3UF7000-1AU00-0AX0

## **Data sheet**



Basic unit SIMOCODE pro C, 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 with coated PCBs

Figure similar

product designation	Motor management system
design of the product	basic unit 1
product type designation	SIMOCODE pro C
General technical data	
product function	
current measurement	No
<ul> <li>voltage measurement</li> </ul>	No
<ul> <li>active power measurement</li> </ul>	No
<ul> <li>energy measurement</li> </ul>	No
<ul> <li>frequency measurement</li> </ul>	No
<ul> <li>bus communication</li> </ul>	Yes
<ul> <li>data acquisition function</li> </ul>	Yes
<ul> <li>diagnostics function</li> </ul>	Yes
<ul> <li>password protection</li> </ul>	Yes
• test function	Yes
maintenance function	Yes
product feature protective coating on printed-circuit board	Yes; acc. to IPC-A-610
product component	
<ul> <li>input for thermistor connection</li> </ul>	Yes
digital input	Yes
<ul> <li>input for analog temperature sensors</li> </ul>	No
<ul> <li>input for ground fault detection</li> </ul>	No
relay output	Yes
product extension	
<ul> <li>temperature monitoring module</li> </ul>	No
<ul> <li>current measuring module</li> </ul>	Yes
<ul> <li>current/voltage measuring module</li> </ul>	No
<ul> <li>fail-safe digital I/O module</li> </ul>	No
<ul> <li>ground-fault monitoring module</li> </ul>	No
<ul> <li>decoupling module</li> </ul>	No
<ul> <li>control unit with display</li> </ul>	No
<ul> <li>control unit</li> </ul>	Yes
analog I/O module	No
apparent power consumption	5.3 VA
consumed active power	2.9 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 0.05 s
buffering time in the event of power failure	0.05 S
reference code according to IEC 81346-2	· ·
continuous current of the NO contacts of the relay outputs  • at 50 °C	6 A
• at 60 °C	5 A
• at 60 °C  Substance Prohibitance (Date)	05/01/2012
SVHC substance name	Lead - 7439-92-1
- The substance numb	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8
Weight	0.31 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	
<ul> <li>due to burst according to IEC 61000-4-4</li> </ul>	2 kV (power ports) / 1 kV (signal ports)
• due to conductor-earth surge according to IEC 61000-4-5	2 kV
<ul> <li>due to conductor-conductor surge according to IEC</li> </ul>	1 kV
<ul><li>61000-4-5</li><li>due to high-frequency radiation according to IEC 61000-</li></ul>	10 V
4-6	
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	
<ul> <li>with conductor cross-section = 0.5 mm² maximum</li> </ul>	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

<ul> <li>blocking current evaluation</li> </ul>	Yes
<ul> <li>power factor monitoring</li> </ul>	No
<ul> <li>ground fault detection</li> </ul>	Yes
<ul> <li>ground-fault monitoring</li> </ul>	No
<ul> <li>phase failure detection</li> </ul>	Yes
<ul> <li>phase sequence recognition</li> </ul>	No
<ul> <li>voltage detection</li> </ul>	No
<ul> <li>monitoring of number of start operations</li> </ul>	Yes
<ul> <li>overvoltage detection</li> </ul>	No
<ul> <li>overcurrent detection 1 phase</li> </ul>	Yes
<ul> <li>undervoltage detection</li> </ul>	No
<ul> <li>undercurrent detection 1 phase</li> </ul>	Yes
active power monitoring	No
product function	
current detection	Yes
<ul> <li>overload protection</li> </ul>	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	
<ul> <li>parameterizable overload relay</li> </ul>	Yes
circuit breaker control	Yes
direct start	Yes
reverse starting	Yes
star-delta circuit	No
<ul> <li>star-delta reversing circuit</li> </ul>	No
Dahlander circuit	No
<ul> <li>Dahlander reversing circuit</li> </ul>	No
<ul> <li>pole-changing switch circuit</li> </ul>	No
<ul> <li>pole-changing switch reversing circuit</li> </ul>	No
slide control	No
valve control	No
Communication/ Protocol	
protocol is supported	
<ul> <li>PROFIBUS DP protocol</li> </ul>	Yes
<ul> <li>PROFINET IO protocol</li> </ul>	No
<ul> <li>PROFIsafe protocol</li> </ul>	No
Modbus RTU	No
EtherNet/IP	No
OPC UA Server	No
• LLDP	No
<ul> <li>Address Resolution Protocol (ARP)</li> </ul>	No
• SNMP	No
• HTTPS	No
• NTP	No
Media Redundancy Protocol (MRP)	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 Device Level Ring (DLR)	No
<ul> <li>is supported PROFINET system redundancy (S2)</li> </ul>	No

a supporte PDODI	No
supports PROFlenergy measured values	No
supports PROFlenergy shutdown	No
transfer rate maximum	12 Mbit/s
identification & maintenance function	
<ul> <li>I&amp;M0 - device-specific information</li> </ul>	Yes
<ul> <li>I&amp;M1 - higher level designation/location designation</li> </ul>	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	95 mm
required spacing	
• top	40 mm
• bottom	40 mm
• left	0 mm
• right	0 mm
Connections/ Terminals	
product component removable terminal for auxiliary and	Yes
control circuit	
type of electrical connection	
<ul> <li>for auxiliary and control circuit</li> </ul>	screw-type terminals
type of connectable conductor cross-sections	
• solid	1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²)
<ul> <li>finely stranded with core end processing</li> </ul>	1x (0.5 2.5 mm²), 2x (0.5 1.5 mm²)
• for AWG cables solid	1x (20 12), 2x (20 14)
<ul> <li>for AWG cables stranded</li> </ul>	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	2x 0.34 mm², AWG 22
PROFIBUS wire	
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	
<ul> <li>during operation</li> </ul>	-25 +50 °C
during storage	-40 +80 °C
during transport	-40 +80 °C
environmental category	
<ul> <li>during operation according to IEC 60721</li> </ul>	3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6
<ul> <li>during storage according to IEC 60721</li> </ul>	1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4
<ul> <li>during transport according to IEC 60721</li> </ul>	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	
<ul> <li>acc. to Equipment and Protective System Intended for Use in Potentially Explosive Atmospheres Regulations 2016 (S.I. 2016 No.1107)</li> </ul>	ITS21UKEX0464, ITS21UKEX0455X

alvanic 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)
ontrol circuit/ Control	
product function soft starter control	No
type of voltage of the control supply voltage	AC/DC
control supply voltage at AC	
at 50 Hz rated value	110 240 V
at 60 Hz rated value	110 240 V
control supply voltage frequency	
• 1 rated value	50 Hz
• 2 rated value	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	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
inrush current peak	
• at 240 V	3 A
duration of inrush current peak	
• at 240 V	1 ms

## Approvals Certificates

**General Product Approval** 



Confirmation









EMV **Test Certificates** Marine / Shipping



<u>KC</u>

Type Test Certificates/Test Report

Special Test Certific-<u>ate</u>





Industrial Commu-Marine / Shipping Environment other nication





Confirmation



Environmental Confirmations



Profibus

## 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

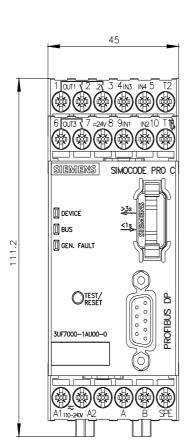
Industry Mall (Online ordering system)

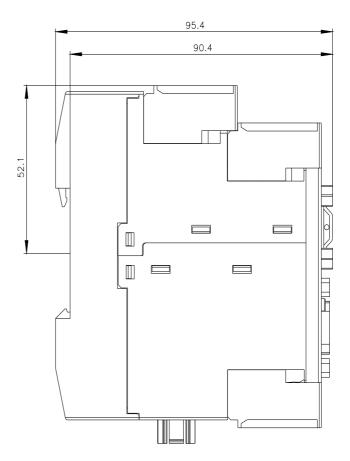
https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3UF7000-1AU00-0AX0

Cax online generator

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3UF7000-1AU00-0AX0

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) <a href="http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3UF7000-1AU00-0AX0&lang=en">http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3UF7000-1AU00-0AX0&lang=en</a>





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