



circuit breaker 3VA6 UL frame 600 breaking capacity class L 150kA @ 480V 4-pole, line protection ETU350, LSI, $I_n=600A$ overload protection $I_r=240A...600A$ short-circuit protection $I_{sd}=1.5...9 \times I_r$, $I_i=9 \times I_n$ N conductor protection adjustable (OFF, 50%, 100%) without connection

Model	
product brand name	SENTRON
product designation	Molded-case circuit breaker
product designation / according to UL file	LLAE
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	ETU350
protection function of the overcurrent release	LSI
number of poles	4
General technical data	
insulation voltage / rated value	800 V
operating voltage / at AC / rated value	690 V
power loss [W] / maximum	151 W
Active power loss / for rated value of the current / at AC / in hot operating state / per pole	50.33 W
mechanical service life (switching cycles) / typical	20 000
Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz	4 000
Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz	3 500
electrical endurance (switching cycles) / at 480 V	4 000
electrical endurance (switching cycles) / at 600 V	3 500
Neutral conductors / upgradeable/retrofitable	No
ground-fault monitoring version	without
product function	
• communication function	No
• other measurement function	No
Net Weight	6.9 kg
Current	
marking / according to UL 489 / 100%-rated breaker	No
operational current	
• at 40 °C	600 A
• at 45 °C	600 A
• at 50 °C	593 A
• at 55 °C	575 A
• at 60 °C	557 A
• at 65 °C	538 A
• at 70 °C	520 A
Switching capacity according to IEC 60947	
switching capacity class of the circuit breaker	L

breaking capacity maximum short-circuit current (Icu)	
• at 240 V	200 kA
• at 415 V	150 kA
• at 690 V	6 kA
breaking capacity operating short-circuit current (Ics)	
• at 240 V	200 kA
• at 415 V	150 kA
• at 690 V	6 kA
short-circuit current making capacity (Icm)	
• at 240 V	440 kA
• at 415 V	330 kA
• at 690 V	9 kA

Switching capacity according to UL 489

breaking capacity current	
• at 240 V	200 kA
• at 480 V	150 kA
• at 600 V	50 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 (I _r) / for L-tripping / with I _{2t} characteristic	St
reference value setting current (I _r) / for L-tripping / with I _{2t} characteristic	x I _n
set values setting current (I _r) / for L-tripping / with I _{2t} characteristic	0.417;0.5;0.583;0.667;0.75;0.833;0.875;0.917;0.958;1
adjustable response factor setting current (I _r) / for L-tripping / with I _{2t} characteristic / minimum	0.417
adjustable response factor setting current (I _r) / for L-tripping / with I _{2t} characteristic / maximum	1
adjustable response value setting current (I _r) / of the L-trip / with I _{2t} characteristic / minimum	250 A
adjustable response value setting current (I _r) / of the L-trip / with I _{2t} characteristic / maximum	600 A
type of value list delay time (t _r) / for L-tripping / with I _{2t} characteristic	St
reference value delay time (t _r) / for L-tripping / with I _{2t} characteristic	s
set values delay time (t _r) / for L-tripping / with I _{2t} characteristic	0,5;0,75;1;2;3;5;8;10;14;15
adjustable response value delay time (t _r) / for L-tripping / with I _{2t} characteristic / minimum	0.5 s
adjustable response value delay time (t _r) / for L-tripping / with I _{2t} characteristic / maximum	15 s
product feature / for S-tripping / independent of direction / can be switched on/off	No
product feature / for S-tripping / independent of direction / selectable characteristic function	No
adjustable response factor setting current (I _{sd}) / for S-tripping / with I _{0t} characteristic / minimum	1.5
adjustable response factor setting current (I _{sd}) / for S-tripping / with I _{0t} characteristic / maximum	9
adjustable response value setting current (I _{sd}) / of S-trip / with I _{0t} characteristic / minimum	900 A
adjustable response value setting current (I _{sd}) / of S-trip / with I _{0t} characteristic / maximum	5 400 A
type of value list setting current (I _{sd}) / for S-tripping / with I _{2t} characteristic	St
reference value setting current (I _{sd}) / for S-tripping / with I _{2t} characteristic	x I _r
set values setting current (I _{sd}) / for S-tripping / with I _{2t} characteristic	1,5;2;2,5;3;3,5;4;5;6;8;9
adjustable response factor setting current (I _{sd}) / for S-tripping / with I _{2t} characteristic / minimum	1.5
adjustable response factor setting current (I _{sd}) / for S-tripping / with I _{2t} characteristic / maximum	9
adjustable response value setting current (I _{sd}) / of S-trip /	900 A

with I2t characteristic / minimum	5 400 A
adjustable response value setting current (I _{sd}) / of S-trip / with I2t characteristic / maximum	0
type of value list delay time (tsd) / for S-tripping / with I0t characteristic	St
type of value list delay time (tsd) / for S-tripping / with I2t characteristic	s
reference value delay time (tsd) / for S-tripping / with I2t characteristic	0,04;0,08;0,15;0,22;0,3;0,4
set values delay time (tsd) / for S-tripping / with I2t characteristic	0.04 s
adjustable response value delay time (tsd) / for S-tripping / with I2t characteristic / minimum	0.4 s
adjustable response value delay time (tsd) / for S-tripping / with I2t characteristic / maximum	No
product feature / for I-tripping / can be switched on/off	No
design of I-trip / adjustable	x I _n
reference value setting current (I _i) / for I-tripping	9
set values setting current (I _i) / for I-tripping	9
adjustable response factor setting current (I _i) / for I-tripping / minimum	9
adjustable response factor setting current (I _i) / for I-tripping / maximum	5 400 A
adjustable response value setting current (I _i) / for I-tripping / minimum	5 400 A
adjustable response value setting current (I _i) / for I-tripping / maximum	No
product feature / for G-tripping / selectable characteristic function	Yes
product feature / with neutral conductor protection / can be switched on/off	Yes
product feature / with neutral conductor protection / adjustable	St
type of value list setting current (I _{nN}) / for N-tripping	x I _r
reference value setting current (I _{nN}) / for N-tripping	0.5;1
setting values setting current (I _{nN}) / for N-tripping	0.5
adjustable response factor setting current (I _{nN}) / for N-tripping / minimum	1
adjustable response factor setting current (I _{nN}) / for N-tripping / maximum	300 A
adjustable absolute value setting current (I _{nN}) / for N-tripping / minimum	600 A
adjustable absolute value setting current (I _{nN}) / for N-tripping / maximum	AK_3VA6_4_600A_ETU350_MuHuCuLuE_uT
tripping characteristic / of the lower tolerance band	AK_3VA6_4_600A_ETU350_MuHuCuLuE_oT
tripping characteristic / of the upper tolerance band	DE_3VA6_3u4_600A_ETUuMCS110_line u starter_3u4p_240V
let-through energy characteristic / at 240 V	DE_3VA6_3u4_600A_ETUuMCS110_line u starter_3u4p_415V
let-through energy characteristic / at 415 V	DE_3VA6_3u4_600A_ETUuMCS110_line u starter_3u4p_690V
let-through energy characteristic / at 690 V	Fest
type of value list setting current (I _i) / for I-tripping	DS_3VA6_3u4_600A_ETUuMCS110_line u starter_3u4p_240V
tripping characteristic / of the let-through current characteristic / at 240 V	DS_3VA6_3u4_600A_ETUuMCS110_line u starter_3u4p_415V
tripping characteristic / of the let-through current characteristic / at 415 V	DS_3VA6_3u4_600A_ETUuMCS110_line u starter_3u4p_690V
tripping characteristic / of the let-through current characteristic / at 690 V	0.4 s
Adjustable response value current / I _g min.	5 400 A
adjustable current response value current / of instantaneous short-circuit trip unit / minimum	5 400 A
Adjustable response value current / I _i max.	5 400 A
design of the N-conductor protection	adjustable OFF; 50%; 100%
Ground fault protection / tripping switchable / I2t=ON/OFF	No

Mechanical Design

product component	No
• undervoltage release	No
• voltage trigger	No
• trip indicator	No
height [in]	9.76 in

Height	248 mm
width [in]	7.24 in
Width	184 mm
depth [in]	4.33 in
depth	110 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
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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	
• 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

Marine / Shipping

[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=3VA6460-8HN41-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA6460-8HN41-0AA0>

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

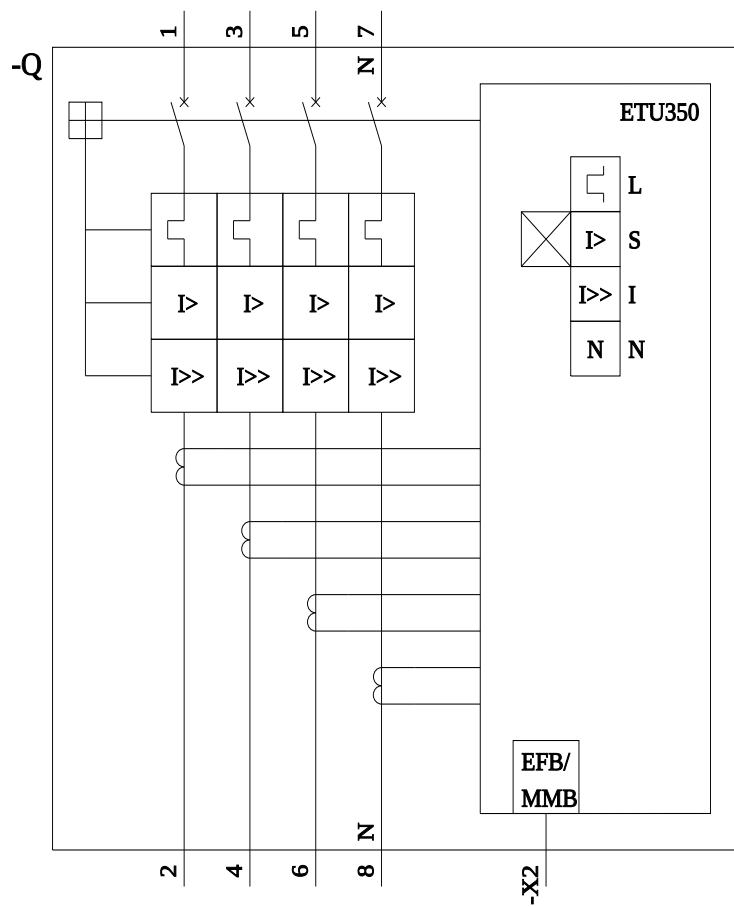
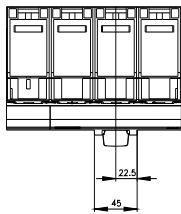
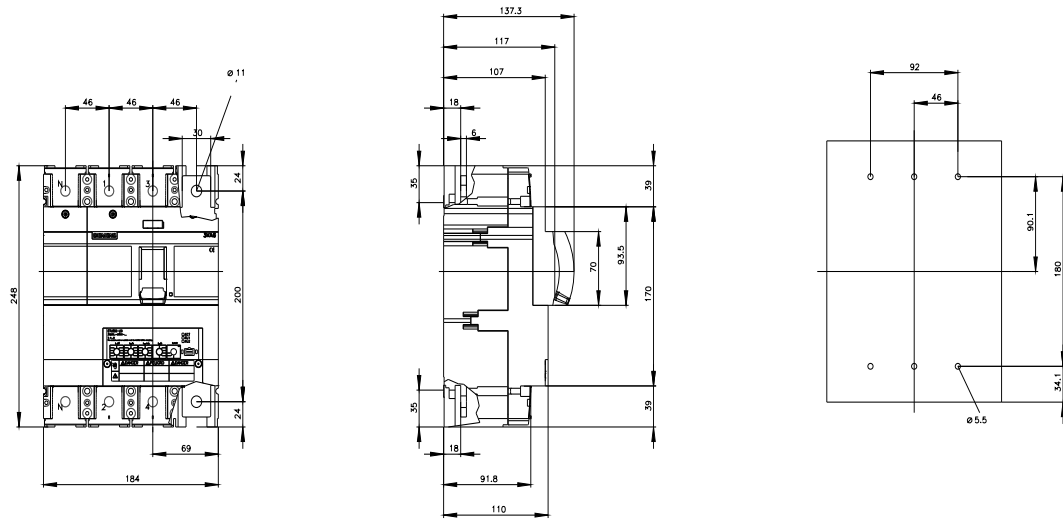
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA6460-8HN41-0AA0

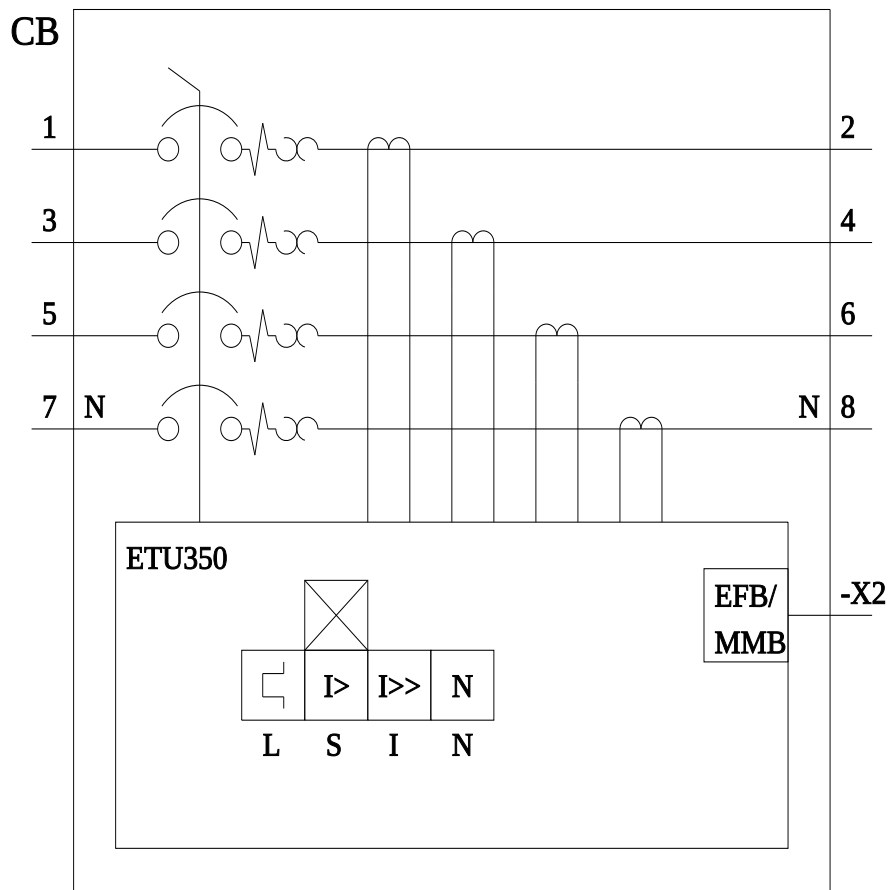
CAX-Online-Generator

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

Tender specifications

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





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