SIEMENS

Data sheet 3VA2116-6HM46-0AA0

CIRCUIT BREAKER 3VA2 IEC FRAME 160 BREAKING CAPACITY CLASS H ICU=85KA @ 415 V 4POLE, LINE PROTECTION ETU330, LIG, IN=160A OVERLOAD PROTECTION IR=64A ...160A SHORT CIRCUIT PROTECTION II=1,5...10 X IN NEUTRAL PROTECTION ADJUSTABLE(OFF,50%,100%) GROUNDFAULTPROTECTION IG=0,2... 1 X IN, TG=0,1/0,3MS CABLE CONNECTION

Model		
product brand name		SENTRON
Product designation		Molded case circuit breaker
Design of the product		Line protection
Product variations		Selective Applications
Ground fault monitoring version		Summation current formation L + N conductor
Design of the auxiliary release		without auxiliaryrelease
Design of the auxiliary switch		Without
Design of the operating mechanism		toggle handle
Type of the driving mechanism / motor drive		No
Design of the overcurrent release		ETU330

General technical data		
Number of poles		4
Trip class / of the L-trip / with I2t characteristic / initial value		0.5
Trip class / of the L-trip / with I2t characteristic / Full-scale value		17
Electrical endurance (switching cycles)		
• at AC-1 / at 380/415 V / at 50/60 Hz		12 000
Total disconnection time / for G-tripping / with standard characteristic / initial value	s	0.1
Total disconnection time / for G-tripping / with standard characteristic / Full-scale value	s	0.3
circuit-breaker / Design		3VA
Mechanical service life (switching cycles) / typical		20 000

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Voltage		
Insulation voltage / Rated value	V	800
Protection class		
Protection class IP		IP40
Protection class IP / on the front		IP40
Protective function of the overcurrent release		LIG
Switching capacity		
Switching capacity class of the circuit breaker		H
Dissipation		
Active power loss		
• maximum	W	25.5
Electricity		
Continuous current / Rated value / maximum	A	160
Continuous current / Rated value	A	160
Adjustable response value current / of the instantaneous short-circuit release / initial value	A	1.5
Main circuit		
Operating voltage		
• with AC / at 50/60 Hz / Rated value	V	690
Operating current		
• at 40 °C / Rated value	A	160
• at 50 °C / Rated value	A	160
• at 60 °C / Rated value	A	160
• at 65 °C / Rated value	A	160
• at 70 °C / Rated value	A	160
Auxiliary circuit		
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 response value current		
• for G-tripping / with standard characteristic / initial value	A	0.2
• for G-tripping / with standard characteristic / Full-scale value	A	1
• of I-trip / Full-scale value	A	10
Adjustable response value current / of the current-dependent overload release / initial value	A	0.394

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Product details		
Product component		
• Trip indicator		No
• display		No
• undervoltage release		No
Product property		
• of the circuit breaker with tripping unit / Tripping characteristic adjustable		Yes
• for neutral conductors / upgradeable/retrofittable / Short-circuit and overload proof		No
Product expansion / optional / motor drive		Yes

Product function		
Product function		
• Intrinsic device protection		Yes
• communication function		No
• Phase failure detection		No
• other measurement function		No

Accessories		
Manufacturer article number / of the supplied basic switch		3VA2116-6HM46-0AA0

Short circuit		
Operational short-circuit current breaking capacity (Ics)		
• at 240 V / Rated value	kA	110
• at 415 V / Rated value	kA	85
• at 440 V / Rated value	kA	85
• at 500 V / Rated value	kA	55
• at 690 V / Rated value	kA	2.5
Maximum short-circuit current breaking capacity (Icu)		
• at 240 V / Rated value	kA	110
• at 415 V / Rated value	kA	85
• at 440 V / Rated value	kA	85
• at 500 V / Rated value	kA	55
• at 690 V / Rated value	kA	2.5
Short-circuit current making capacity (Icm)		
• at 240 V / Rated value	kA	242
• at 415 V / Rated value	kA	187
• at 440 V / Rated value	kA	187
• at 500 V / Rated value	kA	121
• at 690 V / Rated value	kA	3.75

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Connections

Arrangement of electrical connectors / for main current circuit		Front terminal
Type of connectable conductor cross-section		
• of the round conductor terminal / stranded		1 x (6-120 mm²)
Type of electrical connection / for main current circuit		Box terminal

Mechanical Design

Height	mm	181
Width	mm	140
Depth	mm	107
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

Equipment marking		
• acc. to DIN EN 61346-2		Q
• acc. to DIN EN 81346-2		Q

General Product Approval	EMC	Declaration of Conformity	other
CCC VDE EAC	other	EG-Konf.	other

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/3VA21166HM460AA0

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
http://support.automation.siemens.com/WW/view/en/3VA21166HM460AA0/all

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA21166HM460AA0

CAx-Online-Generator
http://www.siemens.com/cax

Tender specifications
http://ausschreibungstexte.siemens.com/tiplv

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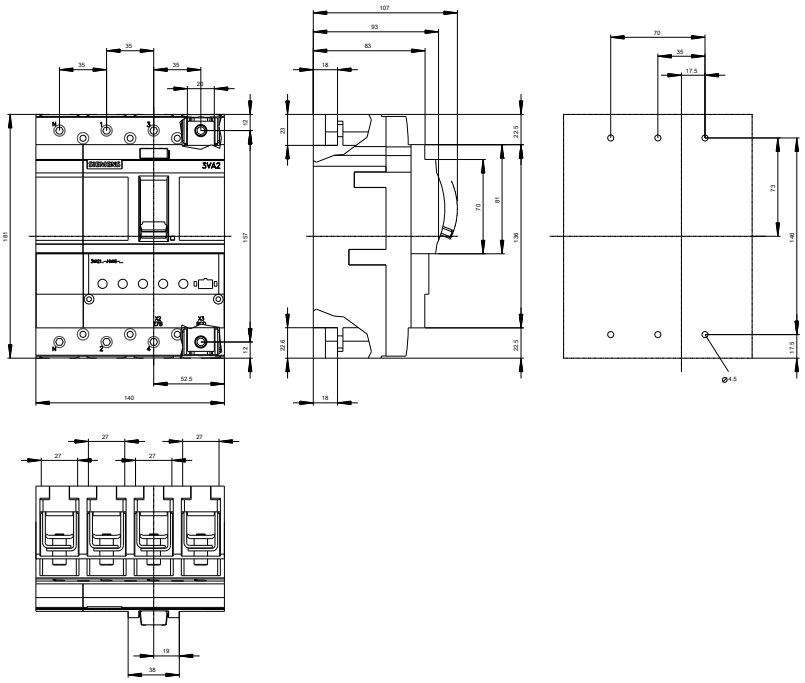

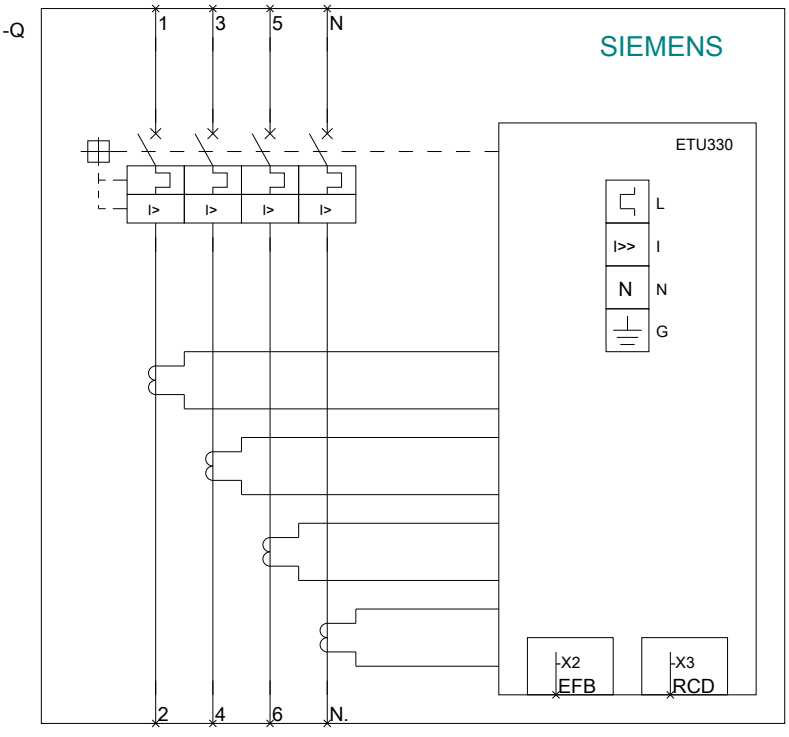

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