## **SIEMENS**

Data sheet 3UF7010-1AB00-0



Basic unit SIMOCODE pro V PB PROFIBUS DP interface 12 Mbit/s, RS 485, 41/30 freely parameterizable, Us: 24 V DC, input for thermistor connection Monostable relay outputs, expandable by extension modules

product brand name product designation design of the product product type designation SIRIUS

Motor management system

basic unit 2

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
<ul> <li>maintenance function</li> </ul>	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
• 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
protection class IP	IP20
shock resistance	
<ul> <li>according to IEC 60068-2-27</li> </ul>	15g / 11 ms
<ul> <li>vibration resistance</li> </ul>	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 buffering time in the event of power failure	100 000 0.05 s
reference code according to IEC 81346-2	6.05 S
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
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
acc. to Equipment and Protective System Intended	ITS21UKEX0464, ITS21UKEX0455X
for 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	II (2) G, II (2 ) D, I (M2) / I (1G/M2), II (1/2) G, II (1G/2D)
directive 2014/34/EU	
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      due to conductor earth ourse according to IEC.	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	corresponds to degree of severity A
CISPR11	consequence to degree or consequence
CISPR11 field-bound HF interference emission according to	
field-bound HF interference emission according to CISPR11	corresponds to degree of severity A
field-bound HF interference emission according to	
field-bound HF interference emission according to CISPR11  Inputs/ Outputs product function	corresponds to degree of severity A
field-bound HF interference emission according to CISPR11 Inputs/ Outputs product function • parameterizable inputs	corresponds to degree of severity A  Yes
field-bound HF interference emission according to CISPR11 Inputs/ Outputs product function	corresponds to degree of severity A  Yes Yes
field-bound HF interference emission according to CISPR11  Inputs/ Outputs  product function  • parameterizable inputs  • parameterizable outputs  number of inputs	corresponds to degree of severity A  Yes Yes 4
field-bound HF interference emission according to CISPR11 Inputs/ Outputs product function	Corresponds to degree of severity A  Yes Yes 4 1
field-bound HF interference emission according to CISPR11  Inputs/ Outputs  product function  • parameterizable inputs  • parameterizable outputs  number of inputs  • for thermistor connection  number of digital inputs with a common reference potential	Corresponds to degree of severity A  Yes Yes 4 1 4
field-bound HF interference emission according to CISPR11  Inputs/ Outputs  product function  • parameterizable inputs  • parameterizable outputs  number of inputs  • for thermistor connection  number of digital inputs with a common reference potential digital input version type 1 acc. to IEC 61131	corresponds to degree of severity A  Yes Yes 4 1
field-bound HF interference emission according to CISPR11  Inputs/ Outputs  product function  • parameterizable inputs  • parameterizable outputs  number of inputs  • for thermistor connection  number of digital inputs with a common reference potential	Corresponds to degree of severity A  Yes Yes 4 1 4 Yes
field-bound HF interference emission according to CISPR11  Inputs/ Outputs  product function  • parameterizable inputs  • parameterizable outputs  number of inputs  • for thermistor connection  number of digital inputs with a common reference potential digital input version type 1 acc. to IEC 61131 input voltage at digital input at DC rated value	Yes Yes 4 1 4 Yes 24 V
field-bound HF interference emission according to CISPR11  Inputs/ Outputs  product function  • parameterizable inputs  • parameterizable outputs  number of inputs  • for thermistor connection  number of digital inputs with a common reference potential digital input version type 1 acc. to IEC 61131 input voltage at digital input at DC rated value number of outputs  number of semiconductor outputs  number of outputs as contact-affected switching	Yes Yes 4 1 4 Yes 24 V 3
field-bound HF interference emission according to CISPR11  Inputs/ Outputs  product function  • parameterizable inputs  • parameterizable outputs  number of inputs  • for thermistor connection  number of digital inputs with a common reference potential digital input version type 1 acc. to IEC 61131 input voltage at digital input at DC rated value number of outputs  number of semiconductor outputs  number of outputs as contact-affected switching element	Yes Yes 4 1 4 Yes 24 V 3 0 3
field-bound HF interference emission according to CISPR11  Inputs/ Outputs  product function  • parameterizable inputs  • parameterizable outputs  number of inputs  • for thermistor connection  number of digital inputs with a common reference potential digital input version type 1 acc. to IEC 61131 input voltage at digital input at DC rated value number of outputs  number of outputs  number of semiconductor outputs  number of outputs as contact-affected switching element  switching behavior	Yes Yes 4 1 4 Yes 24 V 3 0 3 monostable
field-bound HF interference emission according to CISPR11  Inputs/ Outputs  product function	Yes Yes Yes 4 1 4 Yes 24 V 3 0 3 monostable Monostable
field-bound HF interference emission according to CISPR11  Inputs/ Outputs  product function	Yes Yes 4 1 4 Yes 24 V 3 0 3 monostable
field-bound HF interference emission according to CISPR11  Inputs/ Outputs  product function	Yes Yes Yes 4 1 4 Yes 24 V 3 0 3 monostable Monostable 300 m
field-bound HF interference emission according to CISPR11  Inputs/ Outputs  product function	Yes Yes Yes 4 1 4 Yes 24 V 3 0 3 monostable Monostable
field-bound HF interference emission according to CISPR11  Inputs/ Outputs  product function	Yes Yes Yes 4 1 4 Yes 24 V 3 0 3 monostable Monostable 300 m
field-bound HF interference emission according to CISPR11  Inputs/ Outputs  product function	Yes Yes Yes 4 1 4 Yes 24 V 3 0 3 monostable Monostable 300 m 50 m 150 m
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field-bound HF interference emission according to CISPR11  Inputs/ Outputs  product function  parameterizable inputs  product function  parameterizable outputs  number of inputs  for thermistor connection number of digital inputs with a common reference potential digital input version type 1 acc. to IEC 61131 input voltage at digital input at DC rated value number of outputs number of outputs number of semiconductor outputs number of outputs as contact-affected switching element switching behavior type of relay outputs wire length for digital signals maximum wire length for thermistor connection  with conductor cross-section = 0.5 mm² maximum with conductor cross-section = 1.5 mm² maximum with conductor cross-section = 2.5 mm² maximum  protective and monitoring functions  product function  asymmetry detection blocking current evaluation power factor monitoring	Yes Yes Yes 4 1 4 Yes 24 V 3 0 3 monostable Monostable 300 m 50 m 150 m 250 m
field-bound HF interference emission according to CISPR11  Inputs/ Outputs  product function	Yes Yes Yes 4 1 4 Yes 24 V 3 0 3 monostable Monostable 300 m 50 m 150 m 250 m

	Vaa
phase sequence recognition	Yes
voltage detection	Yes
<ul> <li>monitoring of number of start operations</li> </ul>	Yes
<ul> <li>overvoltage detection</li> </ul>	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
<ul> <li>active power monitoring</li> </ul>	Yes
product function	
<ul> <li>current detection</li> </ul>	Yes
<ul> <li>overload protection</li> </ul>	Yes
<ul> <li>evaluation of thermistor motor protection</li> </ul>	Yes
total cold resistance number of sensors in series	1.5 kΩ
maximum	
response value of thermoresistor	3 400 3 800 Ω
<ul> <li>of the short-circuit control</li> </ul>	9 Ω
release value of thermoresistor	1 500 1 650 Ω
Motor control functions	
product function	
parameterizable overload relay	Yes
circuit breaker control	Yes
direct start	Yes
reverse starting	Yes
• star-delta circuit	Yes
star-delta reversing circuit	Yes
Dahlander circuit	Yes
<ul> <li>Dahlander reversing circuit</li> </ul>	Yes
<ul> <li>pole-changing switch circuit</li> </ul>	Yes
<ul> <li>pole-changing switch reversing circuit</li> </ul>	Yes
<ul><li>slide control</li></ul>	Yes
<ul> <li>valve control</li> </ul>	Yes
Communication/ Protocol	
protocol is supported PROFIBUS DP protocol	Yes
protocol is supported PROFINET IO protocol	No
protocol is supported PROFIsafe protocol	Yes
protocol is supported Modbus RTU	No
	No
<ul><li>protocol is supported EtherNet/IP</li><li>protocol is supported OPC UA Server</li></ul>	
·	No No
protocol is supported LLDP	No
<ul> <li>protocol is supported Address Resolution Protocol (ARP)</li> </ul>	No
• protocol is supported SNMP	No
protocol is supported HTTPS	No
protocol is supported NTP	No
<ul> <li>protocol is supported Media Redundancy Protocol (MRP)</li> </ul>	No
product function is supported Device Level Ring	No
(DLR)	
number of interfaces	
according to PROFINET	0
according to PROFIBUS	1
according to Ethernet/IP	0
product function	
web server	No
shared device	No
snared device     at the Ethernet interface Autocrossover	No
at the Ethernet interface Autonogotiation     at the Ethernet interface Autonogotian	No No
at the Ethernet interface Autosensing	No
• is supported PROFINET system redundancy (S2)	No
supports PROFlenergy measured values	No
<ul> <li>supports PROFlenergy shutdown</li> </ul>	No
transfer rate maximum	12 Mbit/s
identification & maintenance function	
1&M0 - device-specific information	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	9-pin SUB-D socket (12 Mbit) / screw terminal (1.5 Mbit)
interface	
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
<ul><li>bottom</li></ul>	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)
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 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	
<ul> <li>during operation</li> </ul>	-25 +60 °C
during storage	-40 +80 °C
<ul> <li>during transport</li> </ul>	-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	5 05 %
during operation	5 95 %
contact rating of auxiliary contacts according to UL	B300 / R300
Short-circuit protection	Fues links at 0.6 A guiek re-resear 40 A (IFO 00047 F 4)
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	
• 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

inrush current peak

• at 24 V

duration of inrush current peak

• at 24 V

1.2

11 A

1.1 ms

Certificates/ approvals

**General Product Approval** 



For use in hazardous locations



Confirmation









For use in hazardous locations

**Declaration of Conformity** 

**Test Certificates** 











Special Test Certificate

**Test Certificates** 

Marine / Shipping

Type Test Certificates/Test Report

Special Test Certificate









other

Confirmation



Profibus

## 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=3UF7010-1AB00-0

Cax online generator

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

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

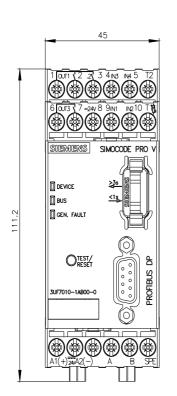
https://support.industry.siemens.com/cs/ww/en/ps/3UF7010-1AB00-0

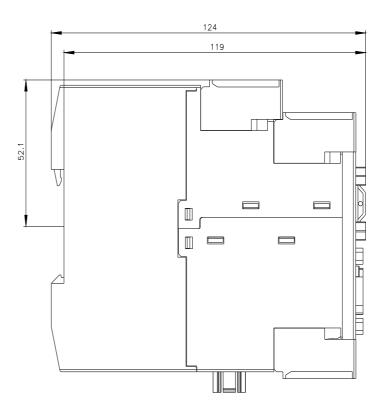
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

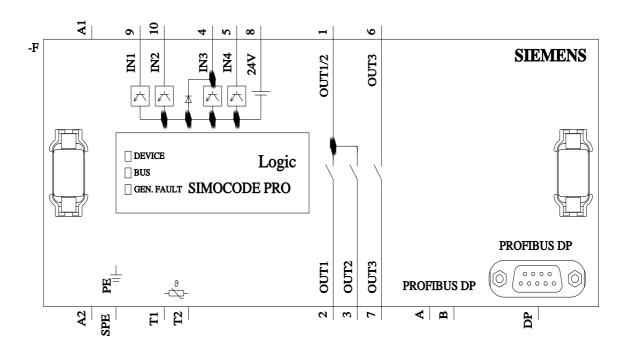
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3UF7010-1AB00-0&lang=en

Test report No. A0258, protective separation

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







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