

circuit breaker 3VT1 standard breaking capacity $I_{cu}=25kA$, 415V AC
 4-pole, line protection trip unit TM, $I_n=50A$ rated current
 $I_R=40...50A$ overload protection $I_t=250...500A$, short-circuit
 protection N-conductor unprotected without auxiliary release without
 auxiliary/alarm switch with front terminals



Model	
Product brand name	SENTRON
Product designation	3VT1_5 molded case circuit breakers
Design of the operating mechanism	toggle handle
Type of the driving mechanism / motor drive	No
Design of the overcurrent release	TM
General technical data	
Number of poles	4
Size of the circuit-breaker	3VT1
Electrical endurance (switching cycles) / typical	6 000
Usage category	A
Performance class for circuit breaker	N
Mechanical service life (switching cycles) / typical	20 000
Operating frequency / maximum	120 1/h
Voltage	
Insulation voltage / rated value	690 V
Surge voltage resistance / rated value	8 kV
Protection class	

Protection class IP	IP40
protection function of the overcurrent release	LI
Dissipation	
Power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	1.66 W
Current	
Operating current / at 45 °C / rated value	48 A
Continuous current / rated value	50 A
Derating temperature / for the rated value of the continuous current	40 °C
adjustable pick-up value current	
<ul style="list-style-type: none"> • of the current-dependent overload release / Full-scale value 	50 A
<ul style="list-style-type: none"> • of instantaneous short-circuit trip unit / initial value 	250 A
<ul style="list-style-type: none"> • of instantaneous short-circuit trip unit / Full-scale value 	500 A
Main circuit	
Operating frequency	
<ul style="list-style-type: none"> • 1 / rated value 	50 Hz
<ul style="list-style-type: none"> • 2 / rated value 	60 Hz
Operating current	
<ul style="list-style-type: none"> • at 40 °C / rated value 	50 A
<ul style="list-style-type: none"> • at 50 °C / rated value 	48 A
Auxiliary circuit	
Number of CO contacts / for auxiliary contacts	0
Number of NC contacts / for auxiliary contacts	0
Number of NO contacts / for auxiliary contacts	0
Suitability	
Suitability for use	system protection
<ul style="list-style-type: none"> • Disconnecting means 	Yes
Adjustable parameters	
adjustable pick-up value current / of the current-dependent overload release / initial value	40 A
Product details	
Product component	
<ul style="list-style-type: none"> • Trip indicator 	No
<ul style="list-style-type: none"> • Auxiliary switch 	No
<ul style="list-style-type: none"> • Voltage trigger 	No
<ul style="list-style-type: none"> • undervoltage release 	No

• undervoltage release with leading contact	No
Product extension / optional / motor drive	Yes
Product function	
Product function	
• of thermal overload trip unit	adjustable
• Ground fault protection	No
• for neutral conductors / Short-circuit and overload proof	No
• Phase failure detection	No
• Overload protection	Yes
Short circuit	
Operational short-circuit current breaking capacity (Ics)	
• at 240 V / rated value	20 kA
• at 415 V / rated value	13 kA
• at 500 V / rated value	6 kA
• at 690 V / rated value	3 kA
Maximum short-circuit current breaking capacity (Icu)	
• at 240 V / rated value	40 kA
• at 415 V / rated value	25 kA
• at 500 V / rated value	12 kA
• at 690 V / rated value	6 kA
Connections	
Arrangement of electrical connectors / for main current circuit	front side
Type of electrical connection / for main current circuit	screw-type terminals
Mechanical Design	
Height	130 mm
Width	100 mm
Depth	80 mm
Mounting type	fixed mounting
Mounting position	with vertical mounting surface +/-180° rotatable, with vertical mounting surface +/- 30° tiltable to the front and back
Net weight	1.336 kg
Environmental conditions	
Ambient temperature / during operation	
• minimum	-40 °C
• maximum	55 °C
Ambient temperature / during storage	
• minimum	-40 °C
• maximum	55 °C

Certificates

Reference code

- acc. to DIN EN 61346-2 Q
- acc. to DIN EN 81346-2 Q

Test Certificates

other

[Type Test Certificates/Test Report](#)

[Miscellaneous](#)

[Manufacturer Declaration](#)

Further information

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

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

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mfb=3VT1705-2EC45-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VT1705-2EC45-0AA0>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mfb=3VT1705-2EC45-0AA0

CAX-Online-Generator

<http://www.siemens.com/cax>

Tender specifications

<http://www.siemens.com/specifications>

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