SIEMENS

Data sheet 3RV2041-4FA10



Circuit breaker size S3 for motor protection, CLASS 10 A-release 28...40 A N-release 520 A screw terminal Standard switching capacity

size of the circuit-breaker \$3 size of contactor can be combined company-specific product extension auxiliary switch Yes power loss [W] for rated value of the current	product brand name	SIRIUS
product type designation General technical data size of the circuit-breaker size of contactor can be combined company-specific product extension 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 insulation voltage with degree of pollution 3 at AC rated value surge voltage resistance rated value maximum permissible voltage for safe isolation in networks with grounded star point • between main and auxiliary circuit • of the main contacts typical electrical endurance (switching cycles) typical electrical endurance (switching cycles) typical certificate of suitability according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU certificate of suitability according to peration • ambient temperature during operation • ambient temperature during storage • ambient temperature during storage • ambient temperature during operation Main circuit number of poles for main current circuit 3 8kV 1 000 V 23 W 400 V 5 KN 400 V 5 5 W 5 W 5 S W 5	product designation	Circuit breaker
Size of the circuit-breaker size of contactor can be combined company-specific product extension auxiliary switch et at AC in hot operating state et at AC in hot operating state pole insulation voltage with degree of pollution 3 at AC rated value emaximum permissible voltage for safe isolation in networks with grounded star point ebetween main and auxiliary circuit ebetween main and auxiliary circuit ebetween main and auxiliary circuit ef of auxiliary contacts typical electrical endurance (switching cycles) typical electrical endurance (switching cycles) typical type of protection according to ATEX directive 2014/34/EU reference code acc. to IEC 81346-2 Q Ambient conditions installation allitude at height above sea level maximum ember of poles for main current circuit number of poles for main current circuit number of poles for main current circuit number of poles for main current circuit sa W 23 W 7 (** 23 W 7 (** 24 W 7 (** 25 W 7 (** 26 W 7 (** 27 W 7 (** 28 K) 400 V 400	design of the product	For motor protection
size of the circuit-breaker size of contactor can be combined company-specific product extension auxiliary switch power loss [W] for rated value of the current	product type designation	3RV2
size of contactor can be combined company-specific product extension 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 insulation voltage with degree of pollution 3 at AC rated value surge voltage resistance rated value surge voltage resistance rated value maximum permissible voltage for safe isolation in networks with grounded star point • between main and auxiliary circuit • of the main contacts typical • of the main contacts typical • of auxiliary contacts typical • of auxiliary contacts typical electrical endurance (switching cycles) typical type of protection according to ATEX directive 2014/3/4/EU certificate of suitability according to ATEX directive 2014/3/4/EU reference code acc. to IEC 81346-2 Q Ambient conditions installation altitude at height above sea level maximum • ambient temperature during operation • ambient temperature during storage • ambient temperature during transport • ambient temperature during transport relative humidity during operation mumber of poles for main current circuit 9 3 Yes Yes Yes 1 000 V 1 000 V 4 000 V 4 00 V 4 00 V 4 00 V 5 50 / 11 ms Sinus 2 50 00 5 50 00 5 50 00 5 50 00 5 50 00 5 50 00 5 50 00 5 50 00 5 50 00 5 50 00 5 50 00 6 7 5 00 00 6 7 6 00 00 6 00 00 00 6 00 00 00 00 6 00 00 00 00 00 6 00 00 00 00 00 6 00 00 00 00 00 00 6 00 00 00 00 00 00 6 00 00 00 00 00 00 00 6 00 00 00 00 00 00 00 00 6 00 00 00 00 00 00 00 00 00 00 6 00 00 00 00 00 00 00 00 00 00 00 00 00	General technical data	
product extension auxiliary switch power loss [W] for rated value of the current	size of the circuit-breaker	S3
power loss [W] for rated value of the current at AC in hot operating state 23 W at AC in hot operating state per pole insulation voltage with degree of pollution 3 at AC rated value surge voltage resistance rated value maximum permissible voltage for safe isolation in networks with grounded star point between main and auxiliary circuit 400 V between main and auxiliary circuit 400 V shock resistance acc. to IEC 60068-2-27 25g / 11 ms Sinus mechanical service life (switching cycles) of the main contacts typical 25 000 electrical endurance (switching cycles) typical 25 000 electrical endurance (switching cycles) typical 25 000 electrical endurance (switching cycles) typical 2014/34/EU certificate of suitability according to ATEX directive 200 m • ambient temperature during operation -20 +60 °C • ambient temperature during transport -50 +80 °C	size of contactor can be combined company-specific	S3
at AC in hot operating state at AC in hot operating state per pole insulation voltage with degree of pollution 3 at AC rated value surge voltage resistance rated value maximum permissible voltage for safe isolation in networks with grounded star point between main and auxiliary circuit betwee	product extension auxiliary switch	Yes
• at AC in hot operating state per pole insulation voltage with degree of pollution 3 at AC rated value surge voltage resistance rated value maximum permissible voltage for safe isolation in networks with grounded star point • between main and auxiliary circuit • of the main contacts typical • of auxiliary contacts typical • of auxiliary contacts typical • of auxiliary contacts typical • of protection according to ATEX directive 2014/34/EU reference code acc. to IEC 81346-2 Ambient conditions installation altitude at height above sea level maximum • ambient temperature during operation • ambient temperature during storage • ambient temperature during transport - 50 +80 °C • ambient temperature during operation • 20 +60 °C • ambient temperature during transport - 50 +80 °C • ambient temperature during operation • 20 +60 °C • ambient temperature during transport - 50 +80 °C • ambient temperature during transport - 50 +80 °C • ambient temperature during operation • 20 +60 °C • ambient temperature during transport - 50 +80 °C • ambient temperature during transport - 50 +80 °C • ambient temperature during transport - 50 +80 °C • ambient conditions relative humidity during operation • 20 +60 °C • ambient compensation relative humidity during operation 3	power loss [W] for rated value of the current	
insulation voltage with degree of pollution 3 at AC rated value surge voltage resistance rated value maximum permissible voltage for safe isolation in networks with grounded star point • between main and auxiliary circuit • between main and auxiliary circuit • between main and auxiliary circuit shock resistance acc. to IEC 60068-2-27 mechanical service life (switching cycles) • of the main contacts typical • of auxiliary contacts typical electrical endurance (switching cycles) typical type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU reference code acc. to IEC 81346-2 Q Ambient conditions installation altitude at height above sea level maximum • ambient temperature during operation • ambient temperature during storage • ambient temperature during transport -50 +80 °C • ambient temperature during transport -50 +80 °C temperature compensation relative humidity during operation 10 95 % Main circuit number of poles for main current circuit 3 400 V 40 V 400	 at AC in hot operating state 	23 W
value surge voltage resistance rated value maximum permissible voltage for safe isolation in networks with grounded star point • between main and auxiliary circuit * 400 V * shock resistance acc. to IEC 60068-2-27 * 25g / 11 ms Sinus mechanical service life (switching cycles) • of the main contacts typical • of auxiliary contacts typical 25 000 electrical endurance (switching cycles) typical 25 000 type of protection according to ATEX directive 2014/34/EU reference code acc. to IEC 81346-2 Q Ambient conditions installation altitude at height above sea level maximum • ambient temperature during operation • ambient temperature during storage • ambient temperature during storage • ambient temperature during transport -50 +60 °C • ambient temperature during transport -50 +80 °C relative humidity during operation 10 95 % Main circuit number of poles for main current circuit 3	at AC in hot operating state per pole	7.7 W
maximum permissible voltage for safe isolation in networks with grounded star point • between main and auxiliary circuit • duo V shock resistance acc. to IEC 60068-2-27 mechanical service life (switching cycles) • of the main contacts typical • of auxiliary contacts typical • Ex II (2) GD 25 000 Ex II (2) GD 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU reference code acc. to IEC 81346-2 Q Ambient conditions installation altitude at height above sea level maximum • ambient temperature during operation • ambient temperature during storage • ambient temperature during storage • ambient temperature during transport • ambient temperature during transport • ambient temperature during transport • 20 +60 °C relative humidity during operation • 3	9 9 1	1 000 V
networks with grounded star point	surge voltage resistance rated value	8 kV
between main and auxiliary circuit shock resistance acc. to IEC 60068-2-27 25g / 11 ms Sinus mechanical service life (switching cycles) of the main contacts typical of auxiliary contacts typical electrical endurance (switching cycles) typical electrical endurance (switching cycles) typical 25 000 electrical endurance (switching cycles) typical 25 000 type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU reference code acc. to IEC 81346-2 Q Ambient conditions installation altitude at height above sea level maximum ambient temperature during operation ambient temperature during storage ambient temperature during storage ambient temperature during transport -50 +80 °C temperature compensation relative humidity during operation 10 95 % Main circuit number of poles for main current circuit 3		
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mechanical service life (switching cycles) of the main contacts typical of auxiliary contacts typical electrical endurance (switching cycles) typical 25 000 Ex II (2) GD type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU reference code acc. to IEC 81346-2 Q Ambient conditions installation altitude at height above sea level maximum of ambient temperature during operation of ambient temperature during storage of ambient temperature during transport temperature compensation -20 +60 °C -30 +80 °C	between main and auxiliary circuit	400 V
 of the main contacts typical of auxiliary contacts typical electrical endurance (switching cycles) typical 25 000 type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU reference code acc. to IEC 81346-2 Q Ambient conditions installation altitude at height above sea level maximum ambient temperature during operation ambient temperature during storage ambient temperature during transport 50 +80 °C temperature compensation -20 +60 °C relative humidity during operation 10 95 % Main circuit ambient current circuit 3 	shock resistance acc. to IEC 60068-2-27	25g / 11 ms Sinus
of auxiliary contacts typical electrical endurance (switching cycles) typical type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU reference code acc. to IEC 81346-2 Ambient conditions installation altitude at height above sea level maximum o ambient temperature during operation o ambient temperature during storage o ambient temperature during transport temperature compensation relative humidity during operation 10 95 % Main circuit number of poles for main current circuit 25 000 Ex II (2) GD DMT 02 ATEX F 001 DMT 02 ATEX F 001 2 000 Ex II (2) GD O C Ex II (2) GD O Ex I	mechanical service life (switching cycles)	
electrical endurance (switching cycles) typical type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU reference code acc. to IEC 81346-2 Ambient conditions installation altitude at height above sea level maximum • ambient temperature during operation • ambient temperature during storage • ambient temperature during storage • ambient temperature during transport temperature compensation relative humidity during operation number of poles for main current circuit 25 000 Ex II (2) GD DMT 02 ATEX F 001 DMT 02 ATEX F 001 20	 of the main contacts typical 	25 000
type of protection according to ATEX directive 2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU reference code acc. to IEC 81346-2 Ambient conditions installation altitude at height above sea level maximum 2 000 m • ambient temperature during operation -20 +60 °C • ambient temperature during storage -50 +80 °C • ambient temperature during transport -50 +80 °C temperature compensation -20 +60 °C relative humidity during operation -20 +60 °C multiple temperature during transport -50 +80 °C temperature compensation -20 +60 °C relative humidity during operation -20 +60 °C 10 95 %	of auxiliary contacts typical	25 000
2014/34/EU certificate of suitability according to ATEX directive 2014/34/EU reference code acc. to IEC 81346-2 Q Ambient conditions installation altitude at height above sea level maximum • ambient temperature during operation • ambient temperature during storage • ambient temperature during transport • ambient temperature during transport -50 +80 °C temperature compensation -20 +60 °C -50 +80 °C temperature compensation -20 +60 °C relative humidity during operation 10 95 % Main circuit number of poles for main current circuit 3	electrical endurance (switching cycles) typical	25 000
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 ambient temperature during storage ambient temperature during transport -50 +80 °C temperature compensation -20 +60 °C relative humidity during operation 10 95 % Main circuit number of poles for main current circuit 3 	installation altitude at height above sea level maximum	2 000 m
	 ambient temperature during operation 	-20 +60 °C
temperature compensation -20 +60 °C relative humidity during operation 10 95 % Main circuit number of poles for main current circuit 3	 ambient temperature during storage 	-50 +80 °C
relative humidity during operation 10 95 % Main circuit number of poles for main current circuit 3	ambient temperature during transport	-50 +80 °C
Main circuit number of poles for main current circuit 3	temperature compensation	-20 +60 °C
number of poles for main current circuit 3	relative humidity during operation	10 95 %
	Main circuit	
adjustable current response value current of the 28 40 A	number of poles for main current circuit	3
·	adjustable current response value current of the	28 40 A

current-dependent overload release			
 operating voltage rated value 	690 V		
 operating voltage at AC-3 rated value maximum 	690 V		
operating frequency rated value	50 60 Hz		
operational current rated value	40 A		
operational current at AC-3 at 400 V rated value	40 A		
operating power at AC-3			
at 230 V rated value	11 000 W		
at 400 V rated value	18 500 W		
at 500 V rated value	22 000 W		
• at 690 V rated value	37 000 W		
operating frequency at AC-3 maximum	15 1/h		
Protective and monitoring functions			
product function			
ground fault detection	No		
phase failure detection	Yes		
trip class	CLASS 10		
design of the overload release	thermal		
breaking capacity operating short-circuit current (Ics)			
at AC			
• at 240 V rated value	100 000 A		
at 400 V rated value	30 000 A		
at 500 V rated value	6 000 A		
breaking capacity maximum short-circuit current (Icu)			
• at AC at 240 V rated value	100 kA		
 at AC at 400 V rated value 	65 kA		
• at AC at 500 V rated value	12 kA		
• at AC at 690 V rated value	6 kA		
response value current of instantaneous short-circuit trip	520 A		
unit			
UL/CSA ratings			
full-load current (FLA) for 3-phase AC motor	40.4		
• at 480 V rated value	40 A		
at 600 V rated value	40 A		
yielded mechanical performance [hp]			
for single-phase AC motor			
— at 110/120 V rated value	3 hp		
— at 230 V rated value	7.5 hp		
 for 3-phase AC motor 			
— at 200/208 V rated value	15 hp		
— at 220/230 V rated value	15 hp		
— at 460/480 V rated value	30 hp		
— at 575/600 V rated value	40 hp		
Short-circuit protection			
product function short circuit protection	Yes		
design of the short-circuit trip	magnetic		
Installation/ mounting/ dimensions			
mounting position	any		
fastening method	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715		
height	165 mm		
width	70 mm		
depth	176 mm		
required spacing			
 for grounded parts at 400 V 			
— downwards	70 mm		
— upwards	70 mm		
— at the side	10 mm		



a for live parts at 400 V		
• for live parts at 400 V	70	
— downwards	70 mm	
— upwards	70 mm	
— at the side	10 mm	
• for grounded parts at 500 V	440	
— downwards	110 mm	
— upwards	110 mm	
— at the side	10 mm	
• for live parts at 500 V	440	
— downwards	110 mm	
— upwards	110 mm	
— at the side	10 mm	
for grounded parts at 690 V	450	
— downwards	150 mm	
— upwards	150 mm	
— backwards	0 mm	
— at the side	30 mm	
— forwards	0 mm	
• for live parts at 690 V		
— downwards	150 mm	
— upwards	150 mm	
— backwards	0 mm	
— at the side	30 mm	
— forwards	0 mm	
Connections/ Terminals		
product function removable terminal for auxiliary and control circuit	No	
type of electrical connection		
for main current circuit	screw-type terminals	
arrangement of electrical connectors for main current circuit	Top and bottom	
type of connectable conductor cross-sections		
for main contacts		
— solid	2x (2.5 16 mm²)	
— solid or stranded	2x (2,5 50 mm²), 1x (10 70 mm²)	
 finely stranded with core end processing 	2x (2.5 35 mm²), 1x (2.5 50 mm²)	
 finely stranded without core end processing 	2x (10 35 mm²), 1x (10 50 mm²)	
• tightening torque		
— for main contacts for ring cable lug	4.5 6 N·m	
outer diameter of the usable ring cable lug maximum	19 mm	
 tightening torque for main contacts with screw-type terminals 	4.5 6 N·m	
Safety related data		
B10 value		
with high demand rate acc. to SN 31920	5 000	
proportion of dangerous failures		
 with low demand rate acc. to SN 31920 	50 %	
with high demand rate acc. to SN 31920	50 %	
T1 value for proof test interval or service life acc. to IEC 61508	10 y	
protection class IP on the front acc. to IEC 60529	IP20	
touch protection on the front acc. to IEC 60529	finger-safe, for vertical contact from the front	
display version for switching status	Handle	
Certificates/ approvals		
General Product Approval		For use in hazardous locations













For use in
hazardous
locations

Declaration of Conformity

Test Certificates

<u>KC</u>

Marine / Shipping





Miscellaneous

Special Test <u>Certificate</u>

Type Test Certificates/Test Report



Marine / Shipping













other

Railway

Confirmation

Confirmation



Confirmation

Vibration and Shock

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=3RV2041-4FA10

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2041-4FA10

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

https://support.industry.siemens.com/cs/ww/en/ps/3RV2041-4FA10

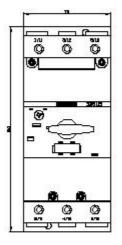
Characteristic: Tripping characteristics, I2t, Let-through current

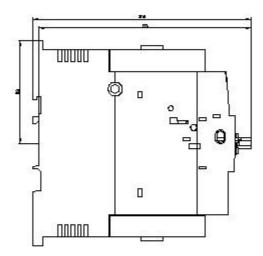
https://support.industry.siemens.com/cs/ww/en/ps/3RV2041-4FA10/char

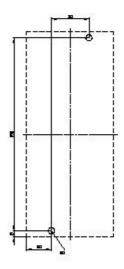
Further characteristics (e.g. electrical endurance, switching frequency)

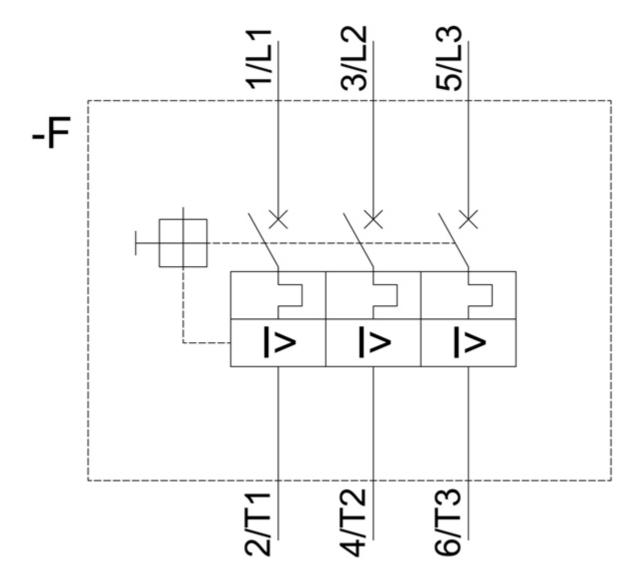
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2041-4FA10&objecttype=14&gridview=view1











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