

CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS N ICU=25KA @ 415 V 4-POLE, LINE PROTECTION TM240, ATAM, IN=20A OVERLOAD PROTECTION IR=14A ...20A SHORT CIRCUIT PROTECTION II=8...16 X IN NEUTRAL UNPROTECTED BUSBAR CONNECTION

Model	
product brandname	SETRON
Product designation	Molded case circuit breaker
Design of the product	Line protection
Type of load switch / according to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type)	Yes
Design of the overcurrent release	TM240
Protective function of the overcurrent release	LI
Number of poles	4

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	600 V
Active power loss / for rated value of the current / at AC / in hot operating state / per device	12 W
Active power loss / for rated value of the current / at AC / in hot operating state / per pole	4 W
Mechanical service life (switching cycles) / typical	15 000
Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz	8 000
Neutral conductors / upgradeable/retrofitable	No
Ground fault monitoring version	Without
Product function	
• communication function	No
• other measurement function	No
Net weight	1.2 kg

Electricity	
Marking / according to UL 489 / 100%-rated breaker	No
Max. rated operational voltage of the size of the circuit-breaker	160 A
Courant permanent assigné Iu	20 A
Operating current	
• at 40 °C	20 A

• at 45 °C	20 A
• at 50 °C	20 A
• at 55 °C	20 A
• at 60 °C	19 A
• at 65 °C	19 A
• at 70 °C	19 A

#### Switching capacity according to IEC 60947

Switching capacity class of the circuit breaker	N
Maximum short-circuit current breaking capacity (I <sub>cu</sub> )	
• at 240 V	36 kA
• at 415 V	25 kA
• at 440 V	16 kA
• at 500 V	8 kA
• at 690 V	7 kA
Operational short-circuit current breaking capacity (I <sub>cs</sub> )	
• at 240 V	36 kA
• at 415 V	25 kA
• at 440 V	16 kA
• at 500 V	8 kA
• at 690 V	5 kA
Short-circuit current making capacity (I <sub>cm</sub> )	
• at 240 V	76 kA
• at 415 V	53 kA
• at 440 V	32 kA
• at 500 V	13.6 kA
• at 690 V	11.9 kA

#### Adjustable parameters

Adjustable response value current / I <sub>g</sub> min.	14 A
Adjustable response value current / I <sub>g</sub> min.	20 A
Adjustable response value current / I <sub>g</sub> min.	1
Adjustable response value current / I <sub>g</sub> min.	1
Short-term delayed / tripping switchable / I <sub>2t</sub> =ON/OFF	No
Adjustable response value current / I <sub>i</sub> min.	160 A
Adjustable response value current / I <sub>i</sub> max.	320 A
Design of the N-conductor protection	Without
Ground fault protection / tripping switchable / I <sub>2t</sub> =ON/OFF	No

#### Mechanical Design

Height [in]	5.1 in
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Height	130 mm
Width [in]	4 in
Width	101.6 mm
Depth [in]	2.8 in
Depth	70 mm

#### Connections

Arrangement of electrical connectors / for main current circuit	Front terminal
Type of electrical connection / for main current circuit	lug terminal

#### Auxiliary circuit

Number of CO contacts / for auxiliary contacts	0
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#### Accessories

Product extension / optional / motor drive	Yes
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#### Environmental conditions

Protection class IP / on the front	IP40
Ambient temperature	
<ul style="list-style-type: none"> <li>• during operation / minimum</li> <li>• during operation / maximum</li> <li>• during storage / minimum</li> <li>• during storage / maximum</li> </ul>	<ul style="list-style-type: none"> <li>-25 °C</li> <li>70 °C</li> <li>-40 °C</li> <li>80 °C</li> </ul>

#### Certificates

Equipment marking / acc. to DIN EN 81346-2	Q
Certificate of suitability / as approval for NAVAL (no combat vessels) / Supplement SB	No

General Product Approval	EMC	Declaration of Conformity
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Test Certificates	Shipping Approval
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[Typprüfbescheinigung/Werkszeugnis](#)

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Shipping Approval	other
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#### Further information

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

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

**Industry Mall (Online ordering system)**

<https://eb.automation.siemens.com/mall/en/WW/Catalog/Product/3VA1120-3EF42-0AA0>

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

<http://support.automation.siemens.com/WW/view/en/3VA1120-3EF42-0AA0/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mfb=3VA1120-3EF42-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mfb=3VA1120-3EF42-0AA0)

**CAX-Online-Generator**

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

**Tender specifications**

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

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