3VA6816-7HL31-0AA0





circuit breaker 3VA6 UL frame 1600 breaking capacity class C 100kA @ 480 V 3-pole, line protection ETU320, LI, In=1600A overload protection Ir=600A - 1600A short circuit protection Ii=1,5-7,5 x In w/o connection

Model	
product brand name	SENTRON
product designation	Molded-case circuit breaker
product designation / according to UL file	CPAE
design of the product	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	ETU320
protection function of the overcurrent release	LI
number of poles	3
General technical data	
insulation voltage / rated value	800 V
operating voltage / at AC / rated value	600 V
power loss [W] / maximum	433 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	433 W
mechanical service life (operating cycles) / typical	3 000
electrical endurance (operating cycles) / at AC-1 / at 380/415 V	1 500
electrical endurance (operating cycles) / at AC-1 / at 690 V	500
electrical endurance (operating cycles) / at 480 V	1 500
electrical endurance (operating cycles) / at 600 V	500
product feature / for neutral conductors / upgradable/retrofittable / short-circuit and overload proof	No
ground-fault monitoring version	without
product function	
 communication function 	No
other measurement function	No
Net Weight	3.133 kg
Current	
marking / according to UL 489 / 100%-rated breaker	No
operational current	
• at 40 °C	1 600 A
• at 45 °C	1 600 A
• at 50 °C	1 600 A
• at 55 °C	1 568 A
• at 60 °C	1 536 A
• at 65 °C	1 504 A
• at 70 °C	1 472 A
Switching capacity according to IEC 60947	
switching capacity class of the circuit breaker	С
maximum short-circuit current breaking capacity (Icu)	

• at 240 V	200 kA
• at 415 V	110 kA
• at 690 V	35 kA
operating short-circuit current breaking capacity (lcs)	
● at 240 V	100 kA
• at 415 V	55 kA
● at 690 V	17 kA
short-circuit current making capacity (Icm)	
• at 240 V	440 kA
• at 415 V	242 kA
• at 690 V	77 kA
Switching capacity according to UL 489	
current breaking capacity	
• at 240 V	200 kA
• at 480 V	100 kA
• at 600 V	65 kA
Adjustable parameters	
adjustable response value setting current (Ir) / of the L-trip / with	
I2t characteristic	
• minimum	600 A
• maximum	1 600 A
adjustable response value delay time (tr) / for L-tripping / with I2t characteristic	
• minimum	2.5 s
• maximum	30 s
adjustable response value setting current (li) / for I-tripping	
• minimum	2 400 A
• maximum	12 000 A
adjustable current response value current / of instantaneous	
short-circuit trip unit • minimum	2 400 A
• minimum	2 400 A
• maximum	12 000 A
maximum product function / grounding protection	12 000 A
product function / grounding protection	12 000 A No
product function / grounding protection Mechanical Design	
product function / grounding protection Mechanical Design product component	No
product function / grounding protection Mechanical Design product component • undervoltage release	No No
product function / grounding protection Mechanical Design product component • undervoltage release • trip indicator	No No
product function / grounding protection Mechanical Design product component • undervoltage release • trip indicator height [in]	No No No 8.14 in
product function / grounding protection Mechanical Design product component • undervoltage release • trip indicator height [in]	No No No 8.14 in 206.9 mm
product function / grounding protection Mechanical Design product component • undervoltage release • trip indicator height [in] height width [in]	No No No 8.14 in 206.9 mm 8.99 in
product function / grounding protection Mechanical Design product component • undervoltage release • trip indicator height [in] height width [in]	No No No 8.14 in 206.9 mm 8.99 in 228.4 mm
product function / grounding protection Mechanical Design product component • undervoltage release • trip indicator height [in] height width [in] width depth [in]	No No No 8.14 in 206.9 mm 8.99 in 228.4 mm 16 in
product function / grounding protection Mechanical Design product component • undervoltage release • trip indicator height [in] height width [in] width depth [in] depth	No No No 8.14 in 206.9 mm 8.99 in 228.4 mm
product function / grounding protection Mechanical Design product component • undervoltage release • trip indicator height [in] height width [in] width depth [in]	No No No 8.14 in 206.9 mm 8.99 in 228.4 mm 16 in
product function / grounding protection Mechanical Design product component • undervoltage release • trip indicator height [in] height width [in] width depth [in] depth	No No No 8.14 in 206.9 mm 8.99 in 228.4 mm 16 in
product function / grounding protection Mechanical Design product component • undervoltage release • trip indicator height [in] height width [in] width depth [in] depth Connections	No No No 8.14 in 206.9 mm 8.99 in 228.4 mm 16 in 406.4 mm
product function / grounding protection Mechanical Design product component • undervoltage release • trip indicator height [in] height width [in] width depth [in] depth Connections type of electrical connection / for main current circuit design of the surface / of the connections / on the top of the	No No No 8.14 in 206.9 mm 8.99 in 228.4 mm 16 in 406.4 mm
product function / grounding protection Mechanical Design product component • undervoltage release • trip indicator height [in] height width [in] width depth [in] depth Connections type of electrical connection / for main current circuit design of the surface / of the connections / on the top of the switch (N, 1, 3, 5) design of the surface / of the connections / on the bottom of the	No No 8.14 in 206.9 mm 8.99 in 228.4 mm 16 in 406.4 mm without terminals silver
product function / grounding protection Mechanical Design product component • undervoltage release • trip indicator height [in] height width [in] width depth [in] depth Connections type of electrical connection / for main current circuit design of the surface / of the connections / on the top of the switch (N, 1, 3, 5) design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)	No No 8.14 in 206.9 mm 8.99 in 228.4 mm 16 in 406.4 mm without terminals silver
product function / grounding protection Mechanical Design product component • undervoltage release • trip indicator height [in] height width [in] width depth [in] depth Connections type of electrical connection / for main current circuit design of the surface / of the connections / on the top of the switch (N, 1, 3, 5) design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6) Auxiliary circuit	No No 8.14 in 206.9 mm 8.99 in 228.4 mm 16 in 406.4 mm without terminals silver
product function / grounding protection Mechanical Design product component • undervoltage release • trip indicator height [in] height width [in] width depth [in] depth Connections type of electrical connection / for main current circuit design of the surface / of the connections / on the top of the switch (N, 1, 3, 5) design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6) Auxiliary circuit number of CO contacts / for auxiliary contacts	No No 8.14 in 206.9 mm 8.99 in 228.4 mm 16 in 406.4 mm without terminals silver
product function / grounding protection Mechanical Design product component • undervoltage release • trip indicator height [in] height width [in] width depth [in] depth Connections type of electrical connection / for main current circuit design of the surface / of the connections / on the top of the switch (N, 1, 3, 5) design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6) Auxiliary circuit number of CO contacts / for auxiliary contacts Environmental conditions	No No 8.14 in 206.9 mm 8.99 in 228.4 mm 16 in 406.4 mm without terminals silver silver
product function / grounding protection Mechanical Design product component • undervoltage release • trip indicator height [in] height width [in] depth Connections type of electrical connection / for main current circuit design of the surface / of the connections / on the top of the switch (N, 1, 3, 5) design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6) Auxiliary circuit number of CO contacts / for auxiliary contacts Environmental conditions protection class IP / on the front	No No 8.14 in 206.9 mm 8.99 in 228.4 mm 16 in 406.4 mm without terminals silver silver
product function / grounding protection Mechanical Design product component • undervoltage release • trip indicator height [in] height width [in] width depth [in] depth Connections type of electrical connection / for main current circuit design of the surface / of the connections / on the top of the switch (N, 1, 3, 5) design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6) Auxiliary circuit number of CO contacts / for auxiliary contacts Environmental conditions protection class IP / on the front ambient temperature	No No 8.14 in 206.9 mm 8.99 in 228.4 mm 16 in 406.4 mm without terminals silver silver
product function / grounding protection Mechanical Design product component • undervoltage release • trip indicator height [in] height width [in] width depth [in] depth Connections type of electrical connection / for main current circuit design of the surface / of the connections / on the top of the switch (N, 1, 3, 5) design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6) Auxiliary circuit number of CO contacts / for auxiliary contacts Environmental conditions protection class IP / on the front ambient temperature • during operation / minimum • during operation / maximum	No No 8.14 in 206.9 mm 8.99 in 228.4 mm 16 in 406.4 mm without terminals silver o IP40 -25 °C
product function / grounding protection Mechanical Design product component • undervoltage release • trip indicator height [in] height width [in] depth Connections type of electrical connection / for main current circuit design of the surface / of the connections / on the top of the switch (N, 1, 3, 5) design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6) Auxiliary circuit number of CO contacts / for auxiliary contacts Environmental conditions protection class IP / on the front ambient temperature • during operation / minimum • during storage / minimum	No No No 8.14 in 206.9 mm 8.99 in 228.4 mm 16 in 406.4 mm without terminals silver silver 0 IP40 -25 °C 70 °C
product function / grounding protection Mechanical Design product component • undervoltage release • trip indicator height [in] height width [in] width depth [in] depth Connections type of electrical connection / for main current circuit design of the surface / of the connections / on the top of the switch (N, 1, 3, 5) design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6) Auxiliary circuit number of CO contacts / for auxiliary contacts Environmental conditions protection class IP / on the front ambient temperature • during operation / minimum • during storage / minimum • during storage / minimum • during storage / maximum	No No No 8.14 in 206.9 mm 8.99 in 228.4 mm 16 in 406.4 mm without terminals silver silver 0 IP40 -25 °C 70 °C -40 °C
product function / grounding protection Mechanical Design product component • undervoltage release • trip indicator height [in] height width [in] width depth [in] depth Connections type of electrical connection / for main current circuit design of the surface / of the connections / on the top of the switch (N, 1, 3, 5) design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6) Auxiliary circuit number of CO contacts / for auxiliary contacts Environmental conditions protection class IP / on the front ambient temperature • during operation / minimum • during storage / minimum • during storage / maximum reference code / according to IEC 81346-2	No No 8.14 in 206.9 mm 8.99 in 228.4 mm 16 in 406.4 mm without terminals silver silver 0 IP40 -25 °C 70 °C -40 °C 80 °C
product function / grounding protection Mechanical Design product component • undervoltage release • trip indicator height [in] height width [in] width depth [in] depth Connections type of electrical connection / for main current circuit design of the surface / of the connections / on the top of the switch (N, 1, 3, 5) design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6) Auxiliary circuit number of CO contacts / for auxiliary contacts Environmental conditions protection class IP / on the front ambient temperature • during operation / minimum • during storage / minimum • during storage / minimum • during storage / maximum	No No 8.14 in 206.9 mm 8.99 in 228.4 mm 16 in 406.4 mm without terminals silver silver 0 IP40 -25 °C 70 °C -40 °C 80 °C













General Product Approval

Test Certificates

Marine / Shipping

other

Dangerous Good



Type Test Certificates/Test Report



Miscellaneous

Confirmation

Transport Information

Further information

Siemens has decided to exit the Russian market (see here).

https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

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=3VA6816-7HL31-0AA0

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

https://support.industry.siemens.com/cs/ww/en/ps/3VA6816-7HL31-0AA0

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

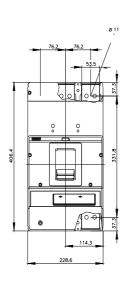
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA6816-7HL31-0AA0

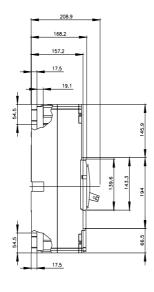
CAx-Online-Generator

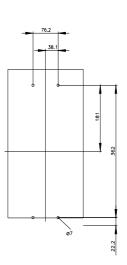
http://www.siemens.com/cax

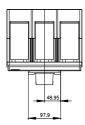
Tender specifications

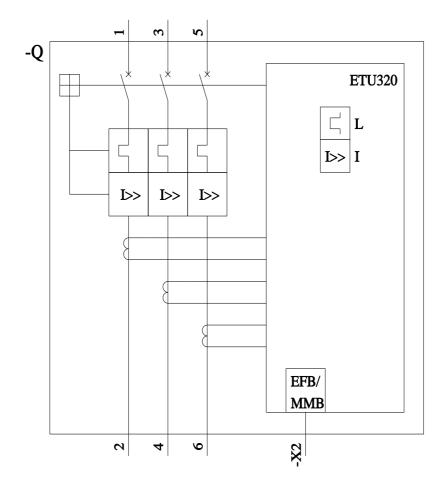
http://www.siemens.com/specifications

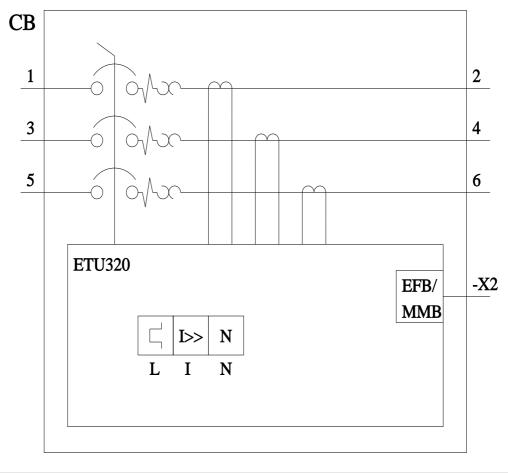












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