



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 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

<ul style="list-style-type: none"> • at 230 V 	3 A
switching capacity current of the NO contacts of the relay outputs at DC-13	
<ul style="list-style-type: none"> • at 24 V • at 60 V • at 125 V 	2 A 0.55 A 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	
<ul style="list-style-type: none"> • at 50 °C • at 60 °C 	6 A 5 A
type of input characteristic	Type 1 in accordance with EN 61131-2
Substance Prohibittance (Date)	01.05.2012
certificate of suitability	
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • due to burst acc. to IEC 61000-4-4 • due to conductor-earth surge acc. to IEC 61000-4-5 • due to conductor-conductor surge acc. to IEC 61000-4-5 • due to high-frequency radiation acc. to IEC 61000-4-6 	2 kV (power ports) / 1 kV (signal ports) 2 kV 1 kV 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	
<ul style="list-style-type: none"> • parameterizable inputs • parameterizable outputs 	Yes Yes
number of inputs	4
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • with conductor cross-section = 0.5 mm² maximum • with conductor cross-section = 1.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum 	50 m 150 m 250 m
Protective and monitoring functions	
product function	
<ul style="list-style-type: none"> • asymmetry detection • blocking current evaluation • power factor monitoring • ground fault detection • phase failure detection 	Yes Yes Yes Yes Yes

<ul style="list-style-type: none"> • 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
product function	
<ul style="list-style-type: none"> • current detection • overload protection • evaluation of thermistor motor protection 	Yes Yes Yes
total cold resistance number of sensors in series maximum	1.5 k Ω
response value of thermoresistor	3 400 ... 3 800 Ω
<ul style="list-style-type: none"> • of the short-circuit control 	9 Ω
release value of thermoresistor	1 500 ... 1 650 Ω
Motor control functions	
product function	
<ul style="list-style-type: none"> • 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 • valve control 	Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes
Communication/ Protocol	
<ul style="list-style-type: none"> • protocol is supported PROFIBUS DP protocol • protocol is supported PROFINET IO protocol • protocol is supported PROFI-safe 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 No
number of interfaces	
<ul style="list-style-type: none"> • acc. to PROFINET • acc. to PROFIBUS • according to Ethernet/IP 	0 1 0
product function	
<ul style="list-style-type: none"> • 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	Yes
• I&M1 – higher level designation/location designation	Yes
• I&M2 - installation date	Yes
• I&M3 - comment	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 component 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)
ambient temperature	
• during operation	-25 ... +60 °C
• during storage	-40 ... +80 °C
• during transport	-40 ... +80 °C
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 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 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	For use in hazardous locations	Declaration of Conformity
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Test Certificates	Marine / Shipping	other
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[Special Test Certificate](#)

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[Special Test Certificate](#)



[Confirmation](#)



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>



