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Data sheet 3VA6460-8KT31-0AA0



circuit breaker 3VA6 UL frame 600 breaking capacity class L 150kA @ 480V 3-pole, line protection ETU856, LSI, In=600A overload protection Ir=240A...600A short-circuit protection Isd=0.6..9x In, Ii=1.5..9x In N conductor protection optionally with external current transformer, up to 160% ground-fault alarm message via EFB300 or COM 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	ETU856
protection function of the overcurrent release	LSI-G-alarm only
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	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/retrofittable	Yes
ground-fault monitoring version	Summation current formation L-conductor
product function	
● communication function	Yes
● other measurement function	Yes
Net Weight	5.3 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	570 A
● at 55 °C	540 A
● at 60 °C	510 A
● at 65 °C	480 A
● at 70 °C	450 A
Switching capacity according to IEC 60947	
switching capacity class of the circuit breaker	L

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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 (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	0,4-1;0
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	240 A
adjustable response value setting current (Ir) / of the L-trip / with I2t characteristic / maximum	600 A
type of value list delay time (tr) / for L-tripping / with I2t characteristic	Einstelltabelle
reference value delay time (tr) / for L-tripping / with I2t characteristic	s
set values delay time (tr) / for L-tripping / with I2t characteristic	0,5-15;0,1
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	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	Yes
type of value list setting current (Isd) / for S-tripping / with I0t characteristic	St
reference value setting current (Isd) / for S-tripping / with I0t characteristic	x In
set values setting current (Isd) / for S-tripping / with I0t characteristic	0,6-9;0
adjustable response factor setting current (Isd) / for S-tripping / with I0t characteristic / minimum	0.6
adjustable response factor setting current (Isd) / for S-tripping / with I0t characteristic / maximum	9
adjustable response value setting current (Isd) / of S-trip / with I0t characteristic / minimum	360 A
adjustable response value setting current (Isd) / of S-trip / with I0t characteristic / maximum	5 400 A
type of value list setting current (Isd) / for S-tripping / with I2t characteristic	St
reference value setting current (Isd) / for S-tripping / with I2t characteristic	x In
set values setting current (Isd) / for S-tripping / with I2t	0,6-9;0

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characteristic	
adjustable response factor setting current (Isd) / for S-tripping / with I2t characteristic / minimum	0.6
adjustable response factor setting current (Isd) / for S-tripping / with I2t characteristic / maximum	9
adjustable response value setting current (Isd) / of S-trip / with I2t characteristic / minimum	360 A
adjustable response value setting current (Isd) / of S-trip / with I2t characteristic / maximum	5 400 A
type of value list delay time (tsd) / for S-tripping / with I0t characteristic	Einstelltabelle
reference value delay time (tsd) / for S-tripping / with I0t characteristic	s
set values delay time (tsd) / for S-tripping / with I0t characteristic	0,05-0,5;0,01
adjustable response value delay time (tsd) / for S-tripping / with I0t characteristic / minimum	0.05 s
adjustable response value delay time (tsd) / for S-tripping / with I0t characteristic / maximum	0.5 s
type of value list delay time (tsd) / for S-tripping / with I2t characteristic	Einstelltabelle
reference value delay time (tsd) / for S-tripping / with I2t characteristic	s
set values delay time (tsd) / for S-tripping / with I2t characteristic	0,05-0,5;0,01
adjustable response value delay time (tsd) / for S-tripping / with I2t characteristic / minimum	0.05 s
adjustable response value delay time (tsd) / for S-tripping / with I2t characteristic / maximum	0.5 s
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	1.5-9;0
adjustable response factor setting current (Ii) / for I-tripping / minimum	1.5
adjustable response factor setting current (Ii) / for I-tripping / maximum	9
adjustable response value setting current (Ii) / for I-tripping / minimum	900 A
adjustable response value setting current (Ii) / for I-tripping / maximum	5 400 A
product feature / for G-tripping / can be switched on/off	Yes
product feature / for G-tripping / adjustable	Yes
product feature / for G-tripping / selectable characteristic function	Yes
type of value list setting current (Ig) / for G-tripping / with I0t characteristic	St
reference value setting current (Ig) / for G-tripping / with I0t characteristic	x In
set values setting current (Ig) / for G-tripping / with I0t characteristic	0.2-1;0
adjustable response factor setting current (Ig) / for G-tripping / with I0t characteristic / minimum	0.2
adjustable response factor setting current (Ig) / for G-tripping / with I0t characteristic / maximum	1
Adjustable response value current / Ig min.	120 A
Adjustable response value current / Ig max.	600 A
type of value list delay time (tg) / for G-tripping / with I0t characteristic	Einstelltabelle
reference value delay time (tg) / for G-tripping / with I0t characteristic	s
set values delay time (tg) / for G-tripping / with I0t characteristic	0,05-0,8;0,01
adjustable response value delay time (tg) / for G-tripping / with I0t characteristic / minimum	0.05 s
adjustable response value delay time (tg) / for G-tripping / with I0t characteristic / maximum	0.8 s
type of value list setting current (Ig) / for G-tripping / with I2t characteristic	St
reference value setting current (Ig) / for G-tripping / with	x In

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I2t characteristic	
set values setting current (Ig) / for G-tripping / with I2t characteristic	0,2-1;0
adjustable response factor setting current (Ig) / for G-tripping / with I2t characteristic / minimum	0.2
adjustable response factor setting current (Ig) / for G-tripping / with I2t characteristic / maximum	1
adjustable response value setting current (Ig) / for G-tripping / with I2t characteristic / minimum	120 A
adjustable response value setting current (Ig) / for G-tripping / with I2t characteristic / maximum	600 A
type of value list delay time (tg) / for G-tripping / with I2t characteristic	Einstelltabelle
reference value delay time (tg) / for G-tripping / with I2t characteristic	s
set values delay time (tg) / for G-tripping / with I2t characteristic	0,05-0,8;0,01
adjustable response value delay time (tg) / for G-tripping / with I2t characteristic / minimum	0.05 s
adjustable response value delay time (tg) / for G-tripping / with I2t characteristic / maximum	0.8 s
product feature / with neutral conductor protection / can be switched on/off	Yes
product feature / with neutral conductor protection / adjustable	Yes
reference value setting current (InN) / for N-tripping	x In
setting values setting current (InN) / for N-tripping	0.2-1.6;0
adjustable response factor setting current (InN) / for N-tripping / maximum	1.6
adjustable absolute value setting current (InN) / for N-tripping / minimum	0.2 A
adjustable absolute value setting current (InN) / for N-tripping / maximum	1.6 A
tripping characteristic / of the lower tolerance band	AK_3VA6_4_600A_ETU5u8_MuHuCuLuE_uT
tripping characteristic / of the upper tolerance band	AK_3VA6_4_600A_ETU5u8_MuHuCuLuE_oT
let-through energy characteristic / at 240 V	DE_3VA6_3u4_600A_ETUuMCS110_line u starter_3u4p_240V
let-through energy characteristic / at 415 V	DE_3VA6_3u4_600A_ETUuMCS110_line u starter_3u4p_415V
let-through energy characteristic / at 690 V	DE_3VA6_3u4_600A_ETUuMCS110_line u starter_3u4p_690V
type of value list setting current (Ii) / for I-tripping	St
tripping characteristic / of the let-through current characteristic / at 240 V	DS_3VA6_3u4_600A_ETUuMCS110_line u starter_3u4p_240V
tripping characteristic / of the let-through current characteristic / at 415 V	DS_3VA6_3u4_600A_ETUuMCS110_line u starter_3u4p_415V
tripping characteristic / of the let-through current characteristic / at 690 V	DS_3VA6_3u4_600A_ETUuMCS110_line u starter_3u4p_690V
Adjustable response value current / Ig min.	0.5 s
adjustable current response value current / of instantaneous short-circuit trip unit / minimum	900 A
Adjustable response value current / Ii max.	5 400 A
design of the N-conductor protection	adjustable OFF; 20% to 160%
Ground fault protection / tripping switchable / I2t=ON/OFF	Yes
Adjustable response value current / tg min.	0.05 s
Adjustable response value current / Ig min.	0.8 s
Mechanical Design	
product component	
● undervoltage release	No
● voltage trigger	No
● trip indicator	No
height [in]	9.76 in
Height	248 mm
width [in]	5.43 in
Width	138 mm
depth [in]	4.33 in
depth	110 mm
Connections	
arrangement of electrical connectors / for main current circuit	Without connection

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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** | **Marine / Shipping**

Miscellaneous

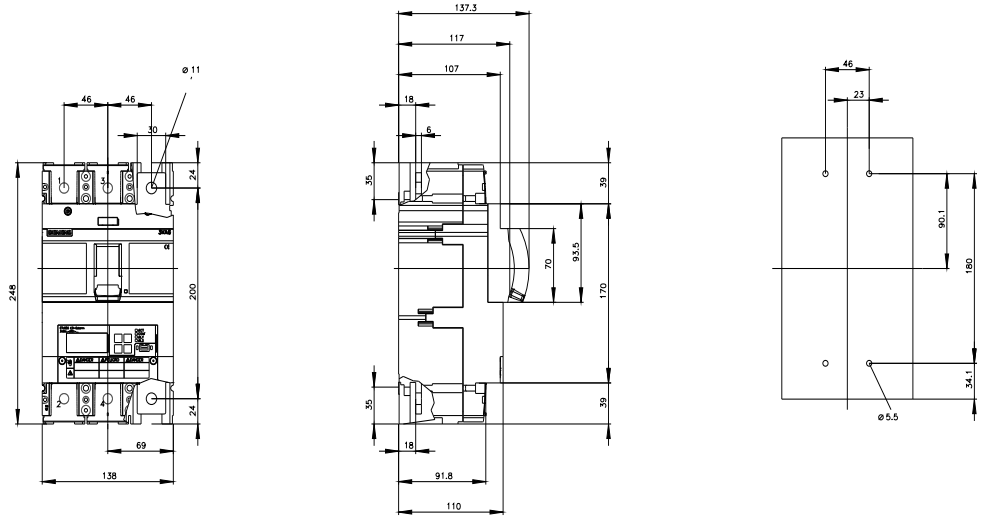
Marine / Shipping | **other**

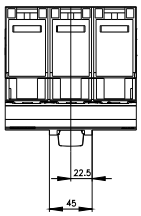
Miscellaneous | Miscellaneous

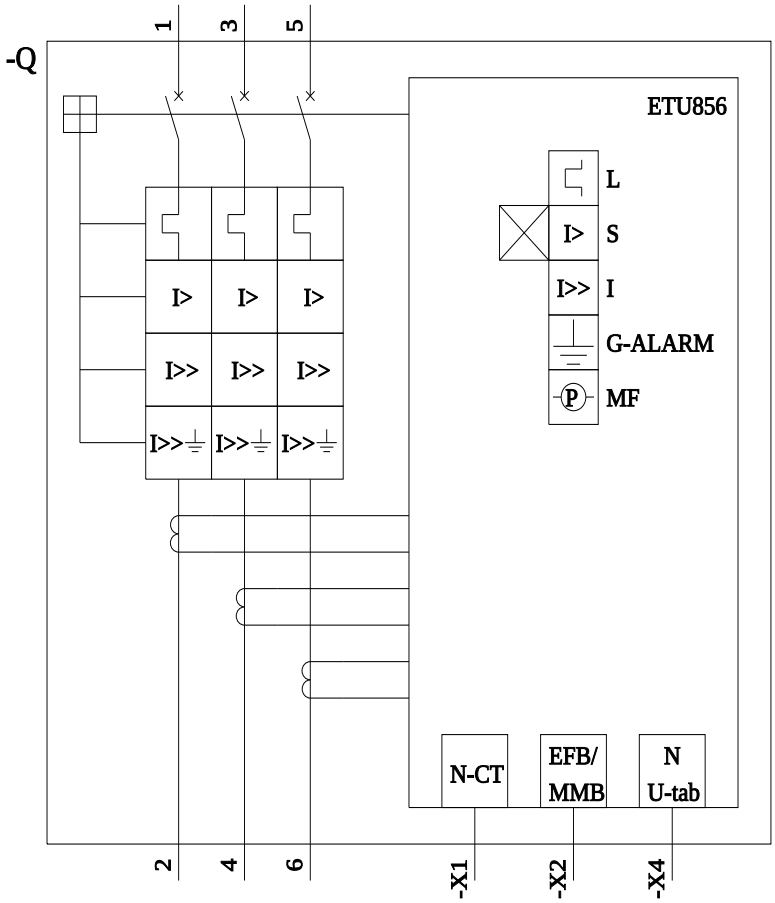
Further information

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=3VA6460-8KT31-0AA0
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3VA6460-8KT31-0AA0
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA6460-8KT31-0AA0
CAx-Online-Generator
http://www.siemens.com/cax
Tender specifications
http://www.siemens.com/specifications

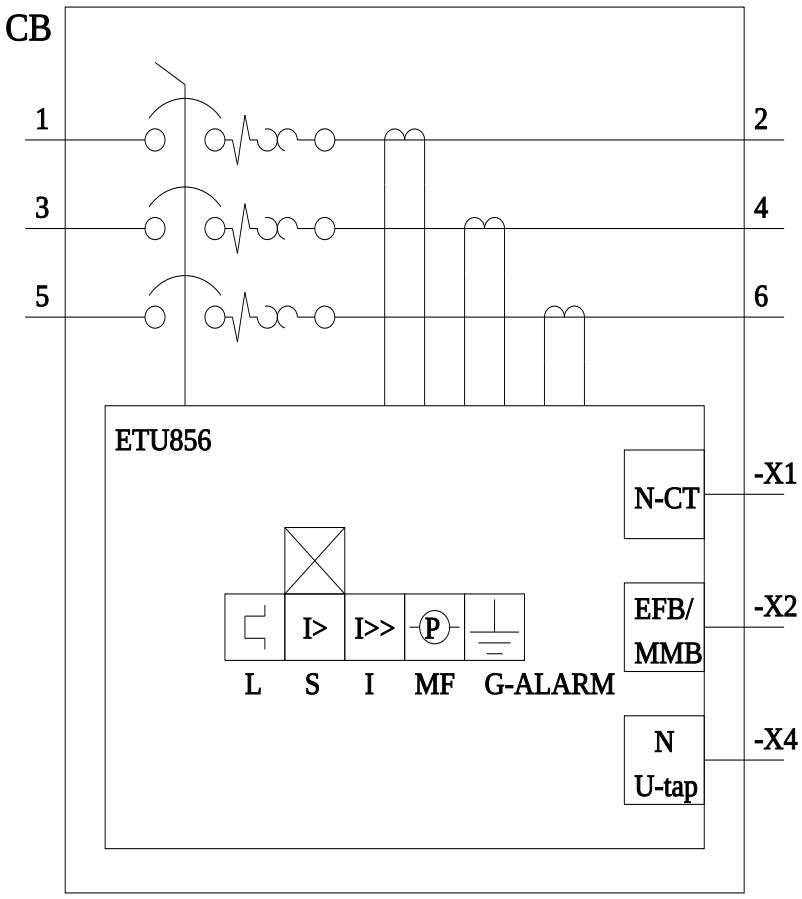
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