## **SIEMENS**

Data sheet 3UF7010-1AB00-0



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	
product function	
<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 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>	Yes
<ul> <li>current measuring module</li> </ul>	Yes
<ul> <li>current/voltage measuring module</li> </ul>	Yes
<ul> <li>fail-safe digital I/O module</li> </ul>	Yes
<ul> <li>ground-fault monitoring module</li> </ul>	Yes
<ul> <li>control unit with display</li> </ul>	Yes
<ul> <li>control unit</li> </ul>	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
protection class IP	IP20
shock resistance	
according to IEC 60068-2-27	15g / 11 ms
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

-1.00 \	0.55.4
• 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 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	Blei - 7439-92-1 Bleimonoxid (Bleioxid) - 1317-36-8 4,4'-isopropylidendiphenol (Bisphenol A, - 80-05-7
certificate of suitability	
• IECEx	Yes; IECEx PTB 18.0004X
<ul> <li>according to ATEX directive 2014/34/EU</li> </ul>	BVS 06 ATEX F001, PTB 18 ATEX 5003 X
<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
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 (1G/M2), II (1/2) G, II (1G/2D)
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)
<ul> <li>due to conductor-earth surge according to IEC 61000-4-5</li> </ul>	2 kV
<ul> <li>due to conductor-conductor surge according to IEC 61000-4-5</li> </ul>	1 kV
<ul> <li>due to high-frequency radiation according to IEC 61000- 4-6</li> </ul>	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	
<ul> <li>parameterizable inputs</li> </ul>	Yes
parameterizable outputs	Yes
number of inputs	4
<ul> <li>for thermistor connection</li> </ul>	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 = 0.5 mm maximum     with conductor cross-section = 1.5 mm² maximum	150 m
with conductor cross-section = 1.5 mm maximum     with conductor cross-section = 2.5 mm² maximum	250 m
Protective and monitoring functions	200 111
product function	Voo
asymmetry detection	Yes
<ul><li>blocking current evaluation</li><li>power factor monitoring</li></ul>	Yes Yes

<ul> <li>ground fault detection</li> </ul>	Yes
phase failure detection	Yes
<ul> <li>phase sequence recognition</li> </ul>	Yes
voltage detection	Yes
<ul> <li>monitoring of number of start operations</li> </ul>	Yes
overvoltage detection	Yes
<ul> <li>overcurrent detection 1 phase</li> </ul>	Yes
<ul> <li>undervoltage detection</li> </ul>	Yes
<ul> <li>undercurrent detection 1 phase</li> </ul>	Yes
active power monitoring	Yes
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	Yes
<ul> <li>star-delta reversing circuit</li> </ul>	Yes
Dahlander circuit	Yes
Dahlander reversing circuit	Yes
<ul> <li>pole-changing switch circuit</li> </ul>	Yes
<ul> <li>pole-changing switch reversing circuit</li> </ul>	Yes
• slide control	Yes
valve control	Yes
Communication/ Protocol	
protocol is supported	
<ul> <li>PROFIBUS DP protocol</li> </ul>	Yes
PROFINET IO protocol	No
PROFIsafe protocol	Yes
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	
<ul> <li>according to PROFINET</li> </ul>	0
<ul> <li>according to PROFIBUS</li> </ul>	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
<ul> <li>at the Ethernet interface Autosensing</li> </ul>	No
• is supported Device Level Ring (DLR)	No
<ul><li>is supported Device Level Ring (DLR)</li><li>is supported PROFINET system redundancy (S2)</li></ul>	No No
<ul> <li>is supported Device Level Ring (DLR)</li> <li>is supported PROFINET system redundancy (S2)</li> <li>supports PROFlenergy measured values</li> </ul>	No No No
<ul><li>is supported Device Level Ring (DLR)</li><li>is supported PROFINET system redundancy (S2)</li></ul>	No No

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
<ul> <li>I&amp;M2 - installation date</li> </ul>	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 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)
<ul> <li>for AWG cables solid</li> </ul>	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 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	
<ul> <li>during operation according to IEC 60721</li> </ul>	3K6 (no formation of ice, no condensation, relative humidity 10 95%), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6
<ul> <li>during storage according to IEC 60721</li> </ul>	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)
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	DC
control supply voltage at DC	
CONTROL SUPPLY VOIGNE OF DO	
	24 V
rated value  control supply voltage 1 at DC rated value	24 V 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

Certificates/ approvals

General Product Approval EMC For use in hazardous locations

Confirmation











For use in hazardous locations

**Declaration of Conformity** 







Explosion Protection Certificate





**Test Certificates** 

Marine / Shipping

Special Test Certificate

Type Test Certificates/Test Report

Special Test Certificate







Marine / Shipping

other



Confirmation



Profibus

## 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=3UF7010-1AB00-0

Cax online generator

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

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

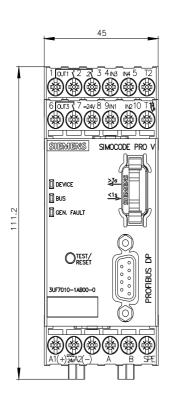
https://support.industry.siemens.com/cs/ww/en/ps/3UF7010-1AB00-0

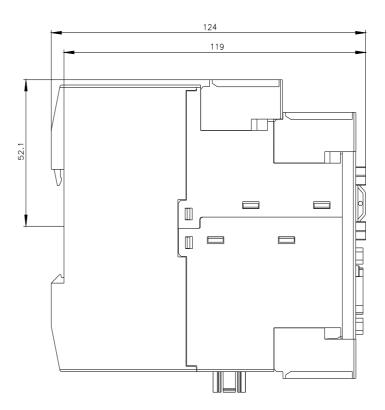
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

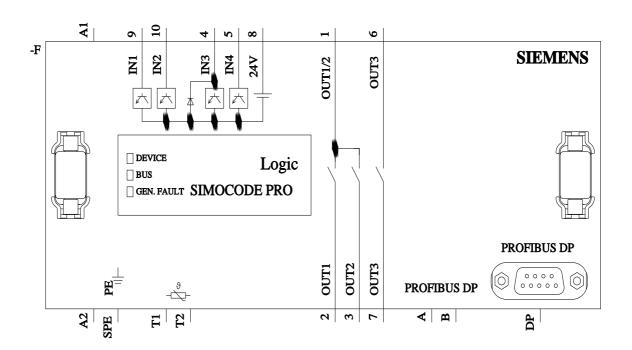
 $\underline{\text{http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3UF7010-1AB00-0\&lang=en}$ 

Test report No. A0258, protective separation

https://support.industry.siemens.com/cs/ww/en/view/109748152







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