



CIRCUIT-BREAKER VL 160N STANDARD BREAKING CAPACITY ICU=55KA / 415 V AC 3 POLE, MOTOR/ GENERATOR PROTECTION ELECTRONIC TRIP UNIT ETU10M, LI IN=160A, RATED CURRENT IR=64-160A, OVERLOAD II=1,25TO11XIN, SHORT CIRCUIT WITHOUT AUXILIARY RELEASE

Model		
Type of the driving mechanism / motor drive		No
Design of the overcurrent release		ETU10M
General technical data		
Number of poles		3
Size of the circuit-breaker		3VL2
Electrical endurance (switching cycles) / typical		10 000
Usage category		A
Performance class for circuit breaker		N
Mechanical service life (switching cycles) / typical		20 000
Equipment marking / acc. to DIN 40719 extended according to IEC 204-2 / acc. to IEC 750		Q
Operating frequency / maximum	1/s	120
Voltage		
Rated operational voltage Ue / max.	V	690
Insulation voltage		
• rated value	V	800
• at AC / rated value	V	800

Surge voltage resistance / rated value	kV	8
Protection class		
Protection class IP		IP20
Protective function of the overcurrent release		LI
Electricity		
Continuous current / rated value	A	160
Derating temperature / for the rated value of the continuous current	°C	50
Adjustable response value current		
• of the current-dependent overload release / Full-scale value	A	160
• of the instantaneous short-circuit release / initial value	A	200
• of the instantaneous short-circuit release / Full-scale value	A	1 760
Main circuit		
Operating frequency		
• 1 / rated value	Hz	50
• 2 / rated value	Hz	60
Operating power / at AC-3		
• at 230 V / rated value	kW	29.4
• at 400 V / rated value	kW	88.7
Operating voltage		
• for main current circuit / at AC / at 50 Hz / maximum	V	690
• for main current circuit / at AC / at 60 Hz / maximum	V	690
• for main current circuit / at DC / maximum	V	500
Operating current		
• at 40 °C / rated value	A	160
• at 50 °C / rated value	A	160
• at 55 °C / rated value	A	152
• at 60 °C / rated value	A	152
• at 65 °C / rated value	A	128
• at 70 °C / rated value	A	128
Auxiliary circuit		
Number of CO contacts / for auxiliary contacts		0
Number of NC contacts / for auxiliary contacts		1
Number of NO contacts / for auxiliary contacts		1
Suitability		
Suitability for use		Motor Protection

Adjustable parameters

Adjustable response value current / of the current-dependent overload release / initial value

A 64

Product details

Product component

- Trip indicator
- Auxiliary switch
- Voltage trigger
- undervoltage release
- undervoltage release with leading contact

No
Yes
No
No
No

Product expansion / optional / motor drive

Yes

Product function

Product function

- of the thermal overload release
- Ground fault protection
- for neutral conductors / Short-circuit and overload proof
- Overload protection

adjustable
No
No
Yes

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

kA 65
kA 55
kA 20
kA 6

Maximum short-circuit current breaking capacity (Icu)

- at 240 V / rated value
- at 415 V / rated value
- at 440 V / rated value
- at 480 V / acc. to NEMA / rated value
- at 500 V / rated value
- at 600 V / acc. to NEMA / rated value
- at 690 V / rated value

kA 65
kA 55
kA 25
kA 25
kA 25
kA 12
kA 12

Connections

Arrangement of electrical connectors / for main current circuit

front side

Type of connectable conductor cross-sections

- for main contacts
 - with flexible busbar
 - solid
 - finely stranded / with core end processing

12 x 10 mm
2.5 ... 95 mm²
2.5 ... 50 mm²

— stranded	2.5 ... 95 mm ²
• for auxiliary contacts	
— solid	0.75 ... 1.5 mm ²
— finely stranded / with core end processing	0,75 ... 1.0 mm ²
Type of electrical connection / for main current circuit	box terminals

Mechanical Design		
Height	mm	174.5
Width	mm	104.5
Depth	mm	106.5
Mounting type		fixed mounting

Environmental conditions		
Ambient temperature		
• during operation / minimum	°C	-25
• during operation / maximum	°C	70
• during storage / minimum	°C	-40
• during storage / maximum	°C	80

Certificates		
Certificate of suitability		IEC, standard switching capacity (N)
Equipment marking		
• acc. to DIN EN 61346-2		Q

General Product Approval	EMC	Declaration of Conformity
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Umweltbestätigung sonstig

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/3VL27161SP330AB1>

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

<http://support.automation.siemens.com/WW/view/en/3VL27161SP330AB1/all>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VL27161SP330AB1

CAX-Online-Generator

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

Tender specifications

<http://ausschreibungstexte.siemens.com/tiplv>

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