



CIRCUIT-BREAKER VL160X N STANDARD
 BREAKING CAPACITY ICU=55KA / 415 V AC 3 POLE,
 LINE PROTECTION OVERCURRENT RELEASE TM, LI
 IN=50A, RATED CURRENT IR=40-50A, OVERLOAD
 II=600A, SHORT-CIRCUIT

| Model | | |
|---|-----|--------|
| Type of the driving mechanism / motor drive | | No |
| Design of the overcurrent release | | TM |
| General technical data | | |
| Number of poles | | 3 |
| Size of the circuit-breaker | | 3VL1 |
| Electrical endurance (switching cycles) / typical | | 10 000 |
| Usage category | | A |
| Performance class for circuit breaker | | N |
| Mechanical service life (switching cycles) / typical | | 20 000 |
| Equipment marking / acc. to DIN 40719 extended according to IEC 204-2 / acc. to IEC 750 | | Q |
| Operating frequency / maximum | 1/s | 120 |
| Voltage | | |
| Rated operational voltage Ue / max. | V | 690 |
| Insulation voltage | | |
| • rated value | V | 800 |
| • at AC / rated value | V | 800 |

| | | |
|--|----|---|
| Surge voltage resistance / rated value | kV | 8 |
|--|----|---|

Protection class

| | | |
|---|--|------|
| Protection class IP | | IP20 |
| Protective function of the overcurrent release | | LI |

Electricity

| | | |
|--|----|-----|
| Continuous current / rated value | A | 50 |
| Derating temperature / for the rated value of the continuous current | °C | 50 |
| Adjustable pick-up value current | | |
| <ul style="list-style-type: none"> • of the current-dependent overload release / Full-scale value | A | 50 |
| <ul style="list-style-type: none"> • of instantaneous short-circuit trip unit / initial value | A | 600 |
| <ul style="list-style-type: none"> • of instantaneous short-circuit trip unit / Full-scale value | A | 600 |

Main circuit

| | | |
|---|----|------|
| Operating frequency | | |
| <ul style="list-style-type: none"> • 1 / rated value | Hz | 50 |
| <ul style="list-style-type: none"> • 2 / rated value | Hz | 60 |
| Operating voltage | | |
| <ul style="list-style-type: none"> • for main current circuit / at AC / at 50 Hz / maximum | V | 690 |
| <ul style="list-style-type: none"> • for main current circuit / at AC / at 60 Hz / maximum | V | 690 |
| <ul style="list-style-type: none"> • for main current circuit / at DC / maximum | V | 500 |
| Operating current | | |
| <ul style="list-style-type: none"> • at 40 °C / rated value | A | 50 |
| <ul style="list-style-type: none"> • at 50 °C / rated value | A | 50 |
| <ul style="list-style-type: none"> • at 55 °C / rated value | A | 46.5 |
| <ul style="list-style-type: none"> • at 60 °C / rated value | A | 46.5 |
| <ul style="list-style-type: none"> • at 65 °C / rated value | A | 43 |
| <ul style="list-style-type: none"> • at 70 °C / rated value | A | 43 |

Auxiliary circuit

| | | |
|--|--|---|
| Number of CO contacts / for auxiliary contacts | | 0 |
| Number of NC contacts / for auxiliary contacts | | 0 |
| Number of NO contacts / for auxiliary contacts | | 0 |

Suitability

| | | |
|----------------------------|--|-------------------|
| Suitability for use | | system protection |
|----------------------------|--|-------------------|

Adjustable parameters

| | | |
|---|---|----|
| Adjustable pick-up value current / of the current-dependent overload release / initial value | A | 40 |
|---|---|----|

Product details

| | | |
|---|--|-----|
| Product component | | |
| • Trip indicator | | No |
| • Auxiliary switch | | No |
| • Voltage trigger | | No |
| • undervoltage release | | No |
| • undervoltage release with leading contact | | No |
| Product extension / optional / motor drive | | Yes |

Product function

| | | |
|---|--|------------|
| Product function | | |
| • of thermal overload trip unit | | adjustable |
| • Ground fault protection | | No |
| • for neutral conductors / Short-circuit and overload proof | | No |
| • Overload protection | | Yes |

Short circuit

| | | |
|--|----|----|
| Operational short-circuit current breaking capacity (Ics) | | |
| • at 240 V / rated value | kA | 65 |
| • at 415 V / rated value | kA | 55 |
| • at 500 V / rated value | kA | 14 |
| • at 690 V / rated value | kA | 4 |
| Maximum short-circuit current breaking capacity (Icu) | | |
| • at 240 V / rated value | kA | 65 |
| • at 415 V / rated value | kA | 55 |
| • at 440 V / rated value | kA | 25 |
| • at 480 V / acc. to NEMA / rated value | kA | 25 |
| • at 500 V / rated value | kA | 18 |
| • at 600 V / acc. to NEMA / rated value | kA | 8 |
| • at 690 V / rated value | kA | 8 |

Connections

| | | |
|---|--|---------------|
| Arrangement of electrical connectors / for main current circuit | | front side |
| Type of electrical connection / for main current circuit | | box terminals |

Mechanical Design

| | | |
|----------------------|----|----------------|
| Height | mm | 157.5 |
| Width | mm | 104.5 |
| Depth | mm | 106.5 |
| Mounting type | | fixed mounting |

Environmental conditions

| | | |
|------------------------------|----|-----|
| Ambient temperature | | |
| • during operation / minimum | °C | 0 |
| • during operation / maximum | °C | 70 |
| • during storage / minimum | °C | -40 |
| • during storage / maximum | °C | 80 |

Certificates

| | | |
|-----------------------------------|--|--------------------------------------|
| Certificate of suitability | | IEC, standard switching capacity (N) |
| Equipment marking | | Q |
| • acc. to DIN EN 61346-2 | | |

General Product Approval EMC



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| Declaration of Conformity | Test Certificates | Shipping Approval |
|---------------------------|-------------------|-------------------|
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| Shipping Approval | other |
|-------------------|-------|
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Further information

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

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

Industry Mall (Online ordering system)

<https://eb.automation.siemens.com/mall/en/WW/Catalog/Product/3VL17051DD330AA0>

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

<http://support.automation.siemens.com/WW/view/en/3VL17051DD330AA0/all>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mfb=3VL17051DD330AA0

CAx-Online-Generator
<http://www.siemens.com/cax>

Tender specifications
<http://ausschreibungstexte.siemens.com/tiplv>

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