



Basic unit SIMOCODE pro V PB PROFIBUS DP interface 12 Mbit/s, RS 485, 4I/3O freely parameterizable, Us: 24 V 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	
certificate of suitability	CE / UL / CSA / CCC / C-Tick (RCM) / GOST / NOM / ATEX / NEPSI / ABS / DNV / GL / LRS / RoHS
product function	
• current measurement	No
• voltage measurement	No
• active power measurement	Yes
• energy measurement	No
• frequency measurement	No
• 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
• decoupling module	Yes
• control unit with display	Yes
• control unit	Yes
• analog I/O module	Yes
consumed active power	2.6 W
insulation voltage with degree of pollution 3 at AC rated value	300 V
surge voltage resistance rated value	4 000 V
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	2 A
• at 60 V	0.55 A
• at 125 V	0.25 A
mechanical service life (operating cycles) typical	10 000 000
electrical endurance (operating cycles) typical	100 000
buffering time in the event of power failure	0.05 s
reference code according 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
Substance Prohibitance (Date)	05/01/2012
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8
Weight	0.345 kg
Electromagnetic compatibility	
EMC emitted interference according to IEC 60947-1	class A
EMC immunity according to IEC 60947-1	corresponds to degree of severity 3
conducted interference	
• due to burst according to IEC 61000-4-4	2 kV (power ports) / 1 kV (signal ports)
• due to conductor-earth surge according to IEC 61000-4-5	2 kV
• due to conductor-conductor surge according to IEC 61000-4-5	1 kV
• due to high-frequency radiation according to IEC 61000-4-6	10 V
field-based interference according to IEC 61000-4-3	10 V/m
electrostatic discharge according to IEC 61000-4-2	6 kV contact discharge / 8 kV air discharge
conducted HF interference emissions according to CISPR11	corresponds to degree of severity A
field-bound HF interference emission according 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	150 m
• with conductor cross-section = 2.5 mm² maximum	250 m
Protective and monitoring functions	
product function	
• asymmetry detection	Yes

• blocking current evaluation • power factor monitoring • ground fault detection • ground-fault monitoring • 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 No 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 • valve control	Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes
Communication/ Protocol	
protocol is supported	
• PROFIBUS DP protocol • PROFINET IO protocol • PROFIsafe protocol • Modbus RTU • EtherNet/IP • OPC UA Server • LLDP • Address Resolution Protocol (ARP) • SNMP • HTTPS • NTP • Media Redundancy Protocol (MRP)	Yes No Yes No No No No No No No No No
number of interfaces	
• according to PROFINET • according 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 Device Level Ring (DLR) • is supported PROFINET system redundancy (S2)	No No No No No No No

• supports PROFinergy measured values • supports PROFinergy shutdown	No
transfer rate maximum	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 electrical connection	
• for auxiliary and control circuit	screw-type terminals
type of connectable conductor cross-sections	
• solid	1x (0.5 ... 4.0 mm²), 2x (0.5 ... 2.5 mm²)
• finely stranded with core end processing	1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.5 mm²)
• for AWG cables solid	1x (20 ... 12), 2x (20 ... 14)
• for 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 mm², 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 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
• during storage according 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 according 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_K < 500 A)
Electrical Safety	
touch protection against electrical shock	finger-safe
ATEX	
certificate of suitability	
• IECEx	Yes; IECEx BVS 20.0020 / IECEx PTB 18.0004X
• according to ATEX directive 2014/34/EU	BVS 06 ATEX F001, PTB 18 ATEX 5003 X
• acc. to Equipment and Protective System Intended for	ITS21UKEX0464, ITS21UKEX0455X

Use in Potentially Explosive Atmospheres Regulations 2016 (S.I. 2016 No.1107)	
• according to UKCA	ITS21UKEX0464, ITS21UKEX0455X
explosion device group and category according to ATEX directive 2014/34/EU	II (2) G, II (2) D, I (M2) / I (M2), II (1/2) G, II (1G/2D)

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)
design of the electrical isolation	Protective separation in accordance with IEC 60947-1 for all circuits
• note	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	DC
control supply voltage at DC rated value	24 V
control supply voltage 1 at DC rated value	24 V
operating range factor control supply voltage rated value at DC	
• initial value	0.8
• full-scale value	1.2
inrush current peak	
• at 24 V	11 A
duration of inrush current peak	
• at 24 V	1.1 ms

Approvals Certificates

General Product Approval



[Confirmation](#)



EMV	For use in hazardous locations
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[KC](#)



For use in hazardous locations	Test Certificates	Marine / Shipping
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[Miscellaneous](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



Marine / Shipping	other	Environment	Industrial Communication
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[Confirmation](#)



[Environmental Confirmations](#)



Further information

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=3UF7010-1AB00-0>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UF7010-1AB00-0>



