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Data sheet 3SU1400-1LL10-3BA1



SIRIUS ACT with PROFINET: fail-safe interface module with 4 DI, 1 DQ (24 V DC), 1 AI (12-bit A/D resolution), 24 V DC, spring-loaded terminal, front plate mounting, 1 to 20 terminal modules connectable

product brand name	SIRIUS ACT
product designation	Fail-safe interface module for PROFINET
product type designation	3SU1
Display	
display version	
● for diagnostic function: Supply voltage monitoring power LED	Yes
● status Tx/Rx link	Yes
General technical data	
product function	
● reverse polarity protection	Yes; With polarity change, DI1 ... DI4 may not be connected to (M) pole
● diagnostics function	Yes
● alarms	Yes
● I&M data	Yes; I&M0 ... I&M3
firmware version	2.1.4
hardware version	1
configuration function with dataset	Yes
software version with STEP 7 in the TIA Portal required	Integrated in TIA Portal Version 14 SP1 or higher (HSP for V13 and V14)
number of units per rack maximum	20
number of submodules per station maximum	24
power loss [W] typical	0.67 W
insulation voltage rated value	30 V
degree of pollution	3
type of voltage	
● of the operating voltage	DC
● of the input voltage	DC
surge voltage resistance rated value	0.8 kV
consumed current	
● maximum	100 mA
● rated value	28 mA
protection class IP	IP20
shock resistance	
● **according to IEC 60068-2-27**	sinusoidal half-wave 15 g / 11 ms
● for railway applications according to EN 61373	Category 1, Class B
vibration resistance	
● **according to IEC 60068-2-6**	10 ... 500 Hz: 5 g

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● for railway applications according to EN 61373	Category 1, Class B
reference code according to IEC 81346-2	K
Substance Prohibitance (day/month/year)	12/19/2016
SVHC substance name	Lead CAS-No. 7439-92-1 Lead monoxide (lead oxide) CAS-No. 1317-36-8 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one CAS-No. 71868-10-5 Melamine CAS-No. 108-78-1
Net Weight	157.38 g
operating voltage rated value minimum	20.4 V
I2t value	0.008 A²·s
Supply voltage	
supply voltage at DC rated value	24 V
Communication/ Protocol	
protocol is supported	
● PROFINET IO protocol	Yes
● PROFIsafe protocol	Yes
product function at the Ethernet interface	
● Autocrossover	Yes
● Autonegotiation	Yes
protocol at the 1st interface media redundancy protocol	No
product function at the 1st interface PROFINET IO device	Yes
product function of the PROFINET IO device is supported PROFINET system redundancy	No
service as PROFINET IO device	
● prioritized startup	No
● isochronous mode	No
● supports Shared Device	No
● supports PROFIenergy	No
● IRT	No
● MRP	No
● MRPD	No
service for open IE communication	
● LLDP	Yes
● SNMP	Yes
● TCP/IP	Yes
GSD version/revision with PROFINET required	V2.34
transmission mode for Industrial Ethernet	PROFINET with 100 Mbps full duplex (100BASE-TX)
network load class according to PROFINET	I
specification for Security Level 1 test according to PROFINET	Resilient to network loading
Control circuit/ Control	
inrush current maximum	16 A
Galvanic isolation	
galvanic isolation between PROFINET and all other circuits	Yes
Inputs/ Outputs	
number of digital inputs	4
● safety-related	0
number of analog inputs	1
number of digital outputs	1
Connections/ Terminals	
type of electrical connection	spring-loaded terminals
connectable conductor cross-section for auxiliary contacts	
● solid or stranded	0.2 ... 2.5 mm²
● finely stranded with core end processing maximum	2.5 mm²
connectable conductor cross-section	
● solid	0.2 ... 2.5 mm²
● solid with core end processing	0.2 ... 2.5 mm²
● finely stranded with core end processing	0.25 ... 2.5 mm²
● finely stranded without core end processing	0.2 ... 2.5 mm²

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AWG number as coded connectable conductor cross section	26 ... 12
Safety related data	
product function suitable for safety function	Yes
safe state	Process value within PROFISafe telegram is set to zero
service life maximum	20 a
test wear-related service life necessary	No
function test interval maximum	1 mo
IEC 62061	
Safety Integrity Level (SIL) according to IEC 62061	SIL 3
PFHD with high demand rate according to IEC 62061	6E-10 1/h
ISO 13849	
performance level (PL) according to ISO 13849-1	PL e
category according to ISO 13849-1	4
device type according to ISO 13849-1	1
IEC 61508	
Safety Integrity Level (SIL) according to IEC 61508	SIL 3
safety device type according to IEC 61508-2	Type B
PFHD with high demand rate according to IEC 61508	6E-10 1/h
PFDavg with low demand rate according to IEC 61508	2.426E-6
Safe failure fraction (SFF)	99.6 %
hardware fault tolerance according to IEC 61508	1
T1 value	
● according to IEC 61508	1 a
● of service life according to IEC 61508	20 a
Interfaces	
design of the interface	
● Ethernet interface	Yes; for Ethernet services
● Fast Ethernet interface	Yes; PROFINET with 100 Mbps
interface design 1	
● integrated switch	No
● RJ45 (Ethernet)	Yes
number of ports at the 1st interface	1
number of interfaces according to PROFINET	1
Ambient conditions	
ambient temperature	
● during operation	-25 ... +60 °C
● during storage	-40 ... +80 °C
environmental category during operation according to IEC 60721	3M6, 3S2, 3B2, 3K6 (with relative air humidity of 10 ... 95%, no condensation in operation permitted)
explosion protection marking for intrinsic safety of related equipment EEx ia	No
explosion protection marking for intrinsic safety of related equipment EEx ib	No
Installation/ mounting/ dimensions	
fastening method of modules and accessories	Front plate mounting
height	80.1 mm
width	40 mm
depth	72.1 mm
Environmental footprint	
Environmental Product Declaration(EPD)	Yes
global warming potential [CO2 eq] total	0.787 kg
global warming potential [CO2 eq] during manufacturing	0.566 kg
global warming potential [CO2 eq] during operation	0.235 kg
global warming potential [CO2 eq] after end of life	-0.015 kg
Approvals Certificates	
Environmental Product Declaration	
● global warming potential [CO2 eq] / during manufacturing	0.566 kg
● global warming potential [CO2 eq] / during operation	0.235 kg
● global warming potential [CO2 eq] / after end of life	-0.0145 kg

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● global warming potential [CO2 eq] / total	0.787 kg

Environment	General Product Approval
Environmental Confirmations	

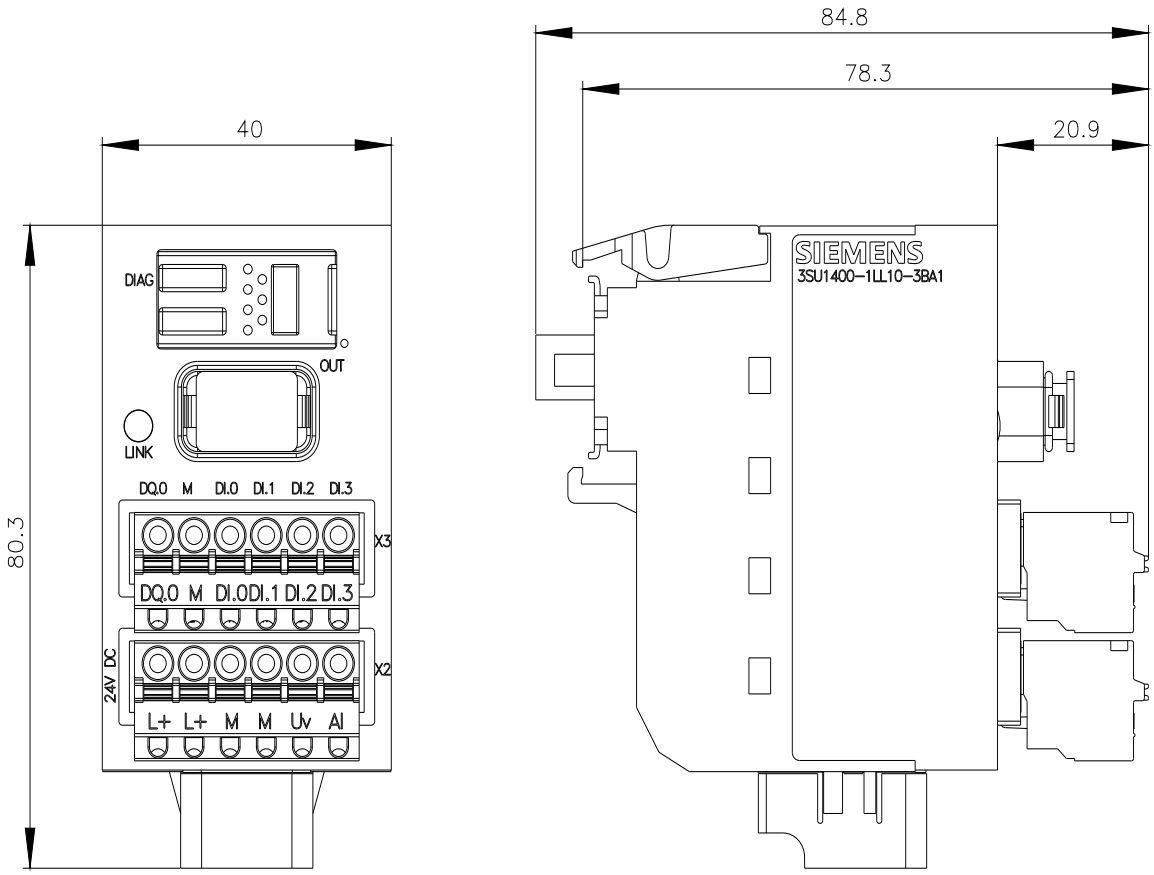
General Product Approval	Functional Saftey	Test Certificates		Maritime application
	Type Examination Certificate	Special Test Certificate	Type Test Certificates/Test Report	

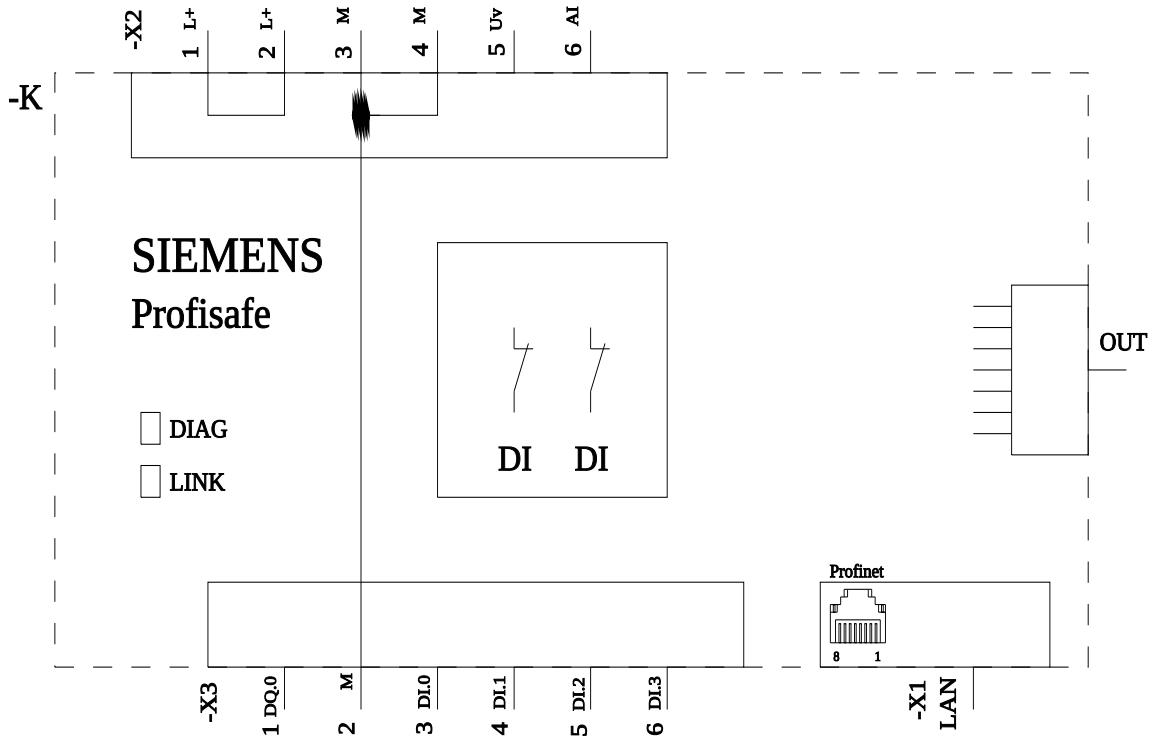
Maritime application	other	Industrial Communication
	Confirmation	PROFIsafe

Further information

Information on the packaging
https://support.industry.siemens.com/cs/ww/en/view/109813875
Information for data generation and storage
https://support.industry.siemens.com/cs/ww/en/view/109995012
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=3SU1400-1LL10-3BA1
Cax online generator
https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3SU1400-1LL10-3BA1
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3SU1400-1LL10-3BA1
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3SU1400-1LL10-3BA1&lang=en

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