## SIEMENS

## Data sheet

## 3RT2023-1AK60

b0 Hz, auxiliary contracts: 1N 0 + 1 NC, screw terminal, size: 50           product type designation         Power contractor           product type designation         BR2           cancer if schutned faits         BI           size of contactor         S0           product type designation         No           • function module for communication         No           • auxiliary workin         Yes           power (ostitudity)         For add value of the current           • at AC in hot operating state per polo         0.2 W           • without tota current share typical         7.9 W           insulation voltage         • of namine current share typical           • of namine current share typical         7.9 W           insulation voltage         • of namine current share typical           • of namine current share typical         680 V           • of auxiliary circuit stated value         680 V           • of auxiliary circuit stated value         680 V           • of auxiliary circuit stated value         64V		power contactor, AC-3e/AC-3, 9 A, 4 kW / 400 V, 3-pole, 110 V AC, 50 Hz / 120 V,
product designation         Power contactor           product type designation         3R12           step of contactor         S0           product strain designation         Na           • at AC in hot operating state         0.8 W           • at AC in hot operating state         0.8 W           • at AC in hot operating state         0.8 W           • at AC in hot operating state         0.8 W           • at AC in hot operating state         0.8 W           • at AC in hot operating state op pole         0.2 W           • without load current share typical         7.9 W           Insultation voltage         680 V           • of nauniary cincuit with degree of pollution 3 rated value         680 V           • of nauniary cincuit metal value         64V           • of naccinare conde ascendron v		
product type designation         3872           Central trachtical clost         S0           product extension         No           • Unction module for communication         No           • auxiliary switch         Yes           • at AC in hot operating state         0.6 W           • • at AC in hot operating state         0.8 W           • • at AC in hot operating state         0.8 W           • • of auxiliary circuit with degree of pollution 3 rated value         680 V           • of main circuit with degree of pollution 3 rated value         680 V           • of main circuit with degree of pollution 3 rated value         680 V           • of auxiliary circuit rated value         6 kV           • of chard cort rated value         6 kV           • of cha	· ·	
Central trichical data         S0           site of contactor         S0           product extension         No           • auxiling witch         Yes           power loss [M] for rated value of the current         0.6 W           • at AC in hot operating state         0.6 W           • at AC in hot operating state         0.6 W           • at AC in hot operating state         0.6 W           • at AC in hot operating state per pole         0.2 W           • without load current share typical         7.9 W           Insulation voltage         6 MV           • of main circuit with degree of pollution 3 rated value         600 V           • of main circuit and value         61 KV           • of main circuit rated value         61 KV           • at AC         7.5g / 5 ms, 7.4g / 10 ms      <		
size of contactor         80           product extension         No           • function module for communication         No           • auxiliary switch         Yes           power loss (P) for rated value of the current         0.6 W           • at AC in hot operating state         0.6 W           • at AC in hot operating state per pole         0.2 W           • without bad current share sypical         7.9 W           Insulation voltage         600 V           • of main inclust with degree of pollution 3 rated value         600 V           • of auxiliary circuit value dagree of pollution 3 rated value         600 V           • of auxiliary circuit value dagree of pollution 3 rated value         600 V           • of auxiliary circuit value dagree of pollution 3 rated value         60V           • of auxiliary circuit value dagree of pollution 3 rated value         60V           • of auxiliary circuit value dagree of pollution 3 rated value         60V           • of auxiliary circuit value dagree of pollution 3 rated value         60V           • of auxiliary circuit value dagree         61V           • of auxiliary circuit value dagree         61V           • at AC         1.8g / 5 ms, 7.4g / 10 ms           • at AC         1.8g / 5 ms, 7.4g / 10 ms           • of contactor with added auxiliary swit		
product extension     No       • function module for communication     No       • auxiliary switch     Yes       power loss [W] for rated value of the current     0.6 W       • at AC in hot operating state per pole     0.2 W       • without bad current share typical     7.9 W       Insulation voltage     600 V       • of auxiliary circuit rated value     61V       machine protective separation between coll and main contacts according to EX 00047.1     400 V       shock resistance with sine pulse     11.8g / 5 ms. 7.4g / 10 ms       • at AC     11.8g / 5 ms. 7.4g / 10 ms       • at AC     10.000 000       • of contactor high added electronically optimized auxiliary switch block typical     10 000 000       • of the contactor with added electronically optimized auxiliary switch block typical     100 000 000       • of the contactor with added electronically optimized auxiliary switch block typical     100 000 000		20
• function module for communication     No       • auxiliary switch     Yes       • at AC in hot operaing state     0.6 W       • at AC in hot operaing state pople     0.2 W       • without bad current share typical     7.9 W       Insultation voltage     660 V       • of main circuit with degree of pollution 3 rated value     690 V       • of main circuit rated value     690 V       • of main circuit rated value     6 KV       • of main contacts according to E N 004V-1     400 V       • at AC     7.5g / 5 ms, 4.7g / 10 ms       • at AC     11.8g / 5 ms, 7.4g / 10 ms       • at AC     10 000 000       • of charted typical     10 000 000       • of the contactor with added electronically optimized auxiliary switch block typical     10 000 000       • of the contactor with addee lectronically optimized auxiliary state above sea level maximum     2000 m       • of the contactor with addee lectronically optimized au		50
• auxiliary switch         Yes           power loss [W] for rated value of the current         0.6 W           • at AC in hot operating state per pole         0.2 W           • without load current share typical         7.9 W           insulation voltage         600 V           • of anality circuit with degree of pollution 3 rated value         600 V           • of anality circuit vith degree of pollution 3 rated value         600 V           • of anality circuit vith degree of pollution 3 rated value         600 V           • of anality circuit vith degree of pollution 3 rated value         600 V           • of anality circuit vith degree of pollution 3 rated value         600 V           • of anality circuit vith degree of pollution 3 rated value         600 V           • of anality circuit vith degree of pollution 3 rated value         610 V           • of anality circuit vith degree of pollution 3 rated value         600 V           • of main circuit vith adde value         61V           • of anality circuit vithe of person protective separation between         61V           • at AC         7.5g / 5 ms, 4.7g / 10 ms           mechanical service life (operating cycles)         10 000 000           • of contactor with added auxiliary switch block typical         10 000 000           • of the contactor with added auxiliary switch block typical         10 000 00		No
power loss [W] for rated value of the current     0.6 W       • at AC in hot operating state     0.6 W       • at AC in hot operating state per pole     0.2 W       • without load current share typical     7.9 W       Insulation voltage     690 V       • of main circuit with degree of pollution 3 rated value     690 V       • of main circuit rated value     680 V       • of main circuit rated value     64 V       • of auxilary circuit rated value     64 V       • of the contractor with sine pulse     11.8g / 5 ms, 7.4g / 10 ms       • at AC     11.8g / 5 ms, 7.4g / 10 ms       mechanical service life (operating cycles)     10 000 000       • of the contactor with added electronically optimized auxiliary switch block typical     10 000 000       • of the contactor with added auxiliary switch block typical     10 000 000       Installation afflude at height above sea level maximum     2000 m       ambint foregration <td< td=""><td></td><td></td></td<>		
• at AC in hot operating state     0.6 W       • at AC in hot operating state per pole     0.2 W       • without load current street typical     7.9 W       Insulation voitage     600 V       • of main incluit with degree of pollution 3 rated value     600 V       • of auxiliary circuit with degree of pollution 3 rated value     600 V       • of main incluit rated value     64V       • of auxiliary circuit with degree of pollution 3 rated value     64V       • of auxiliary circuit with degree of pollution 3 rated value     64V       • of auxiliary circuit rated value     64V       • at AC     7.5g / 5 ms, 4.7g / 10 ms       machanical service life (operating cycles)     10 000 000       • of the contactor with added electronically optimized auxiliary switch block typical     10 000 000       • of the contactor with added auxiliary switch block typical     10 000 000       • of the contactor with added auxiliary switch block typical     10 000 000       • of the contactor with added auxiliary switch block typical     10 000 000       • of the contactor with added electronically optimized auxiliary switch block typical     10 000 000       • of the contactor with ad		res
		0.6.W
• without load current share typical     • of main circult with degree of pollution 3 rated value     • of auxiliary circuit with degree of pollution 3 rated value     • of auxiliary circuit with degree of pollution 3 rated value     • of auxiliary circuit rated value     • of onscharce according to IDN 600477     • of onscharce according to IDN 600477     • of contactor typical     • of contactor typical     • of the contactor with added auxiliary switch block typical     • of the contactor with added auxiliary switch block typical     • of the contactor with added auxiliary switch block typical     • of the contactor with added auxiliary switch block typical     • of the contactor with added auxiliary switch block typical     • of the contactor with added auxiliary switch block typical     • of the contactor with added auxiliary switch block typical     • of the contactor with added auxiliary switch block typical     • of the contactor with added auxiliary switch block typical     • of the contactor with added auxiliary switch block typical     • of the contactor with added auxiliary switch block typical     • of added auxiliary switch block typical     • of the contactor form and corrent circuit     • of added auxiliary switch block typical     • of the contactor form and cor		
insulation voltage       60 main circuit with degree of pollution 3 rated value       690 V         e of analizing circuit with degree of pollution 3 rated value       690 V         surge voltage resistance       6 kV         e of anal micruit rated value       6 kV         e of auxiliary circuit rated value       6 kV         e of auxiliary circuit rated value       6 kV         maximum pernissible voltage for protective separation between contacts according to EN 8047.1       400 V         shock resistance at rectangular impulse       7,5g / 5 ms, 4,7g / 10 ms         shock resistance with sine pulse       11.8g / 5 ms, 7,4g / 10 ms         e of contactor typical       10 000 000         e of the contactor with added electronically optimized auxiling yswitch block typical       10 000 000         e of the contactor with added auxiling yswitch block typical       10 000 000         e of during torage       2000 m         ambient conditions       2000 m         installation altitude at helight above sea level maximum       2 000 m         ambient temperature       60 V         e during storage       -55 +60 °C         e factor tumidity minimum       10 %         relative humidity at 55 °C according to IEC 60068-2:30       95 %         maximum       3         e at AC-3 rated value m		
<ul> <li>of main circuit with degree of pollution 3 rated value</li> <li>of auxiliary circuit with degree of pollution 3 rated value</li> <li>of auxiliary circuit with degree of pollution 3 rated value</li> <li>of main circuit rated value</li> <li>of main circuit rated value</li> <li>of contactor value</li> <li>of ontactor value</li> <li>of the contactor value detectorically optimized</li> <li>of the</li></ul>		1.5 W
	•	690 V
surge voltage resistance     6 kV       • of main circuit rated value     6 kV       • of adailing vicuit rated value     6 kV       maximum pernissible voltage for protective separation between coil and main contacts according to EN 60947-1     400 V       shock resistance at rectangular impulse     7.5g / 5 ms, 4.7g / 10 ms       • et A.C     7.5g / 5 ms, 7.4g / 10 ms       mechanical service life (operating cycles)     10 000 000       • of contactor typical     10 000 000       • of the contactor with added electronically optimized auxiliary switch block typical     10 000 000       • of the contactor with added electronically optimized auxiliary switch block typical     10 000 000       • of the contactor with added electronically optimized auxiliary switch block typical     10 000 000       • of the contactor with added auxiliary switch block typical     10 000 000       reference code according to IEC 81346-2     Q       Substance Prohibitance (Date)     10 01/2009       Anbient conditions     2000 m       amblent temperature     -25 +60 °C       • during storage     -55 +80 °C       relative humidity at 55 °C according to IEC 60068-2-30     95 %       maximum     10 %       relative humidity at 55 °C according to IEC 60068-2-30     95 %       maximum     690 V       operating voltage     3       operating volt	-	
• of auxiliary circuit rated value     6 kV       maximum permissible voltage for protective separation between coll and main contacts according to EN 6097-1.     400 V       shock resistance at rectangular impulse     • at AC       • at AC     7.5g / 5 ms, 4.7g / 10 ms       shock resistance with sine pulse     • at AC       • at AC     11.8g / 5 ms, 7.4g / 10 ms       mechanical service life (operating cycles)     10 000 000       • of contactor typical     10 000 000       • of the contactor with added electronically optimized auxiliary switch block typical     10 000 000       reference code according to IEC 81346-2     Q       Substance Prohibitiance (Date)     10/01/2009       Ambient conditions     2000 m       installation athight above sea level maximum     2 000 m       ambient temperature     -55 +60 °C       • during operation     -25 +60 °C       • during operation     -25 +60 °C       • during operation     -25 +60 °C       • during operation     -55 +80 °C       relative humidity minimum     10 %       relative humidity at 5°C according to IEC 60068-2-30     95 %       maximum     690 V       • at AC-3 rated value maximum     690 V       • at AC-3 rated value maximum     690 V       • at AC-1     - up to 690 V at ambient temperature 40 °C rated value </td <td></td> <td>6 kV</td>		6 kV
maximum permissible voltage for protective separation between coil and main contacts according to EN 09347-1     400 V       shock resistance at rectangular impulse     7,5g / 5 ms, 4,7g / 10 ms       • at AC     7,5g / 5 ms, 7,4g / 10 ms       shock resistance at rectangular impulse     11,8g / 5 ms, 7,4g / 10 ms       • of contactor typical     10 000 000       • of contactor typical     5 000 000       • of the contactor with added electronically optimized auxiliary switch block typical     10 000 000       • of the contactor with added electronically optimized auxiliary switch block typical     10 000 000       • of the contactor with added electronically optimized auxiliary switch block typical     000 000       • of the contactor with added electronically optimized auxiliary switch block typical     10 000 000       • of the contactor with added electronically optimized auxiliary switch block typical     10 000 000       • of the contactor with added electronically optimized auxiliary switch block typical     10 000 000       • of the contactor with added electronically optimized auxiliary switch block typical     10 000 000       Installation attrude at height above sea level maximum     2 000 m       • during operation     -25 +60 °C       • during storage     -55 +80 °C       • relative humidity minimum     10 %       relative humidity at 55 °C according to IEC 6068-2-30     95 %       Main circuit     3 <t< td=""><td></td><td></td></t<>		
coil and main contacts according to EN 60947-1         shock resistance at rectangular impulse         • at AC         • at AC         for contactor with sine pulse         • of contactor typical         • of the contactor with added electronically optimized auxiliary switch block typical         • of the contactor with added auxiliary switch block typical         • of the contactor with added auxiliary switch block typical         • of the contactor with added auxiliary switch block typical         • of the contactor with added auxiliary switch block typical         • of the contactor with added auxiliary switch block typical         • of the contactor with added auxiliary switch block typical         • of the contactor with added auxiliary switch block typical         • of the contactor with added auxiliary switch block typical         • of the contactor with added auxiliary switch block typical         • of the contactor with added auxiliary switch block typical         • of the contactor with added auxiliary switch block typical         • of the contactor with added auxiliary switch block typical         • of the contactor with added auxiliary switch block typical         • at AC:0         • at AC:0         • at AC:1		
• at AC     7,5g / 5 ms, 4,7g / 10 ms       shock resistance with sine pulse     11.8g / 5 ms, 7,4g / 10 ms       • at AC     11.8g / 5 ms, 7,4g / 10 ms       mechanical service life (operating cycles)     10 000 000       • of contactor typical     10 000 000       • of the contactor with added electronically optimized auxiliary switch block typical     5 000 000       • of the contactor with added auxiliary switch block typical     10 000 000       • of the contactor with added auxiliary switch block typical     10 000 000       reference code according to IEC 81346-2     Q       Substance Prohibitance (Date)     10/01/2009       Ambient conditions     10/01/2009       installation altitude at height above sea level maximum     2 000 m       ambient temperature     -64 or °C       • during storage     -55 +60 °C       • during storage     -55 +80 °C       relative humidity at 55 °C according to IEC 60068-2-30     95 %       maximum     10 %       Main circuit     3       number of Poles for main current circuit     3       number of NO contacts for main contacts     3       operating voltage     - at AC-3 rated value maximum       • at AC-3 rated value maximum     690 V       • at AC-1     - up to 690 V at ambient temperature 40 °C rated value       • at AC-1     - up to 690 V		
shock resistance with sine pulse     11.8g / 5 ms, 7,4g / 10 ms       mechanical service life (operating cycles)     10 000 000       • of contactor typical     10 000 000       • of the contactor with added electronically optimized auxiliary switch block typical     5 000 000       • of the contactor with added auxiliary switch block typical     10 000 000       • of the contactor with added auxiliary switch block typical     10 000 000       reference code according to IEC 81346-2     Q       Substance Prohibitance (Date)     10/01/2009       Ambient conditions     2 000 m       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 at 55 °C according to IEC 60068-2-30     95 %       maximum     10 %       Main circuit     3       number of poles for main current circuit     3       number of NO contacts for main current circuit     3       operating voltage     690 V       • at AC-3 rated value maximum     690 V       • at AC-1 at 400 V at ambient temperature 40 °C rated value     40 A       value     • at AC-1     40 A       value     - up to 690 V at ambient temperature 40 °C rated value     40 A	shock resistance at rectangular impulse	
• at AC       11.8g / 5 ms, 7.4g / 10 ms         mechanical service life (operating cycles)       0 000 000         • of the contactor with added electronically optimized auxiliary switch block typical       10 000 000         • of the contactor with added electronically optimized auxiliary switch block typical       10 000 000         reference code according to IEC 81346-2       Q         Substance Prohibitance (Date)       10/01/2009         Ambient conditions       2 000 m         installation attitude at height above sea level maximum       2 000 m         ambient strage       -25 +60 °C         • during operation       -25 +60 °C         • during storage       -55 +80 °C         relative humidity at 55 °C according to IEC 60068-2:30       95 %         maximum       10 %         relative humidity at 55 °C according to IEC 60068-2:30       95 %         Main circoit       3         number of poles for main current circuit       3         number of NO contacts for main contacts       3         operating value       690 V         • at AC-3 rated value maximum       690 V         • at AC-1 at 400 V at ambient temperature 40 °C rated value       40 A         value       - up to 690 V at ambient temperature 40 °C rated value       40 A         <	• at AC	7,5g / 5 ms, 4,7g / 10 ms
mechanical service life (operating cycles)     10 000 000       • of contactor with added electronically optimized auxiliary switch block typical     10 000 000       • of the contactor with added auxiliary switch block typical     10 000 000       • of the contactor with added auxiliary switch block typical     10 000 000       • of the contactor with added auxiliary switch block typical     10 000 000       • of the contactor with added auxiliary switch block typical     10 000 000       reference code according to IEC 81346-2     Q       Substance Prohibitance (Date)     10/01/2009       Ambient temperature     000 m       • 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     95 %       maximum     mumber of poles for main current circuit     3       number of NO contacts for main contacts     3       operating voltage     690 V       • at AC-3 rated value maximum     690 V       • at AC-3 rated value maximum     690 V       • at AC-1 at 440 V at ambient temperature 40 °C rated value     40 A       • at Que     -u p to 690 V at ambient temperature 40 °C rated value     40 A	shock resistance with sine pulse	
<ul> <li>of contactor typical</li> <li>of the contactor with added electronically optimized auxiliary switch block typical</li> <li>of the contactor with added auxiliary switch block typical</li> <li>10 000 000</li> <li>reference code according to IEC 81346-2</li> <li>Q</li> <li>Substance Prohibitance (Date)</li> <li>10/01/2009</li> <li>Ambient conditions</li> <li>ambient temperature</li> <li>during operation</li> <li>-25 +60 °C</li> <li>during storage</li> <li>-55 +60 °C</li> <li>during storage</li> <li>-55 +80 °C</li> <li>relative humidity minimum</li> <li>10 %</li> <li>relative humidity minimum</li> <li>10 %</li> <li>relative humidity at 55 °C according to IEC 60068-2-30</li> <li>maximum</li> <li>Main circuit</li> <li>number of poles for main current circuit</li> <li>at AC-3 rated value maximum</li> <li>690 V</li> <li>et AC-3 rated value maximum</li> <li>690 V</li> <li>et AC-1 at 400 V at ambient temperature 40 °C rated value</li> <li>et AC-1</li> <li>-up to 690 V at ambient temperature 60 °C rated</li> <li>40 A</li> </ul>	• at AC	11,8g / 5 ms, 7,4g / 10 ms
<ul> <li>of the contactor with added electronically optimized auxiliary switch block typical</li> <li>of the contactor with added auxiliary switch block typical</li> <li>10 000 000</li> <li>reference code according to IEC 81346-2</li> <li>Q</li> <li>Substance Prohibitance (Date)</li> <li>10/01/2009</li> <li>Ambient conditions</li> <li>Installation altitude at height above sea level maximum</li> <li>2 000 m</li> <li>ambient temperature         <ul> <li>during operation</li> <li>-25 +60 °C</li> <li>elutive humidity at 55 °C according to IEC 60068-2-30</li> <li>95 %</li> </ul> </li> <li>Main circuit</li> <li>number of NO contacts for main contacts</li> <li>operating voltage</li> <li>el at AC-3 rated value maximum</li> <li>690 V</li> <li>el AC-1 at 400 V at ambient temperature 40 °C rated value</li> <li>el AC-1</li> <li></li></ul>	mechanical service life (operating cycles)	
auxiliary switch block typical       10 000 000         reference code according to IEC 81346-2       Q         Substance Prohibitance (Date)       10/01/2009         Ambient conditions       2 000 m         ambient temperature       -25 +60 °C         • 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       95 %         maximum       3         number of poles for main current circuit       3         number of NO contacts for main contacts       3         operating voltage       -         • at AC-3 rated value maximum       690 V         • at AC-1       40 A         • at AC-1	<ul> <li>of contactor typical</li> </ul>	10 000 000
• of the contactor with added auxiliary switch block typical       10 000 000         reference code according to IEC 81346-2       Q         Substance Prohibitance (Date)       10/01/2009         Ambient conditions       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 %         Main circuit       3         number of poles for main current circuit       3         operating voltage       690 V         • at AC-3 rated value maximum       690 V         • at AC-1 at 400 V at ambient temperature 40 °C rated value       40 A         • at AC-1       -up to 690 V at ambient temperature 40 °C rated value         • at AC-1       -up to 690 V at ambient temperature 60 °C rated value		5 000 000
reference code according to IEC 81346-2       Q         Substance Prohibitance (Date)       10/01/2009         Ambient conditions       2 000 m         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       95 %         maximum       95 %         Main circuit       3         number of poles for main current circuit       3         operating voltage       690 V         • at AC-3 rated value maximum       690 V         • at AC-1 arted value maximum       690 V         • at AC-1       40 A         value       • at AC-1         - up to 690 V at ambient temperature 40 °C rated value       40 A         value       - up to 690 V at ambient temperature 40 °C rated value       40 A		10.000.000
Substance Prohibitance (Date)       10/01/2009         Ambient conditions       2 000 m         ambient temperature       -25 +60 °C         • during operation       -25 +60 °C         • during storage       -55 +80 °C         relative humidity minimum       10 %         greative humidity at 55 °C according to IEC 60068-2-30       95 %         maximum       95 %         Main circuit       3         number of poles for main current circuit       3         number of NO contacts for main contacts       3         operating voltage       690 V         • at AC-3 rated value maximum       690 V         • at AC-1 at 400 V at ambient temperature 40 °C rated value       40 A         value       • at AC-1         - up to 690 V at ambient temperature 40 °C rated value       40 A		
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 %         Main circuit       3         number of poles for main current circuit       3         number of NO contacts for main contacts       3         operating voltage       -         • at AC-3 rated value maximum       690 V         • at AC-3 rated value maximum       690 V         • at AC-1 at 400 V at ambient temperature 40 °C rated value       40 A         • at AC-1       -up to 690 V at ambient temperature 40 °C rated value       40 A		
installation altitude at height above sea level maximum       2 000 m         ambient temperature       -25 +60 °C         • during operation       -25 +80 °C         relative humidity minimum       10 %         relative humidity at 55 °C according to IEC 60068-2-30 maximum       95 %         Main circuit       3         number of poles for main current circuit       3         number of NO contacts for main contacts       3         operating voltage       690 V         • at AC-3 rated value maximum       690 V         • at AC-1 at 400 V at ambient temperature 40 °C rated value       40 A         value       -up to 690 V at ambient temperature 40 °C rated value       40 A		10/01/2009
ambient temperature       -25 +60 °C         • during operation       -25 +80 °C         • during storage       -55 +80 °C         relative humidity minimum       10 %         relative humidity at 55 °C according to IEC 60068-2-30       95 %         maximum       95 %         Main circuit       3         number of poles for main current circuit       3         number of NO contacts for main contacts       3         operating voltage       690 V         • at AC-3 rated value maximum       690 V         • at AC-3 rated value maximum       690 V         • at AC-1 at 400 V at ambient temperature 40 °C rated value       40 A         • at AC-1       -up to 690 V at ambient temperature 40 °C rated value         • at AC-1       -up to 690 V at ambient temperature 60 °C rated value         • up to 690 V at ambient temperature 60 °C rated value       40 A		2,000 m
• 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 %         Main circuit       3         number of poles for main current circuit       3         number of NO contacts for main contacts       3         operating voltage       -         • at AC-3 rated value maximum       690 V         • at AC-3e rated value maximum       690 V         • at AC-3 rated value maximum       690 V         • at AC-1 at 400 V at ambient temperature 40 °C rated value       40 A         • at AC-1       - up to 690 V at ambient temperature 40 °C rated value         • up to 690 V at ambient temperature 60 °C rated value       40 A		2 000 111
• during storage       -55 +80 °C         relative humidity minimum       10 %         relative humidity at 55 °C according to IEC 60068-2-30       95 %         Main circuit       3         number of poles for main current circuit       3         number of NO contacts for main contacts       3         operating voltage       690 V         • at AC-3 rated value maximum       690 V         • at AC-3 rated value maximum       690 V         • at AC-1 at 400 V at ambient temperature 40 °C rated value       40 A         - up to 690 V at ambient temperature 40 °C rated value       40 A	•	25 ±60 °C
relative humidity minimum       10 %         relative humidity at 55 °C according to IEC 60068-2-30       95 %         Main circuit       3         number of poles for main current circuit       3         number of NO contacts for main contacts       3         operating voltage       690 V         • at AC-3 rated value maximum       690 V         • at AC-3e rated value maximum       690 V         • at AC-1 at 400 V at ambient temperature 40 °C rated value       40 A         - up to 690 V at ambient temperature 40 °C rated value       40 A		
relative humidity at 55 °C according to IEC 60068-2-30       95 %         Main circuit       3         number of poles for main current circuit       3         number of NO contacts for main contacts       3         operating voltage       690 V         • at AC-3 rated value maximum       690 V         • at AC-3 rated value maximum       690 V         • at AC-3 rated value maximum       690 V         • at AC-1 at 400 V at ambient temperature 40 °C rated value       40 A         • at AC-1       - up to 690 V at ambient temperature 40 °C rated value         • at AC-1       - up to 690 V at ambient temperature 60 °C rated value         • up to 690 V at ambient temperature 60 °C rated value       40 A		
maximum       Main circuit         number of poles for main current circuit       3         number of NO contacts for main contacts       3         operating voltage		
number of poles for main current circuit       3         number of NO contacts for main contacts       3         operating voltage       3         • at AC-3 rated value maximum       690 V         • at AC-3e rated value maximum       690 V         operational current       690 V         • at AC-1 at 400 V at ambient temperature 40 °C rated value       40 A         • at AC-1       40 A         - up to 690 V at ambient temperature 40 °C rated value       40 A		30 /0
number of NO contacts for main contacts       3         operating voltage       690 V         • at AC-3 rated value maximum       690 V         • at AC-3e rated value maximum       690 V         operational current       690 V         • at AC-1 at 400 V at ambient temperature 40 °C rated value       40 A         • at AC-1       40 A         - up to 690 V at ambient temperature 40 °C rated value       40 A         - up to 690 V at ambient temperature 40 °C rated value       40 A	Main circuit	
number of NO contacts for main contacts       3         operating voltage       690 V         • at AC-3 rated value maximum       690 V         • at AC-3e rated value maximum       690 V         operational current       690 V         • at AC-1 at 400 V at ambient temperature 40 °C rated value       40 A         • at AC-1       40 A         - up to 690 V at ambient temperature 40 °C rated value       40 A         - up to 690 V at ambient temperature 40 °C rated value       40 A	number of poles for main current circuit	3
<ul> <li>at AC-3 rated value maximum</li> <li>at AC-3e rated value maximum</li> <li>operational current</li> <li>at AC-1 at 400 V at ambient temperature 40 °C rated value</li> <li>at AC-1         <ul> <li>- up to 690 V at ambient temperature 40 °C rated value</li> <li>- up to 690 V at ambient temperature 40 °C rated value</li> <li>- up to 690 V at ambient temperature 40 °C rated value</li> <li>- up to 690 V at ambient temperature 60 °C rated value</li> <li>- up to 690 V at ambient temperature 60 °C rated value</li> </ul> </li> </ul>	number of NO contacts for main contacts	3
• at AC-3e rated value maximum       690 V         operational current       40 A         • at AC-1 at 400 V at ambient temperature 40 °C rated value       40 A         • at AC-1       40 A         • at AC-1       40 A         • up to 690 V at ambient temperature 40 °C rated value       40 A         • up to 690 V at ambient temperature 40 °C rated value       40 A         • up to 690 V at ambient temperature 60 °C rated       40 A	operating voltage	
operational current <ul> <li>at AC-1 at 400 V at ambient temperature 40 °C rated value</li> <li>at AC-1</li> <li>up to 690 V at ambient temperature 40 °C rated value</li> <li>up to 690 V at ambient temperature 60 °C rated</li> <li>35 A</li> </ul> <ul> <li>40 A</li> </ul>	• at AC-3 rated value maximum	690 V
<ul> <li>at AC-1 at 400 V at ambient temperature 40 °C rated value</li> <li>at AC-1         <ul> <li>up to 690 V at ambient temperature 40 °C rated value</li> <li>up to 690 V at ambient temperature 60 °C rated 35 A</li> </ul> </li> </ul>	• at AC-3e rated value maximum	690 V
value     • at AC-1       - up to 690 V at ambient temperature 40 °C rated value     40 A       - up to 690 V at ambient temperature 60 °C rated     35 A	operational current	
<ul> <li>up to 690 V at ambient temperature 40 °C rated value</li> <li>up to 690 V at ambient temperature 60 °C rated 35 A</li> </ul>	value	40 A
— up to 690 V at ambient temperature 60 °C rated 35 A	— up to 690 V at ambient temperature 40 °C rated	40 A
	— up to 690 V at ambient temperature 60 °C rated	35 A

• at AC-3	9 A
— at 400 V rated value — at 500 V rated value	9A
— at 600 V rated value	9A
• at AC-3e	SA .
<ul> <li>at AC-Se</li> <li>— at 400 V rated value</li> </ul>	9 A
— at 500 V rated value	9A
— at 690 V rated value	9A
at AC-4 at 400 V rated value	8.5 A
• at AC-5a up to 690 V rated value	35.2 A
• at AC-5b up to 400 V rated value	7.4 A
• at AC-6a	
— up to 230 V for current peak value n=20 rated value	11.4 A
— up to 400 V for current peak value n=20 rated value	11.4 A
— up to 500 V for current peak value n=20 rated value	9.1 A
— up to 690 V for current peak value n=20 rated value	9 A
● at AC-6a	
<ul> <li>— up to 230 V for current peak value n=30 rated value</li> </ul>	7.6 A
<ul> <li>— up to 400 V for current peak value n=30 rated value</li> </ul>	7.6 A
<ul> <li>— up to 500 V for current peak value n=30 rated value</li> </ul>	6.1 A
— up to 690 V for current peak value n=30 rated value	6.1 A
minimum cross-section in main circuit at maximum AC-1 rated value	10 mm²
operational current for approx. 200000 operating cycles at	
AC-4 • at 400 V rated value	4.1 A
at 400 V rated value     at 690 V rated value	3.3 A
operational current	5.5 A
• at 1 current path at DC-1	
— at 24 V rated value	35 A
— at 60 V rated value	20 A
— at 110 V rated value	4.5 A
— at 220 V rated value	1A
— at 440 V rated value	0.4 A
— at 600 V rated value	0.25 A
<ul> <li>with 2 current paths in series at DC-1</li> </ul>	
— at 24 V rated value	35 A
— at 60 V rated value	35 A
— at 110 V rated value	35 A
— at 220 V rated value	5 A
— at 440 V rated value	1 A
— at 600 V rated value	0.8 A
<ul> <li>with 3 current paths in series at DC-1</li> </ul>	
— at 24 V rated value	35 A
— at 60 V rated value	35 A
— at 110 V rated value	35 A
— at 220 V rated value	35 A
— at 440 V rated value	2.9 A
— at 600 V rated value	1.4 A
at 1 current path at DC-3 at DC-5	20 A
- at 24 V rated value	20 A 5 A
— at 60 V rated value — at 220 V rated value	1A
— at 440 V rated value	0.09 A
— at 600 V rated value	0.06 A
• with 2 current paths in series at DC-3 at DC-5	
— at 24 V rated value	35 A
— at 60 V rated value	35 A
— at 110 V rated value	15 A
— at 220 V rated value	3 A
— at 440 V rated value	0.27 A

— at 600 V rated value	0.16 A
<ul> <li>with 3 current paths in series at DC-3 at DC-5</li> </ul>	
— at 24 V rated value	35 A
— at 60 V rated value	35 A
— at 110 V rated value	35 A
— at 220 V rated value	10 A
— at 440 V rated value	0.6 A
— at 600 V rated value	0.6 A
operating power	
• at AC-3	
— at 230 V rated value	2.2 kW
— at 400 V rated value	4 kW
— at 500 V rated value	4 kW
— at 690 V rated value	7.5 kW
• at AC-3e	
— at 230 V rated value	2.2 kW
— at 400 V rated value	4 kW
— at 500 V rated value	4 kW
— at 690 V rated value	7.5 kW
operating power for approx. 200000 operating cycles at AC-	
4	
• at 400 V rated value	2 kW
• at 690 V rated value	2.5 kW
operating apparent power at AC-6a	
<ul> <li>up to 230 V for current peak value n=20 rated value</li> </ul>	4.5 kVA
<ul> <li>up to 400 V for current peak value n=20 rated value</li> </ul>	7.8 kVA
<ul> <li>up to 500 V for current peak value n=20 rated value</li> </ul>	7.8 kVA
<ul> <li>up to 690 V for current peak value n=20 rated value</li> </ul>	10.7 kVA
operating apparent power at AC-6a	
<ul> <li>up to 230 V for current peak value n=30 rated value</li> </ul>	3 kVA
<ul> <li>up to 400 V for current peak value n=30 rated value</li> </ul>	5.2 kVA
<ul> <li>up to 500 V for current peak value n=30 rated value</li> </ul>	5.2 kVA
<ul> <li>up to 690 V for current peak value n=30 rated value</li> </ul>	7.2 kVA
short-time withstand current in cold operating state up to 40 $^{\circ}\mathrm{C}$	
<ul> <li>limited to 1 s switching at zero current maximum</li> </ul>	170 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 5 s switching at zero current maximum</li> </ul>	170 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 10 s switching at zero current maximum</li> </ul>	140 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 30 s switching at zero current maximum</li> </ul>	104 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 60 s switching at zero current maximum</li> </ul>	88 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	
• at AC	5 000 1/h
operating frequency	
• at AC-1 maximum	1 000 1/h
• at AC-1 maximum	1 000 1/h
• at AC-3 maximum	1 000 1/h
• at AC-3 maximum	1 000 1/h
• at AC-3e maximum • at AC-4 maximum	300 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	AC
control supply voltage at AC	440.1/
at 50 Hz rated value	110 V
at 60 Hz rated value	120 V
operating range factor control supply voltage rated value of magnet coil at AC	
• at 50 Hz	0.8 1.1
• at 60 Hz	0.8 1.1
apparent pick-up power of magnet coil at AC	
• at 50 Hz	68 VA
• at 60 Hz	67 VA
inductive power factor with closing power of the coil	
<ul> <li>at 50 Hz</li> </ul>	0.72
	V.12

• at 60 Hz	0.74
• at 60 HZ apparent holding power of magnet coil at AC	0.74
apparent noting power of magnet con at AC     o at 50 Hz	7.9 VA
• at 60 Hz	6.5 VA
inductive power factor with the holding power of the coil	0.0 VA
• at 50 Hz	0.25
• at 60 Hz	0.28
closing delay	
• at AC	8 40 ms
opening delay	
• at AC	4 16 ms
arcing time	10 10 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	
number of NC contacts for auxiliary contacts instantaneous contact	1
number of NO contacts for auxiliary contacts instantaneous contact	1
operational current at AC-12 maximum	10 A
operational current at AC-15	
• at 230 V rated value	10 A
• at 400 V rated value	3 A
• at 500 V rated value	2 A
at 690 V rated value	1 A
operational current at DC-12	
• at 24 V rated value	10 A
• at 48 V rated value	6 A
at 60 V rated value	6 A
• at 110 V rated value	3 A
at 125 V rated value	2 A
at 220 V rated value	
at 600 V rated value	0.15 A
operational current at DC-13	10.0
at 24 V rated value	10 A 2 A
at 48 V rated value	
at 60 V rated value	2 A
<ul> <li>at 110 V rated value</li> <li>at 125 V rated value</li> </ul>	1A
	0.9 A
<ul> <li>at 220 V rated value</li> <li>at 600 V rated value</li> </ul>	0.3 A 0.1 A
contact reliability of auxiliary contacts	1 faulty switching per 100 million (17 V, 1 mA)
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
at 480 V rated value	7.6 A
at 600 V rated value	9A
yielded mechanical performance [hp]	
• for single-phase AC motor	
— at 110/120 V rated value	1 hp
— at 230 V rated value	1 hp
• for 3-phase AC motor	
— at 200/208 V rated value	2 hp
— at 220/230 V rated value	3 hp
— at 460/480 V rated value	5 hp
— at 575/600 V rated value	7.5 hp
contact rating of auxiliary contacts according to UL	A600 / P600
Short-circuit protection	
design of the fuse link	
<ul> <li>for short-circuit protection of the main circuit</li> </ul>	
- with type of coordination 1 required	gG: 63A (690V,100kA), aM: 32A (690V,100kA), BS88: 63A (415V,80kA)
- with type of assignment 2 required	gG: 25A (690V,100kA), aM: 20A (690V,100kA), BS88: 25A (415V,80kA)
<ul> <li>for short-circuit protection of the auxiliary switch required</li> </ul>	gG: 10 A (500 V, 1 kA)

nstallation/ mounting/ dimensions			
mounting position	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backword by $4/23.5^{\circ}$ on vertical mounting surface.		
fastening method	backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715		
side-by-side mounting	Yes		
height	85 mm		
width	45 mm		
depth	97 mm		
required spacing			
with side-by-side mounting			
— forwards	10 mm		
— upwards	10 mm		
— downwards	10 mm		
— at the side	0 mm		
for grounded parts			
— forwards	10 mm		
— upwards	10 mm		
— at the side	6 mm		
— downwards	10 mm		
for live parts			
— forwards	10 mm		
— upwards	10 mm		
— downwards	10 mm		
— at the side	6 mm		
Connections/ Terminals	<b>U</b> mm		
type of electrical connection	corou turo terminale		
for main current circuit	screw-type terminals		
for auxiliary and control circuit	screw-type terminals		
at contactor for auxiliary contacts	Screw-type terminals		
of magnet coil	Screw-type terminals		
type of connectable conductor cross-sections for main contacts	2 + (4 - 2 - 5 - 5 - 5 - 2) + (2 - 5 - 4 - 5 - 5 - 2)		
• solid	2x (1 2.5 mm²), 2x (2.5 10 mm²)		
• solid or stranded	2x (1 2.5 mm <sup>2</sup> ), 2x (2.5 10 mm <sup>2</sup> )		
finely stranded with core end processing	2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²		
connectable conductor cross-section for main contacts	4 40 mm²		
• solid	1 10 mm <sup>2</sup>		
• stranded	1 10 mm <sup>2</sup>		
finely stranded with core end processing	1 10 mm²		
connectable conductor cross-section for auxiliary contacts	0.5 0.5 mm²		
• solid or stranded	0.5 2.5 mm <sup>2</sup>		
finely stranded with core end processing	0.5 2.5 mm²		
type of connectable conductor cross-sections			
for auxiliary contacts	$2 \times (0.5 - 1.5 \text{ mm}^2) \cdot 2 \times (0.75 - 0.5 \text{ mm}^2)$		
— solid or stranded	2x (0.5 1.5 mm <sup>2</sup> ), 2x (0.75 2.5 mm <sup>2</sup> )		
— finely stranded with core end processing	2x (0.5 1.5 mm <sup>2</sup> ), 2x (0.75 2.5 mm <sup>2</sup> )		
for AWG cables for auxiliary contacts	2x (20 16), 2x (18 14)		
AWG number as coded connectable conductor cross section			
for main contacts	16 8		
for auxiliary contacts	20 14		
Safety related data			
product function			
mirror contact according to IEC 60947-4-1	Yes		
B10 value with high demand rate according to SN 31920	450 000		
proportion of dangerous failures			
with low demand rate according to SN 31920	40 %		
-	40 % 73 %		
with high demand rate according to SN 31920 failure rate [EIT] with low demand rate according to SN 31920			
failure rate [FIT] with low demand rate according to SN 31920 T1 value for proof test interval or service life according to IEC	20 a		
61508	20 a		

touch protection on t	the front according to IEC	60529 fina	er-safe, for vertical contact	from the front	
suitability for use	the none according to IEC	linge			
<ul> <li>safety-related sv</li> </ul>	witching OFF	Yes			
Certificates/ approvals	•				
General Product App					
()		Confirmation	<b>U</b>	KC	EHC
EMC	Functional Safety/Safety of Ma- chinery	Declaration of Confo	ormity	Test Certificates	
RCM	<u>Type Examination Cer-</u> <u>tificate</u>	UK CA	CE EG-Konf.	<u>Special Test Certific-</u> <u>ate</u>	Type Test Certific- ates/Test Report
Marine / Shipping	-				
ABS	BUREAU VERITAS		Llovds Register uks	RINA	RMRS
other			Railway	Environment	
<u>Confirmation</u>	VDE	<u>Confirmation</u>	<u>Vibration and Shock</u>	Environmental Con- firmations	
Further information					
Siemens has decided to exit the Russian market (see here). https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business Siemens is working on the renewal of the current EAC certificates. Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus). 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=3RT2023-1AK60 Cax online generator http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2023-1AK60 Service&Support (Manuals, Certificates, Characteristics, FAQs,) https://support.industry.siemens.com/plictb/signation.gismens.git approximation.gismens.com/bildb/cax_de_aspx?nlfb=3RT2023-1AK60⟨=en Characteristic: Tripping characteristics, Pt, Let-through current http://support.industry.siemens.com/bildb/cax_de_aspx?nlfb=3RT2023-1AK60⟨=en Characteristic: Tripping characteristics, Pt, Let-through current http://support.industry.siemens.com/bildb/index.aspx?view=Search&mlfb=3RT2023-1AK60&bijecttype=14&gridview=view1					
last modified:		2/10	/2023 🖸		