Data sheet



circuit breaker 3VT1 standard breaking capacity Icu=25kA, 415V AC 3-pole, line protection trip unit TM, LI In=100A rated current IR=80...100A overload prot. II=500...1000A, short-circuit protection 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	3	
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
Protective function of the overcurrent release	u
Dissipation	
Power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	3.33 W
Current	
Operating current / at 45 °C / rated value	91 A
Continuous current / rated value	100 A
Derating temperature / for the rated value of the continuous current	40 °C
Adjustable pick-up value current	
 of the current-dependent overload release / Full-scale value 	100 A
 of instantaneous short-circuit trip unit / initial value 	500 A
 of instantaneous short-circuit trip unit / Full- scale value 	1 000 A
Main circuit	
Operating frequency	
• 1 / rated value	50 Hz
• 2 / rated value	60 Hz
Operating current	
• at 40 °C / rated value	100 A
• at 50 °C / rated value	91 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
Disconnecting means	Yes
Adjustable parameters	
Adjustable pick-up value current / of the current- dependent overload release / initial value	80 A
Product details	
Product component	
Trip indicator	No
Auxiliary switch	No
Voltage trigger	No
undervoltage release	No

Product function Product function Product function of thermal overload trip unit Ground fault protection of neutral conductors / Short-circuit and overload proof Phase failure detection Operational short-circuit current breaking capacity (Ics) of at 240 V / rated value of at 500 V / rated value of at	undervoltage release with leading contact	No
Product function of thermal overload trip unit Ground fault protection for neutral conductors / Short-circuit and overload proof Phase failure detection Overload protection No Overload protection Poerational short-circuit current breaking capacity (Ics) other at 240 V / rated value other at 500	Product extension / optional / motor drive	Yes
Product function of thermal overload trip unit Ground fault protection for neutral conductors / Short-circuit and overload proof Phase failure detection Overload protection No Overload protection Poerational short-circuit current breaking capacity (Ics) other at 240 V / rated value other at 500	Product function	
Ground fault protection for neutral conductors / Short-circuit and overload proof Phase failure detection Overload protection No Overload protection Short circuit Operational short-circuit current breaking capacity (Ics) • at 240 V / rated value • at 415 V / rated value • at 690 V / rated value • at 240 V / rated value • at 690 V / rated value • fixA • at 690 V / rated value • at 690		
Ground fault protection for neutral conductors / Short-circuit and overload proof Phase failure detection Overload protection Short circuit Operational short-circuit current breaking capacity ((ts) at 240 V / rated value at 415 V / rated value at 690 V / rated value at 240 V / rated value back A Ask A Maximum short-circuit current breaking capacity ((tcu)) at 240 V / rated value at 415 V / rated value at 415 V / rated value back A at 415 V / rated value at 500 V / rated value at 690 V / rated value at 690 V / rated value back A at 690 V / rated value front side Connections Arrangement of electrical connectors / for main current circuit Type of electrical connection / for main current circuit screw-type terminals Mechanical Design Height 130 mm 75 mm Depth Bo mm Mounting type Mounting position with vertical mounting surface +/-180° rotatable, with vertical mounting surface +/-180° tiltable to the front and back Net weight	of thermal overload trip unit	adjustable
overload proof Phase failure detection Ves Short circuit Operational short-circuit current breaking capacity (Ics) 1 at 240 V / rated value 1 at 415 V / rated value 1 at 690 V / rated value 1 at 240 V / rated value 1 at 240 V / rated value 1 at 690 V / rated value 1 at 240 V / rated value 1 at 690 V / rated value 1	·	No
Phase failure detection Overload protection Short circuit Operational short-circuit current breaking capacity (Ics) at 240 V / rated value at 415 V / rated value at 690 V / rated value at 415 V / rated value at 415 V / rated value background of the state of the		No
Overload protection Yes Short circuit Operational short-circuit current breaking capacity (Ics) at 240 V / rated value at 415 V / rated value at 690 V / rated value at 690 V / rated value at 240 V / rated value at 690 V / rated value at 415 V / rated value at 690 V / rated value at 415 V / rated value at 445 V / rated value at 445 V / rated value at 445 V / rated value at 450 V / rated value at 450 V / rated value at 690 V / rated value fo kA Connections Arrangement of electrical connectors / for main current circuit Type of electrical connection / for main current circuit screw-type terminals Mechanical Design Width 75 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 1.05 kg		Na
Short circuit Operational short-circuit current breaking capacity (Ics) • at 240 V / rated value • at 415 V / rated value • at 500 V / rated value • at 690 V / rated value • at 690 V / rated value • at 240 V / rated value • at 690 V / rated value • at 240 V / rated value • at 240 V / rated value • at 240 V / rated value • at 415 V / rated value • at 415 V / rated value • at 690 V / rated value • at 240 V / rated value • at 250 K A • at 240 V / rated value • at 240		
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 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 5 crew-type terminals Mechanical Design Height 130 mm Width 75 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 1.05 kg	Overload protection	Yes
e at 240 V / rated value e at 415 V / rated value 13 kA e at 500 V / rated value 6 kA 3 kA Maximum short-circuit current breaking capacity (Icu) e at 240 V / rated value 40 kA e at 690 V / rated value 25 kA e at 690 V / rated value 12 kA e at 690 V / rated value 6 kA **Total of the current of electrical connectors / for main current circuit Type of electrical connection / for main current circuit **Total of the current	Short circuit	
at 415 V / rated value at 500 V / rated value at 690 V / rated value at 690 V / rated value 40 kA Maximum short-circuit current breaking capacity (Icu) at 240 V / rated value at 415 V / rated value at 415 V / rated value at 500 V / rated value at 690 V / rated value but at 690 V / rated value at 690 V / rated value but at 690 V / rated value but at 690 V / rated value front side Connections Arrangement of electrical connectors / for main current circuit Type of electrical connection / for main current circuit acrew-type terminals Mechanical Design Height 130 mm Width 75 mm Depth But 130 mm Mounting type fixed mounting Mounting type fixed mounting Mounting surface +/-180° rotatable, with vertical mounting surface +/-180° rotatable, with vertical mounting surface +/-30° tiltable to the front and back Net weight 1.05 kg		
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at 690 V / rated value Maximum short-circuit current breaking capacity (Icu) at 240 V / rated value at 415 V / rated value at 690 V / rated value at 690 V / rated value at 690 V / rated value be at 690 V / rated value front side Connections Arrangement of electrical connectors / for main current circuit Type of electrical connection / for main current circuit Type of electrical connection / for main current circuit Mechanical Design Height 130 mm Width 75 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 1.05 kg	at 415 V / rated value	13 kA
Maximum short-circuit current breaking capacity (Icu) • at 240 V / rated value • at 415 V / rated value • at 500 V / rated value • at 690 V / rated value • at 690 V / rated value • at 690 V / rated value • font side Connections Arrangement of electrical connectors / for main current circuit Type of electrical connection / for main current circuit Mechanical Design Height 130 mm Width 75 mm Depth 80 mm Mounting type Mounting position with vertical mounting surface +/-180° rotatable, with vertical mounting surface +/- 30° tiltable to the front and back Net weight	at 500 V / rated value	6 kA
 at 240 V / rated value at 415 V / rated value at 500 V / rated value at 690 V / rated value 6 kA Connections Arrangement of electrical connectors / for main current circuit Type of electrical connection / for main current circuit Wechanical Design Height 130 mm Width 75 mm Depth 80 mm Mounting type fixed mounting with vertical mounting surface +/-180° rotatable, with vertical mounting surface +/- 30° tiltable to the front and back Net weight 1.05 kg 	at 690 V / rated value	3 kA
 at 240 V / rated value at 415 V / rated value at 500 V / rated value at 690 V / rated value 6 kA Connections Arrangement of electrical connectors / for main current circuit Type of electrical connection / for main current circuit Wechanical Design Height 130 mm Width 75 mm Depth 80 mm Mounting type fixed mounting with vertical mounting surface +/-180° rotatable, with vertical mounting surface +/- 30° tiltable to the front and back Net weight 1.05 kg 	Maximum short-circuit current breaking capacity (Icu)	
at 500 V / rated value at 690 V / rated value 6 kA Connections Arrangement of electrical connectors / for main current circuit Type of electrical connection / for main current circuit Screw-type terminals Mechanical Design Height 130 mm Width 75 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 1.05 kg		40 kA
 at 500 V / rated value at 690 V / rated value 6 kA Connections Arrangement of electrical connectors / for main current circuit Type of electrical connection / for main current circuit Mechanical Design Height 130 mm Width 75 mm Depth Mounting type Mounting position with vertical mounting surface +/-180° rotatable, with vertical mounting surface +/- 30° tiltable to the front and back Net weight 	at 415 V / rated value	25 kA
● at 690 V / rated value Connections Arrangement of electrical connectors / for main current circuit Type of electrical connection / for main current circuit Mechanical Design Height 130 mm Width 75 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 1.05 kg	at 500 V / rated value	12 kA
Arrangement of electrical connectors / for main current circuit Type of electrical connection / for main current circuit Mechanical Design Height Width 75 mm Depth 80 mm Mounting type Mounting position With vertical mounting surface +/-180° rotatable, with vertical mounting surface +/- 30° tiltable to the front and back Net weight front side front side screw-type terminals screw-type terminals	• at 690 V / rated value	6 kA
Arrangement of electrical connectors / for main current circuit Type of electrical connection / for main current circuit Mechanical Design Height Width 75 mm Depth 80 mm Mounting type Mounting position With vertical mounting surface +/-180° rotatable, with vertical mounting surface +/- 30° tiltable to the front and back Net weight front side front side screw-type terminals screw-type terminals	Connections	
Type of electrical connection / for main current circuit Mechanical Design Height 130 mm 75 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 1.05 kg		front side
Mechanical Design Height 130 mm Width 75 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 1.05 kg	current circuit	
Height 130 mm Width 75 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 1.05 kg	Type of electrical connection / for main current circuit	screw-type terminals
Width 75 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 1.05 kg	Mechanical Design	
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 1.05 kg	Height	130 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 1.05 kg	Width	75 mm
Mounting position with vertical mounting surface +/-180° rotatable, with vertical mounting surface +/- 30° tiltable to the front and back Net weight 1.05 kg	Depth	
mounting surface +/- 30° tiltable to the front and back Net weight 1.05 kg		fixed mounting
	Mounting position	-
	Net weight	1.05 kg
◆ during operation	during operation	-40 +55 °C
• during storage -40 +55 °C	during storage	-40 +55 °C
Certificates	Certificates	
Reference code	Reference code	
• acc. to DIN EN 61346-2 Q	• acc. to DIN EN 61346-2	Q
• acc. to DIN EN 81346-2 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?mlfb=3VT1710-2DC35-0AA0

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

https://support.industry.siemens.com/cs/ww/en/ps/3VT1710-2DC35-0AA0

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VT1710-2DC35-0AA0

CAx-Online-Generator

http://www.siemens.com/cax

Tender specifications

http://www.siemens.com/specifications



