 60 Hz rated value 	110 ... 240 V 110 ... 240 V
control supply voltage frequency	

<ul style="list-style-type: none"> • 1 rated value • 2 rated value 	50 Hz
relative symmetrical tolerance of the control supply voltage frequency	60 Hz
control supply voltage at DC	5 %
<ul style="list-style-type: none"> • rated value 	110 ... 240 V
operating range factor control supply voltage rated value at DC	
<ul style="list-style-type: none"> • initial value • full-scale value 	0.85
	1.1
operating range factor control supply voltage rated value at AC at 50 Hz	
<ul style="list-style-type: none"> • initial value • full-scale value 	0.85
	1.1
operating range factor control supply voltage rated value at AC at 60 Hz	
<ul style="list-style-type: none"> • initial value • full-scale value 	0.85
	1.1
inrush current peak	
<ul style="list-style-type: none"> • at 240 V 	15 A
duration of inrush current peak	
<ul style="list-style-type: none"> • at 240 V 	1 ms

Certificates/ approvals

General Product Approval



[Confirmation](#)



For use in hazardous locations

Declaration of Conformity

Test Certificates



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)

Marine / Shipping

other



[Confirmation](#)



Further information

Siemens has decided to exit the Russian market (see here).

<https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business>

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

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

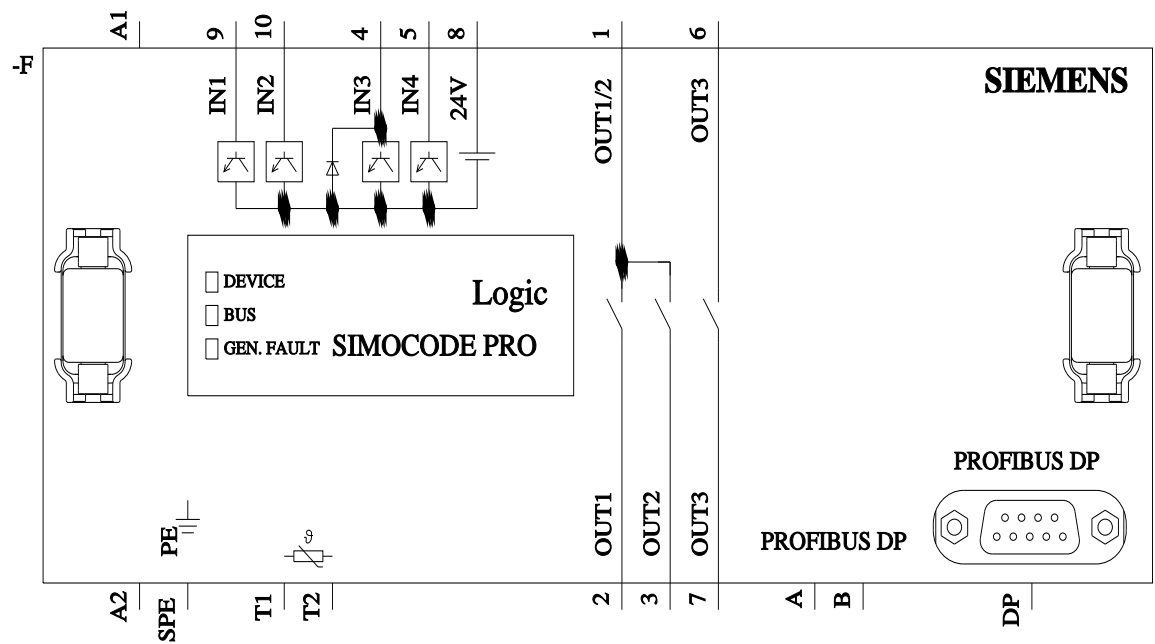
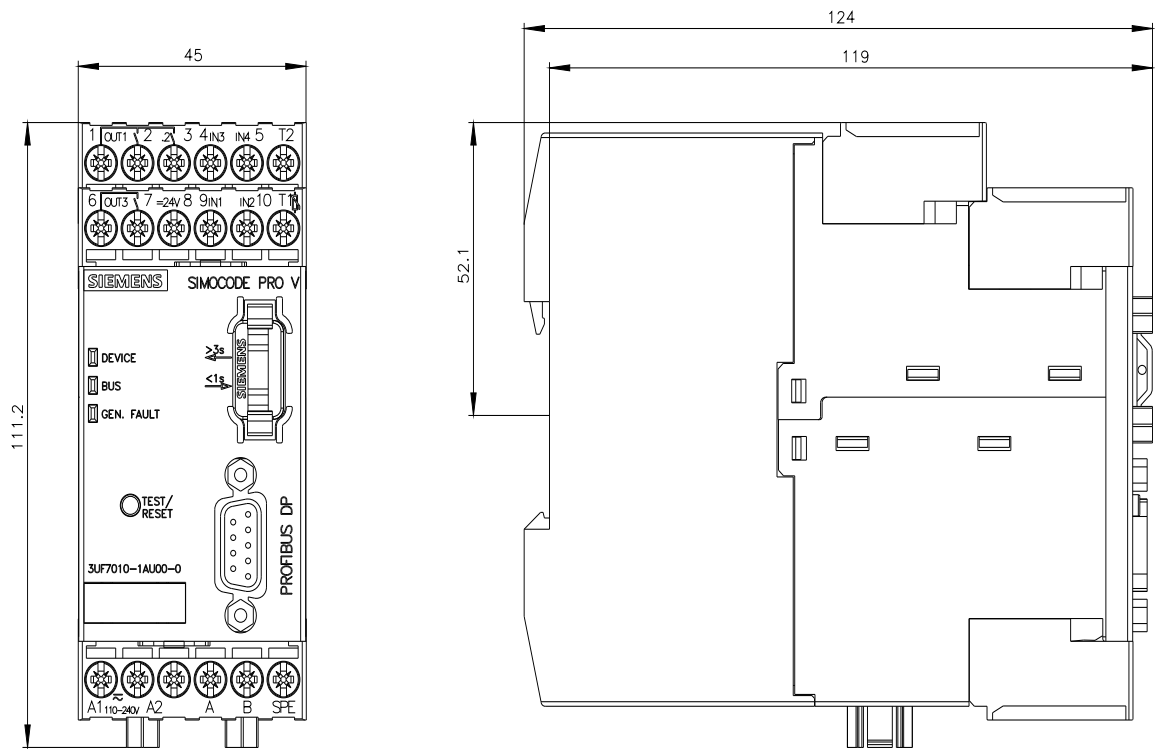
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UF7010-1AU00-0>

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



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