



circuit breaker 3VA6 UL frame 150 breaking capacity class M 35kA @ 480V 3-pole, line protection ETU550, LSI, In=100A overload protection Ir=40A...100A short-circuit protection Isd=0.6..10x In, li=1.5..12x In N conductor protection optionally with external current transformer, up to 160% without connection

Model	
product brand name	SENTRON
product designation	Molded-case circuit breaker
product designation / according to UL file	MDAE
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	ETU550
protection function of the overcurrent release	LSI
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	Yes
ground-fault monitoring version	without
product function	
• communication function	Yes
• 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	M

breaking capacity maximum short-circuit current (Icu)	
• at 240 V	85 kA
• at 415 V	55 kA
• at 690 V	2.5 kA
breaking capacity operating short-circuit current (Ics)	
• at 240 V	85 kA
• at 415 V	55 kA
• at 690 V	2.5 kA
short-circuit current making capacity (Icm)	
• at 240 V	187 kA
• at 415 V	121 kA
• at 690 V	3.8 kA

Switching capacity according to UL 489

breaking capacity current	
• at 240 V	100 kA
• at 480 V	35 kA
• at 600 V	18 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	0,4-1;0
adjustable response factor setting current (I _r) / for L-tripping / with I _{2t} characteristic / minimum	0.4
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	40 A
adjustable response value setting current (I _r) / of the L-trip / with I _{2t} characteristic / maximum	100 A
type of value list delay time (t _r) / for L-tripping / with I _{2t} characteristic	Einstelltabelle
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	0,5-25;0,1
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	25 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 (I _{sd}) / for S-tripping / with I _{0t} characteristic	St
reference value setting current (I _{sd}) / for S-tripping / with I _{0t} characteristic	x I _n
set values setting current (I _{sd}) / for S-tripping / with I _{0t} characteristic	0,6-10;0
adjustable response factor setting current (I _{sd}) / for S-tripping / with I _{0t} characteristic / minimum	0.6
adjustable response factor setting current (I _{sd}) / for S-tripping / with I _{0t} characteristic / maximum	10
adjustable response value setting current (I _{sd}) / of S-trip / with I _{0t} characteristic / minimum	60 A
adjustable response value setting current (I _{sd}) / of S-trip / with I _{0t} characteristic / maximum	1 000 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 _n
set values setting current (I _{sd}) / for S-tripping / with I _{2t}	0,6-10;0

characteristic	
adjustable response factor setting current (I _{sd}) / for S-tripping / with I _{2t} characteristic / minimum	0.6
adjustable response factor setting current (I _{sd}) / for S-tripping / with I _{2t} characteristic / maximum	10
adjustable response value setting current (I _{sd}) / of S-trip / with I _{2t} characteristic / minimum	60 A
adjustable response value setting current (I _{sd}) / of S-trip / with I _{2t} characteristic / maximum	1 000 A
type of value list delay time (tsd) / for S-tripping / with I _{0t} characteristic	Einstelltabelle
reference value delay time (tsd) / for S-tripping / with I _{0t} characteristic	s
set values delay time (tsd) / for S-tripping / with I _{0t} characteristic	0,05-0,5;0,01
adjustable response value delay time (tsd) / for S-tripping / with I _{0t} characteristic / minimum	0.05 s
adjustable response value delay time (tsd) / for S-tripping / with I _{0t} characteristic / maximum	0.5 s
type of value list delay time (tsd) / for S-tripping / with I _{2t} characteristic	Einstelltabelle
reference value delay time (tsd) / for S-tripping / with I _{2t} characteristic	s
set values delay time (tsd) / for S-tripping / with I _{2t} characteristic	0,05-0,5;0,01
adjustable response value delay time (tsd) / for S-tripping / with I _{2t} characteristic / minimum	0.05 s
adjustable response value delay time (tsd) / for S-tripping / with I _{2t} 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 (I _i) / for I-tripping	x I _n
set values setting current (I _i) / for I-tripping	1.5-12;0
adjustable response factor setting current (I _i) / for I-tripping / minimum	1.5
adjustable response factor setting current (I _i) / for I-tripping / maximum	12
adjustable response value setting current (I _i) / for I-tripping / minimum	150 A
adjustable response value setting current (I _i) / for I-tripping / maximum	1 200 A
product feature / for G-tripping / selectable characteristic function	No
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
setting values setting current (I _{nN}) / for N-tripping	0.2-1.6;0
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_ETU5u8_MuHuCuLuE_uT
tripping characteristic / of the upper tolerance band	AK_3VA6_1_100A_ETU5u8_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 response value current / I _g min.	0.5 s

adjustable current response value current / of instantaneous short-circuit trip unit / minimum	150 A
Adjustable response value current / li max.	1 200 A
design of the N-conductor protection	adjustable OFF; 20% to 160%
Ground fault protection / tripping switchable / I2t=ON/OFF	No

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
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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



[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=3VA6110-5JP31-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA6110-5JP31-0AA0>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA6110-5JP31-0AA0

CAX-Online-Generator

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

Tender specifications

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





