## SIEMENS

## Data sheet

## 3RU2116-0EB0



Overload relay 0.28...0.40 A Thermal For motor protection Size S00, Class 10 Contactor mounting Main circuit: Screw Auxiliary circuit: Screw Manual-Automatic-Reset

product brand name	SIRIUS
product designation	thermal overload relay
product type designation	3RU2
General technical data	
size of overload relay	S00
size of contactor can be combined company-specific	S00
power loss [W] for rated value of the current at AC in hot operating state	4.8 W
• per pole	1.6 W
insulation voltage with degree of pollution 3 at AC rated value	690 V
surge voltage resistance rated value	6 V
maximum permissible voltage for protective separation in networks with grounded star point	
<ul> <li>between auxiliary and auxiliary circuit</li> </ul>	440 V
<ul> <li>between auxiliary and auxiliary circuit</li> </ul>	440 V
<ul> <li>between main and auxiliary circuit</li> </ul>	440 V
<ul> <li>between main and auxiliary circuit</li> </ul>	440 V
shock resistance according to IEC 60068-2-27	8g / 11 ms
reference code according to IEC 81346-2	F
Substance Prohibitance (Date)	10/01/2009
SVHC substance name	Lead - 7439-92-1
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
<ul> <li>during operation</li> </ul>	-40 +70 °C
<ul> <li>during storage</li> </ul>	-55 +80 °C
during transport	-55 +80 °C
temperature compensation	-40 +60 °C
relative humidity during operation	10 95 %
Main circuit	
number of poles for main current circuit	3
adjustable current response value current of the current- dependent overload release	0.28 0.4 A
operating voltage	
rated value	690 V
• at AC-3e rated value maximum	690 V
operating frequency rated value	50 60 Hz
operational current rated value	0 A
operational current at AC-3e at 400 V rated value	0.4 A
operating power	
• at AC-3	

— at 400 V rated value	0.09 kW
— at 500 V rated value	0.12 kW
— at 690 V rated value	0.18 kW
• at AC-3e	
— at 400 V rated value	0.09 kW
— at 500 V rated value	0.12 kW
— at 690 V rated value	0.18 kW
Auxiliary circuit	
design of the auxiliary switch	integrated
number of NC contacts for auxiliary contacts	1
note	for contactor disconnection
number of NO contacts for auxiliary contacts	1
note	for message "Tripped"
number of CO contacts for auxiliary contacts	0
operational current of auxiliary contacts at AC-15	
• at 24 V	3 A
• at 110 V	3 A
• at 120 V	3 A
• at 125 V	3 A
• at 230 V	2 A
• at 400 V	1 A
• at 690 V	0.75 A
operational current of auxiliary contacts at DC-13	
• at 24 V	2 A
• at 60 V	0.3 A
• at 110 V	0.2 A
• at 125 V	0.22 A
• at 220 V	0.11 A
contact rating of auxiliary contacts according to UL	B600 / R300
Protective and monitoring functions	
trip class	CLASS 10
trip class design of the overload release	CLASS 10 thermal
trip class	
trip class design of the overload release	
trip class design of the overload release UL/CSA ratings	
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor	thermal
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value	thermal 0.4 A
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value	thermal 0.4 A
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value Short-circuit protection	thermal 0.4 A
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value Short-circuit protection design of the fuse link	thermal 0.4 A 0.4 A
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value Short-circuit protection design of the fuse link • for short-circuit protection of the auxiliary switch required	thermal 0.4 A 0.4 A
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value Short-circuit protection design of the fuse link • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions	thermal 0.4 A 0.4 A 0.4 A fuse gG: 6 A, quick: 10 A
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value Short-circuit protection design of the fuse link • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions mounting position	thermal 0.4 A 0.4 A fuse gG: 6 A, quick: 10 A any
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value Short-circuit protection design of the fuse link • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions mounting position fastening method	thermal 0.4 A 0.4 A 0.4 A fuse gG: 6 A, quick: 10 A any Contactor mounting
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value Short-circuit protection design of the fuse link • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions mounting position fastening method height	thermal 0.4 A 0.4 A 0.4 A fuse gG: 6 A, quick: 10 A any Contactor mounting 76 mm
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value Short-circuit protection design of the fuse link • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions mounting position fastening method height width	thermal 0.4 A 0.4 A 0.4 A 0.4 A 1.1 fuse gG: 6 A, quick: 10 A any Contactor mounting 76 mm 45 mm
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value Short-circuit protection design of the fuse link • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions mounting position fastening method height width depth Connections/ Terminals product component removable terminal for auxiliary and	thermal 0.4 A 0.4 A 0.4 A 0.4 A 1.1 fuse gG: 6 A, quick: 10 A any Contactor mounting 76 mm 45 mm
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value Short-circuit protection design of the fuse link • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions mounting position fastening method height width depth Connections/ Terminals product component removable terminal for auxiliary and control circuit	thermal 0.4 A 0.4 A 0.4 A fuse gG: 6 A, quick: 10 A any Contactor mounting 76 mm 45 mm 70 mm
trip class         design of the overload release         UL/CSA ratings         full-load current (FLA) for 3-phase AC motor         • at 480 V rated value         • at 600 V rated value         Short-circuit protection         design of the fuse link         • for short-circuit protection of the auxiliary switch required         Installation/ mounting/ dimensions         mounting position         fastening method         height         width         depth         Connections/ Terminals         product component removable terminal for auxiliary and control circuit         type of electrical connection	thermal 0.4 A 0.4 A 0.4 A fuse gG: 6 A, quick: 10 A any Contactor mounting 76 mm 45 mm 70 mm No
trip class         design of the overload release         UL/CSA ratings         full-load current (FLA) for 3-phase AC motor         • at 480 V rated value         • at 600 V rated value         Short-circuit protection         design of the fuse link         • for short-circuit protection of the auxiliary switch required         Installation/ mounting/ dimensions         mounting position         fastening method         height         width         depth         Connections/ Terminals         product component removable terminal for auxiliary and control circuit         type of electrical connection         • for main current circuit	thermal 0.4 A 0.4 A 0.4 A fuse gG: 6 A, quick: 10 A any Contactor mounting 76 mm 45 mm 70 mm No No screw-type terminals
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value Short-circuit protection design of the fuse link • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions mounting position fastening method height width depth Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection • for main current circuit • for auxiliary and control circuit	thermal 0.4 A 0.4 A 0.4 A 0.4 A
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value Short-circuit protection design of the fuse link • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions mounting position fastening method height width depth Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection • for main current circuit • for auxiliary and control circuit arrangement of electrical connectors for main current	thermal 0.4 A 0.4 A 0.4 A fuse gG: 6 A, quick: 10 A any Contactor mounting 76 mm 45 mm 70 mm No No screw-type terminals
trip class         design of the overload release         UL/CSA ratings         full-load current (FLA) for 3-phase AC motor <ul> <li>at 480 V rated value</li> <li>at 600 V rated value</li> <li>at 600 V rated value</li> </ul> Short-circuit protection         design of the fuse link         • for short-circuit protection of the auxiliary switch required         Installation/ mounting/ dimensions         mounting position         fastening method         height         width         depth         Connections/ Terminals         product component removable terminal for auxiliary and control circuit         type of electrical connection         • for main current circuit         • for auxiliary and control circuit         arrangement of electrical connectors for main current circuit	thermal 0.4 A 0.4 A 0.4 A 0.4 A
trip class         design of the overload release         UL/CSA ratings         full-load current (FLA) for 3-phase AC motor <ul> <li>at 480 V rated value</li> <li>at 600 V rated value</li> </ul> Short-circuit protection         design of the fuse link         for short-circuit protection of the auxiliary switch required         Installation/ mounting/ dimensions         mounting position         fastening method         height         width         depth         Connections/ Terminals         product component removable terminal for auxiliary and control circuit         type of electrical connection         e for auxiliary and control circuit         arrangement of electrical connectors for main current circuit         type of connectable conductor cross-sections	thermal 0.4 A 0.4 A 0.4 A 0.4 A 0.4 A
trip class         design of the overload release         UL/CSA ratings         full-load current (FLA) for 3-phase AC motor <ul> <li>at 480 V rated value</li> <li>at 600 V rated value</li> </ul> Short-circuit protection         design of the fuse link         for short-circuit protection of the auxiliary switch required         Installation/ mounting/ dimensions         mounting position         fastening method         height         width         depth         Connections/ Terminals         product component removable terminal for auxiliary and control circuit         type of electrical connection         e for main current circuit         e for auxiliary and control circuit         arrangement of electrical connectors for main current circuit         type of connectable conductor cross-sections         e for main contacts	thermal 0.4 A 0.4 A 0.4 A 0.4 A
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value Short-circuit protection design of the fuse link • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions mounting position fastening method height width depth Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection • for main current circuit • for auxiliary and control circuit arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections • for main contacts — solid or stranded	thermal 0.4 A 0.4 A 0.4 A 1.4 1.5 mm <sup>2</sup> ), 2x (0,75 2,5 mm <sup>2</sup> ), 2x 4 mm <sup>2</sup>
trip class         design of the overload release         UL/CSA ratings         full-load current (FLA) for 3-phase AC motor <ul> <li>at 480 V rated value</li> <li>at 600 V rated value</li> <li>at 600 V rated value</li> </ul> <li>Short-circuit protection         <ul> <li>design of the fuse link</li> <li>for short-circuit protection of the auxiliary switch required</li> </ul> </li> <li>Installation/ mounting/ dimensions         <ul> <li>mounting position</li> <li>fastening method</li> <li>height</li> <li>width</li> <li>depth</li> </ul> </li> <li>Connections/ Terminals         <ul> <li>product component removable terminal for auxiliary and control circuit</li> <li>type of electrical connection                <ul> <li>for auxiliary and control circuit</li> <li>arrangement of electrical connectors for main current circuit</li> <li>type of connectable conductor cross-sections                  <ul> <li>otid or stranded</li> <li>main cortexis</li> <li>for main contacts</li></ul></li></ul></li></ul></li>	thermal         0.4 A         0.4 A         fuse gG: 6 A, quick: 10 A         any         Contactor mounting         76 mm         45 mm         70 mm         No         screw-type terminals         screw-type terminals         Top and bottom         2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²), 2x 4 mm²         2x (0.5 1.5 mm²), 2x (0,75 2,5 mm²)
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value Short-circuit protection design of the fuse link • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions mounting position fastening method height width depth Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection • for main current circuit • for auxiliary and control circuit arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections • for main contacts — solid or stranded — finely stranded with core end processing • for AWG cables for main contacts	thermal 0.4 A 0.4 A 0.4 A 1.4 1.5 mm <sup>2</sup> ), 2x (0,75 2,5 mm <sup>2</sup> ), 2x 4 mm <sup>2</sup>
trip class         design of the overload release         UL/CSA ratings         full-load current (FLA) for 3-phase AC motor <ul> <li>at 480 V rated value</li> <li>at 600 V rated value</li> </ul> state value       at 600 V rated value         Short-circuit protection       design of the fuse link         of or short-circuit protection of the auxiliary switch required         Installation/ mounting/ dimensions         mounting position         fastening method         height         width         depth         Connections/ Terminals         product component removable terminal for auxiliary and control circuit         type of electrical connection         of or auxiliary and control circuit         arrangement of electrical connectors for main current circuit         type of connectable conductor cross-sections         of or main contacts         — solid or stranded         — finely stranded with core end processing         of or AWG cables for main contacts         type of connectable conductor cross-sections	thermal         0.4 A         0.4 A         fuse gG: 6 A, quick: 10 A         any         Contactor mounting         76 mm         45 mm         70 mm         No         screw-type terminals         screw-type terminals         Top and bottom         2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²), 2x 4 mm²         2x (0.5 1.5 mm²), 2x (0.75 2,5 mm²)
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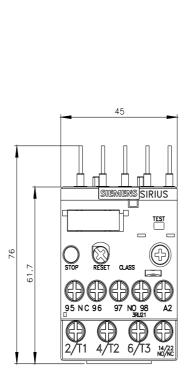
<ul> <li>finely stranded with core end processing</li> <li>for AWG cables for auxiliary contacts</li> </ul>	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (20 16), 2x (18 14)				
tightening torque	ZX (20 10), ZX (10 14)				
for main contacts with screw-type terminals	0.8 1.2 N·m				
<ul> <li>for main contacts with screw-type terminals</li> <li>for auxiliary contacts with screw-type terminals</li> </ul>	0.8 1.2 N·m				
design of screwdriver shaft	Diameter 5 6 mm				
size of the screwdriver tip	Pozidriv PZ 2				
•					
design of the thread of the connection screw	MO				
• for main contacts	M3				
of the auxiliary and control contacts	M3				
Safety related data					
failure rate [FIT] with low demand rate according to SN 31920	50 FIT				
MTTF with high demand rate	2 280 a	2 280 a			
IEC 61508	-				
T1 value					
<ul> <li>for proof test interval or service life according to IEC 61508</li> </ul>	20 a				
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	rom the front			
Display					
display version for switching status	Slide switch				
Approvals Certificates					
General Product Approval					
	<u>Confirmation</u>		EHC		
For use in hazard- ous locations Test Certificates	Marine / Shipping				
Type Test Certific- ates/Test Report     Special Test Cartific- ates       ATEX     Type Test Certific- ates     Special Test Cartific- ates	ertific-	BUREAU VERITAS			
Marine / Shipping		other			
LIRS PRS RINA	RMRS	<u>Miscellaneous</u>	<u>Confirmation</u>		
Environment					
Environmental Con-					
<u>firmations</u>					

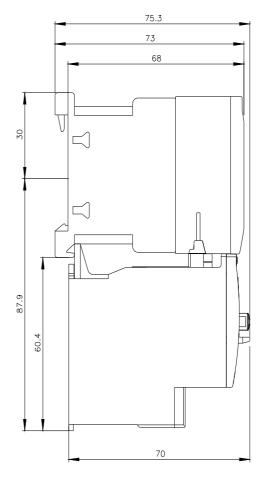
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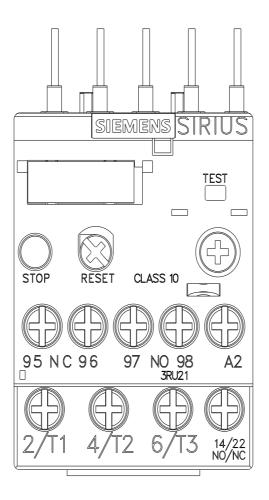
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RU2116-0EB0&lang=en

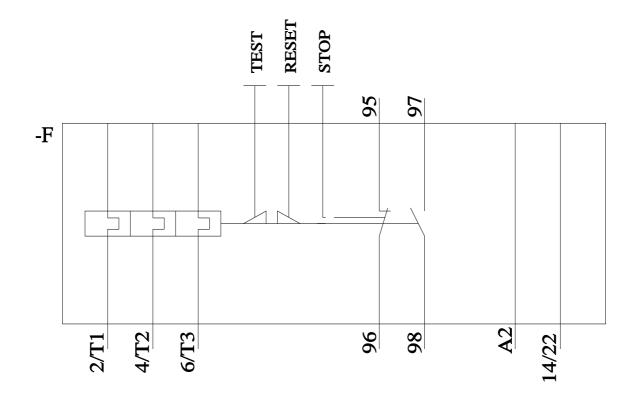
Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-0EB0/char

Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RU2116-0EB0&objecttype=14&gridview=view1









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