SIEMENS

Data sheet 3UF7011-1AB00-0

Basic unit SIMOCODE pro V PN, Ethernet/PROFINET IO, PN system redundancy, OPC UA server, Web server, transmission rate 100 Mbps, 2 x bus connection via RJ45, 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 3
Product type designation	SIMOCODE pro V PN

General technical data

Product function	
• 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
• failsafe digital I/O module	Yes
• Ground fault monitoring module	Yes
• Control unit with display	Yes
• Control unit	Yes
• analog I/O module	Yes
Consumed active power	8 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 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 (switching cycles)	
• typical	10 000 000
Electrical endurance (switching cycles)	
• typical	100 000
Buffering time in the event of power failure	0.02 s
Reference code 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

Electromagnetic compatibility	
EMC emitted interference	
• acc. to IEC 60947-1	class A
EMI immunity acc. to IEC 60947-1	corresponds to degree of severity 3

Conducted interference	
• due to burst acc. to IEC 61000-4-4	2 kV (power ports) / 1 kV (signal ports)
• due to conductor-earth surge acc. to IEC 61000-4-5	2 kV
• due to conductor-conductor surge acc. to IEC 61000-4-5	1 kV
• 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	
• 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 outputs as contact-affected switching element	3
Switching behavior	monostable
Number of semiconductor outputs	0
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	
• Phase unbalance	Yes
• blocking current evaluation	Yes

• power factor monitoring	Yes
• Ground fault detection	Yes
• Phase failure detection	Yes
• phase sequence recognition	Yes
• voltage detection	Yes
• Monitoring of number of start operations	Yes
• Overvoltage detection	Yes
• Overcurrent detection 1 phase	Yes
• undervoltage detection	Yes
• undercurrent detection 1 phase	Yes
• active power monitoring	Yes
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	Yes
• star-delta reversing circuit	Yes
• Dahlander circuit	Yes
• Dahlander reversing circuit	Yes
• pole-changing switch circuit	Yes
• pole-changing switch reversing circuit	Yes
• Slide control	Yes
• valve control	Yes

Communication/ Protocol

• Protocol is supported PROFIBUS DP protocol	No
• Protocol is supported PROFINET IO protocol	Yes
• Protocol is supported PROFIsafe protocol	Yes
• Protocol is supported Modbus RTU	No
• Protocol is supported EtherNet/IP	No
• Protocol is supported OPC UA Server	Yes
• Protocol is supported LLDP	Yes

• Protocol is supported Address Resolution Protocol (ARP)	Yes
• Protocol is supported SNMP	Yes
• Protocol is supported HTTPS	Yes
• Protocol is supported NTP	Yes
• Protocol is supported Media Redundancy Protocol (MRP)	Yes
• Product function is supported Device Level Ring (DLR)	No
Number of interfaces	
• acc. to PROFINET	2
• acc. to PROFIBUS	0
• according to Ethernet/IP	0
Product function	
• web server	Yes
• shared device	Yes
• at the Ethernet interface Autocrossover	Yes
• at the Ethernet interface Autonegotiation	Yes
• at the Ethernet interface Autosensing	Yes
• Media Redundancy Protocol for Planned Duplication (MRPD)	Yes
• is supported PROFINET system redundancy	Yes
• supports PROFIenergy measured values	Yes
• supports PROFIenergy shutdown	Yes
Transfer rate maximum	100 Mbit/s
PROFINET conformity class	B
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	2x RJ45

Installation/ mounting/ dimensions	
Mounting position	any
Mounting type	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 function	
• removable terminal for auxiliary and control circuit	Yes
Type of electrical connection	
• for auxiliary and control current 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)
• at AWG conductors solid	1x (20 ... 12), 2x (20 ... 14)
• at AWG conductors 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

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; No protective separation at 40 °C
Ambient temperature	
• during operation	-25 ... +60 °C
• during storage	-40 ... +80 °C
• during transport	-40 ... +80 °C
Environmental category	
• during operation acc. 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 acc. 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 acc. 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	
Protection against electrical shock	finger-safe

Galvanic isolation	
(electrically) protective separation acc. to IEC 60947-1	All circuits in SIMOCODE pro are with protective separation, i.e. they are designed with doubled creepage paths and clearances. NOTICE: The information in the "Protective Separation" test report, No. 2668, must be observed.
Design of the electrical isolation	Protective separation in accordance with IEC 60947-1 for all circuits

Control circuit/ Control	
Product function soft starter control	Yes
Type of voltage of the control supply voltage	DC
Control supply voltage 1	
• at DC rated value	24 V
Operating range factor control supply voltage rated value at DC	
• initial value	0.85
• Full-scale value	1.2

Certificates/approvals

General Product Approval				EMC	For use in hazardous locations
CCC	CSA	UL	EAC	C-Tick	ATEX

For use in hazardous locations	Declaration of Conformity	Test Certificates			Marine / Shipping
Explosion Protection Certificate	EG-Konf.	Declaration of the Compliance with the order	Special Test Certificate	Type Test Certificates/Test Report	ABS

Marine / Shipping			other		
LRS	RMRS	DNVGL.COM/AF	Confirmation	PROFINET-Certification	Profibus

other
PROFIsafe-Certification

Further information

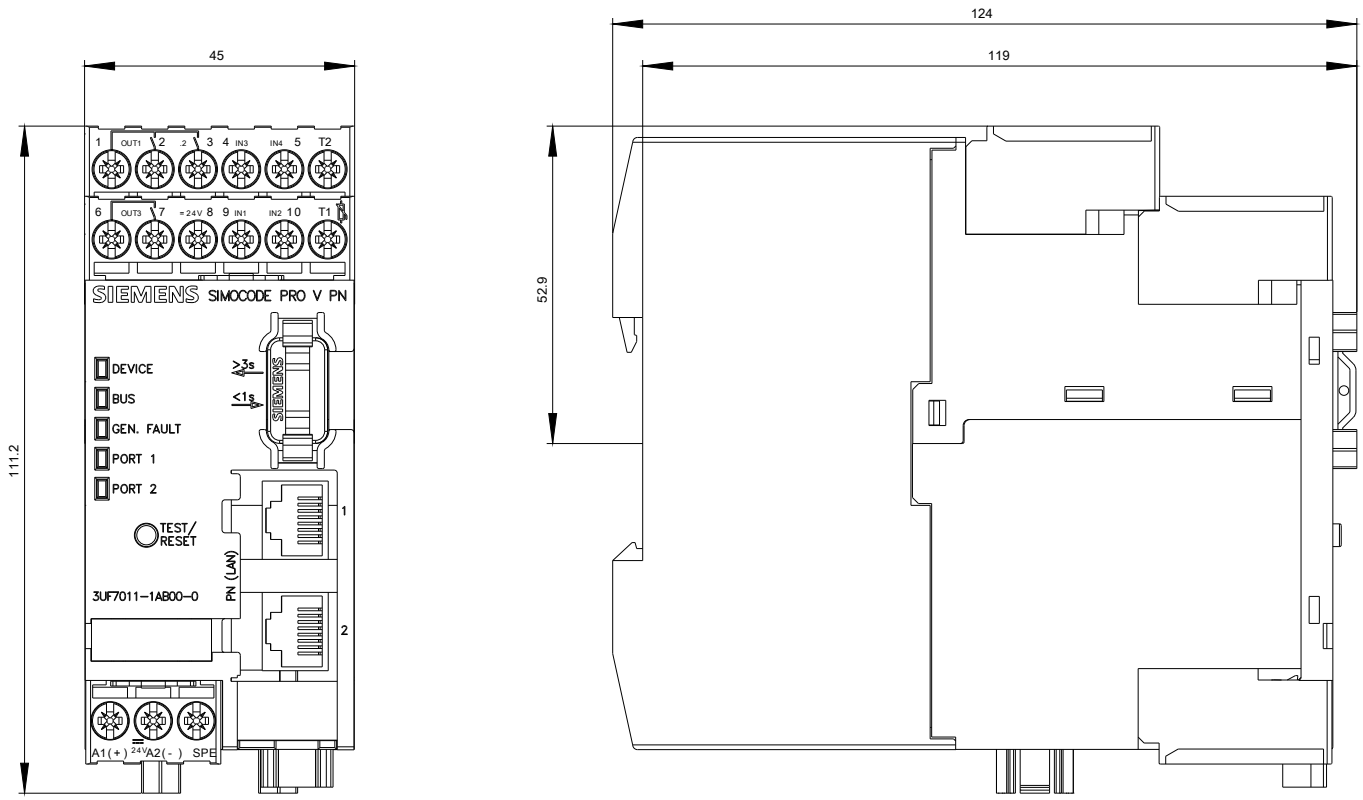
Information- and Downloadcenter (Catalogs, Brochures,…)
http://www.siemens.com/industrial-controls/catalogs

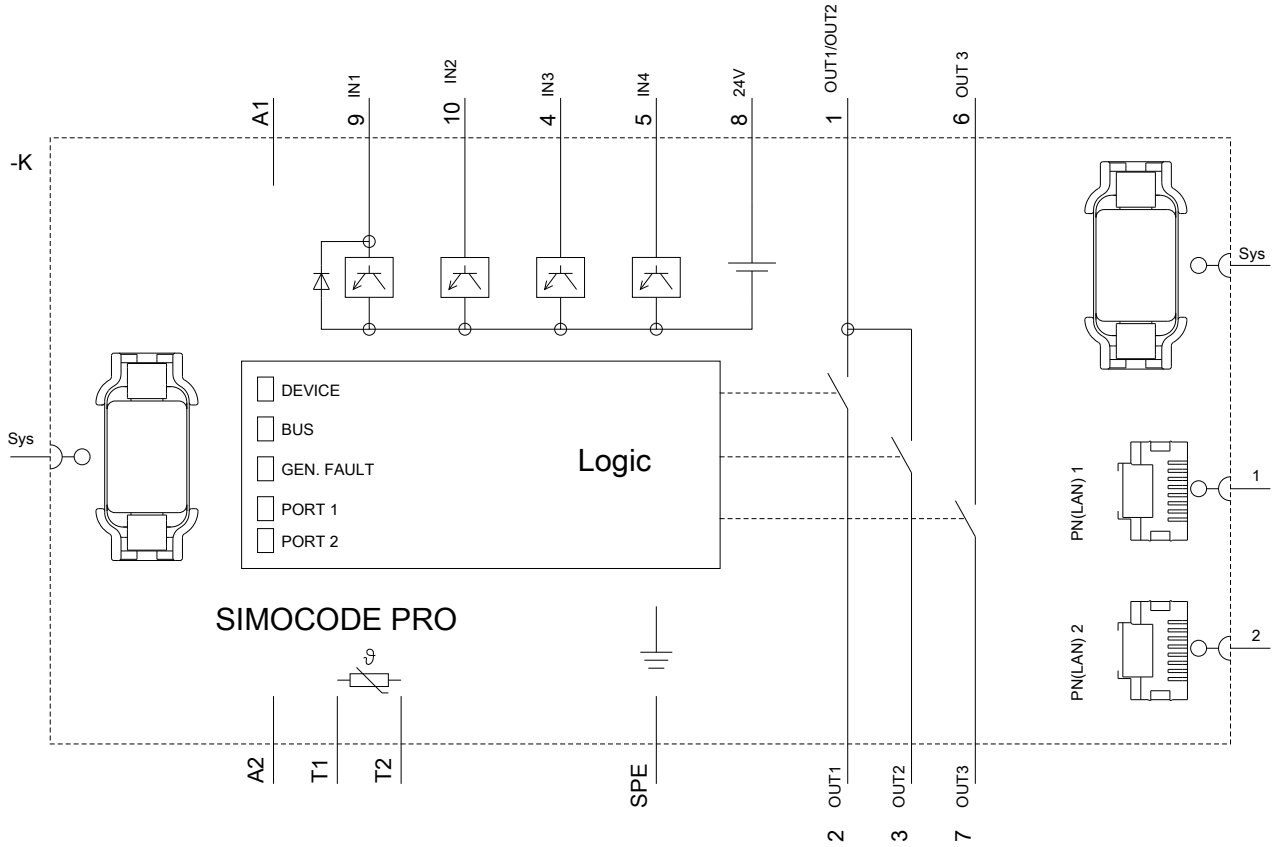
Industry Mall (Online ordering system)
https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3UF7011-1AB00-0

Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UF7011-1AB00-0

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3UF7011-1AB00-0

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UF7011-1AB00-0&lang=en





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