



circuit breaker 3VA1 IEC Frame 630 breaking capacity class M Icu=55 kA @ 415 V
4-pole, line protection TM220, ATFM, In=630 A overload protection Ir=440 A...630
A short-circuit protection li=8 x In N conductor unprotected nut keeper kit

Model	
product brand name	SENTRON
product designation	Molded case circuit breaker
design of the product	Line protection
design of the overcurrent release	TM220
protection function of the overcurrent release	LI
number of poles	4
General technical data	
insulation voltage / rated value	800 V
operating voltage / at DC / rated value	600 V
operating voltage / at AC / rated value	690 V
power loss [W] / maximum	192.9 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	64.3 W
mechanical service life (operating cycles) / typical	20 000
electrical endurance (operating cycles) / at AC-1 / at 380/415 V	4 000
electrical endurance (operating cycles) / at AC-1 / at 690 V	3 000
product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof	No
ground-fault monitoring version	Without
product function	
• communication function	No
• other measurement function	No
Net Weight	6.812 kg
Current	
operational current	
• at 40 °C	630 A
• at 45 °C	630 A
• at 50 °C	630 A
• at 55 °C	618 A
• at 60 °C	607 A
• at 65 °C	595 A
• at 70 °C	583 A
Switching capacity according to IEC 60947	
switching capacity class of the circuit breaker	M
maximum short-circuit current breaking capacity (Icu)	
• at 240 V	85 kA
• at 415 V	55 kA
• at 440 V	55 kA

<ul style="list-style-type: none"> • at 500 V • at 690 V 	<p>36 kA</p> <p>7 kA</p>
operating short-circuit current breaking capacity (Ics)	
<ul style="list-style-type: none"> • at 240 V • at 415 V • at 440 V • at 500 V • at 690 V 	<p>85 kA</p> <p>55 kA</p> <p>55 kA</p> <p>36 kA</p> <p>5 kA</p>
short-circuit current making capacity (Icm)	
<ul style="list-style-type: none"> • at 240 V • at 415 V • at 440 V • at 500 V • at 690 V 	<p>187 kA</p> <p>121 kA</p> <p>121 kA</p> <p>75.5 kA</p> <p>11.9 kA</p>
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

Adjustable parameters

product feature / for L-tripping / can be switched on/off	No
adjustable response value setting current (Ir) / of the L-trip / with I2t characteristic	
<ul style="list-style-type: none"> • minimum • maximum 	<p>441 A</p> <p>630 A</p>
adjustable response value delay time (tr) / for L-tripping / with I2t characteristic	
<ul style="list-style-type: none"> • minimum • maximum 	<p>1 s</p> <p>1 s</p>
adjustable response value setting current (Ii) / for I-tripping	
<ul style="list-style-type: none"> • minimum • maximum 	<p>5 040 A</p> <p>5 040 A</p>
adjustable setting current (InN) / for N-tripping	
<ul style="list-style-type: none"> • minimum • maximum 	<p>0 A</p> <p>0 A</p>
design of the N-conductor protection	without
product function / grounding protection	No

Mechanical Design

product component	
<ul style="list-style-type: none"> • undervoltage release • voltage trigger • trip indicator 	<p>No</p> <p>No</p> <p>No</p>
height [in]	9.76 in
height	248 mm
width [in]	7.24 in
width	184 mm
depth [in]	4.33 in
depth	110 mm

Connections

arrangement of electrical connectors / for main current circuit	Front terminal
type of electrical connection / for main current circuit	nut keeper kit on both ends
type of connectable conductor cross-sections / for flat-bar terminal connection / minimum	20 x 1 mm
type of connectable conductor cross-sections / for flat-bar terminal connection / maximum	35 x 10 mm
design of the surface / of the connections / on the top of the switch (N, 1, 3, 5)	Silver
design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)	Silver

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

Environmental footprint	
global warming potential [CO2 eq] / total	473 kg
global warming potential [CO2 eq] / during manufacturing	23.9 kg
global warming potential [CO2 eq] / during operation	450 kg
global warming potential [CO2 eq] / after end of life	-2.9 kg
reference code / according to IEC 81346-2	Q

Approvals / Certificates

General Product Approval



[Miscellaneous](#)



[Confirmation](#)

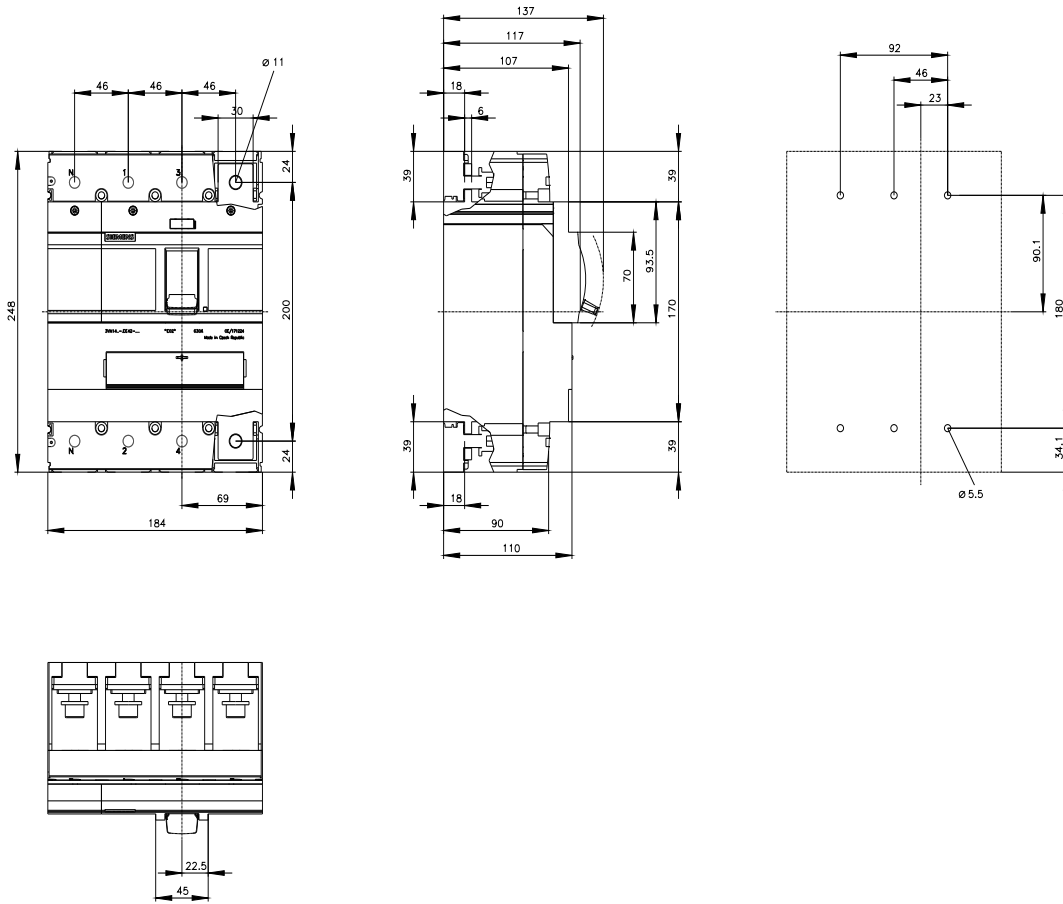
General Product Approval	EMV	Test Certificates		
			Special Test Certificate	Miscellaneous
	EG-Konf.			Type Test Certificates/Test Report

Maritime application	other			
			CCS (China Classification Society)	Miscellaneous
				Confirmation

other	Environment		
	Environmental Confirmations	Environmental Confirmations	

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=3VA1463-5EE42-0AA0>
- Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
<https://support.industry.siemens.com/cs/ww/en/ps/3VA1463-5EE42-0AA0>
- Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)
https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1463-5EE42-0AA0
- 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:

4/18/2026

