



DC load monitoring relay for PROFINET, max. 1x63 A DC, max. 60 V Width: 45.0 mm Monitoring for violation of upper and lower limit of current, voltage and power; energy consumption counter, energy recovery counter, switching cycle counter, operating hours counter warning and alarm thresholds auto-reset or manual reset ON delay 0-999.0 sec, OFF delay 0-999.0 sec, automatic reclosing delay 0-999.0 sec Supply voltage: 24 VDC 1 change-over contact, screw terminal

product brand name	SIRIUS
product designation	DC load monitoring relay
design of the product	for PROFINET
product type designation	3UG5
General technical data	
product function	DC load monitoring relay
power loss [W] maximum	3 W
insulation voltage	
• for overvoltage category II according to IEC 60664 with degree of pollution 3 rated value	600 V
• for overvoltage category III according to IEC 60664 with degree of pollution 3 rated value	300 V
• of the auxiliary and control circuit for overvoltage category III according to IEC 60664 with degree of pollution 3 rated value	30 V
type of voltage for monitoring	DC
surge voltage resistance rated value	6 kV
maximum permissible voltage for protective separation	
• between auxiliary and auxiliary circuit	24 V
• between control and auxiliary circuit	24 V
protection class IP	
• on the front	IP20
• of the terminal	IP00
shock resistance according to IEC 60068-2-27	sinusoidal half-wave 15g / 11 ms
vibration resistance according to IEC 60068-2-6	1 ... 6 Hz: 15 mm, 6 ... 500 Hz: 2g
mechanical service life (operating cycles) typical	10 000 000
electrical endurance (operating cycles) for relay outputs maximum	100 000
• note	0.5 A 125 V AC, with resistive load up to 40 °C
thermal current of the switching element with contacts maximum	1 A
reference code according to IEC 81346-2	K
Substance Prohibittance (Date)	05/31/2019
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol - 119-47-1 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one - 71868-10-5
Weight	0.381 kg
Product Function	
product function	
• overvoltage detection DC	Yes
• undervoltage detection DC	Yes

• overcurrent detection DC	Yes
• undercurrent detection DC	Yes
• auto-RESET	Yes
• manual RESET	Yes
Supply voltage	
type of voltage of the supply voltage	DC
supply voltage 1 at DC rated value	24 V
operating range factor supply voltage rated value at DC	0.85 ... 1.15
Measuring circuit	
type of current for monitoring	DC
measurable current	-63 ... +63 A
measurable voltage at DC	0 ... 60 V
adjustable voltage range	0 ... 60 V
adjustable current response value current	
• 1	-63 ... +63 A
adjustable response delay time	
• when starting	0 ... 999 s
• with lower or upper limit violation	0 ... 999 s
response time maximum	100 ms
relative temperature-related measurement deviation	0.5 %
internal resistance of the measuring circuit	10 mΩ
Communication/ Protocol	
protocol is supported	
• PROFINET IO protocol	Yes
• Address Resolution Protocol (ARP)	Yes
design of the interface Fast Ethernet interface	Yes
number of interfaces according to PROFINET	1
product function at the Ethernet interface Autocrossover	Yes
interface design 1 RJ45 (Ethernet)	Yes
product function at the 1st interface PROFINET IO device	Yes
number of ports at the 1st interface	1
service for open IE communication LLDP	Yes
transmission mode for Industrial Ethernet	PROFINET with 100 Mbps full duplex (100BASE-TX)
PROFINET conformity class	A
network load class according to PROFINET	I
Auxiliary circuit	
number of CO contacts for auxiliary contacts	1
ampacity of the output relay at DC-13	
• at 24 V	1 A
ampacity for overcurrent duration < 1 s maximum permissible	1 A
continuous current of the DIAZED fuse link of the output relay	2 A
Electromagnetic compatibility	
conducted interference	
• due to burst according to IEC 61000-4-4	2 kV
• due to conductor-earth surge according to IEC 61000-4-5	2 kV
• due to conductor-conductor surge according to IEC 61000-4-5	1 kV
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
Galvanic isolation	
design of the electrical isolation	Protective separation
galvanic isolation	
• between input and output	Yes
• between the voltage supply and other circuits	Yes
Electrical Safety	
protection class IP on the front according to IEC 60529	IP20
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front

Connections/ Terminals			
product component removable terminal for main circuit	No		
product component removable terminal for auxiliary and control circuit	Yes		
type of electrical connection	screw terminal		
type of connectable conductor cross-sections for main contacts	• solid2x (1 ... 16 mm²), 1x (1 ... 16 mm²) • stranded2x (1 ... 16 mm²), 1x (1 ... 16 mm²) • finely stranded with core end processing2x (1 ... 25 mm²), 1x (1 ... 35 mm²)		
type of connectable conductor cross-sections	• for auxiliary contacts — solid1x (0.5 ... 4 mm²), 2x (0.5 ... 2.5 mm²) — finely stranded with core end processing2x (0,5 ... 1,5 mm²), 1x (0,5 ... 4 mm²) • for AWG cables for auxiliary contacts1x (20 ... 12), 2x (20 ... 14)		
tightening torque	• for main contacts with screw-type terminals3 ... 4.5 N·m • for auxiliary contacts with screw-type terminals0.6 ... 0.8 N·m		
Installation/ mounting/ dimensions			
mounting position	any		
fastening method	screw and snap-on mounting onto 35 mm DIN rail		
height	100 mm		
width	45 mm		
depth	141.6 mm		
required spacing	• with side-by-side mounting — forwards0 mm — backwards0 mm — upwards50 mm — downwards50 mm — at the side0 mm • for grounded parts — forwards0 mm — backwards0 mm — upwards50 mm — at the side3 mm — downwards50 mm • for live parts — forwards0 mm — backwards0 mm — upwards50 mm — downwards50 mm — at the side3 mm		
Ambient conditions			
installation altitude at height above sea level maximum	2 000 m		
ambient temperature	• during operation-25 ... +60 °C • during storage-40 ... +80 °C • during transport-40 ... +80 °C		
Approvals Certificates			
General Product Approval		Test Certificates	other
 EG-Konf.  UL 		Type Test Certificates/Test Report	 Confirmation
other	Environment	Industrial Communication	

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=3UG5462-1AA41>

Cax online generator

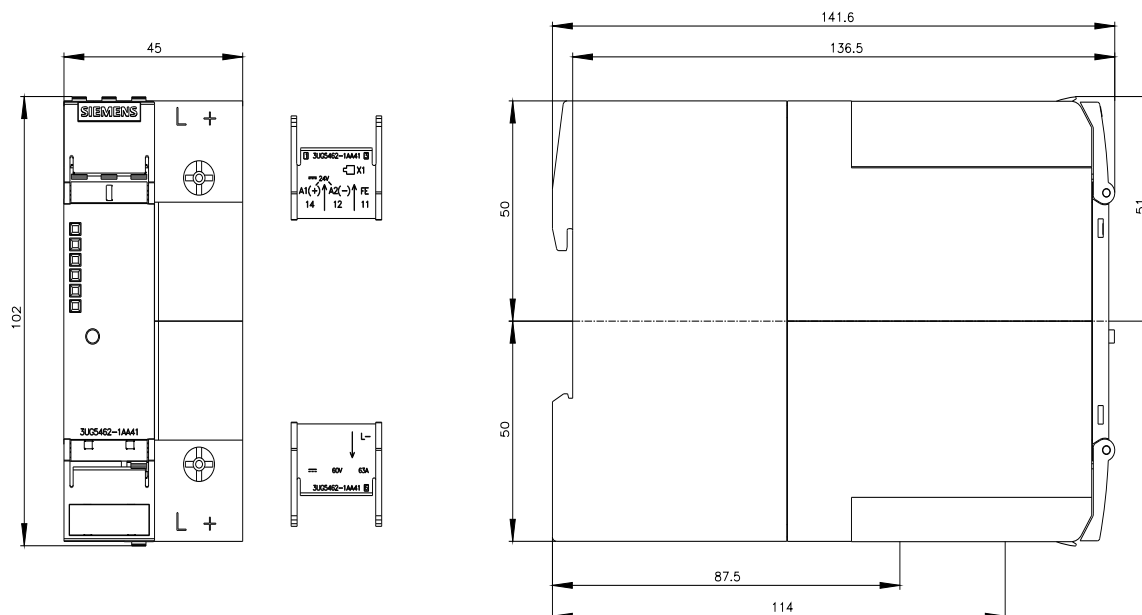
<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG5462-1AA41>

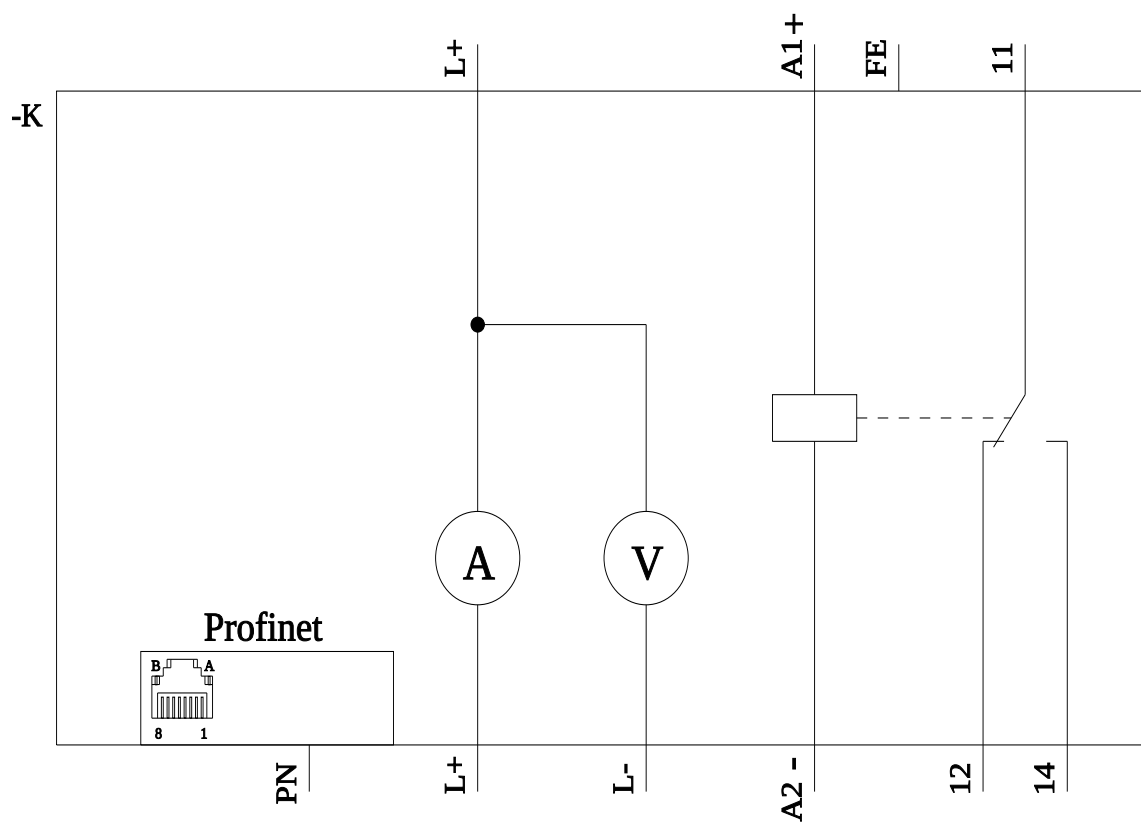
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3UG5462-1AA41>

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

https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG5462-1AA41&lang=en





last modified:

4/18/2025