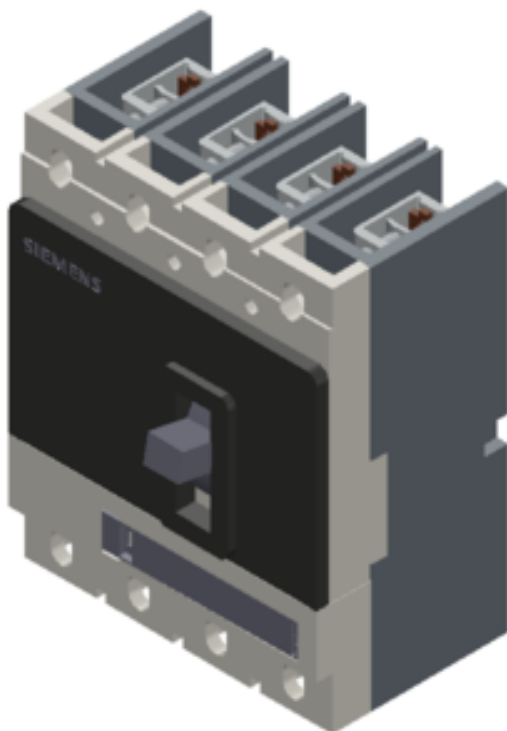




CIRCUIT-BREAKER VL 160N STANDARD BREAKING
CAPACITY ICU=55KA / 415 V AC 4 POLE, LINE
PROTECTION OVERCURRENT RELEASE TM, LI
IN=80A, RATED CURRENT IR=63-80A, OVERLOAD
II=400-800A, SHORT CIRCUIT N PROTECTED

Model		
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		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		LIN
Electricity		
Continuous current / rated value	A	80
Derating temperature / for the rated value of the continuous current	°C	50
Adjustable pick-up value current		
• of the current-dependent overload release / Full-scale value	A	80
• of instantaneous short-circuit trip unit / initial value	A	400
• of instantaneous short-circuit trip unit / Full-scale value	A	800
Main circuit		
Operating frequency		
• 1 / rated value	Hz	50
• 2 / rated value	Hz	60
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	80
• at 50 °C / rated value	A	80
• at 55 °C / rated value	A	74.4
• at 60 °C / rated value	A	74.4
• at 65 °C / rated value	A	68.8
• at 70 °C / rated value	A	68.8
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
Adjustable parameters		
Adjustable pick-up value current / of the current-dependent overload release / initial value	A	64

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
• Ground fault protection		No
• for neutral conductors / Short-circuit and overload proof		Yes
• Overload protection		Yes

Short circuit

Operational short-circuit current breaking capacity (Ics)		
• at 240 V / rated value	kA	65
• at 415 V / rated value	kA	55
• at 500 V / rated value	kA	20
• at 690 V / rated value	kA	6
Maximum short-circuit current breaking capacity (Icu)		
• at 240 V / rated value	kA	65
• at 415 V / rated value	kA	55
• at 440 V / rated value	kA	25
• at 480 V / acc. to NEMA / rated value	kA	25
• at 500 V / rated value	kA	25
• at 600 V / acc. to NEMA / rated value	kA	12
• at 690 V / rated value	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		12 x 10 mm
— solid		2.5 ... 95 mm ²
— finely stranded / with core end processing		2.5 ... 50 mm ²
— 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 mm²

Type of electrical connection / for main current circuit

box terminals

Mechanical Design

Height	mm	174.5
Width	mm	139.5
Depth	mm	106.5
Mounting type		fixed mounting

Environmental conditions

Ambient temperature

- during operation / minimum
- during operation / maximum
- during storage / minimum
- during storage / maximum

°C	0
°C	70
°C	-40
°C	80

Certificates

Certificate of suitability

IEC, standard switching capacity (N)

Equipment marking

- acc. to DIN EN 61346-2

Q

General Product Approval

EMC



CCC

[sonstig](#)



[TSE](#)

[KTL](#)



C-TICK

Declaration of Conformity

Test Certificates

Shipping Approval



EG-Konf.

[spezielle Prüfbescheinigungen](#)

n



DNV



GL



LRS



RINA

Shipping Approval

other



RMRS

[Umweltbestätigung](#)

[Bestätigungen](#)

[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/3VL27081EM430AA0>

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

<http://support.automation.siemens.com/WW/view/en/3VL27081EM430AA0/all>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VL27081EM430AA0

CAX-Online-Generator

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

Tender specifications

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

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