3RT2045-3XF40-0LA2

## **Data sheet**



Traction contactor, AC-3 80 A, 37 kW / 400 V 1 NO + 1 NC, 110 V DC 0.7-1.25\*US 3-pole, 3 NO, Size S3 integrated varistor Spring-type terminal

product designation design of the product product type designation graduct type designation size of contactor size of contactor function module for communication functions [W] for rated value of the current function at AC in hot operating state per pole function of the current function or the current func	product brand name	SIRIUS
product type designation General technical data size of contactor product extension • function module for communication • auxiliary switch  • at AC in hot operating state • at AC in hot operating state • at AC in hot operating state per pole • without load current share typical insulation voltage • of main circuit 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  surge voltage resistance • of main circuit rated value • of auxiliary circuit rated value • of auxiliary circuit rated value  soli and main contacts according to EN 60947-1  shock resistance at rectangular impulse • at DC  shock resistance with sine pulse • at DC  mechanical service life (switching cycles) • of contactor typical • of the contactor with added electronically optimized auxiliary switch block typical • of the contactor with added auxiliary switch block typical reference code according to EC 81346-2 Q Substance Prohibitance (Date)  Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage	product designation	Contactor
Sacrotactor	design of the product	With extended operating range
size of contactor product extension • function module for communication • auxiliary switch  power loss [W] for rated value of the current • at AC in hot operating state • of main circuit 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 with degree of pollution 3 rated value • of main circuit rated value • of auxiliary circuit rated value • of the contactor typical • of the contactor with added electronically optimized auxiliary switch block typical • of the contactor with added electronically optimized auxiliary switch block typical • of the contactor with added auxiliary switch block typical reference code according to IEC 81346-2 Q Substance Prohibitance (Date)  Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage	product type designation	3RT2
product extension  • function module for communication • auxiliary switch  • at AC in hot operating state • at AC in hot operating state per pole • without load current share typical  insulation voltage • of main circuit 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 collage for safe isolation between coil and main contacts according to EN 60947-1  shock resistance at rectangular impulse • at DC • at	General technical data	
• function module for communication • auxiliary switch  power loss [W] for rated value of the current • at AC in hot operating state • at AC in hot operating state per pole • at AC in hot operating state per pole • at AC in hot operating state per pole • at AC in hot operating state per pole • of main circuit with degree of pollution 3 rated value • of auxiliary circuit with degree of pollution 3 rated value • of main circuit with degree of pollution 3 rated value  surge voltage resistance • of main circuit rated value • of auxiliary circuit rated value • of to contacts according to EN 60947-1  shock resistance at rectangular impulse • at DC • at DC  shock resistance with sine pulse • at DC  shock resistance with sine pulse • at DC  shock resistance with sine pulse • at DC  shock resistance with added electronically optimized auxiliary switch block typical • of the contactor with added electronically optimized auxiliary switch block typical • of the contactor with added auxiliary switch block typical  reference code according to IEC 81346-2  Q  Substance Prohibitance (Date)  Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during operation • during storage	size of contactor	S3
auxiliary switch  power loss [W] for rated value of the current  at AC in hot operating state at AC in hot operating state per pole without load current share typical  of main circuit with degree of pollution 3 rated value of auxiliary circuit with degree of pollution 3 rated value af 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 auxiliary switch block typical  of the contactor with added electronically optimized auxiliary switch block typical  reference code according to IEC 81346-2  Q  Substance Prohibitance (Date)  odo 000  ambient temperature  oduring operation  oduring storage  of uning storage  of with current share years and the current state value  1 000 V  2 000 M  2 000 M  2 000 M  ambient temperature  oduring operation  oduring storage	product extension	
power loss [W] for rated value of the current  at AC in hot operating state at AC in hot operating state per pole without load current share typical  insulation voltage of main circuit 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 surge voltage resistance of main circuit rated value of auxiliary circuit rated value of the contacts according to EN 60947-1  shock resistance at rectangular impulse 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 of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical	<ul> <li>function module for communication</li> </ul>	No
at AC in hot operating state at AC in hot operating state per pole without load current share typical  insulation voltage of main circuit with degree of pollution 3 rated value of auxiliary circuit with degree of pollution 3 rated value of auxiliary circuit rest value  surge voltage resistance of main circuit rated value  of auxiliary circuit rated value  surge voltage resistance of main circuit rated value  of word main contacts according to EN 60947-1  shock resistance at rectangular impulse of at DC  shock resistance with sine pulse of the contactor typical of the contactor with added electronically optimized auxiliary switch block typical reference code according to IEC 81346-2  Substance Prohibitance (Date)  installation altitude at height above sea level maximum ambient temperature of during operation of main circuit with degree of pollution 3 rated value  1 000 V  690 V  690 V  690 V  690 V  690 V  600 V  60	auxiliary switch	Yes
at AC in hot operating state per pole  without load current share typical  insulation voltage  of main circuit 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 ta DC of Contacts a rectangular impulse of the contactor with sine pulse 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 reference code according to IEC 81346-2 Quudout auxiliary circuit rated value of the contactor with added auxiliary switch block typical reference code according to IEC 81346-2 Quudout auxiliary circuit rated value of the contactor with added auxiliary switch block typical reference code according to IEC 81346-2 Quudout auxiliary switch block typical reference code according to IEC 81346-2 Quudout 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	power loss [W] for rated value of the current	
without load current share typical     insulation voltage         of main circuit 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  surge voltage resistance         of main circuit rated value         of auxiliary circuit rated value         of auxiliary circuit rated value         of auxiliary circuit rated value         maximum permissible voltage for safe isolation between coil and main contacts according to EN 60947-1  shock resistance at rectangular impulse         ot DC         shock resistance with sine pulse         ot DC         shock resistance 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 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         of the contactor with added auxiliary switch block typical         of the contactor with added auxiliary switch block typical         of the contactor with added aux	<ul> <li>at AC in hot operating state</li> </ul>	15.9 W
insulation voltage  • of main circuit 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  surge voltage resistance • of main circuit rated value • of auxiliary circuit rated value • of auxiliary circuit rated value • of auxiliary circuit rated value  • of auxiliary circuit rated value  • of auxiliary circuit rated value • of auxiliary circuit rated value  • of waxiliary circuit rated value • of the collage for safe isolation between coil and main contacts according to EN 60947-1  shock resistance at rectangular impulse • at DC  shock resistance with sine pulse • at DC  shock resistance with sine pulse • at DC  10.6 g / 5 ms, 6.3 g / 10 ms  mechanical service life (switching cycles) • 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 • 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 ty	<ul> <li>at AC in hot operating state per pole</li> </ul>	5.3 W
of main circuit with degree of pollution 3 rated value     of auxiliary circuit with degree of pollution 3 rated value  surge voltage resistance     of main circuit rated value     of auxiliary circuit rated value     of kV  maximum permissible voltage for safe isolation between coil and main contacts according to EN 60947-1  shock resistance at rectangular impulse     of tDC     of 7 g / 5 ms, 4.0 g / 10 ms  shock resistance with sine pulse     of the contactor life (switching cycles)     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  Proference code according to IEC 81346-2  Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum     oduring operation     oduring operation     of during storage   1 000 V  6 kV  6 vo  6 00 V  6 00	<ul> <li>without load current share typical</li> </ul>	1 W
of auxiliary circuit with degree of pollution 3 rated value  surge voltage resistance     of main circuit rated value     of auxiliary circuit rated value     of the contact according to EN 60947-1  shock resistance at rectangular impulse     of the contactor with sine pulse     of contactor typical     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     of the contactor with added auxiliary switch block typical     of the contactor with added electronically optimized auxiliary switch block typical     of the contactor with added electronically optimized auxiliary switch block typical     of the contactor with added electronically optimized auxiliary switch block typical     of the contactor with added electronically optimized     of the contac	insulation voltage	
surge voltage resistance  • of main circuit rated value  • of auxiliary circuit rated value  • of auxiliary circuit rated value  maximum permissible voltage for safe isolation between coil and main contacts according to EN 60947-1  shock resistance at rectangular impulse  • at DC  shock resistance with sine pulse  • at DC  shock resistance with sine pulse  • at DC  nechanical service life (switching cycles)  • of contactor typical  • of the contactor with added electronically optimized auxiliary switch block typical  • of the contactor with added electronically optimized auxiliary switch block typical  • of the contactor with added electronically optimized auxiliary switch block typical  • of the contactor with added electronically op	<ul> <li>of main circuit with degree of pollution 3 rated value</li> </ul>	1 000 V
of main circuit rated value     of auxiliary circuit rated value     of auxiliary circuit rated value     maximum permissible voltage for safe isolation between coil and main contacts according to EN 60947-1  shock resistance at rectangular impulse     ot DC     of Contactor with sine pulse     of the 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     reference code according to IEC 81346-2     Substance Prohibitance (Date)  Ambient conditions installation altitude at height above sea level maximum  ambient temperature     oduring operation     of maximum permissible voltage isolation between coil edw voltage isolation between coil and will on the voltage isolation between coil and will on the voltage isolation between coil and selected in the voltage isolation in the voltage isolation between coil and selected in the voltage isolation between coil and selected isolation between coil and selected in the voltage isolation isolation between coil and selected in the voltage isolation in the voltage isolation in the voltage isolation in the voltage isolation isolation in the voltage isolation isolation isolation isolation isolation isolation isolation isolation isolation isolati	, ,	690 V
of auxiliary circuit rated value     maximum permissible voltage for safe isolation between coil and main contacts according to EN 60947-1  shock resistance at rectangular impulse     o at DC     fo.7 g / 5 ms, 4.0 g / 10 ms  shock resistance with sine pulse     or at DC     fo.6 g / 5 ms, 6.3 g / 10 ms  mechanical service life (switching cycles)     or of contactor typical     or of the contactor with added electronically optimized auxiliary switch block typical     or of the contactor with added auxiliary switch block typical     or of the contactor with added auxiliary switch block typical     reference code according to IEC 81346-2     Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum     ambient temperature     or during operation     or during storage  6 kV  690 V  690 V  600 V	surge voltage resistance	
maximum permissible voltage for safe isolation between coil and main contacts according to EN 60947-1  shock resistance at rectangular impulse	<ul> <li>of main circuit rated value</li> </ul>	8 kV
coil and main contacts according to EN 60947-1  shock resistance at rectangular impulse  • at DC  shock resistance with sine pulse  • at DC  10.6 g / 5 ms, 4.0 g / 10 ms  mechanical service life (switching cycles)  • 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  reference code according to IEC 81346-2  Quality Sustance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  • during operation  • during storage  • during storage  6.7 g / 5 ms, 4.0 g / 10 ms  10.6 g / 5 ms, 6.3 g / 10 ms  10.000 000  10.00	<ul> <li>of auxiliary circuit rated value</li> </ul>	6 kV
• at DC  shock resistance with sine pulse  • at DC  10.6 g / 5 ms, 4.0 g / 10 ms  mechanical service life (switching cycles)  • 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  reference code according to IEC 81346-2  Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation  • during storage  6.7 g / 5 ms, 4.0 g / 10 ms  10.6 g / 5 ms, 6.3 g / 10 ms  10 000 000  5 000 000  2 000 000  10 000 000  10 000 000  10 000 00		690 V
shock resistance with sine pulse  • at DC  10.6 g / 5 ms, 6.3 g / 10 ms  mechanical service life (switching cycles)  • 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  reference code according to IEC 81346-2  Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation  • during storage  10.6 g / 5 ms, 6.3 g / 10 ms  10.000 000  5 000 000  10 000 000  10 000 000  10 000 00	shock resistance at rectangular impulse	
<ul> <li>at DC</li> <li>mechanical service life (switching cycles)</li> <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>of the contactor with added auxiliary switch block typical</li> <li>reference code according to IEC 81346-2</li> <li>Substance Prohibitance (Date)</li> <li>Ambient conditions</li> <li>installation altitude at height above sea level maximum</li> <li>ambient temperature</li> <li>during operation</li> <li>during storage</li> <li>10.6 g / 5 ms, 6.3 g / 10 ms</li> <li>10 000 000</li> <li>000</li> <li>000</li></ul>	• at DC	6.7 g / 5 ms, 4.0 g / 10 ms
mechanical service life (switching cycles)  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  reference code according to IEC 81346-2 Q Substance Prohibitance (Date)  Ambient conditions installation altitude at height above sea level maximum  ambient temperature of during operation during storage  -40 +70 °C of the contactor with added electronically optimized 5 000 000  10 000 000  10 000 000  10 000 00	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>reference code according to IEC 81346-2</li> <li>Substance Prohibitance (Date)</li> <li>Ambient conditions installation altitude at height above sea level maximum</li> <li>ambient temperature</li> <li>during operation</li> <li>during storage</li> <li>10 000 000</li> <li>10 000 000</li></ul>	at DC	10.6 g / 5 ms, 6.3 g / 10 ms
of the contactor with added electronically optimized auxiliary switch block typical     of the contactor with added auxiliary switch block typical      reference code according to IEC 81346-2      Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature     o during operation     oduring storage      of the contactor with added electronically optimized     10 000 000      00	mechanical service life (switching cycles)	
auxiliary switch block typical  ● of the contactor with added auxiliary switch block typical  reference code according to IEC 81346-2  Q Substance Prohibitance (Date)  Ambient conditions installation altitude at height above sea level maximum  ambient temperature  ● during operation  ● during storage  auxiliary switch block 10 000 000  10 000 000  03/01/2017  Auxiliary switch block 10 000 000  2 000 000  10 000 000  10 000 000  10 000 00	<ul> <li>of contactor typical</li> </ul>	10 000 000
typical  reference code according to IEC 81346-2  Q  Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation  • during storage  Q  03/01/2017  2 000 m  -40 +70 °C  -55 +80 °C		5 000 000
Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation • during storage  03/01/2017  2 000 m  -40 +70 °C  -55 +80 °C		10 000 000
Ambient conditions installation altitude at height above sea level maximum  ambient temperature  • during operation • during storage  2 000 m  -40 +70 °C  -55 +80 °C	reference code according to IEC 81346-2	Q
installation altitude at height above sea level maximum  ambient temperature  ● during operation  • during storage  2 000 m  -40 +70 °C  -55 +80 °C	Substance Prohibitance (Date)	03/01/2017
ambient temperature  • during operation  • during storage  -40 +70 °C  -55 +80 °C	Ambient conditions	
<ul> <li>during operation</li> <li>during storage</li> <li>-40 +70 °C</li> <li>-55 +80 °C</li> </ul>	installation altitude at height above sea level maximum	2 000 m
• during storage -55 +80 °C	ambient temperature	
3 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	<ul> <li>during operation</li> </ul>	-40 +70 °C
relative humidity minimum 10 %	during storage	-55 +80 °C
	relative humidity minimum	10 %

relative humidity at 55 °C according to IEC 60068-2-30 maximum	95 %			
Main circuit				
number of poles for main current circuit	3			
number of NO contacts for main contacts	3			
operating voltage				
at AC-3 rated value maximum	1 000 V			
at AC-3e rated value maximum	1 000 V			
operational current	1 000 V			
at AC-1 at 400 V at ambient temperature 40 °C rated value	125 A			
• at AC-1				
— up to 690 V at ambient temperature 40 °C rated value	125 A			
<ul> <li>— up to 690 V at ambient temperature 60 °C rated value</li> </ul>	105 A			
<ul><li>at AC-2 at 400 V rated value</li><li>at AC-3</li></ul>	80 A			
— at 400 V rated value	80 A			
— at 500 V rated value	80 A			
— at 690 V rated value	58 A			
— at 1000 V rated value	30 A			
• at AC-3e				
— at 400 V rated value	80 A			
— at 500 V rated value	80 A			
— at 690 V rated value	58 A			
— at 1000 V rated value	30 A			
<ul> <li>at AC-4 at 400 V rated value</li> </ul>	66 A			
minimum cross-section in main circuit				
<ul> <li>at maximum AC-1 rated value</li> </ul>	50 mm²			
<ul> <li>at maximum Ith rated value</li> </ul>	50 mm²			
operational current for approx. 200000 operating				
cycles at AC-4				
at 400 V rated value	34 A			
at 690 V rated value	24 A			
operating power	07.114			
at AC-2 at 400 V rated value	37 kW			
• at AC-3				
— at 230 V rated value	22 kW			
— at 400 V rated value	37 kW			
— at 500 V rated value	45 kW			
— at 690 V rated value	55 kW			
— at 1000 V rated value	37 kW			
• at AC-3e	00 144			
— at 230 V rated value	22 kW			
— at 400 V rated value	37 kW			
— at 500 V rated value	45 kW			
— at 690 V rated value	55 kW			
— at 1000 V rated value  operating power for approx. 200000 operating cycles at AC-4	37 kW			
• at 400 V rated value	17.9 kW			
at 400 V rated value     at 690 V rated value	21.8 kW			
short-time withstand current in cold operating state up to 40 °C	Z.I.O.KVI			
• limited to 1 s switching at zero current maximum	1 500 A; Use minimum cross-section acc. to AC-1 rated value			
limited to 5 s switching at zero current maximum	1 186 A; Use minimum cross-section acc. to AC-1 rated value			
limited to 10 s switching at zero current maximum	851 A; Use minimum cross-section acc. to AC-1 rated value			
limited to 10 s switching at zero current maximum	538 A; Use minimum cross-section acc. to AC-1 rated value			
Ilmitted to 30 s switching at zero current maximum     Ilmitted to 60 s switching at zero current maximum	423 A; Use minimum cross-section acc. to AC-1 rated value			
- minica to 55 5 Switching at 2010 Culterit maximum	1207, God Hilliman Group Section acc. to 70-1 lated value			
no-load switching frequency				

	_
operating frequency	
<ul> <li>at AC-2 at AC-3e maximum</li> </ul>	400 1/h
<ul> <li>at AC-4 maximum</li> </ul>	300 1/h
Ratings for railway applications	
thermal current (Ith) up to 690 V	
<ul> <li>up to 40 °C according to IEC 60077 rated value</li> </ul>	125 A
<ul> <li>up to 70 °C according to IEC 60077 rated value</li> </ul>	90 A
Control circuit/ Control	
type of voltage	DC
type of voltage of the control supply voltage	DC
control supply voltage at DC	
rated value	110 V
operating range factor control supply voltage rated	
value of magnet coil at DC	
initial value	0.7
full-scale value	1.25
design of the surge suppressor	with varistor
inrush current peak	1.5 A
duration of inrush current peak	50 μs
locked-rotor current mean value	1.1 A
locked-rotor current peak	2.7 A
duration of locked-rotor current	150 ms
holding current mean value	15 mA
closing power of magnet coil at DC	64 W
holding power of magnet coil at DC	1 W
closing delay	
• at DC	50 70 ms
opening delay	
• at DC	38 57 ms
arcing time	10 20 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	Standard A1 - A2
Auxiliary circuit number of NC contacts for auxiliary contacts	1
Auxiliary circuit  number of NC contacts for auxiliary contacts  • instantaneous contact	1 1
Auxiliary circuit  number of NC contacts for auxiliary contacts  • instantaneous contact  number of NO contacts for auxiliary contacts	1 1 1
Auxiliary circuit  number of NC contacts for auxiliary contacts  • instantaneous contact  number of NO contacts for auxiliary contacts  • instantaneous contact	1 1 1 1
Auxiliary circuit  number of NC contacts for auxiliary contacts  • instantaneous contact  number of NO contacts for auxiliary contacts  • instantaneous contact  operational current at AC-12 maximum	1 1 1
Auxiliary circuit  number of NC contacts for auxiliary contacts  • instantaneous contact  number of NO contacts for auxiliary contacts  • instantaneous contact  operational current at AC-12 maximum  operational current at AC-15	1 1 1 1 1 10 A
Auxiliary circuit  number of NC contacts for auxiliary contacts  • instantaneous contact  number of NO contacts for auxiliary contacts  • instantaneous contact  operational current at AC-12 maximum  operational current at AC-15  • at 230 V rated value	1 1 1 1 10 A
number of NC contacts for auxiliary contacts	1 1 1 1 1 10 A
Auxiliary circuit  number of NC contacts for auxiliary contacts  • instantaneous contact  number of NO contacts for auxiliary contacts  • instantaneous contact  operational current at AC-12 maximum  operational current at AC-15  • at 230 V rated value  • at 400 V rated value  • at 500 V rated value	1 1 1 1 1 10 A
Auxiliary circuit  number of NC contacts for auxiliary contacts  instantaneous contact  number of NO contacts for auxiliary contacts  instantaneous contact  operational current at AC-12 maximum  operational current at AC-15  at 230 V rated value  at 400 V rated value  at 500 V rated value  at 690 V rated value	1 1 1 1 1 10 A
Auxiliary circuit  number of NC contacts for auxiliary contacts  • instantaneous contact  number of NO contacts for auxiliary contacts  • instantaneous contact  operational current at AC-12 maximum  operational current at AC-15  • at 230 V rated value  • at 400 V rated value  • at 500 V rated value  • at 690 V rated value  operational current at DC-12	1 1 1 1 10 A 6 A 3 A 2 A 1 A
number of NC contacts for auxiliary contacts	1 1 1 1 10 A 6 A 3 A 2 A 1 A
number of NC contacts for auxiliary contacts	1 1 1 1 10 A 6 A 3 A 2 A 1 A
number of NC contacts for auxiliary contacts	1 1 1 1 10 A 6 A 3 A 2 A 1 A 10 A 6 A 6 A
number of NC contacts for auxiliary contacts	1 1 1 1 10 A 6 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 6 A
number of NC contacts for auxiliary contacts	1 1 1 1 10 A 6 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 6 A 3 A 2 A
number of NC contacts for auxiliary contacts         • instantaneous contact  number of NO contacts for auxiliary contacts         • instantaneous contact  operational current at AC-12 maximum  operational current at AC-15         • at 230 V rated value         • at 400 V rated value         • at 500 V rated value         • at 690 V rated value  operational current at DC-12  • at 24 V rated value  • at 48 V rated value  • at 60 V rated value  • at 110 V rated value  • at 125 V rated value  • at 220 V rated value	1 1 1 1 10 A 6 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 3 A 2 A 1 A
number of NC contacts for auxiliary contacts	1 1 1 1 10 A 6 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 6 A 3 A 2 A
number of NC contacts for auxiliary contacts	1 1 1 1 1 1 10 A  6 A 3 A 2 A 1 A  10 A 6 A 6 A 6 A 3 A 2 A 1 A 0.15 A
number of NC contacts for auxiliary contacts	1 1 1 1 1 10 A 6 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 6 A 7 A 7 A 7 A 7 A 7 A 7 A 7 A 7 A 7 A 7
number of NC contacts for auxiliary contacts         • instantaneous contact  number of NO contacts for auxiliary contacts         • instantaneous contact  operational current at AC-12 maximum  operational current at AC-15         • at 230 V rated value         • at 400 V rated value         • at 690 V rated value  operational current at DC-12         • at 24 V rated value         • at 48 V rated value         • at 110 V rated value         • at 125 V rated value         • at 220 V rated value         • at 24 V rated value         • at 24 V rated value         • at 25 V rated value         • at 27 V rated value         • at 28 V rated value         • at 29 V rated value         • at 20 V rated value         • at 20 V rated value         • at 30 V rated value         • at 48 V rated value         • at 48 V rated value         • at 48 V rated value         • at 24 V rated value         • at 24 V rated value	1 1 1 1 1 1 10 A 6 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 3 A 2 A 1 A 0.15 A
number of NC contacts for auxiliary contacts	1 1 1 1 1 1 10 A 6 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 7 A 7 A 7 A 7 A 7 A 7 A 7 A 7 A 7 A 7
number of NC contacts for auxiliary contacts	1 1 1 1 1 10 A 6 A 3 A 2 A 1 A 10 A 6 A 6 A 3 A 2 A 1 A 0.15 A
number of NC contacts for auxiliary contacts	1 1 1 1 1 10 A 6 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 3 A 2 A 1 A 0.15 A  10 A 2 A 2 A 1 A 0.9 A
number of NC contacts for auxiliary contacts	1 1 1 1 1 1 10 A 6 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 3 A 2 A 1 A 0.15 A  10 A 2 A 2 A 1 A 0.9 A 0.3 A
number of NC contacts for auxiliary contacts	1 1 1 1 1 10 A 6 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 3 A 2 A 1 A 0.15 A  10 A 2 A 2 A 1 A 0.9 A
number of NC contacts for auxiliary contacts	1 1 1 1 1 1 10 A 6 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 3 A 2 A 1 A 0.15 A  10 A 2 A 2 A 1 A 0.9 A 0.3 A

<ul> <li>at 480 V rated value</li> </ul>	77 A				
at 600 V rated value	62 A				
yielded mechanical performance [hp]					
<ul> <li>for single-phase AC motor</li> </ul>					
<ul> <li>— at 110/120 V rated value</li> </ul>	7.5 hp				
— at 230 V rated value	15 hp				
<ul> <li>for 3-phase AC motor</li> </ul>					
— at 200/208 V rated value	25 hp				
<ul> <li>— at 220/230 V rated value</li> </ul>	30 hp				
— at 460/480 V rated value	60 hp				
— at 575/600 V rated value	60 hp				
contact rating of auxiliary contacts according to UL	A600 / P600				
Short-circuit protection					
product function short circuit protection	No				
design of the fuse link					
<ul> <li>for short-circuit protection of the main circuit</li> </ul>					
<ul> <li>— with type of coordination 1 required</li> </ul>	gG: 250 A (690 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A				
	(415 V, 80 kA)				
<ul> <li>— with type of assignment 2 required</li> </ul>	gG: 160A (690V,100kA), aM: 80A (690V,100kA), BS88: 125A				
• for short circuit protection of the auxilians quite	(415V,80kA)				
<ul> <li>for short-circuit protection of the auxiliary switch required</li> </ul>	gG: 10 A (500 V, 1 kA)				
Installation/ mounting/ dimensions					
mounting position	+/-180° rotation possible on vertical mounting surface; can be tilted				
	forward and backward by +/- 22.5° on vertical mounting surface				
fastening method	screw and snap-on mounting onto 35 mm standard mounting rail				
	according to DIN EN 60715				
side-by-side mounting	Yes				
height	140 mm				
width	70 mm				
depth	152 mm				
required spacing					
<ul><li>with side-by-side mounting</li></ul>					
— forwards	20 mm				
— upwards	10 mm				
— downwards	10 mm				
— at the side	0 mm				
<ul> <li>for grounded parts</li> </ul>					
— forwards	20 mm				
— upwards	10 mm				
— at the side	10 mm				
— downwards	10 mm				
for live parts					
— forwards	20 mm				
— upwards	10 mm				
— downwards	10 mm				
— at the side	10 mm				
Connections/ Terminals					
type of electrical connection					
for main current circuit	screw-type terminals				
<ul> <li>for auxiliary and control circuit</li> </ul>	spring-loaded terminals				
<ul> <li>at contactor for auxiliary contacts</li> </ul>	Spring-type terminals				
of magnet coil	Spring-type terminals				
type of connectable conductor cross-sections					
for main contacts					
<ul> <li>finely stranded with core end processing</li> </ul>	2x (2.5 35 mm²), 1x (2.5 50 mm²)				
at AWG cables for main contacts	2x (10 1/0), 1x (10 2)				
type of connectable conductor cross-sections					
for auxiliary contacts					
— solid or stranded	2x (0.5 2.5 mm²)				
<ul> <li>finely stranded with core end processing</li> </ul>	2x (0.5 1.5 mm²)				

<ul> <li>finely stranded without core end processing</li> </ul>	2x (0.5 2.5 mm²)
<ul> <li>at AWG cables for auxiliary contacts</li> </ul>	2x (20 16)
AWG number as coded connectable conductor cross section	
<ul> <li>for main contacts</li> </ul>	10 2
<ul> <li>for auxiliary contacts</li> </ul>	20 14
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
B10 value with high demand rate according to SN 31920	1 000 000
proportion of dangerous failures	
<ul> <li>with low demand rate according to SN 31920</li> </ul>	40 %
<ul> <li>with high demand rate according to SN 31920</li> </ul>	73 %
failure rate [FIT] with low demand rate according to SN 31920	100 FIT
protection class IP on the front according to IEC 60529	IP20
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front
Communication/ Protocol	
product function bus communication	No
Certificates/ approvals	

**General Product Approval** 





Confirmation



<u>KC</u>



EMC	Functional Safety/Safety of Machinery	Declaration of Conformity		Test Certificates	Marine / Shipping
^	Type Examination		UK Declaration of	Type Test Certific-	-



Certificate



Conformity

ates/Test Report



Marine / Shipping other Railway









Confirmation

Vibration and Shock

## Railway

Special Test Certificate Type Test Certificates ates/Test Report

## Further information

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=3RT2045-3XF40-0LA2

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2045-3XF40-0LA2

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) <a href="https://support.industry.siemens.com/cs/ww/en/ps/3RT2045-3XF40-0LA2">https://support.industry.siemens.com/cs/ww/en/ps/3RT2045-3XF40-0LA2</a>

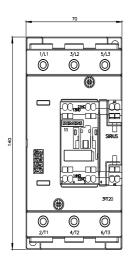
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) <a href="http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT2045-3XF40-0LA2&lang=en">http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT2045-3XF40-0LA2&lang=en</a>

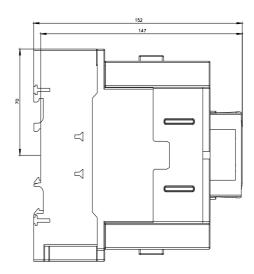
Characteristic: Tripping characteristics, I2t, Let-through current

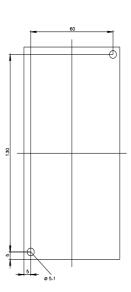
https://support.industry.siemens.com/cs/ww/en/ps/3RT2045-3XF40-0LA2/char

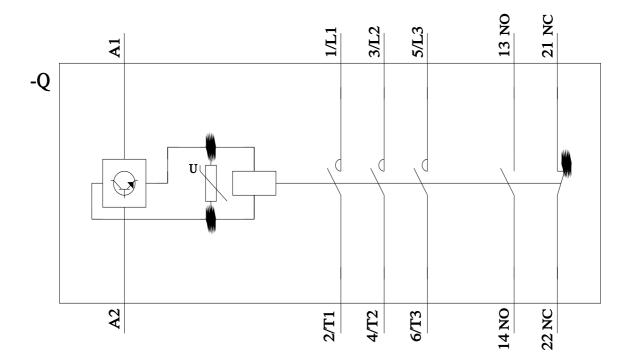
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2045-3XF40-0LA2&objecttype=14&gridview=view1









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