3VA5250-7ED41-0AA0

Data sheet



Circuit breaker 3VA5 UL Frame 250 Breaking capacity class C 100kA @ 480 V 4-pole, line protection TM210, FTFM, In=50A Overload protection Ir=50A fixed Short-circuit protection Ii=10 x In N conductor Unprotected Without connection

product designation product designation / according to UL file CFAS product designation / according to UL file CFAS System protection design of the load switch / acc. to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type) design of the evercurrent release TM210	Model	
product designation / according to UL file Product version design of the load switch / acc. to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type) design of the overcurrent release protection function of the overcurrent release ILI number of poles General technical data Tension assignée d'isolement Ui Max. rated operational voltage Ue with AC 50/60Hz Max. rated operational voltage Ue with AC 50/60Hz Max. rated operational voltage Ue with DC power loss [W] / maximum 17.4 W Active power loss / for rated value of the current / at AC / in hot operating state / per pole mechanical service life (switching cycles) / typical Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz Electrical endurance (switching cycles) / at ABO V 8 000 electrical endurance (switching cycles) / at 80 V 9 000 Neutral conductors / upgradeable/retrofittable No	product brand name	SENTRON
Product version design of the load switch / acc. to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type) design of the overcurrent release protection function of the overcurrent release ILI number of poles General technical data Tension assignée d'isolement Ui Max. rated operational voltage Ue with AC 50/60Hz Max. rated operational voltage Ue with DC Max. rated operational voltage Ue with DC Jower loss [W] / maximum Jr.4 W Active power loss [W] / maximum Jr.4 W Active power loss [W] / maximum Jr.4 W Active power loss for rated value of the current / at AC / in hot operating state / per pole mechanical service life (switching cycles) / typical Belectrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz electrical endurance (switching cycles) / at AC-0 / at 8000 electrical endurance (switching cycles) / at AC-0 / at 8000 electrical endurance (switching cycles) / at AC-0 / at 8000 electrical endurance (switching cycles) / at 600 V Nound for the maximum of the form of the	product designation	Molded-case circuit breaker
design of the load switch / acc. to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type) design of the overcurrent release protection function of the overcurrent release ILI number of poles 4 General technical data Tension assignée d'isolement UI Max. rated operational voltage Ue with AC 50/60Hz 690 V Max. rated operational voltage Ue with DC 1000 V power loss [W] / maximum 17.4 W Active power loss [W] r for rated value of the current / at AC / in hot operating state / per pole mechanical service life (switching cycles) / typical Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690 4 000 4 50/60 Hz electrical endurance (switching cycles) / at 80 V electrical endurance (switching cycles) / at 600 V A 50/60 Hz electrical endurance (switching cycles) / at 600 V A 50/60 Hz electrical endurance (switching cycles) / at 600 V A 000 V 50/60 Hz electrical endurance (switching cycles) / at 600 V A 000 V 50/60 Hz electrical endurance (switching cycles) / at 600 V A 000 V 50/60 Hz electrical endurance (switching cycles) / at 600 V A 000 V 50/60 Hz electrical endurance (switching cycles) / byte of the following cycles) / byte of the cycles / by	product designation / according to UL file	CFAS
Conditioning, and Refrigeration circuit breaker (HACR Type) design of the overcurrent release protection function of the overcurrent release protection function of the overcurrent release number of poles 4 General technical data Tension assignée d'isolement Ui Max. rated operational voltage Ue with AC 50/60Hz Max. rated operational voltage Ue with DC 1 000 V power loss [M] / maximum 17.4 W Active power loss / for rated value of the current / at AC / in hot operating state / per pole mechanical service life (switching cycles) / typical Electrical endurance (switching cycles) / typical Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz Electrical endurance (switching cycles) / at ABO V 4 000 V 50/60 Hz electrical endurance (switching cycles) / at 480 V electrical endurance (switching cycles) / at 600 V Neutral conductors / upgradeable/retrofittable product function • communication function • oommunication function • oommunication function No • other measurement function Max. rated operational current of the frame size 250 A Courant permanent assigné lu • at 240 V 200 kA	Product version	System protection
protection function of the overcurrent release number of poles General technical data Tension assignée d'isolement Ui Max. rated operational voltage Ue with AC 50/60Hz Max. rated operational voltage Ue with DC power loss [W] / maximum 17.4 W Active power loss / for rated value of the current / at AC / in hot operating state / per pole mechanical service life (switching cycles) / typical Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz electrical endurance (switching cycles) / at 480 V 8 000 electrical endurance (switching cycles) / at 600 V Neutral conductors / upgradeable/retrofittable product function o communication function o toher measurement function No Current marking / acc. to UL 489 / 100%-rated breaker Max. rated operational current of the frame size Courant permanent assigné lu Switching capacity according to IEC 60947 switching capacity according to IEC 60947 switching capacity dass of the circuit breaker Dreaking capacity maximum short-circuit current (Icu) o at 240 V 200 kA	Conditioning, and Refrigeration circuit breaker (HACR Type)	Yes
number of poles General technical data Tension assignée d'isolement Ui 800 V Max. rated operational voltage Ue with AC 50/60Hz 690 V Max. rated operational voltage Ue with DC 1000 V power loss [W] / maximum 17.4 W Active power loss / for rated value of the current / at AC / in hot operating state / per pole mechanical service life (switching cycles) / typical 20 000 Electrical endurance (switching cycles) / typical 8 000 380/415 V 50/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz electrical endurance (switching cycles) / at 480 V 8 000 electrical endurance (switching cycles) / at 600 V 4 000 Neutral conductors / upgradeable/retrofittable No ground-fault monitoring version Without product function • communication function No • other measurement function No • other measurement function No Max. rated operational current of the frame size 250 A Courrant permanent assigné lu 50 A Switching capacity according to IEC 60947 switching capacity class of the circuit breaker C breaking capacity maximum short-circuit current (Icu) • at 240 V 200 kA	design of the overcurrent release	TM210
Tension assignée d'isolement Ui Max. rated operational voltage Ue with AC 50/60Hz Max. rated operational voltage Ue with DC 1 000 V power loss [W] / maximum 17.4 W Active power loss / for rated value of the current / at AC / in hot operating state / per pole mechanical service life (switching cycles) / typical Electrical endurance (switching cycles) / typical Electrical endurance (switching cycles) / at AC-1 / at 8 000 380/415 V 50/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz electrical endurance (switching cycles) / at 480 V 8 000 electrical endurance (switching cycles) / at 4600 V 4 000 Neutral conductors / upgradeable/retrofittable No ground-fault monitoring version Without product function • communication function • other measurement function No Ourrent marking / acc. to UL 489 / 100%-rated breaker No Max. rated operational current of the frame size 250 A Courant permanent assigné lu 50 A Switching capacity according to IEC 60947 switching capacity dass of the circuit breaker C breaking capacity maximum short-circuit current (licu) • at 240 V 200 kA	protection function of the overcurrent release	Ш
Tension assignée d'isolement Ui Max. rated operational voltage Ue with AC 50/60Hz 690 V Max. rated operational voltage Ue with DC 1 000 V power loss [W] / maximum 17.4 W Active power loss / for rated value of the current / at AC / in hot operating state / per pole mechanical service life (switching cycles) / typical Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz Electrical endurance (switching cycles) / at 480 V electrical endurance (switching cycles) / at 480 V electrical endurance (switching cycles) / at 600 V Neutral conductors / upgradeable/retrofittable ground-fault monitoring version v communication function • communication function • other measurement function No Current marking / acc. to UL 489 / 100%-rated breaker Max. rated operational current of the frame size Courant permanent assigné lu Switching capacity according to IEC 60947 switching capacity according to IEC 60947 switching capacity paximum short-circuit current (Icu) • at 240 V 200 kA	number of poles	4
Max. rated operational voltage Ue with AC 50/60Hz Max. rated operational voltage Ue with DC power loss [W] / maximum 17.4 W Active power loss / for rated value of the current / at AC / in hot operating state / per pole mechanical service life (switching cycles) / typical Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz electrical endurance (switching cycles) / at 480 V electrical endurance (switching cycles) / at 600 V Neutral conductors / upgradeable/retrofittable ground-fault monitoring version product function • communication function • other measurement function • other measurement function No Current marking / acc. to UL 489 / 100%-rated breaker Max. rated operational current of the frame size 250 A Courant permanent assigné lu 50 A Switching capacity according to IEC 60947 switching capacity class of the circuit breaker C breaking capacity paximum short-circuit current (Icu) • at 240 V 200 kA	General technical data	
Max. rated operational voltage Ue with DC power loss [W] / maximum 17.4 W Active power loss / for rated value of the current / at AC / in hot operating state / per pole mechanical service life (switching cycles) / typical Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz Electrical endurance (switching cycles) / at 480 V 8 000 electrical endurance (switching cycles) / at 600 V 4 000 Neutral conductors / upgradeable/retrofittable No ground-fault monitoring version Without product function • communication function • other measurement function • other measurement function No Current marking / acc. to UL 489 / 100%-rated breaker No Max. rated operational current of the frame size 250 A Courant permanent assigné lu 50 A Switching capacity according to IEC 60947 switching capacity class of the circuit breaker C breaking capacity maximum short-circuit current (Icu) • at 240 V 200 kA	Tension assignée d'isolement Ui	800 V
power loss [W] / maximum Active power loss / for rated value of the current / at AC / in hot operating state / per pole mechanical service life (switching cycles) / typical Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz electrical endurance (switching cycles) / at 480 V 8 000 electrical endurance (switching cycles) / at 600 V 4 000 Neutral conductors / upgradeable/retrofittable No ground-fault monitoring version Without product function • communication function No • other measurement function No Max. rated operational current of the frame size 250 A Courant permanent assigné lu 50 A Switching capacity according to IEC 60947 switching capacity dass of the circuit breaker C breaking capacity maximum short-circuit current (Icu) • at 240 V 200 kA	Max. rated operational voltage Ue with AC 50/60Hz	690 V
Active power loss / for rated value of the current / at AC / in hot operating state / per pole mechanical service life (switching cycles) / typical 20 000 Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz electrical endurance (switching cycles) / at 480 V 8 000 electrical endurance (switching cycles) / at 600 V 4 000 Neutral conductors / upgradeable/retrofittable No ground-fault monitoring version Without product function • communication function No • other measurement function No Max. rated operational current of the frame size 250 A Courant permanent assigné lu 50 A Switching capacity according to IEC 60947 switching capacity class of the circuit breaker C breaking capacity maximum short-circuit current (Icu) • at 240 V 200 kA	Max. rated operational voltage Ue with DC	1 000 V
in hot operating state / per pole mechanical service life (switching cycles) / typical 20 000 Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz electrical endurance (switching cycles) / at 480 V 8 000 electrical endurance (switching cycles) / at 600 V 4 000 Neutral conductors / upgradeable/retrofittable No ground-fault monitoring version Without product function • communication function • other measurement function No Current marking / acc. to UL 489 / 100%-rated breaker No Max. rated operational current of the frame size 250 A Courant permanent assigné lu 50 A Switching capacity according to IEC 60947 switching capacity class of the circuit breaker C breaking capacity maximum short-circuit current (Icu) • at 240 V 200 kA	power loss [W] / maximum	17.4 W
Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz electrical endurance (switching cycles) / at 480 V 8 000 electrical endurance (switching cycles) / at 600 V 4 000 Neutral conductors / upgradeable/retrofittable No ground-fault monitoring version Without product function • communication function No • other measurement function No Current marking / acc. to UL 489 / 100%-rated breaker No Max. rated operational current of the frame size 250 A Courant permanent assigné lu 50 A Switching capacity according to IEC 60947 switching capacity class of the circuit breaker C breaking capacity maximum short-circuit current (Icu) • at 240 V 200 kA	·	5.8 W
Blectrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz electrical endurance (switching cycles) / at 480 V 8 000 electrical endurance (switching cycles) / at 600 V 4 000 Neutral conductors / upgradeable/retrofittable No ground-fault monitoring version Without product function • communication function No • other measurement function No Current marking / acc. to UL 489 / 100%-rated breaker No Max. rated operational current of the frame size 250 A Courant permanent assigné lu 50 A Switching capacity according to IEC 60947 switching capacity class of the circuit breaker C breaking capacity maximum short-circuit current (Icu) • at 240 V 200 kA	mechanical service life (switching cycles) / typical	20 000
electrical endurance (switching cycles) / at 480 V 8 000 electrical endurance (switching cycles) / at 600 V 4 000 Neutral conductors / upgradeable/retrofittable No ground-fault monitoring version Without product function • communication function No • other measurement function No Current marking / acc. to UL 489 / 100%-rated breaker No Max. rated operational current of the frame size 250 A Courant permanent assigné lu 50 A Switching capacity according to IEC 60947 switching capacity class of the circuit breaker C breaking capacity maximum short-circuit current (Icu) • at 240 V 200 kA		8 000
electrical endurance (switching cycles) / at 600 V Neutral conductors / upgradeable/retrofittable ground-fault monitoring version Product function Current marking / acc. to UL 489 / 100%-rated breaker Max. rated operational current of the frame size Courant permanent assigné lu Switching capacity according to IEC 60947 switching capacity class of the circuit breaker breaking capacity maximum short-circuit current (Icu) at 240 V A 000 4 000 No Without No No No Son Son Courant permanent function No Son Courant permanent assigné lu Son Courant permanent assigné lu Son Courant permanent assigné lu Son Son Son Courant permanent assigné lu Son Son Son Courant permanent assigné lu Son Son Courant permanent assigné lu Son Son Son Courant permanent assigné lu Son Son Son Courant permanent assigné lu Son Son Courant permanent assigné lu Son Son Son Courant permanent assigné lu Son Son Son Son Son Son Son So	(4 000
Neutral conductors / upgradeable/retrofittable ground-fault monitoring version • communication function • other measurement function Mo Current marking / acc. to UL 489 / 100%-rated breaker Max. rated operational current of the frame size Courant permanent assigné lu Switching capacity according to IEC 60947 switching capacity class of the circuit breaker breaking capacity maximum short-circuit current (Icu) • at 240 V Without No No No So Courant permanent assigné lu 50 A Courant permanent assigné lu 50 A Switching capacity according to IEC 60947 Switching capacity maximum short-circuit current (Icu) • at 240 V 200 kA	electrical endurance (switching cycles) / at 480 V	8 000
ground-fault monitoring version product function communication function other measurement function Mo Current marking / acc. to UL 489 / 100%-rated breaker Max. rated operational current of the frame size Courant permanent assigné lu Switching capacity according to IEC 60947 switching capacity maximum short-circuit current (Icu) other at 240 V Without No No Current No Current Courant permanent assigné lu 50 A Courant permanent assigné lu 50 A Switching capacity according to IEC 60947 switching capacity class of the circuit breaker Dreaking capacity maximum short-circuit current (Icu) other at 240 V 200 kA	electrical endurance (switching cycles) / at 600 V	4 000
product function	Neutral conductors / upgradeable/retrofittable	No
 ◆ communication function ♦ other measurement function No Current marking / acc. to UL 489 / 100%-rated breaker Max. rated operational current of the frame size Courant permanent assigné lu Switching capacity according to IEC 60947 switching capacity class of the circuit breaker breaking capacity maximum short-circuit current (Icu) ♦ at 240 V 200 kA 	ground-fault monitoring version	Without
● other measurement function No Current marking / acc. to UL 489 / 100%-rated breaker No Max. rated operational current of the frame size 250 A Courant permanent assigné lu 50 A Switching capacity according to IEC 60947 switching capacity class of the circuit breaker C breaking capacity maximum short-circuit current (Icu) ● at 240 V 200 kA	product function	
Current marking / acc. to UL 489 / 100%-rated breaker No Max. rated operational current of the frame size 250 A Courant permanent assigné lu 50 A Switching capacity according to IEC 60947 switching capacity class of the circuit breaker C breaking capacity maximum short-circuit current (Icu) ● at 240 V 200 kA	 communication function 	No
marking / acc. to UL 489 / 100%-rated breaker Max. rated operational current of the frame size Courant permanent assigné lu Switching capacity according to IEC 60947 switching capacity class of the circuit breaker breaking capacity maximum short-circuit current (Icu) • at 240 V No 50 A C C 250 A C 200 kA	 other measurement function 	No
Max. rated operational current of the frame size Courant permanent assigné lu Switching capacity according to IEC 60947 switching capacity class of the circuit breaker breaking capacity maximum short-circuit current (Icu) • at 240 V 200 kA	Current	
Courant permanent assigné lu 50 A Switching capacity according to IEC 60947 switching capacity class of the circuit breaker C breaking capacity maximum short-circuit current (Icu) • at 240 V 200 kA	marking / acc. to UL 489 / 100%-rated breaker	No
Switching capacity according to IEC 60947 switching capacity class of the circuit breaker breaking capacity maximum short-circuit current (Icu) • at 240 V 200 kA	Max. rated operational current of the frame size	250 A
switching capacity class of the circuit breaker breaking capacity maximum short-circuit current (Icu) • at 240 V 200 kA	Courant permanent assigné lu	50 A
breaking capacity maximum short-circuit current (Icu) • at 240 V 200 kA	Switching capacity according to IEC 60947	
• at 240 V 200 kA	switching capacity class of the circuit breaker	С
	breaking capacity maximum short-circuit current (Icu)	
• at 415 V 85 kA	• at 240 V	200 kA
	• at 415 V	85 kA

● at 690 V	10 kA
breaking capacity operating short-circuit current (Ics)	
● at 240 V	200 kA
● at 415 V	85 kA
● at 690 V	10 kA
short-circuit current making capacity (Icm)	
● at 240 V	440 kA
● at 415 V	187 kA
● at 690 V	17 kA
design of short-circuit protection	For switching power values in DC networks, see the 3VA molded case circuit breaker device manual; link to be found under Service & Support in the last chapter
Switching capacity according to UL 489	
breaking capacity current	
• at 240 V	200 kA
● at 480 V	100 kA
● at 600 Y/347 V	35 kA
Adjustable parameters	
Adjustable response value current / lg min.	50 A
Adjustable response value current / lg min.	50 A
Adjustable response value current / li min.	500 A
Adjustable response value current / li max.	500 A
design of the N-conductor protection	Without
Ground fault protection / tripping switchable / I2t=ON/OFF	No
Mechanical Design	
height [in]	7.3 in
Height	185 mm
width [in]	5.5 in
Width	140 mm
depth [in]	3.3 in
depth	83 mm
Connections	
arrangement of electrical connectors / for main current circuit	Without connection
type of electrical connection / for main current circuit	Without
Auxiliary circuit	
number of CO contacts / for auxiliary contacts	0
Accessories	
product extension / optional / motor drive	Yes
Environmental conditions	
protection class IP / on the front	IP40
ambient temperature	
during operation / minimum	-25 °C
during operation / maximum	70 °C
during storage / minimum	-40 °C
during storage / maximum	80 °C
Certificates	
reference code / acc. to IEC 81346-2	Q
certificate of suitability / as approval for NAVAL (no combat vessels) / supplement SB	No
General Product Approval	
σοποιαι Γτουμοι Αρμιοναι	







Miscellaneous













Miscellaneous

Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

http://www.siemens.com/lowvoltage/catalogs

Industry Mall (Online ordering system)

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

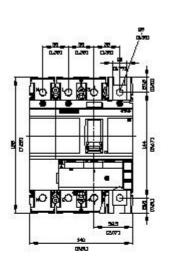
https://support.industry.siemens.com/cs/ww/en/ps/3VA5250-7ED41-0AA0

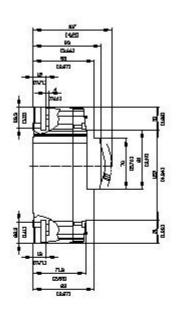
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)

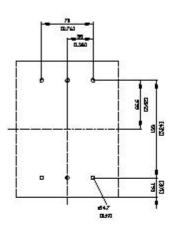
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5250-7ED41-0AA0

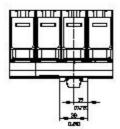
Tender specifications

http://www.siemens.com/specifications









last modified: