



circuit breaker 3VA6 UL frame 150 breaking capacity class C 100kA @ 480V 3-pole, line protection ETU330, LIG, $I_n=100A$ overload protection $I_r=40A...100A$ short-circuit protection $I_i=1.5...12 \times I_n$ ground-fault protection $I_g=0.2...1 \times I_n$, $t_g=0.1/0.3s$ without connection

Model

product brand name	SENTRON
product designation	Molded-case circuit breaker
product designation / according to UL file	CDAE
Product version	System protection
design of the load switch / according to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type)	Yes
design of the overcurrent release	ETU330
protection function of the overcurrent release	LIG
number of poles	3

General technical data

insulation voltage / rated value	800 V
operating voltage / at AC / rated value	690 V
power loss [W] / maximum	13 W
Active power loss / for rated value of the current / at AC / in hot operating state / per pole	4.33 W
mechanical service life (switching cycles) / typical	25 000
Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz	14 000
Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz	9 800
electrical endurance (switching cycles) / at 480 V	14 000
electrical endurance (switching cycles) / at 600 V	9 800
Neutral conductors / upgradeable/retrofitable	No
ground-fault monitoring version	Summation current formation L-conductor
product function	
• communication function	No
• other measurement function	No
Net Weight	2.5 kg

Current

marking / according to UL 489 / 100%-rated breaker	No
operational current	
• at 40 °C	100 A
• at 45 °C	100 A
• at 50 °C	100 A
• at 55 °C	100 A
• at 60 °C	100 A
• at 65 °C	100 A
• at 70 °C	100 A

Switching capacity according to IEC 60947

switching capacity class of the circuit breaker	C
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breaking capacity maximum short-circuit current (Icu)	
• at 240 V	150 kA
• at 415 V	110 kA
• at 690 V	2.5 kA
breaking capacity operating short-circuit current (Ics)	
• at 240 V	150 kA
• at 415 V	110 kA
• at 690 V	2.5 kA
short-circuit current making capacity (Icm)	
• at 240 V	330 kA
• at 415 V	242 kA
• at 690 V	3.8 kA
Switching capacity according to UL 489	
breaking capacity current	
• at 240 V	200 kA
• at 480 V	100 kA
• at 600 V	35 kA
Adjustable parameters	
product feature / for L-tripping / adjustable	Yes
product feature / for L-tripping / selectable characteristic function	No
type of value list setting current (Ir) / for L-tripping / with I2t characteristic	St
reference value setting current (Ir) / for L-tripping / with I2t characteristic	x In
set values setting current (Ir) / for L-tripping / with I2t characteristic	0,4;0,5;0,6;0,7;0,75;0,8;0,85;0,9;0,95;1
adjustable response factor setting current (Ir) / for L-tripping / with I2t characteristic / minimum	0.4
adjustable response factor setting current (Ir) / for L-tripping / with I2t characteristic / maximum	1
adjustable response value setting current (Ir) / of the L-trip / with I2t characteristic / minimum	40 A
adjustable response value setting current (Ir) / of the L-trip / with I2t characteristic / maximum	100 A
type of value list delay time (tr) / for L-tripping / with I2t characteristic	St
reference value delay time (tr) / for L-tripping / with I2t characteristic	s
set values delay time (tr) / for L-tripping / with I2t characteristic	0,5;0,75;1;2;3;5;8;10;14;17
adjustable response value delay time (tr) / for L-tripping / with I2t characteristic / minimum	0.5 s
adjustable response value delay time (tr) / for L-tripping / with I2t characteristic / maximum	17 s
product feature / for S-tripping / independent of direction / selectable characteristic function	No
set values delay time (tsd) / for S-tripping / with I0t characteristic	0
product feature / for I-tripping / can be switched on/off	No
design of I-trip / adjustable	Yes
reference value setting current (Ii) / for I-tripping	x In
set values setting current (Ii) / for I-tripping	1.5;2;2.5;3;4;5;6;8;10;12
adjustable response factor setting current (Ii) / for I-tripping / minimum	1.5
adjustable response factor setting current (Ii) / for I-tripping / maximum	12
adjustable response value setting current (Ii) / for I-tripping / minimum	150 A
adjustable response value setting current (Ii) / for I-tripping / maximum	1 200 A
product feature / for G-tripping / can be switched on/off	No
product feature / for G-tripping / adjustable	Yes
product feature / for G-tripping / selectable characteristic function	No
type of value list setting current (Ig) / for G-tripping / with I0t characteristic	St

reference value setting current (I _g) / for G-tripping / with I0t characteristic	x I _n
set values setting current (I _g) / for G-tripping / with I0t characteristic	0.2;0.4;0.6;0.8;1
adjustable response factor setting current (I _g) / for G-tripping / with I0t characteristic / minimum	0.2
adjustable response factor setting current (I _g) / for G-tripping / with I0t characteristic / maximum	1
Adjustable response value current / I _g min.	20 A
Adjustable response value current / I _g max.	100 A
type of value list delay time (t _g) / for G-tripping / with I0t characteristic	St
reference value delay time (t _g) / for G-tripping / with I0t characteristic	s
set values delay time (t _g) / for G-tripping / with I0t characteristic	0.1;0.3
adjustable response value delay time (t _g) / for G-tripping / with I0t characteristic / minimum	0.1 s
adjustable response value delay time (t _g) / for G-tripping / with I0t characteristic / maximum	0.3 s
set values setting current (I _g) / for G-tripping / with I2t characteristic	0
adjustable response factor setting current (I _g) / for G-tripping / with I2t characteristic / minimum	0
adjustable response factor setting current (I _g) / for G-tripping / with I2t characteristic / maximum	0
type of value list delay time (t _g) / for G-tripping / with I2t characteristic	0
set values delay time (t _g) / for G-tripping / with I2t characteristic	0
product feature / with neutral conductor protection / can be switched on/off	No
product feature / with neutral conductor protection / adjustable	Yes
type of value list setting current (I _{nN}) / for N-tripping	St
reference value setting current (I _{nN}) / for N-tripping	x I _n
adjustable response factor setting current (I _{nN}) / for N-tripping / maximum	0
adjustable absolute value setting current (I _{nN}) / for N-tripping / minimum	0 A
adjustable absolute value setting current (I _{nN}) / for N-tripping / maximum	0 A
tripping characteristic / of the lower tolerance band	AK_3VA6_1_100A_ETU320u330_MuHuCuLuE_uT
tripping characteristic / of the upper tolerance band	AK_3VA6_1_100A_ETU320u330_MuHuCuLuE_oT
let-through energy characteristic / at 240 V	DE_3VA6_1_100A_ETU_line u starter_3u4p_240V
let-through energy characteristic / at 415 V	DE_3VA6_1_100A_ETU_line u starter_3u4p_415V
let-through energy characteristic / at 690 V	DE_3VA6_1_100A_ETU_line u starter_3u4p_690V
type of value list setting current (I _i) / for I-tripping	St
tripping characteristic / of the let-through current characteristic / at 240 V	DS_3VA6_3u4_100A_ETU_line u starter_3u4p_240V
tripping characteristic / of the let-through current characteristic / at 415 V	DS_3VA6_3u4_100A_ETU_line u starter_3u4p_415V
tripping characteristic / of the let-through current characteristic / at 690 V	DS_3VA6_3u4_100A_ETU_line u starter_3u4p_690V
adjustable current response value current / of instantaneous short-circuit trip unit / minimum	150 A
Adjustable response value current / I _i max.	1 200 A
Ground fault protection / tripping switchable / I2t=ON/OFF	Yes
Adjustable response value current / t _g min.	0.1 s
Adjustable response value current / I _g min.	0.3 s

Mechanical Design

product component	
• undervoltage release	No
• voltage trigger	No
• trip indicator	No
height [in]	7.8 in
Height	198 mm
width [in]	4.13 in

Width	105 mm
depth [in]	3.39 in
depth	86 mm
Connections	
arrangement of electrical connectors / for main current circuit	Without connection
type of electrical connection / for main current circuit	Without
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
Certificates	
reference code / according to IEC 81346-2	Q
certificate of suitability / as approval for NAVAL (no combat vessels) / supplement SB	Yes
General Product Approval	



[Confirmation](#)

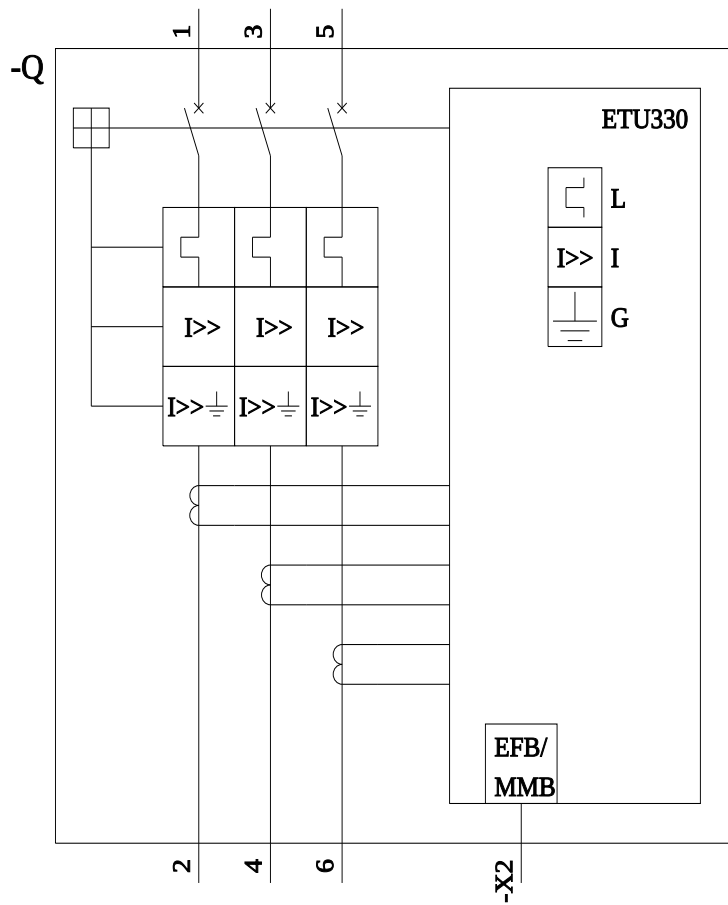
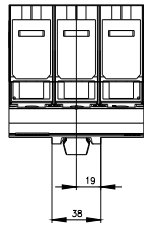


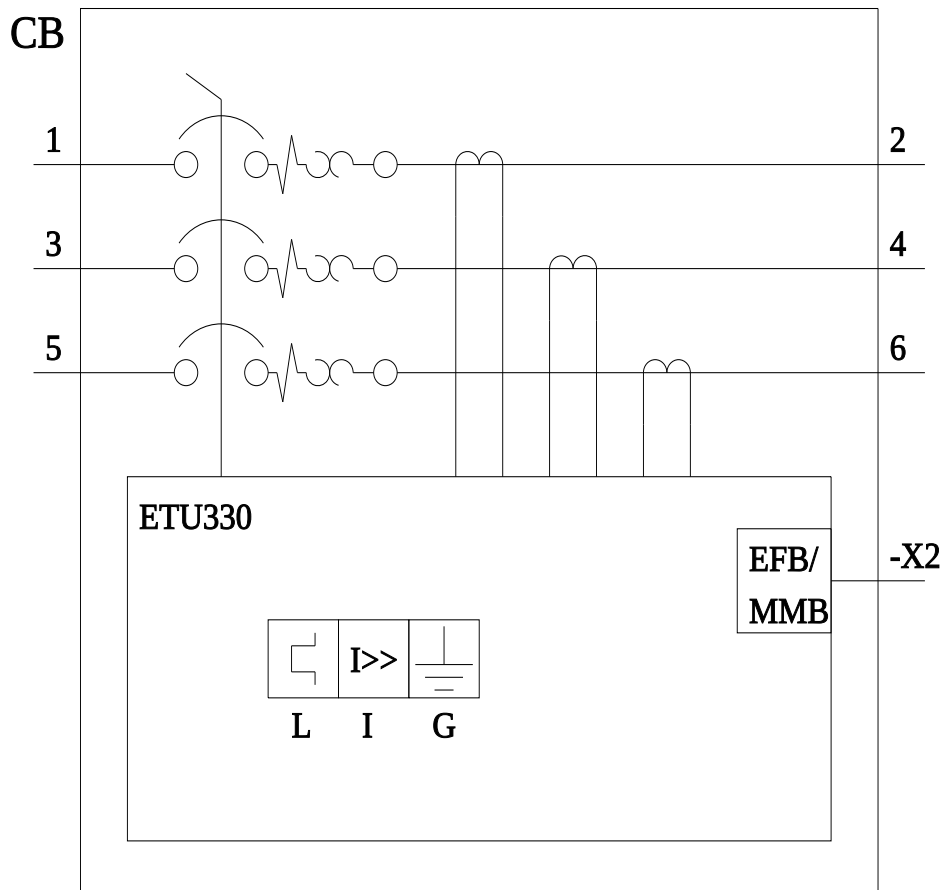
General Product Approval	EMC	Declaration of Conformity

[Miscellaneous](#)

Marine / Shipping	other
	Miscellaneous
	Miscellaneous

Further information
Information- and Downloadcenter (Catalogs, Brochures,...) http://www.siemens.com/lowvoltage/catalogs
Industry Mall (Online ordering system) https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VA6110-7HM31-0AA0
Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3VA6110-7HM31-0AA0
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA6110-7HM31-0AA0
CAX-Online-Generator http://www.siemens.com/cax
Tender specifications http://www.siemens.com/specifications





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