

BASIC UNIT 1 SIMOCODE PRO C; PROFIBUS DP-INTERFACE 12 MBIT/S, RS485; 4I/3O FREELY PARAMETERIZABLE; US: AC/DC 110-240V; THERMISTOR MOTOR PROTECTION; OUTPUTS MONOSTABLE



product brandname	SIRIUS
Product designation	SIMOCODE pro C Motor Management System
Design of the product	basic unit 1

General technical data

Product function	
• soft starter control	No
• data acquisition function	Yes
• Diagnostics function	Yes
• Password protection	Yes
• Test function	Yes
• maintenance function	Yes
• becomes supported Device Level Ring (DLR)	No
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	No
• Current measuring module	Yes
• Current/voltage measuring module	No
• failsafe digital I/O module	No
• Ground fault monitoring module	No
• decoupling module	No
• digital I/O module	No
• Control unit with display	No
• Control unit	Yes
• analog I/O module	No
Apparent power consumption	7 V·A
Consumed active power	5 W
Insulation voltage	
• with degree of pollution 3 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 behavior	monostable
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
Mechanical service life (switching cycles)	
• typical	10 000 000
Electrical endurance (switching cycles)	
• typical	100 000
Buffering time in the event of power failure	0.05 s
Certificate of suitability	CE / UL / CSA / CCC / C-Tick (RCM) / GOST / NOM / ATEX / NEPSI / ABS / DNV / GL / LRS / RoHS
Equipment marking	
• acc. to DIN EN 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
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Electromagnetic compatibility

EMC emitted interference	
<ul style="list-style-type: none"> • acc. to IEC 60947-1 	class A
Conducted interference	
<ul style="list-style-type: none"> • due to burst acc. to IEC 61000-4-4 	2 kV (power ports) / 1 kV (signal ports)
<ul style="list-style-type: none"> • due to conductor-earth surge acc. to IEC 61000-4-5 	2 kV
<ul style="list-style-type: none"> • due to conductor-conductor surge acc. to IEC 61000-4-5 	1 kV
<ul style="list-style-type: none"> • due to high-frequency radiation acc. to IEC 61000-4-6 	10 V
Field-bound parasitic coupling 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 	Yes
<ul style="list-style-type: none"> • Parameterizable outputs 	Yes
Number of inputs	4
<ul style="list-style-type: none"> • for thermistor connection 	1
Number of digital inputs	
<ul style="list-style-type: none"> • with a common reference potential 	4
Digital input version	
<ul style="list-style-type: none"> • Type 1 acc. to IEC 61131 	Yes
Input voltage at digital input at DC rated value	24 V
Number of outputs	3
Number of outputs as contact-affected switching element	3
Number of semiconductor outputs	0
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 	50 m
<ul style="list-style-type: none"> • with conductor cross-section = 1.5 mm² maximum 	150 m
<ul style="list-style-type: none"> • with conductor cross-section = 2.5 mm² maximum 	250 m

Protective and monitoring functions

Product function	
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• Phase unbalance	Yes
• blocking current evaluation	Yes
• power factor monitoring	No
• Ground fault detection	Yes
• Phase failure detection	Yes
• phase sequence recognition	No
• voltage detection	No
• Monitoring of number of start operations	Yes
• Overvoltage detection	No
• Overcurrent detection 1 phase	Yes
• undervoltage detection	No
• undercurrent detection 1 phase	Yes
• active power monitoring	No

Motor protection functions

Product function	
• Current detection	Yes
• Overload protection	Yes
• Evaluation of thermistor motor protection	Yes
Response value of thermoresistor	3 400 ... 3 800 Ω
Release value of thermoresistor	1 500 ... 1 650 Ω
Explosion device group and category acc. to ATEX product directive 94/9/EC	Ex II (2) GD / Ex I (M2)

Motor control functions

Product function	
• parameterizable overload relay	Yes
• circuit breaker control	Yes
• direct start	Yes
• reverse starting	Yes
• star-delta circuit	No
• star-delta reversing circuit	No
• Dahlander circuit	No
• Dahlander reversing circuit	No
• pole-changing switch circuit	No
• pole-changing switch reversing circuit	No
• Slide control	No
• valve control	No

Communication/ Protocol

Number of interfaces	
• acc. to PROFINET	0
• acc. to PROFIBUS	1

<ul style="list-style-type: none"> • according to Ethernet/IP 	0
Product function Bus communication	Yes
Product function	
<ul style="list-style-type: none"> • web server 	No
<ul style="list-style-type: none"> • shared device 	No
<ul style="list-style-type: none"> • at the Ethernet interface Autocrossover 	No
<ul style="list-style-type: none"> • at the Ethernet interface Autonegotiation 	No
<ul style="list-style-type: none"> • at the Ethernet interface Autosensing 	No
<ul style="list-style-type: none"> • MRRT redundancy procedure 	No
<ul style="list-style-type: none"> • is supported PROFINET system redundancy 	No
<ul style="list-style-type: none"> • supports PROFINET measured values 	No
<ul style="list-style-type: none"> • supports PROFINET shutdown 	No
Transfer rate maximum	12 Mbit/s
Identification & maintenance function	
<ul style="list-style-type: none"> • I&M0 - device-specific information 	Yes
<ul style="list-style-type: none"> • I&M1 – higher-level designation/location designation 	Yes
<ul style="list-style-type: none"> • I&M2 - installation date 	Yes
<ul style="list-style-type: none"> • I&M3 - comment 	Yes
Type of electrical connection	
<ul style="list-style-type: none"> • of the communication interface 	9-pin SUB-D socket (12 Mbit) / screw terminal (1.5 Mbit)

Installation/ mounting/ dimensions	
Mounting position	any
Mounting type	screw and snap-on mounting
Height	111 mm
Width	45 mm
Depth	95 mm
Required spacing	
<ul style="list-style-type: none"> • top 	40 mm
<ul style="list-style-type: none"> • bottom 	40 mm
<ul style="list-style-type: none"> • left 	0 mm
<ul style="list-style-type: none"> • right 	0 mm

Connections/Terminals	
Product function	
<ul style="list-style-type: none"> • removable terminal for auxiliary and control circuit 	Yes
Type of electrical connection	
<ul style="list-style-type: none"> • for auxiliary and control current circuit 	screw-type terminals
Type of connectable conductor cross-sections	
<ul style="list-style-type: none"> • solid 	1x (0.5 ... 4.0 mm ²), 2x (0.5 ... 2.5 mm ²)
<ul style="list-style-type: none"> • finely stranded with core end processing 	1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.5 mm ²)

<ul style="list-style-type: none"> • at AWG conductors solid 	1x (20 ... 12), 2x (20 ... 14)
<ul style="list-style-type: none"> • at AWG conductors stranded 	1x (20 ... 14), 2x (20 ... 16)
Tightening torque	
<ul style="list-style-type: none"> • with screw-type terminals 	0.8 ... 1.2 N·m
Tightening torque [lbf·in]	
<ul style="list-style-type: none"> • with screw-type terminals 	7 ... 10.3 lbf·in

Ambient conditions

Installation altitude at height above sea level	
<ul style="list-style-type: none"> • 1 maximum 	2 000 m
<ul style="list-style-type: none"> • 2 maximum 	3 000 m
<ul style="list-style-type: none"> • 3 maximum 	4 000 m; No protective separation at 40 °C
Ambient temperature	
<ul style="list-style-type: none"> • during operation 	-25 ... +60 °C
<ul style="list-style-type: none"> • during storage 	-40 ... +80 °C
<ul style="list-style-type: none"> • during transport 	-40 ... +80 °C
Environmental category	
<ul style="list-style-type: none"> • during transport acc. to IEC 60721 	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	
<ul style="list-style-type: none"> • 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

Protection against electrical shock	finger-safe
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Galvanic isolation

Design of the electrical isolation	Protective separation in accordance with IEC 60947-1 for all circuits
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Control circuit/ Control

Type of voltage of the control supply voltage	AC/DC
Relative symmetrical tolerance of the control supply voltage frequency	5 %
Control supply voltage at AC	
<ul style="list-style-type: none"> • at 50 Hz rated value 	110 ... 240 V
<ul style="list-style-type: none"> • at 60 Hz rated value 	110 ... 240 V
Control supply voltage at DC	
<ul style="list-style-type: none"> • rated value 	110 ... 240 V
Control supply voltage frequency	50 Hz, 60 Hz

Operating range factor control supply voltage rated value at DC	
• initial value	0.85
• Full-scale value	1.1
Operating range factor control supply voltage rated value at AC at 50 Hz	
• initial value	0.85
• Full-scale value	1.1
Operating range factor control supply voltage rated value at AC at 60 Hz	
• initial value	0.85
• Full-scale value	1.1

Certificates/approvals

General Product Approval	EMC	For use in hazardous locations
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For use in hazardous locations	Declaration of Conformity	Test Certificates	Shipping Approval
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[Explosion Protection Certificate](#)



[Special Test Certificate](#)

[Declaration of the Compliance with the order](#)

[Type Test Certificates/Test Report](#)



Shipping Approval	other
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[Confirmation](#)

[PROFINET-Certification](#)

other



Profibus

[PROFI-safe-Certification](#)

Further information

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

<http://www.siemens.com/industrial-controls/catalogs>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mfb=3UF7000-1AU00-0>

Cax online generator

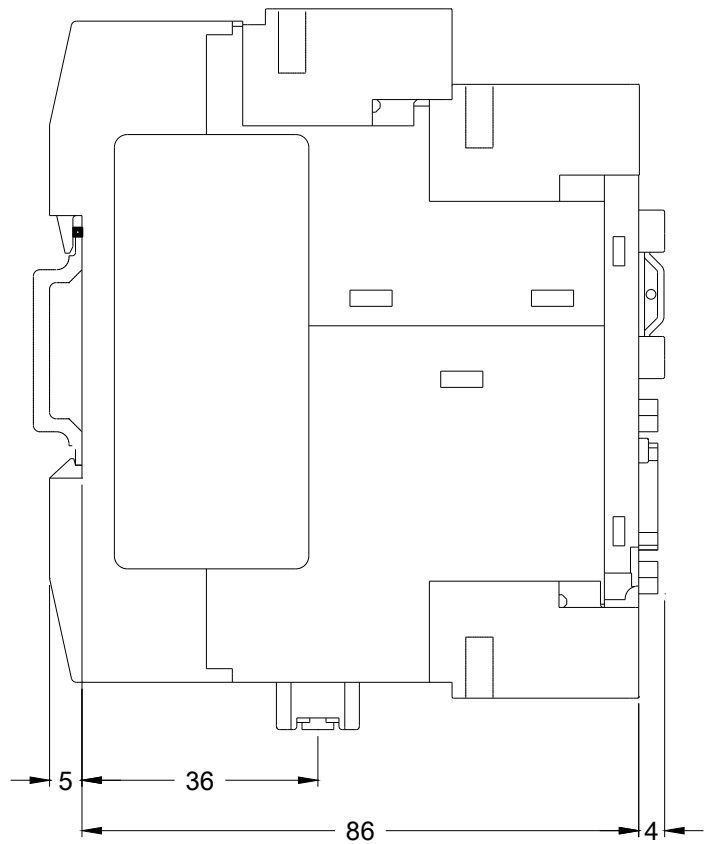
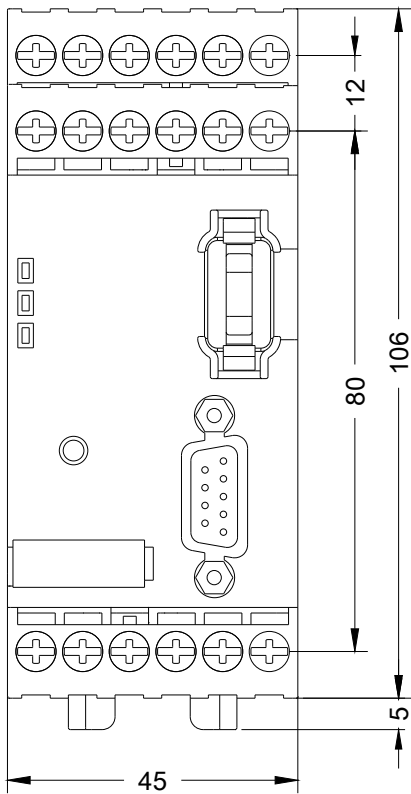
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mfb=3UF7000-1AU00-0>

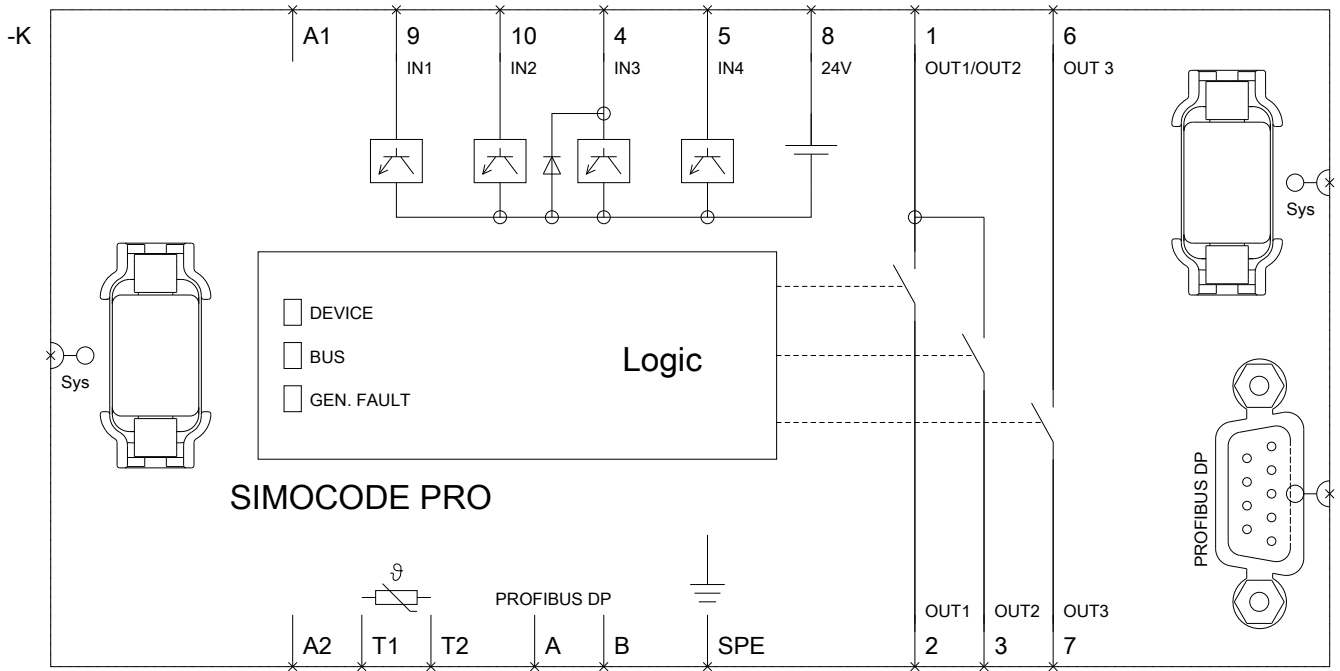
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3UF7000-1AU00-0>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mfb=3UF7000-1AU00-0&lang=en





last modified:

07/07/2017