



circuit breaker 3VA6 UL frame 1600 breaking capacity class C 100kA @ 480 V 3-pole, line protection ETU856, LSI, In=1600A 100%-rated, overload protection Ir=600A - 1600A short circuit protection Isd=0,6-10x In, Ii=1,5-7,5x 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 | ETU856 |
| 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 | 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/retrofitable / short-circuit and overload proof | Yes |
| ground-fault monitoring version | without |
| product function | |
| • communication function | Yes |
| • other measurement function | Yes |
| Net Weight | 3.133 kg |
| Current | |
| marking / according to UL 489 / 100%-rated breaker | Yes |
| 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 | C |

| | |
|--|---------------------------|
| maximum short-circuit current breaking capacity (I _{cu}) | |
| <ul style="list-style-type: none"> ● at 240 V ● at 415 V ● at 690 V | 200 kA 110 kA 35 kA |
| operating short-circuit current breaking capacity (I _{cs}) | |
| <ul style="list-style-type: none"> ● at 240 V ● at 415 V ● at 690 V | 100 kA 55 kA 17 kA |
| short-circuit current making capacity (I _{cm}) | |
| <ul style="list-style-type: none"> ● at 240 V ● at 415 V ● at 690 V | 440 kA 242 kA 77 kA |

Switching capacity according to UL 489

| | |
|--|---------------------------|
| current breaking capacity | |
| <ul style="list-style-type: none"> ● at 240 V ● at 480 V ● at 600 V | 200 kA 100 kA 65 kA |

Adjustable parameters

| | |
|--|-----------------------------|
| adjustable response value setting current (I _r) / of the L-trip / with I _{2t} characteristic | |
| <ul style="list-style-type: none"> ● minimum ● maximum | 600 A 1 600 A |
| adjustable response value delay time (t _r) / for L-tripping / with I _{2t} characteristic | |
| <ul style="list-style-type: none"> ● minimum ● maximum | 2.5 s 30 s |
| adjustable response value setting current (I _{sd}) / of S-trip / with I _{0t} characteristic | |
| <ul style="list-style-type: none"> ● minimum ● maximum | 960 A 12 000 A |
| adjustable response value setting current (I _{sd}) / of S-trip / with I _{2t} characteristic | |
| <ul style="list-style-type: none"> ● minimum ● maximum | 960 A 12 000 A |
| adjustable response value delay time (t _{sd}) / for S-tripping / with I _{0t} characteristic | |
| <ul style="list-style-type: none"> ● minimum ● maximum | 0.05 s 0.5 s |
| adjustable response value delay time (t _{sd}) / for S-tripping / with I _{2t} characteristic | |
| <ul style="list-style-type: none"> ● minimum ● maximum | 0.05 s 0.5 s |
| adjustable response value setting current (I _i) / for I-tripping | |
| <ul style="list-style-type: none"> ● minimum ● maximum | 2 400 A 12 000 A |
| adjustable current response value current / for G-tripping / with standard characteristic | |
| <ul style="list-style-type: none"> ● initial value ● full-scale value | 320 A 1 200 A |
| adjustable response value delay time (t _g) / for G-tripping / with I _{0t} characteristic | |
| <ul style="list-style-type: none"> ● minimum ● maximum | 0.05 s 0.8 s |
| adjustable response value setting current (I _g) / for G-tripping / with I _{2t} characteristic | |
| <ul style="list-style-type: none"> ● minimum ● maximum | 320 A 1 200 A |
| adjustable response value delay time (t _g) / for G-tripping / with I _{2t} characteristic | |
| <ul style="list-style-type: none"> ● minimum ● maximum | 0.05 s 0.8 s |
| design of the N-conductor protection | adjustable OFF; 20% to 160% |

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|---|----------|
| product function / grounding protection | No |
| Mechanical Design | |
| product component | |
| • undervoltage release | No |
| • trip indicator | No |
| height [in] | 8.14 in |
| height | 206.9 mm |
| width [in] | 8.99 in |
| width | 228.4 mm |
| depth [in] | 16 in |
| depth | 406.4 mm |

| | |
|---|-------------------|
| Connections | |
| type of electrical connection / for main current circuit | without terminals |
| design of the surface / of the connections / on the top of the switch (N, 1, 3, 5) | silver |
| design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6) | silver |

| | |
|--|---|
| Auxiliary circuit | |
| number of CO contacts / for auxiliary contacts | 0 |

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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 |
| reference code / according to IEC 81346-2 | F |

Approvals / Certificates

General Product Approval



[Confirmation](#)



[Miscellaneous](#)

| | | | | |
|--------------------------|-----|-------------------|----------------------|-------|
| General Product Approval | EMV | Test Certificates | Maritime application | other |
|--------------------------|-----|-------------------|----------------------|-------|



[Type Test Certificates/Test Report](#)



[Confirmation](#)

[Miscellaneous](#)

| | |
|-----------------|-------------|
| Dangerous goods | Environment |
|-----------------|-------------|

[Transport Information](#)

[Environmental Confirmations](#)

Further information

Information on the packaging

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

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

Information- and Downloadcenter (Catalogs, Brochures,...)

<https://www.siemens.com/lowvoltage/catalogs>

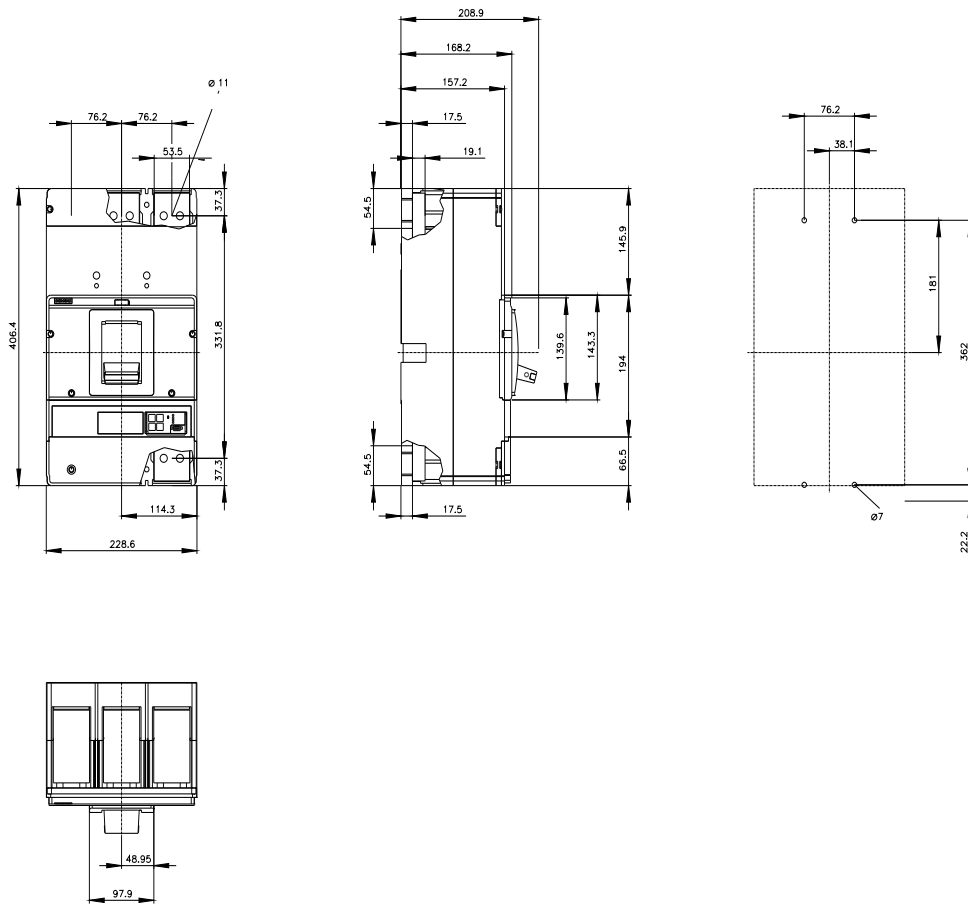
Industry Mall (Online ordering system)

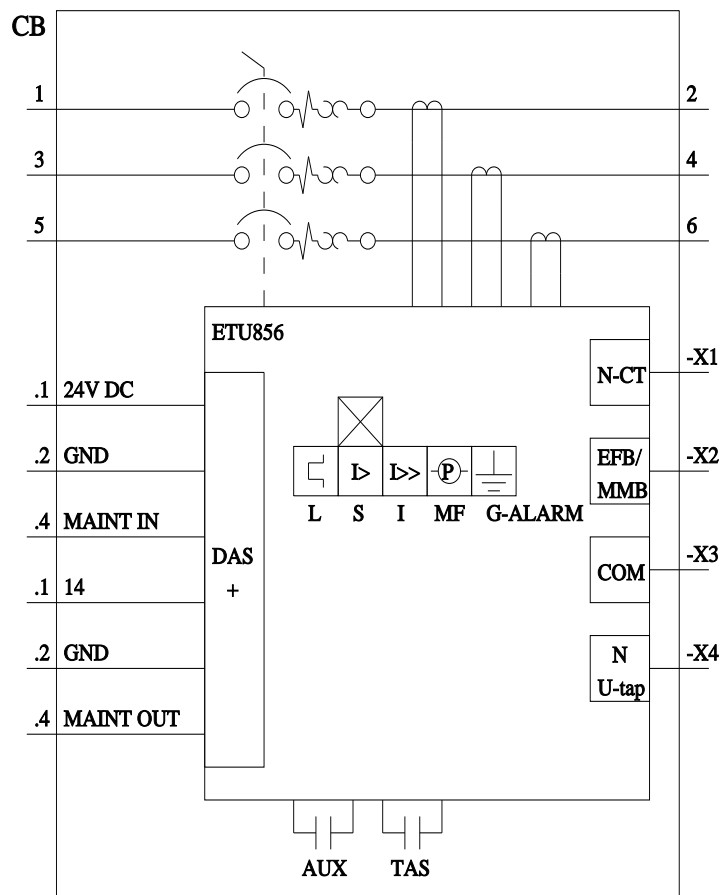
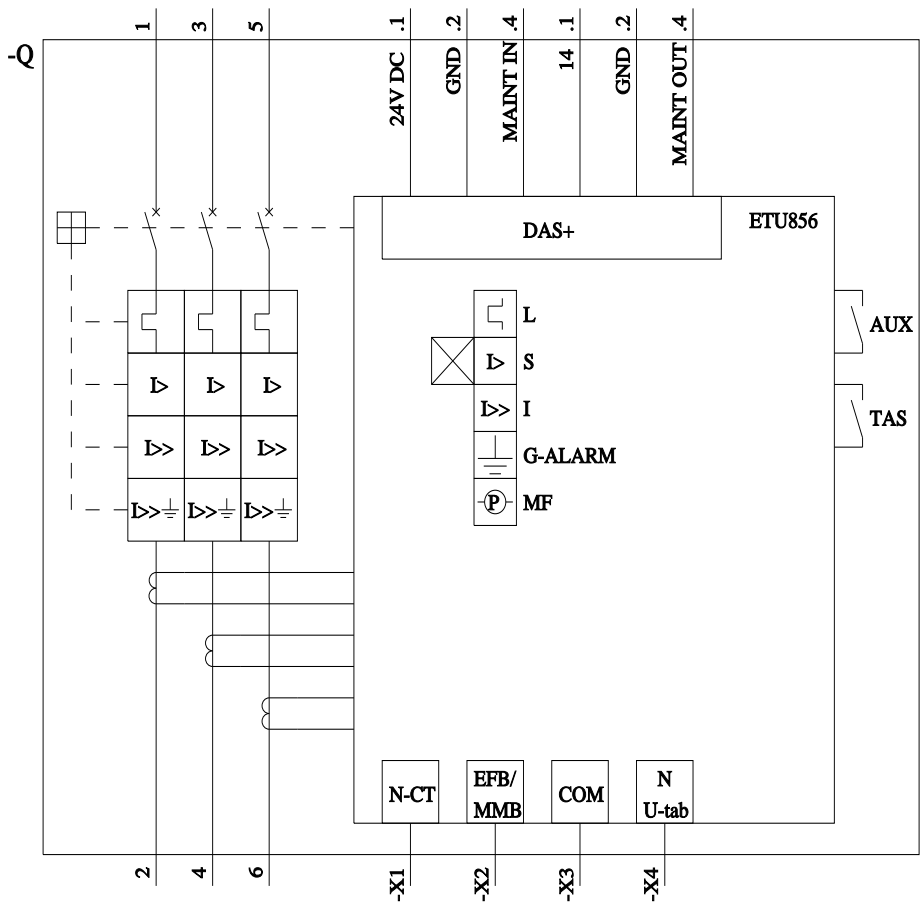
<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VA6816-7KT31-2AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA6816-7KT31-2AA0>

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





last modified:

3/31/2025

