



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

Model	
product brand name	SENTRON
product designation	3VT1_5 molded case circuit breakers
design of the actuating element	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
mechanical service life (operating cycles) typical	20 000
electrical endurance (operating cycles) typical	6 000
utilization category	A
performance class for circuit breaker	N
operating frequency maximum	120 1/h
Voltage	
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
Main circuit	
operating frequency	
• 1 rated value	50 Hz
• 2 rated value	60 Hz
operational current rated value	50 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
suitability for use disconnecting means	Yes
Adjustable parameters	
adjustable current response value current of the current-dependent overload release initial value	40 A
Product details	
product component	

• trip indicator	No
• auxiliary switch	No
• voltage trigger	No
• 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
• grounding protection	No
• for neutral conductors short-circuit and overload proof	No
• phase failure detection	No
• overload protection	Yes

Short circuit

operating 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	box terminal

Mechanical Design

height	130 mm
width	100 mm
depth	80 mm
fastening method	fixed mounting
mounting position	with vertical mounting surface +/-180° rotatable, with vertical mounting surface +/- 30° tiltable to the front and back
Net Weight	1.352 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 according to EN 61346-2	Q
reference code according to IEC 81346-2	Q

Approvals Certificates

Environment	General Product Approval	Test Certificates	other
-------------	--------------------------	-------------------	-------

[Environmental Con-
firmations](#)



[Confirmation](#)



[Type Test Certifi-
cates/Test Report](#)

[Confirmation](#)

other



[Miscellaneous](#)

Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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

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

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VT1705-2EC46-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VT1705-2EC46-0AA0>

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

https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VT1705-2EC46-0AA0

CAx-Online-Generator

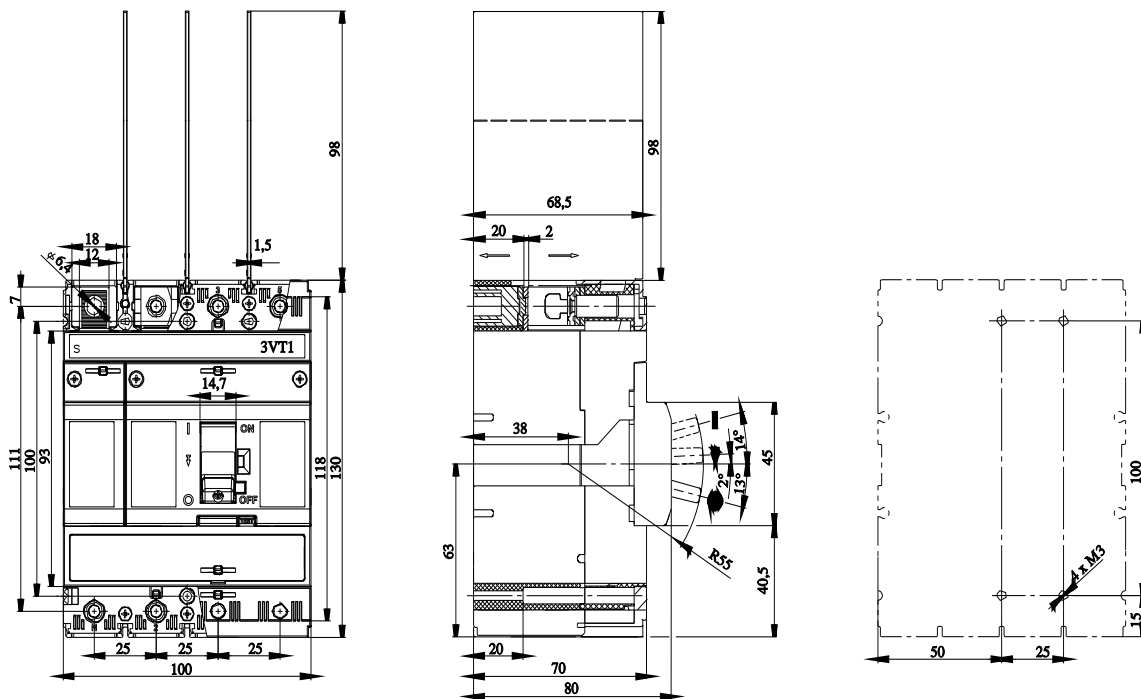
<https://www.siemens.com/cax>

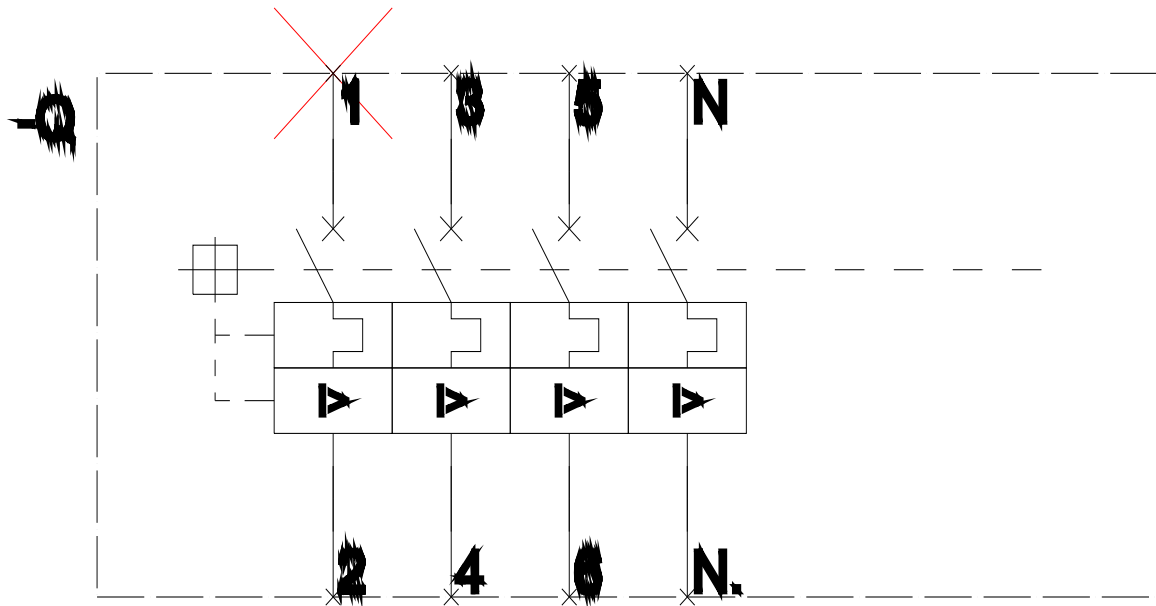
Tender specifications

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

Characteristic curves

[https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP="HAUPT"></mmp_prod_no>](https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP=)





last modified:

6/15/2025 

