## **SIEMENS**

Data sheet 3RT1456-6AR36



power contactor AC-1 275 A / 690 V / 40  $^{\circ}$ C 3-pole, Uc: 440-480 V AC(50-60 Hz) / DC drive: conventional auxiliary contacts 2 NO + 2 NC main circuit: busbar control and auxiliary circuit: screw terminal

product brand name	SIRIUS
product designation	Contactor
product type designation	3RT14
General technical data	
size of contactor	S6
product extension	
<ul> <li>function module for communication</li> </ul>	No
auxiliary switch	Yes
power loss [W] for rated value of the current	
<ul> <li>at AC in hot operating state</li> </ul>	86.4 W
<ul> <li>at AC in hot operating state per pole</li> </ul>	28.8 W
without load current share typical	5.2 W
type of calculation of power loss depending on pole	quadratic
insulation voltage	
<ul> <li>of main circuit with degree of pollution 3 rated value</li> </ul>	1 000 V
of auxiliary circuit with degree of pollution 3 rated value	500 V
surge voltage resistance	
of main circuit rated value	8 kV
of auxiliary circuit rated value	6 kV
shock resistance at rectangular impulse	
• at AC	8,5g / 5 ms, 4,2g / 10 ms
• at DC	8,5g / 5 ms, 4,2g / 10 ms
shock resistance with sine pulse	
• at AC	13,4g / 5 ms, 6,5g / 10 ms
• at DC	13,4g / 5 ms, 6,5g / 10 ms
mechanical service life (operating cycles)	
of contactor typical	10 000 000
<ul> <li>of the contactor with added electronically optimized auxiliary switch block typical</li> </ul>	5 000 000
of the contactor with added auxiliary switch block typical	10 000 000
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	05/01/2012
SVHC substance name	Lead - 7439-92-1
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
during operation	-25 +60 °C
during storage	-55 +80 °C
relative humidity minimum	10 %
relative humidity at 55 °C according to IEC 60068-2-30 maximum	95 %

mumber of poles for main current circuit  number of NC contacts for main contacts  1 number of NC contacts for main contacts  2 number of NC contacts for main contacts  1 number of NC contacts for main contacts  1 number of NC contacts for main contacts  1 number of NC contacts for main contacts  2 number of NC contacts  2 number	
number of NO contacts for main contacts  number of NC contacts for main contacts  type of voltage for main current circuit  • at AC-1  — up to 690 V at ambient temperature 40 °C rated value — up to 690 V at ambient temperature 55 °C rated value — up to 690 V at ambient temperature 60 °C rated value — up to 690 V at ambient temperature 60 °C rated value — up to 690 V at ambient temperature 60 °C rated value — at 690 V rated value  minimum cross-section in main circuit at maximum AC-1 rated value  minimum cross-section in main circuit at maximum AC-1 rated value  operating frequency  at AC  at AC  2000 1/h 2	
number of NC contacts for main current circuit  type of voltage for main current  at AC-1  — up to 690 V at ambient temperature 40 °C rated value — up to 690 V at ambient temperature 55 °C rated value — up to 690 V at ambient temperature 60 °C rated value — up to 690 V at ambient temperature 60 °C rated value — up to 690 V at ambient temperature 60 °C rated value — up to 690 V at ambient temperature 60 °C rated value — at 400 V rated value — at 690 V rated value — at 690 V rated value — at 690 V rated value — at 600 V rated value  molioad switching frequency  at AC at AC at AC at AC operating frequency at AC-1 maximum 600 1/h operating frequency at AC-1 maximum 600 1/h operating frequency at AC-1 maximum 600 1/h  control circuit/ Control  type of voltage type of voltage AC/DC control supply voltage at AC at 50 Hz rated value at 60 Hz rated value  at 60 Hz rated value  at 60 Hz rated value  at 60 Hz rated value  full-scale value  full-scale value  full-scale value  full-scale value  value at 60 Hz	
type of voltage for main current circuit  at AC-1  — up to 690 V at ambient temperature 40 °C rated value — up to 690 V at ambient temperature 55 °C rated value — up to 690 V at ambient temperature 55 °C rated value — up to 690 V at ambient temperature 60 °C rated value — up to 690 V at ambient temperature 60 °C rated value — up to 690 V at ambient temperature 60 °C rated value — at 690 V rated value  minimum cross-section in main circuit at maximum AC-1 rated value no-load switching frequency  • at AC 2000 1/h • at DC operating frequency at AC-1 maximum 600 1/h  Control circuit/ Control  type of voltage AC/DC  control supply voltage at AC • at 50 Hz rated value • at 60 Hz rated value • at 60 Hz rated value • full-scale value  • full-scale value  • util-scale value  • at 50 Hz • at 60 Hz	
operational current  • at AC-1  — up to 690 V at ambient temperature 40 °C rated value — up to 690 V at ambient temperature 55 °C rated value — up to 690 V at ambient temperature 55 °C rated value — up to 690 V at ambient temperature 60 °C rated value — up to 690 V at ambient temperature 60 °C rated value — up to 690 V at ambient temperature 60 °C rated value — at 400 V rated value 97 A  — at 400 V rated value 97 A  minimum cross-section in main circuit at maximum AC-1 rated value mol-load switching frequency • at AC • at DC 2000 1/h 2000 1/h 2000 1/h 2000 1/h 2010 1/h 201	
at AC-1  — up to 690 V at ambient temperature 40 °C rated value  — up to 690 V at ambient temperature 55 °C rated value  — up to 690 V at ambient temperature 50 °C rated value  — up to 690 V at ambient temperature 60 °C rated value  — up to 690 V at ambient temperature 60 °C rated value  — at 4C-3  — at 400 V rated value  — at 690 V rated value  — at 690 V rated value  97 A  minimum cross-section in main circuit at maximum AC-1 rated value  no-load switching frequency  • at AC  • at DC  • at DC  control circuit/ Control  type of voltage of the control supply voltage  control supply voltage at AC  • at 50 Hz rated value  • 440 480 V  operating range factor control supply voltage rated value of magnet coil at DC  • initial value  • full-scale value  • at 60 Hz  • at 50 Hz  • at 50 Hz  • at 50 Hz  • at 60 Hz  • at 50 Hz  • at 60 Hz  • at 50 Hz	
- up to 690 V at ambient temperature 40 °C rated value  - up to 690 V at ambient temperature 55 °C rated value  - up to 690 V at ambient temperature 50 °C rated value  - up to 690 V at ambient temperature 60 °C rated value  • at AC-3  - at 400 V rated value  - at 690 V rated value  - at 690 V rated value  97 A  minimum cross-section in main circuit at maximum AC-1 rated value  • at AC  • at AC  • at AC  • at CC  control circuit/ Control  type of voltage the control supply voltage  control supply voltage at AC  • at 50 Hz rated value  • at 60 Hz rated value  • at 60 Hz rated value  operating range factor control supply voltage rated value of magnet coil at AC  • initial value  • full-scale value  operating range factor control supply voltage rated value of magnet coil at AC  • at 50 Hz  • at 60 Hz  • at 60 Hz  • full-scale value  operating range factor control supply voltage rated value of magnet coil at AC  • at 50 Hz  • at 60 Hz  • at minimum rated control supply voltage at AC  — at 50 Hz  • at minimum rated control supply voltage at AC  — at 50 Hz  • at minimum rated control supply voltage at AC  — at 50 Hz	
— up to 690 V at ambient temperature 55 °C rated value — up to 690 V at ambient temperature 60 °C rated value — up to 690 V at ambient temperature 60 °C rated value  • at AC-3 — at 400 V rated value 97 A — at 690 V rated value 97 A minimum cross-section in main circuit at maximum AC-1 rated value no-load switching frequency • at AC • at DC • at DC • at DC • at DC  control circuit/ Control  type of voltage type of voltage type of voltage at AC-1 maximum  Control supply voltage at AC • at 50 Hz rated value • at 60 Hz rated value • at 60 Hz rated value • full-scale value • at 60 Hz • at 60 Hz • at 60 Hz • full-scale value • full-scale	
value  • at AC-3  — at 400 V rated value — at 690 V rated value 97 A  minimum cross-section in main circuit at maximum AC-1 rated value  no-load switching frequency • at AC • at DC  operating frequency at AC-1 maximum 600 1/h  Control circuit/ Control  type of voltage type of voltage of the control supply voltage control supply voltage at AC • at 50 Hz rated value • at 60 Hz rated value • at 60 Hz rated value • full-scale value • full-scale value • full-scale value • at 50 Hz • at 60 Hz  operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value • at 50 Hz • at 60 Hz	
at 400 V rated value at 690 V rated value 97 A minimum cross-section in main circuit at maximum AC-1 rated value no-load switching frequency • at AC • at DC • at DC operating frequency at AC-1 maximum 600 1/h  Control circuit/ Control  type of voltage type of voltage of the control supply voltage control supply voltage at AC • at 50 Hz rated value • at 60 Hz rated value • at 60 Hz rated value • full-scale value • full-scale value • full-scale value  operating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz • at 50 Hz • initial value • full-scale value  operating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz • at 60 Hz • at minimum rated control supply voltage at AC - at 50 Hz • at minimum rated control supply voltage at AC - at 50 Hz  2000 1/h	
minimum cross-section in main circuit at maximum AC-1 rated value  140 mm²	
minimum cross-section in main circuit at maximum AC-1 rated value  no-load switching frequency  • at AC  • at DC  operating frequency at AC-1 maximum  operating range factor control supply voltage rated value of magnet coil at AC  • it SO Hz  • at 50 Hz  • at 60 Hz  • at 50 Hz  • at 50 Hz  • at 50 Hz  • with scale value  • toll-scale value  • t	
value  no-load switching frequency  • at AC  • at DC  operating frequency at AC-1 maximum  control supply voltage at DC rated value  • at 6D Hz rated value  • at 50 Hz  operating range factor control supply voltage rated value of magnet coil at DC  • initial value  • full-scale value  • at 50 Hz  • at 50 Hz  design of the surge suppressor  apparent pick-up power  • at minimum rated control supply voltage at AC  — at 50 Hz  250 VA	
<ul> <li>at AC</li> <li>at DC</li> <li>operating frequency at AC-1 maximum</li> <li>600 1/h</li> </ul> Control circuit/ Control type of voltage <ul> <li>AC/DC</li> <li>type of voltage at AC</li> <li>at 50 Hz rated value</li> <li>at 60 Hz rated value</li> <li>at 60 Hz rated value</li> <li>at 50 Hz</li> <li>at 60 Hz</li> <li>at 60 Hz</li> <li>at 60 Hz</li> <li>at 50 Hz</li> <li>at 50 Hz</li> <li>at 50 Hz</li> <li>at 50 Hz</li> <li>at 60 Hz</li> <li>at 50 Hz</li> <li>at 60 Hz</li> <li>at 70 Hz</li> <li>at</li></ul>	
at DC operating frequency at AC-1 maximum operating frequency at AC-1 maximum  control circuit/ Control  type of voltage	
operating frequency at AC-1 maximum  Control circuit/ Control  type of voltage	
type of voltage type of voltage AC/DC  type of voltage of the control supply voltage AC/DC  control supply voltage at AC	
type of voltage type of voltage of the control supply voltage control supply voltage at AC  • at 50 Hz rated value • at 60 Hz rated value • 440 480 V  control supply voltage at DC rated value • 440 480 V  control supply voltage at DC rated value • 440 480 V  operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value  0.8 • full-scale value  operating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz • at 60 Hz design of the surge suppressor apparent pick-up power • at minimum rated control supply voltage at AC — at 50 Hz  250 VA	
type of voltage of the control supply voltage  control supply voltage at AC  • at 50 Hz rated value  • at 60 Hz rated value  • other of the control supply voltage at DC rated value  • operating range factor control supply voltage rated value of magnet coil at DC  • initial value  • initial value  • other of the control supply voltage rated value of magnet coil at AC  • at 50 Hz  • at 60 Hz  • at minimum rated control supply voltage at AC  — at 50 Hz  • at minimum rated control supply voltage at AC  — at 50 Hz  250 VA	
control supply voltage at AC  • at 50 Hz rated value  • at 60 Hz rated value  • at 60 Hz rated value  • 440 480 V  control supply voltage at DC rated value  • 440 480 V  operating range factor control supply voltage rated value of magnet coil at DC  • initial value  • initial value  • 1.1  operating range factor control supply voltage rated value of magnet coil at AC  • at 50 Hz  • at 60 Hz  design of the surge suppressor  apparent pick-up power  • at minimum rated control supply voltage at AC  — at 50 Hz  250 VA	
at 50 Hz rated value  at 60 Hz rated value  tontrol supply voltage at DC rated value  control supply voltage at DC rated value  440 480 V  poperating range factor control supply voltage rated value of magnet coil at DC  initial value  full-scale value  0.8  full-scale value  1.1  poperating range factor control supply voltage rated value of magnet coil at AC  at 50 Hz  at 60 Hz  0.8 1.1  design of the surge suppressor  apparent pick-up power  at minimum rated control supply voltage at AC  at 50 Hz  250 VA	
at 60 Hz rated value      control supply voltage at DC rated value     operating range factor control supply voltage rated value of magnet coil at DC     oinitial value     onerating range factor control supply voltage rated value of magnet coil at AC     operating range factor control supply voltage rated value of magnet coil at AC     oat 50 Hz     oat 60 Hz     design of the surge suppressor     apparent pick-up power     oat minimum rated control supply voltage at AC     — at 50 Hz     250 VA	
control supply voltage at DC rated value  •	
operating range factor control supply voltage rated value of magnet coil at DC     initial value     one full-scale value     one full-scale value     one full-scale value     one at 50 Hz     one at 50 Hz     one at 60 Hz  design of the surge suppressor  apparent pick-up power     one at minimum rated control supply voltage at AC     — at 50 Hz  250 VA	
operating range factor control supply voltage rated value of magnet coil at DC  • initial value  • full-scale value  • full-scale value  1.1  operating range factor control supply voltage rated value of magnet coil at AC  • at 50 Hz  • at 60 Hz  design of the surge suppressor  apparent pick-up power  • at minimum rated control supply voltage at AC  — at 50 Hz  250 VA	
magnet coil at DC	
• full-scale value     operating range factor control supply voltage rated value of magnet coil at AC     • at 50 Hz     • at 60 Hz     design of the surge suppressor     apparent pick-up power     • at minimum rated control supply voltage at AC     — at 50 Hz     1.1  1.1  1.1  1.1  1.1  1.1  1.1	
operating range factor control supply voltage rated value of magnet coil at AC  • at 50 Hz  • at 60 Hz  0.8 1.1  design of the surge suppressor  apparent pick-up power  • at minimum rated control supply voltage at AC  — at 50 Hz  250 VA	
magnet coil at AC          • at 50 Hz         • at 60 Hz         • at 60 Hz  design of the surge suppressor  apparent pick-up power          • at minimum rated control supply voltage at AC  — at 50 Hz  0.8 1.1  with varistor  250 VA	
● at 60 Hz  design of the surge suppressor  with varistor  apparent pick-up power  ● at minimum rated control supply voltage at AC  — at 50 Hz  0.8 1.1  with varistor  250 VA	
design of the surge suppressor  apparent pick-up power  • at minimum rated control supply voltage at AC  — at 50 Hz  with varistor  250 VA	
apparent pick-up power  • at minimum rated control supply voltage at AC  — at 50 Hz  250 VA	
apparent pick-up power  • at minimum rated control supply voltage at AC  — at 50 Hz  250 VA	
• at minimum rated control supply voltage at AC — at 50 Hz  250 VA	
— at 50 Hz 250 VA	
at maximum rated control supply voltage at AC	
— at 60 Hz 300 VA	
— at 50 Hz 300 VA	
apparent pick-up power of magnet coil at AC	
• at 50 Hz  300 VA	
inductive power factor with closing power of the coil  • at 50 Hz  0.9	
apparent holding power	
at minimum rated control supply voltage at DC  4.3 VA  4.3 VA  5.3 VA  6.4 The province of the control supply voltage at DC  6.3 VA  6.4 The province of the control supply voltage at DC  6.3 VA  6.4 The province of the control supply voltage at DC	
at maximum rated control supply voltage at DC      5.2 VA      The state of th	
apparent holding power	
at minimum rated control supply voltage at AC	
— at 50 Hz 4.8 VA	
— at 60 Hz 4.8 VA	
at maximum rated control supply voltage at AC	
— at 50 Hz 5.8 VA	
— at 60 Hz 5.8 VA	
apparent holding power of magnet coil at AC	
• at 50 Hz 5.8 VA	

number of NC contacts for auxiliary contacts atlachable instantaneous contact 2 number of NO contacts for auxiliary contacts atlachable instantaneous contact 2 atlachable instantaneous contact 2 operational current at AC-12 maximum 0 operational current at AC-15 atl 230 V rated value at 500 V rated value at 600 V rated value 1 A operational current at DC-13 atl 48 V rated value 1 A operational current at DC-13 atl 48 V rated value 2 A atl 400 V rated value 1 A operational current at DC-13 atl 48 V rated value 2 A atl 110 V rated value 1 A atl 22 V rated value 2 A atl 110 V rated value 1 A atl 125 V rated value 1 A atl 125 V rated value 3 A atl 220 V rated value 4 atl 200 V rated value 5 A 5 A 5 A 5 A 5 A 5 A 5 A 5 A 6 B 7 B 7 B 7 B 7 B 7 B 7 B 7 B 7 B 7 B 7		
closing power of magnet cell at DC	inductive power factor with the holding power of the coil	
Selection   Sele	● at 50 Hz	0.8
Section   Comment   Comm	closing power of magnet coil at DC	360 W
* ## AC	holding power of magnet coil at DC	5.2 W
* al IDC	closing delay	
Section   Sect	• at AC	20 95 ms
* al AC	• at DC	20 95 ms
+ O	opening delay	
arcing time	• at AC	40 60 ms
Abortiny circuit	• at DC	40 60 ms
Auxiliary circuit number of NC contacts for auxiliary contacts	arcing time	10 15 ms
Mumber of NC contacts for auxiliary contacts   2     * aliachable   4     * instantaneous contact   2     number of NO contacts for auxiliary contacts   2     operational current at AC-12 working   2     operational current at AC-15     * al 220 V rated value   6     * al 480 V rated value   2     * al 680 V rated value   3     * al 24 V rated value   4     * al 680 V rated value   2     * al 480 V rated value   3     * al 480 V rated value   4     * al 190 V rated value   9     * al 220 V rated value   0.9     * al 600 V rated value   0.9     * al 700 V rated value   0.9	control version of the switch operating mechanism	Standard A1 - A2
initariabable         4           initiantianeous contacts         2           intarchable         4           initiantianeous contact         2           operational current at AC-12 maximum         10 A           operational current at AC-12 maximum         6 A           initiantianeous contact         6 A           operational current at AC-12 maximum         3A           initiantianeous contact         6 A           initiantianeous contact         1 A           initiantianeous contact         10 A           initiantianeous contact         10 A           initiantianeous contact         1 A           initiantianeous contact         1 A           initiantianeous contact         1 A           initiantianeous contact         2 A           initiantianeous contact         2 A           initiantianeous contact         2 A <tr< th=""><td>Auxiliary circuit</td><td></td></tr<>	Auxiliary circuit	
• instantaneous contact   2   1   1   1   1   1   1   1   1   1	number of NC contacts for auxiliary contacts	2
Mumber of NO contacts for auxiliary contacts	attachable	4
• attachable 4     poerational current at AC-12 maximum 10 A     operational current at AC-15     • al 230 V rated value 6 A     • al 400 V rated value 3 A     • at 500 V rated value 1A     • at 500 V rated value 2 A     • at 500 V rated value 1A     • at 500 V rated value 2 A     • at 500 V rated value 1A     • at 500 V rated value 2 A     • at 600 V rated value 2 A     • at 600 V rated value 1A     • at 600 V rated value 2 A     • at 100 V rated value 2 A     • at 100 V rated value 3 A     • at 220 V rated value 3 A     • at 500 V rated value 4 A     • at 500 V rated value 5 A     • at 600 V rated value 6 A     • at 600 V rated value 7 A     • at 600 V rated value 8 A     • at 600 V rated value 9 A	instantaneous contact	2
• Instantaneous contact         2           operational current at AC-12 maximum         10 A           o at 230 V rated value         6 A           • at 400 V rated value         3 A           • at 850 V rated value         1 A           • at 850 V rated value         1 A           • at 84 V rated value         10 A           • at 84 V rated value         2 A           • at 86 V rated value         2 A           • at 10 V rated value         1 A           • at 125 V rated value         0.9 A           • at 125 V rated value         0.3 A           • at 2600 V rated value         0.1 A           • at 1200 V rated value         0.1 A           • at 2600 V rated value         0.1 A           • at 1200 V rated value         0.1 A           • at 1200 V rated value         0.1 A           • at 1200 V rated value         0.1 A	number of NO contacts for auxiliary contacts	2
operational current at AC-12 maximum         10 A           operational current at AC-15         ***           • al 230 V rated value         6 A           • at 8500 V rated value         1 A           • at 8500 V rated value         1 A           • at 8500 V rated value         1 A           • at 24 V rated value         10 A           • at 40 V rated value         2 A           • at 80 V rated value         2 A           • at 10 V rated value         1 A           • at 1220 V rated value         0.9 A           • at 220 V rated value         0.3 A           • at 80 V rated value         0.1 A           • at 80 V rated value         0.9 A           • at 80 V rated value         0.0 A           • at 92 V rated value         0.0 A           • at 92 V rated value         0.0 A           • at 92 V rated value         0.0 A      <	attachable	
0		
• at 230 V rated value	<u> </u>	10 A
• at 400 V rated value	operational current at AC-15	
• at 500 V rated value 1 A  • at 690 V rated value 1 A  operational current at DC-13  • at 24 V rated value 10 A  • at 48 V rated value 2 A  • at 48 V rated value 2 A  • at 110 V rated value 2 A  • at 110 V rated value 1 A  • at 125 V rated value 0.9 A  • at 220 V rated value 0.9 A  • at 220 V rated value 0.1 A  design of the miniature circuit breaker for short-circuit protection of the auxiliary switch required  contact reliability of auxiliary contacts 1 faulty switching per 100 million (17 V, 1 mA)  Short-circuit protection  product function short circuit protection of the main circuit − with type of coordination 1 required 9 GS: 355 A (690 V, 100 kA)  • for short-circuit protection of the auxiliary switch required 9 GS: 355 A (690 V, 100 kA)  • for short-circuit protection of the auxiliary switch required 17 mounting position with vertical mounting surface */•90" rotatable, with vertical mounting surface */  • fastening method 9 screw fixing 17 mm  • with side-by-side mounting − forwards 10 mm  • upwards 10 mm  • of orgrounded parts − corwards 20 mm  • upwards 10 mm  • forgrounded parts − corwards 20 mm  • upwards 10 mm  • of grounded parts − corwards 20 mm  • upwards 10 mm  • of grounded parts − corwards 20 mm  • upwards 10 mm  • of grounded parts − corwards 20 mm	at 230 V rated value	
• at 690 V rated value   10 A   10	at 400 V rated value	
operational current at DC-13         at 24 V rated value         10 A           at 24 V rated value         2 A           at 60 V rated value         2 A           at 110 V rated value         1 A           at 125 V rated value         0.9 A           at 220 V rated value         0.3 A           at 250 V rated value         0.1 A           design of the miniature circuit breaker for short-circuit protection of the auxiliary switch required         gG: 10 A (230 V, 400 A)           contact reliability of auxiliary contacts         1 faulty switching per 100 million (17 V, 1 mA)           Short-circuit protection         No           design of the fuse link         6 or short-circuit protection of the main circuit           — with type of coordination 1 required         gG: 355 A (690 V, 100 kA)           — with type of assignment 2 required         gG: 355 A (690 V, 100 kA)           6 or short-circuit protection of the auxiliary switch required         gG: 355 A (690 V, 100 kA)           9 or short-circuit protection of the auxiliary switch required         gG: 355 A (690 V, 100 kA)           10 stallation/mounting/dimensions         with type of coordination 1 required           4 of or short-circuit protection of the auxiliary switch required         gG: 355 A (690 V, 100 kA)           10 stallation/mounting/dimensions         with type of coordination 1 required <tr< th=""><td>at 500 V rated value</td><td></td></tr<>	at 500 V rated value	
	at 690 V rated value	1 A
	operational current at DC-13	
	at 24 V rated value	10 A
at 110 V rated value at 125 V rated value at 125 V rated value at 220 V rated value 2.1 A  design of the miniature circuit breaker for short-circuit protection of the auxiliary switch required contact reliability of auxiliary contacts  The short-circuit protection  with yep of coordination 1 required - with type of coordination 1 required for short-circuit protection of the auxiliary switch required for short-circuit protection of the main circuit  with yep of assignment 2 required for short-circuit protection of the auxiliary switch required for short-circuit protection for	at 48 V rated value	2 A
at 125 V rated value at 220 V rated value at 200 V rated value at 800 V rated value  design of the miniature circuit breaker for short-circuit protection of the auxiliary switch required  contact reliability of auxiliary contacts  I faulty switching per 100 million (17 V, 1 mA)  Short-circuit protection  product function short circuit protection  No  design of the fuse link  for short-circuit protection of the main circuit  - with type of coordination 1 required  with type of assignment 2 required gR: 350 A (690 V, 100 kA)  for short-circuit protection of the auxiliary switch required gR: 350 A (690 V, 100 kA)  for short-circuit protection of the auxiliary switch required gR: 350 A (690 V, 100 kA)  with type of assignment 2 required gR: 350 A (690 V, 100 kA)  for short-circuit protection of the auxiliary switch required gR: 350 A (690 V, 100 kA)  with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/-22.5° tiltable to the front and back  fastening method screw fixing  height 172 mm  width 120 mm  depth 170 mm  required spacing  with side-by-side mounting  - forwards 20 mm  - upwards 10 mm  - at the side 0 mm  for grounded parts  - forwards 20 mm  - quowards 10 mm  - at the side  for grounded parts  - forwards 20 mm  - upwards 10 mm	at 60 V rated value	2 A
at 220 V rated value at 600 V rated value design of the miniature circuit breaker for short-circuit protection of the auxiliary switch required  contact reliability of auxiliary contacts  1 faulty switching per 100 million (17 V, 1 mA)  Short-circuit protection  product function short circuit protection  esign of the fuse link  for short-circuit protection of the main circuit  — with type of coordination 1 required for short-circuit protection of the auxiliary switch required for short-circuit protection of the main circuit  ### Carchy Carc	at 110 V rated value	1 A
e at 600 V rated value  design of the miniature circuit protection of the auxiliary switch required  contact reliability of auxiliary contacts  1 faulty switching per 100 million (17 V, 1 mA)  Short-circuit protection  product function short circuit protection  design of the fuse link  • for short-circuit protection of the main circuit  — with type of coordination 1 required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  provided provided protection of the auxiliary switch required  ### Auxiliary for the formation surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back  ### Secrete Fixing  ### Auxiliary for the fixing provided pr	at 125 V rated value	
design of the miniature circuit breaker for short-circuit protection of the auxiliary switch required  contact reliability of auxiliary contacts  1 faulty switching per 100 million (17 V, 1 mA)  Short-circuit protection  product function short circuit protection  Mo  design of the fuse link  • for short-circuit protection of the main circuit  — with type of coordination 1 required  • with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  gG: 355 A (690 V, 100 kA)  gG: 356 A (690 V, 100 k	at 220 V rated value	
of the auxiliary switch required contact reliability of auxiliary contacts  1 faulty switching per 100 million (17 V, 1 mA)  Short-circuit protection  product function short circuit protection  No  design of the fuse link  • for short-circuit protection of the main circuit  — with type of coordination 1 required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position  with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/-22.5° tiltable to the front and back  screw fixing  172 mm  width  depth  170 mm  required spacing  • with side-by-side mounting  — forwards — upwards — downwards — at the side  • for grounded parts — for grounded parts — for wards — upwards — upwards — of mwards — at the side  • for grounded parts — forwards — upwards — upwards — upwards — upwards — of mm — the side — forwards — upwards — of mm — of mm — of mands — at the side — of mm — of		
product function short circuit protection  design of the fuse link		gG: 10 A (230 V, 400 A)
product function short circuit protection  design of the fuse link  of or short-circuit protection of the main circuit  with type of coordination 1 required with type of assignment 2 required of or short-circuit protection of the auxiliary switch required of or short-circuit protection of the auxiliary switch required of or short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions  mounting position  with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back  screw fixing height 172 mm  width depth 170 mm  required spacing  with side-by-side mounting forwards upwards downwards at the side 0 mm  of or grounded parts forwards growards upwards upwards forwards forwards upwards forwards upwards upwards upwards forwards upwards forwards upwards upwards forwards upwards forwards upwards forwards upwards forwards upwards upwards forwards upwards upwards upwards upwards forwards upwards upwards forwards upwards upwa	contact reliability of auxiliary contacts	1 faulty switching per 100 million (17 V, 1 mA)
design of the fuse link  • for short-circuit protection of the main circuit  — with type of coordination 1 required — with type of assignment 2 required 9G: 355 A (690 V, 100 kA) 9 for short-circuit protection of the auxiliary switch required 9G: 10 A (500 V, 10 kA)  Installation/ mounting/ dimensions  mounting position  with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back screw fixing height 172 mm  width 120 mm  depth 170 mm  required spacing  • with side-by-side mounting — forwards — upwards — downwards — at the side • for grounded parts — forwards — upwards — of orwards — upwards — of orwards — upwards — of orwards — of orwards — upwards — forwards — upwards — of orwards — upwards — of orwards — upwards — of or grounded parts — forwards — upwards — upwards — of or grounded parts — forwards — upwards — upwards — of or grounded parts — forwards — upwards — upwards — upwards — upwards — of or grounded parts — forwards — upwards — upw	Short-circuit protection	
• for short-circuit protection of the main circuit  - with type of coordination 1 required - with type of assignment 2 required • for short-circuit protection of the auxiliary switch required • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • (500 V, 100 kA)  • (500 V, 10 kA)  • (500 V, 100	product function short circuit protection	No
- with type of coordination 1 required     - with type of assignment 2 required     - with type of assignment 2 required     • for short-circuit protection of the auxiliary switch required     • for short-circuit protection of the auxiliary switch required     • for short-circuit protection of the auxiliary switch required     • for short-circuit protection of the auxiliary switch required     • for short-circuit protection of the auxiliary switch required     • for short-circuit protection of the auxiliary switch required    mounting position	design of the fuse link	
- with type of assignment 2 required for short-circuit protection of the auxiliary switch required gG: 10 A (500 V, 100 kA)    of short-circuit protection of the auxiliary switch required gG: 10 A (500 V, 1 kA)    Installation/ mounting/ dimensions    with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back    fastening method	<ul> <li>for short-circuit protection of the main circuit</li> </ul>	
• for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions  mounting position   with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/-22.5° tiltable to the front and back    fastening method   screw fixing   height   172 mm   width   120 mm   depth   170 mm   required spacing   • with side-by-side mounting   - forwards   20 mm   - upwards   10 mm   - downwards   10 mm   - at the side   0 mm   • for grounded parts   - forwards   20 mm   - torwards   20 mm   - at the side   0 mm   - at the side   0 mm   - upwards   10 mm   - at the side   10 mm   - upwards   10 mm   - upwards   10 mm   - torwards   20 mm   - torwards   20 mm   - torwards   20 mm   - torwards   20 mm   - upwards   10 mm   - upwards   10 mm   - upwards   10 mm   - at the side   10 mm	<ul> <li>— with type of coordination 1 required</li> </ul>	gG: 355 A (690 V, 100 kA)
mounting position  with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back  fastening method screw fixing  height 172 mm  width 120 mm  depth 170 mm  required spacing  with side-by-side mounting — forwards — upwards — downwards — at the side for grounded parts — forwards — upwards — upwards — to mm  for grounded parts — forwards — upwards — upwards — to mm  for grounded parts — forwards — upwards — upwards — to mm  for grounded parts — forwards — upwards —		gR: 350 A (690 V, 100 kA)
mounting positionwith vertical mounting surface +/-90° rotatable, with vertical mounting surface +/-22.5° tiltable to the front and backfastening methodscrew fixingheight172 mmwidth120 mmdepth170 mmrequired spacing**• with side-by-side mounting20 mm— forwards20 mm— upwards10 mm— downwards10 mm— at the side0 mm• for grounded parts20 mm— forwards20 mm— upwards10 mm— at the side10 mm		gG: 10 A (500 V, 1 kA)
#/- 22.5° tiltable to the front and back  fastening method screw fixing  height 172 mm  width 120 mm  depth 170 mm  required spacing  • with side-by-side mounting — forwards — upwards — downwards — at the side • for grounded parts — forwards — upwards — upwards — at the side 10 mm  • for grounded parts — forwards — upwards — upwards — at the side 10 mm  10 mm  10 mm  10 mm  10 mm  10 mm	Installation/ mounting/ dimensions	
height         172 mm           width         120 mm           depth         170 mm           required spacing         • with side-by-side mounting           - forwards         20 mm           - upwards         10 mm           - downwards         10 mm           - at the side         0 mm           • for grounded parts         20 mm           - upwards         20 mm           - upwards         10 mm           - at the side         10 mm	mounting position	
width 120 mm  depth 170 mm  required spacing  with side-by-side mounting — forwards 20 mm — upwards 10 mm — downwards 10 mm — at the side 0 mm  for grounded parts — forwards 20 mm — at the side 10 mm	fastening method	screw fixing
depth 170 mm   required spacing   ● with side-by-side mounting 20 mm   — forwards 20 mm   — upwards 10 mm   — downwards 10 mm   — at the side 0 mm   ● for grounded parts 20 mm   — forwards 20 mm   — upwards 10 mm   — at the side 10 mm	height	172 mm
required spacing  • with side-by-side mounting  — forwards — upwards — downwards — at the side  • for grounded parts — forwards — upwards — at the side  10 mm  • for grounded parts — forwards — upwards — upwards — upwards — at the side  10 mm	width	120 mm
<ul> <li>with side-by-side mounting</li> <li>forwards</li> <li>upwards</li> <li>downwards</li> <li>downwards</li> <li>at the side</li> <li>for grounded parts</li> <li>forwards</li> <li>upwards</li> <li>upwards</li> <li>at the side</li> <li>10 mm</li> <li>upwards</li> <li>at the side</li> <li>10 mm</li> </ul>	depth	170 mm
— forwards       20 mm         — upwards       10 mm         — downwards       10 mm         — at the side       0 mm         • for grounded parts       20 mm         — forwards       20 mm         — upwards       10 mm         — at the side       10 mm		
— upwards       10 mm         — downwards       10 mm         — at the side       0 mm         • for grounded parts       20 mm         — forwards       20 mm         — upwards       10 mm         — at the side       10 mm	•	
<ul> <li>— downwards</li> <li>— at the side</li> <li>• for grounded parts</li> <li>— forwards</li> <li>— upwards</li> <li>— at the side</li> <li>10 mm</li> <li>10 mm</li> </ul>		
<ul> <li>— at the side</li> <li>● for grounded parts</li> <li>— forwards</li> <li>— upwards</li> <li>— at the side</li> <li>0 mm</li> <li>20 mm</li> <li>10 mm</li> <li>10 mm</li> </ul>		
<ul> <li>for grounded parts</li> <li>forwards</li> <li>upwards</li> <li>at the side</li> <li>20 mm</li> <li>10 mm</li> <li>10 mm</li> </ul>		
<ul> <li>forwards</li> <li>upwards</li> <li>at the side</li> <li>20 mm</li> <li>10 mm</li> <li>10 mm</li> </ul>		0 mm
<ul><li>upwards</li><li>at the side</li><li>10 mm</li><li>10 mm</li></ul>		
— at the side 10 mm		
	·	
— downwards 10 mm		
	— downwards	10 mm

• for live parts	00
— forwards	20 mm
— upwards	10 mm
— downwards	10 mm
— at the side	10 mm
Connections/ Terminals	
type of electrical connection	
for main current circuit	Connection bar
<ul> <li>for auxiliary and control circuit</li> </ul>	screw-type terminals
<ul> <li>at contactor for auxiliary contacts</li> </ul>	Screw-type terminals
of magnet coil	Screw-type terminals
width of connection bar	17 mm
thickness of connection bar	3 mm
diameter of holes	9 mm
number of holes	1
connectable conductor cross-section for main contacts	
<ul> <li>solid or stranded</li> </ul>	25 120 mm²
• stranded	25 120 mm²
connectable conductor cross-section for auxiliary contacts	
solid or stranded	0.5 4 mm²
<ul> <li>finely stranded with core end processing</li> </ul>	0.5 2.5 mm²
type of connectable conductor cross-sections	
for auxiliary contacts	
— solid	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), max. 2x (0.75 4 mm²)
— solid or stranded	2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²), max. 2x (0,75 4 mm²)
<ul> <li>finely stranded with core end processing</li> </ul>	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
for AWG cables for auxiliary contacts	2x (20 16), 2x (18 14), 1x 12
Safety related data	
product function	
<ul> <li>mirror contact according to IEC 60947-4-1</li> </ul>	Yes
<ul> <li>positively driven operation according to IEC 60947-5-1</li> </ul>	No
suitable for safety function	Yes
suitability for use safety-related switching OFF	Yes
service life maximum	20 a
proportion of dangerous failures	
with low demand rate according to SN 31920	40 %
with high demand rate according to SN 31920	73 %
B10 value with high demand rate according to SN 31920	1 000 000
failure rate [FIT] with low demand rate according to SN 31920	100 FIT
ISO 13849	
device type according to ISO 13849-1	3
overdimensioning according to ISO 13849-2 necessary	Yes
IEC 61508	
safety device type according to IEC 61508-2	Type A
Electrical Safety	
protection class IP on the front according to IEC 60529	IP00; IP20 with box terminal/cover
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front with box terminal/cover
Approvals Certificates	
General Product Approval	

General Product Approval



Confirmation







<u>KC</u>





Type Examination Certificate

Special Test Certificate

Type Test Certificates/Test Report



Marine / Shipping

other









**Confirmation** 

Miscellaneous

other

Railway

**Environment** 

Confirmation

Special Test Certificate

Environmental Confirmations

## Further information

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

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=3RT1456-6AR36

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1456-6AR36

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT1456-6AR36

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

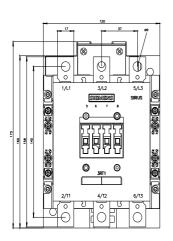
 $\underline{\text{http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT1456-6AR36\&lang=en}$ 

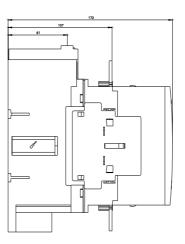
Characteristic: Tripping characteristics, I²t, Let-through current

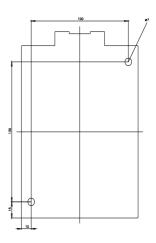
https://support.industry.siemens.com/cs/ww/en/ps/3RT1456-6AR36/char

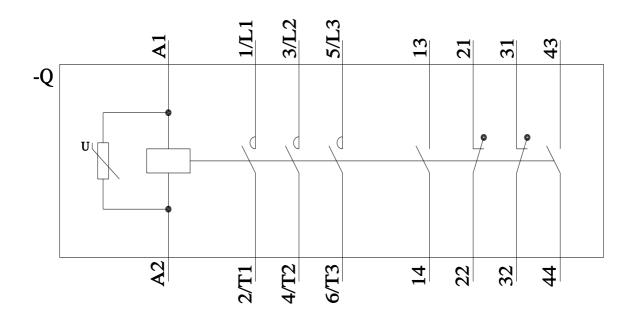
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1456-6AR36&objecttype=14&gridview=view1









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