



circuit breaker 3VA2 IEC frame 160 breaking capacity class E Icu=200 kA @ 415 V 3-pole, line protection ETU850, LSI, In=160A overload protection Ir=63A ... 160A short circuit protection I_{sd}=0,6...10xI_n, I_i=1,5...12xI_n busbar connection

Model	
product brand name	SENTRON
product designation	Molded case circuit breaker
Product version	Line protection
design of the overcurrent release	ETU850
protection function of the overcurrent release	LSI
number of poles	3
General technical data	
rated insulation voltage U _i	800 V
operating voltage / at AC / rated value	690 V
power loss [W] / maximum	19.7 W
Active power loss / for rated value of the current / at AC / in hot operating state / per pole	6.57 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
Neutral conductors / upgradeable/retrofitable	Yes
ground-fault monitoring version	Without
product function	
• communication function	Yes
• other measurement function	Yes
Net Weight	2.5 kg
Current	
Max. rated operational current of the frame size	160 A
Courant permanent assigné I _u	160 A
operational current	
• at 40 °C	160 A
• at 45 °C	160 A
• at 50 °C	160 A
• at 55 °C	160 A
• at 60 °C	160 A
• at 65 °C	160 A
• at 70 °C	160 A
Switching capacity according to IEC 60947	
switching capacity class of the circuit breaker	E
breaking capacity maximum short-circuit current (I _{cu})	
• at 415 V	200 kA
• at 690 V	85 kA

breaking capacity operating short-circuit current (Ics)	
• at 415 V	200 kA
• at 690 V	65 kA
short-circuit current making capacity (Icm)	
• at 415 V	440 kA
• at 690 V	187 kA

Adjustable parameters

product feature / for L-tripping / can be switched on/off	No
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	0.394-1;0
adjustable response factor setting current (I _r) / for L-tripping / with I _{2t} characteristic / minimum	0.394
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	63 A
adjustable response value setting current (I _r) / of the L-trip / with I _{2t} characteristic / maximum	160 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	96 A
adjustable response value setting current (I _{sd}) / of S-trip / with I _{0t} characteristic / maximum	1 600 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} characteristic	0.6-10;0
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	96 A
adjustable response value setting current (I _{sd}) / of S-trip / with I _{2t} characteristic / maximum	1 600 A

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
type of value list delay time (tsd) / for S-tripping / with I0t characteristic	Einstelltabelle
design of I-trip / adjustable	Yes
product feature / for I-tripping / can be switched on/off	No
adjustable response factor setting current (Ii) / for I-tripping / minimum	1.5
adjustable response value delay time (tsd) / for S-tripping / with I2t characteristic / maximum	0.5 s
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
adjustable response value setting current (Ii) / for I-tripping / maximum	1 920 A
adjustable response factor setting current (Ii) / for I-tripping / maximum	12
adjustable response value delay time (tsd) / for S-tripping / with I2t characteristic / minimum	0.05 s
adjustable response value setting current (Ii) / for I-tripping / minimum	240 A
type of value list delay time (tsd) / for S-tripping / with I2t characteristic	Einstelltabelle
reference value setting current (Ii) / for I-tripping	x In
type of value list setting current (Ii) / for I-tripping	St
set values delay time (tsd) / for S-tripping / with I2t characteristic	0.05-0.5;0.01
set values setting current (Ii) / for I-tripping	1.5-12;0
reference value delay time (tsd) / for S-tripping / with I2t characteristic	s
product feature / with neutral conductor protection / can be switched on/off	Yes
product feature / with neutral conductor protection / adjustable	Yes
adjustable absolute value setting current (InN) / for N-tripping / maximum	256 A
adjustable absolute value setting current (InN) / for N-tripping / minimum	32 A
adjustable response factor setting current (InN) / for N-tripping / minimum	0.2
adjustable response factor setting current (InN) / for N-tripping / maximum	1.6
let-through energy characteristic / at 690 V	DE_3VA2_1u2_160A_ETU_line u starter u motor_3u4p_690V
setting values setting current (InN) / for N-tripping	0.2-1.6;0
tripping characteristic / of the let-through current characteristic / at 415 V	DS_3VA2_1u2_160A_ETU_line u starter u motor_3u4p_415V
tripping characteristic / of the let-through current characteristic / at 690 V	DS_3VA2_1u2_160A_ETU_line u starter u motor_3u4p_690V
type of value list setting current (InN) / for N-tripping	St
reference value setting current (InN) / for N-tripping	x In
tripping characteristic / of the upper tolerance band	AK_3VA2_1_160A_ETU850u860_E_oT
tripping characteristic / of the lower tolerance band	AK_3VA2_1_160A_ETU850u860_E_uT
let-through energy characteristic / at 415 V	DE_3VA2_1u2_160A_ETU_line u starter u motor_3u4p_415V
Adjustable response value current / Ii min.	240 A
Adjustable response value current / Ii max.	1 600 A
design of the N-conductor protection	adjustable OFF; 20% to 160%
Ground fault protection / tripping switchable / I2t=ON/OFF	No
Mechanical Design	
height [in]	7.13 in
Height	181 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	Front terminal
type of electrical connection / for main current circuit	on both sides nut keeper kit
Type of connectable conductor cross-section, connection screw, width x thickness , min.	13 x 1 mm
Type of connectable conductor cross-section, connection screw, width x thickness , max.	25 x 8 mm
design of the surface / of the connections / on the top of the switch (N, 1, 3, 5)	tin
design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)	tin
Auxiliary circuit	
product component	
• undervoltage release	No
• voltage trigger	No
• trip indicator	No
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
General Product Approval	

[Confirmation](#)



[Miscellaneous](#)



EMC	Declaration of Conformity	Test Certificates	Marine / Shipping
		Special Test Certificate	Miscellaneous

Marine / Shipping	other
	CCS / China Classification Society
	Miscellaneous
	Environmental Confirmations
	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?mfb=3VA2116-0KP32-0AA0>
 Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
<https://support.industry.siemens.com/cs/ww/en/ps/3VA2116-0KP32-0AA0>

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

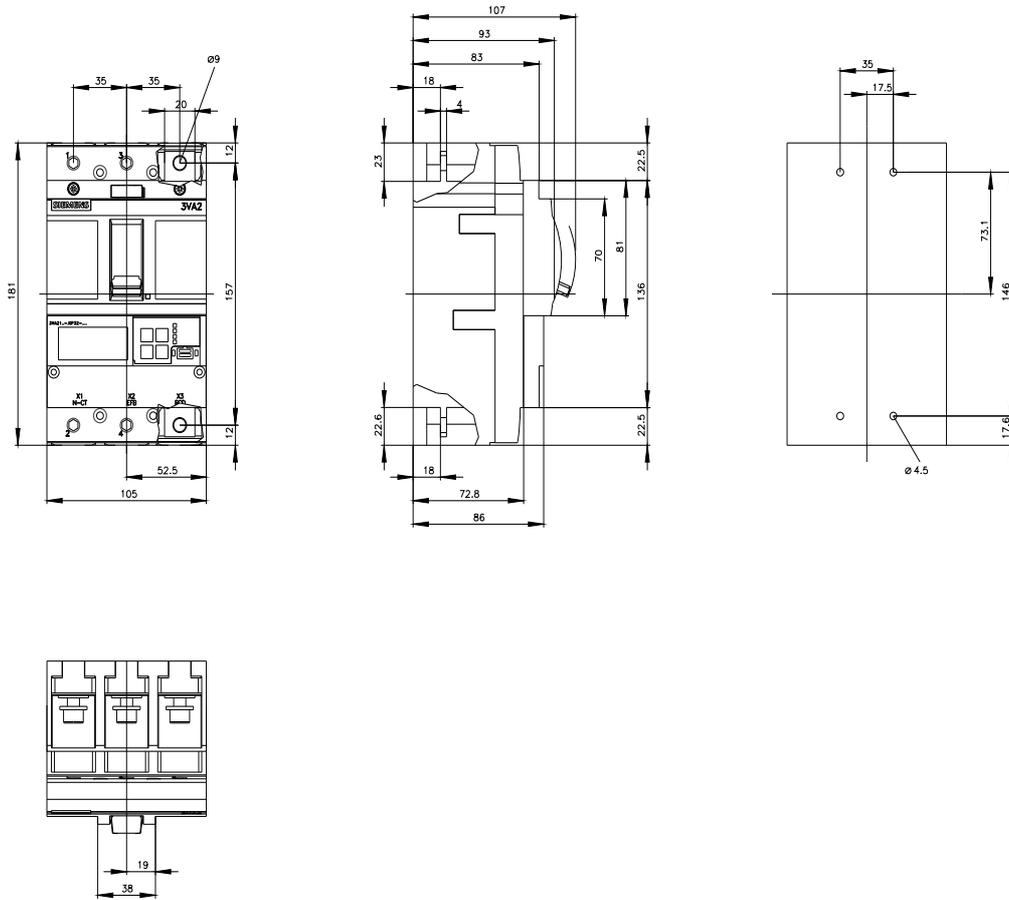
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA2116-0KP32-0AA0

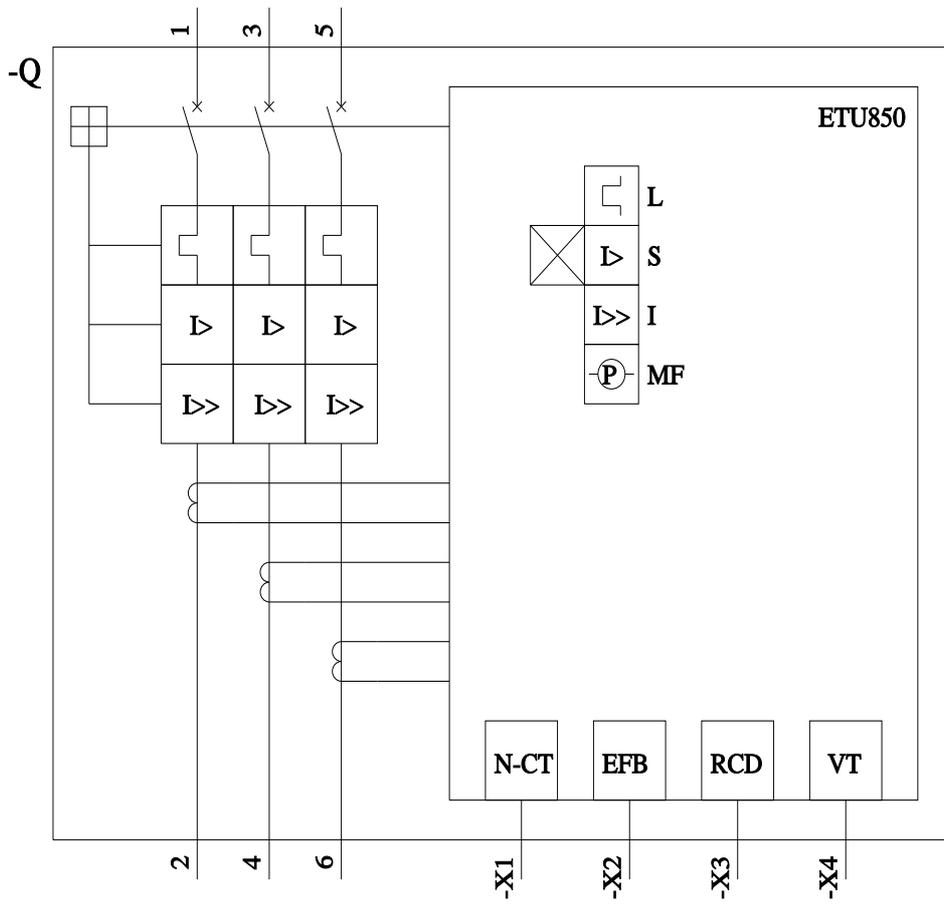
CAX-Online-Generator

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

Tender specifications

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





last modified:

7/19/2022 

