

Circuit-breaker, 4 pole, 1250 A, 50 kA, Selective operation, IEC, Withdrawable



Part no. IZMX16N4-V12W-1 Article no. 183567

| | PO POP | MAN | 1110 21 | 110 |
|----|----------|---|---------|-----|
| ш. | 1211111 | | IVEIV | 112 |
| • | I WIIIII | ,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | |
| U | ı allılı | n oyı | ivery | DEI |

| Delivery programme | | | |
|---|------------------------|----|--|
| Product range | | | Air circuit-breakers/switch-disconnectors |
| Product range | | | Open circuit-breakers |
| Current Range | | | Up to 4000 A |
| Protective function | | | Selective operation |
| Installation type | | | Withdrawable |
| | | | Cassette must be separately ordered. |
| | | | Main terminals must be separately ordered. |
| Construction size | | | IZMX16 |
| Release system | | | Electronic release |
| Standard/Approval | | | IEC |
| Number of poles | | | 4 pole |
| Degree of Protection | | | IP31 with door seals, IP55 with protective cover |
| | | | suitable for zone selectivity optionally fittable by user with comprehensive accessories |
| Rated current = rated uninterrupted current | $I_n = I_u$ | Α | 1250 |
| up to 440 V 50/60 Hz | I _{cu} | kA | 50 |
| up to 440 V 50/60 Hz | I _{cs} | kA | 50 |
| Overload release, min. | l _r | Α | 500 |
| Overload release, max. | I _r | Α | 1250 |
| Non-delayed I | $I_i = I_n x \dots$ | | 2 - 15, OFF |
| Delayed > | $I_{sd} = I_r x \dots$ | | 1,5 - 10 |

Technical data

| General | | | |
|---|-------------|----|--|
| Standards | | | IEC/EN 60947 |
| Ambient temperature | | | |
| Storage | θ | °C | -20 - +70 |
| Ambient temperature | | °C | -20 - +70 |
| Mounting position | | | 30° 30° |
| | | | 30° 30° |
| Utilization category | | | В |
| Degree of Protection | | | IP31 with door seals, IP55 with protective cover |
| Direction of incoming supply | | | as required |
| Main conducting paths | | | |
| Rated current = rated uninterrupted current | $I_n = I_u$ | Α | 1250 |

Rated uninterrupted current at 50 °C

1250

| Randed uninterrupted curinarial PD **CO*** I, 2000 Case of production of curinaria voltage Up ** VAC 12000 Use in IT described prover instruction as pit U = MOV VAC 17 AC 0 Use in IT described prover instruction as pit U = MOV VAC 17 AC 0 Own redispose disapply of comprehensive as pit U = MOV VAC 100 100 Own redispose disapply of comprehensive as pit U = MOV VAC 100 100 Power and share-discuss that the control through pages by Vac 100 100 Plance of a chard-circuit making capacity /** 10 10 10 Break destruction in making capacity /** 10 10 10 Break destruction in making capacity /** 10 10 10 Break destruction in making capacity /** 10 10 10 10 Break destruction in making capacity /** 10 1 | Rated uninterrupted current at 60 °C | Iu | Α | 1250 |
|--|--|-----------------|------|---|
| Nacid proute withstand voltage Nacid proute withstand voltage Nacid proute withstand voltage Nacid proute mit alectorical power methods up to 10 40 V Use in IT alectorical power methods up to 10 40 V Use in IT alectorical power methods up to 10 40 V Use in IT alectorical power methods up to 10 40 V Use in IT alectorical power methods up to 10 40 V Normolling canagerity Normolling canagerity Normolling canagerity 10 10 40 V 2000 R Normolling canagerity 10 10 40 V 2000 R Normolling canagerity 10 10 40 V 2000 R 10 10 40 V 200 | | | | |
| Name of operations voltage Use in IT decirated power methods up to 1 - 480 V V V V V V V V V V V V V V V V V V V | · | | | |
| Use in IT alectrical power networks up to U = 480 V | | · | | |
| Part March Contentinal power methodria up to U = 200 / 100 | | | | |
| December | | | | |
| ### Part | | -111 | NA. | |
| Name of short - circuit making capacity Imm | | 11- | V | |
| Reserved short or vacuum shaining capacatry Improved AV 05/000 Hz Improv | | O _I | • | 1000 |
| 1 | | I _{cm} | | |
| Bit bit to 880 V 50000 Hz Lam LAM 88 Rized absort-circuit breaking capacity L _m Lam Vax 42 Rized absort-circuit breaking capacity L _m Lam Vax 42 IECDEN 80647 operating sequence L _m 0-t-CO Lam KA 85 up to 26M V 5080 Hz Lam KA 85 up to 88M V 5080 Hz Lam KA 59 Up to 26M V 5080 Hz Lam KA 59 Up to 26M V 5080 Hz Lam KA 59 Up to 26M V 5080 Hz Lam KA 59 Up to 36M V 5080 Hz Lam KA 59 Up to 48M V 5080 Hz Lam KA 59 Up to 36M V 5080 Hz Lam KA 59 Up to 45M V 5080 Hz Lam KA 59 Up to 45M V 5080 Hz Lam KA 59 Up to 36M V 5080 Hz Lam KA 59 Up to 36M V 5080 Hz Lam KA 59 Up to 36M V 5080 Hz Lam KA | up to 440 V 50/60 Hz | | kA | 105 |
| Rated short-time withstand current 50/80 Hz Les | up to 690 V 50/60 Hz | | kA | 88 |
| Rated short-circuit breaking capacity c c c c c IEC/EN 0997 operating sequence c Q - CO up to 240 V 5090 Hz c c c c k 5 up to 440 V 5090 Hz c c c c k 4 Up to 480 V 5090 Hz c c c c c c up to 240 V 5090 Hz c c c c c c up to 240 V 5090 Hz c c c c c c up to 240 V 5090 Hz c c c c c c c up to 440 V 5090 Hz c c c c c c c up to 440 V 5090 Hz c c c c c c c up to 440 V 5090 Hz c c c c c c c up to 440 V 5090 Hz c c c c c c c up to 440 V 5090 Hz c c c c c c c up to 440 V 5090 Hz c c c c c c c up to 440 V 5090 Hz c c c c c c c up to 440 V 5090 Hz c c c c c c c c up to 440 V 5090 Hz c c c c c c c c c up to 440 V 5090 Hz c c c c c c c c c | Rated short-time withstand current 50/60 Hz | | | |
| Ratio short-circuit breaking capacity co 1 1 1 1 1 1 1 1 1 | t = 1 s | I _{cw} | kA | 42 |
| ECICEN 00797 poprating sequence c_0 O-CO voices v | Rated short-circuit breaking capacity I _{cn} | | | |
| Lifespan, mechanical with maintonance Lifespan, mechanical with maintonance Lifespan, mechanical with maintonance Lifespan, electrical with maintonance Life | | CII | | |
| Up to 460 V 50/60 Hz | | lou | kA | 85 |
| Lifespan, mechanical with maintenance Lifespan, mechanical with maintenance Lifespan, electrical with maintenance Lifespan, electrical with maintenance Switching cycles (INV OFF) Lifespan, electrical with maintenance Withdrawable units (awtich with cassette) Withdrawable Withdrawable Lifespan Maximum operating frequency Withdrawable Lifespan Maximum operating frequency Withdrawable Lifespan Withdrawable Lifespan Maximum operating frequency Withdrawable Lifespan Withdrawable Lifespan Withdrawable Lifespan Maximum operating frequency Withdrawable Lifespan Withdrawable Lifespan Withdrawable Lifespan Maximum operating frequency Withdrawable Lifespan Withdrawable Lifespan Maximum operating frequency Mithdrawable Lifespan Mithdrawable Mi | | | | |
| EC/EN 60947 operating sequence | · | | | |
| up to 240 V 50/80 Hz up to 680 V 50/80 Hz up to 680 V 50/80 Hz lcs kA 50 Operations times Closing delay via spring release Total opening delay via undervoltage release Sovitching cycles (INV OFF) Lifespan, mechanical Sovitching cycles (INV OFF) Lifespan, electrical with maintenance Sovitching cycles (INV OFF) Lifespan, electrical with mai | | 'cu | NA. | 72 |
| up to 440 V 50/60 Hz lcs KA 50 up to 690 V 50/60 Hz lcs kA 42 Operating times ms 30 Closing delay via spring release ms 30 Total opening delay via undervoltage release ms 50 Total opening delay on non-delayed short-circuit release (up to complete arc quenching) ms 27 Lifespan Switching cycles (DN/OFF) 25000 Lifespan, mechanical Switching cycles (DN/OFF) 25000 Lifespan, electrical Switching cycles (DN/OFF) 25000 Lifespan, electrical with maintenance Switching cycles (DN/OFF) 25000 Lifespan, electrical with maintenance Switching cycles (DN/OFF) 20000 Maximum operating frequency Operations/h 20000 Maximum operating frequency W 180 Weight Withdrawable units (switch with cassette) W 180 Weight Withdrawable g 2 4 pole kg 2 4 pole kg 2 4 pole kg | | | LΛ | E0. |
| up to 890 V 50/60 Hz Dperating times Closing delay via spring release Total opening delay via shunt release Total opening delay via undervoltage release Total opening delay via undervoltage release Total opening delay via undervoltage release Total opening delay on non-delayed short-circuit release (up to complete arc quenching) Lifespan, mechanical Lifespan, mechanical Lifespan, mechanical Lifespan, mechanical Switching cycles (DN/ OPF) Lifespan, electrical with maintenance Switching cycles (DN/ OPF) Lifespan electrical with maintenance Switching cycles (DN/ OPF) Life | | | | |
| Operating times Closing delay via spring release Total opening delay via undervoltage release Total opening delay via undervoltage release Total opening delay | | | | |
| Closing delay via spring release Total opening delay via sunt release Total opening delay via undervoltage release Total opening delay via undervoltage release Total opening delay on non-delayed short-circuit release (up to complete arc querching) Lifespan Lifespan, mechanical Lifespan, mechanical Lifespan, mechanical with maintenance Lifespan, mechanical with maintenance Lifespan, mechanical with maintenance Lifespan, electrical Lifespan, electrical Vorles (DN/OFF) Lifespan, electrical with maintenance Voyles (DN/OFF) Maximum operating frequency Heat dissipation at rated current In Withdrawable units (switch with cassette) Weight Veright Terminal capacities Capper bar Withdrawable units Black Mithage A 2x5x80 | | I _{CS} | KA | 42 |
| Total opening delay via shunt release Total opening delay via undervoltage release Total opening delay on non-delayed short-circuit release (up to complete arc quenching) Lifespan Lifespan, mechanical Lifespan, mechanical with maintenance Lifespan, mechanical with maintenance Lifespan, electrical Lifespan, electrical Lifespan, electrical with maintenance Voices (INV OFF) Voices (INV | | | | |
| Total opening delay via undervoltage release Total opening delay on non-delayed short-circuit release (up to complete are quenching) Lifespan Lifespan, mechanical Lifespan, mechanical Lifespan, mechanical with maintenance Switching cycles (DN/ OFF) Lifespan, electrical Lifespan, electrical with maintenance Cycles (DN/ OFF) Lifespan, electrical with maintenance Switching cycles (DN/ OFF) Lifespan, electrical with maintenance Cycles (DN/ OFF) Withdrawable units (switch with cassette) Withdrawable 4-pole 4-pole 4-pole 4-pole 4-pole 5-cassette 4-pole Withdrawable units Withdrawable units Withdrawable units Mithdrawable units Black mm 2×5×80 | | | | |
| Total opening delay on non-delayed short-circuit release (up to complete arc quenching) Lifespan, mechanical Lifespan, mechanical Lifespan, mechanical with maintenance Lifespan, mechanical with maintenance Lifespan, electrical Lifespan, electrical Lifespan, electrical with maintenance Lifespan, electrical with maintenance Withdrawable units (switch with cassette) Withdrawable 4-pole 4-pole 4-pole 4-pole 4-pole 4-pole 4-pole 4-pole 5-minal capacities Copper bar Withdrawable units Black mm 2x5 x80 | | | | |
| Lifespan Lifespan, mechanical Lifespan, mechanical Lifespan, mechanical with maintenance Lifespan, mechanical with maintenance Lifespan, electrical Lifespan, electrical Lifespan, electrical Lifespan, electrical Lifespan, electrical Switching cycles (DN/ OFF) Lifespan, electrical with maintenance Switching cycles (DN/ OFF) Lifespan, electrical with maintenance Switching cycles (DN/ OFF) Withdrawable current In Withdrawable units (switch with cassette) Withdrawable 4-pole 4-pole 4-pole 4-pole 4-pole 4-pole 5-cassette 4-pole 6-cassette 4-pole 7-cassette 4-pole 8-cassette 4-pole 1-cassette 4-pole 1-c | rotal opening acity via anactivotage release | | 1113 | |
| Lifespan, mechanical Lifespan, mechanical Lifespan, mechanical with maintenance Lifespan, mechanical with maintenance Lifespan, mechanical with maintenance Lifespan, electrical Lifespan, electrical Lifespan, electrical Lifespan, electrical Lifespan, electrical with maintenance Lifespan, electrical with maintenance Switching cycles (DN/ OFF) Black Black Switching cycles (DN/ OFF) Lifespan, electrical with maintenance | Total opening delay on non-delayed short-circuit release (up to complete arc | | ms | 27 |
| Lifespan, mechanical Lifespan, mechanical with maintenance Lifespan, mechanical with maintenance Switching cycles (ON/ OFF) Lifespan, electrical Lifespan, electrical Switching cycles (ON/ OFF) Cuffespan, electrical with maintenance Switching cycles (ON/ OFF) OFF) Withdrawable units (switch with cassette) Withdrawable units (switch with cassette) Withdrawable 4-pole 4-pole 4-pole 4-pole 4-pole 4-pole 5-cassette 4-pole 4-pole 5-cassette 4-pole 5-cassette 4-pole Cassette 4-pole Cassette 4-pole Mithdrawable units Switching cycles (ON/ OFF) Operations/h For including specifies Capper bar Withdrawable units Black mm 2x5x80 | | | | |
| cycles (ON/ OFF) Lifespan, mechanical with maintenance Switching cycles (ON/ OFF) Lifespan, electrical Switching cycles (ON/ OFF) Lifespan, electrical with maintenance Switching cycles (ON/ OFF) Lifespan, electrical with maintenance Switching cycles (ON/ OFF) Double of the switch with case (ON/ OFF) Maximum operating frequency Operations/h Withdrawable units (switch with cassette) W 180 Weight Withdrawable 4-pole 4-pole 4-pole 4-pole 4-pole 5-cassette 4-pole 4-pole 5-cassette 4-pole 5-cassette 4-pole 6-cassette 4-pole 7-cassette 4-pole 8-cassette 4-pole 9-cycles (ON/ OFF) 180 Terminal capacities Copper bar Withdrawable units Black mm 2-x5 x 80 | | | S | |
| Lifespan, electrical Switching cycles (ON/ OFF) Lifespan, electrical with maintenance Switching cycles (ON/ OFF) Lifespan, electrical with maintenance Switching cycles (ON/ OFF) Maximum operating frequency Operations/h Withdrawable units (switch with cassette) W 180 Weight Withdrawable 4-pole kg 33 Cassette 4 pole kg 21 Terminal capacities Copper bar Withdrawable units Black mm 2x5x80 | Lifespan, mechanical | cycles (ON/ | | 12500 |
| Cycles (ON/ OFF) Lifespan, electrical with maintenance Switching cycles (ON/ OFF) Switching cycles (ON/ OFF) Maximum operating frequency Operations/h Withdrawable units (switch with cassette) Withdrawable units (switch with cassette) Withdrawable 4-pole 4-pole 4-pole 4-pole 5-pole 4-pole 6-pole 6-pole 7-pole 8-pole 7-pole 8-pole 9-pole | Lifespan, mechanical with maintenance | cycles (ON/ | | 25000. |
| Lifespan, electrical with maintenance Lifespan, electrical with maintenance Switching cycles (DN/ OFF) Maximum operating frequency Heat dissipation at rated current In Withdrawable units (switch with cassette) Weight Withdrawable 4-pole 4-pole 4-pole 4-pole 5 | Lifespan, electrical | | | 10000 |
| Maximum operating frequency Operations/h 60 Heat dissipation at rated current In W 180 Weight W Withdrawable kg 33 Cassette kg 21 4 pole kg 21 Terminal capacities Copper bar Withdrawable units Withdrawable units mm 2x5x80 | | OFF) | | |
| Heat dissipation at rated current In Withdrawable units (switch with cassette) Withdrawable 4-pole 4-pole kg 33 Cassette 4 pole kg 21 Terminal capacities Copper bar Withdrawable units Black mm 2x5x80 | Lifespan, electrical with maintenance | cycles (ON/ | | 20000. |
| Withdrawable units (switch with cassette) Weight Withdrawable 4-pole 4-pole 4 pole 4 pole 5 pole Copper bar Withdrawable units Black Multiplication (Switch with cassette) Withdrawable units (Switch with cassette) | Maximum operating frequency | Operations/h | | 60 |
| Weight Withdrawable kg 33 4-pole kg 21 Terminal capacities Copper bar Withdrawable units Black mm 2x5x80 | Heat dissipation at rated current I_n | | | |
| Withdrawable 4-pole kg 33 Cassette 4 pole kg 21 Terminal capacities Copper bar Withdrawable units Black mm 2x5x80 | | | W | 180 |
| 4-pole | | | | |
| Cassette kg 21 Terminal capacities Copper bar Withdrawable units Black mm 2x5x80 | | | La | |
| 4 pole kg 21 Terminal capacities Copper bar Withdrawable units Black mm 2 x 5 x 80 | | | кд | 55 |
| Terminal capacities Copper bar Withdrawable units Black mm 2x5x80 | | | ka | 21 |
| Copper bar Withdrawable units Black mm 2 x 5 x 80 | | | ĸy | 21 |
| Withdrawable units Black mm 2 x 5 x 80 | _ | | | |
| | | | | |
| The constitution of the co | Black | | mm | 2 x 5 x 80 |
| the temperature around the circuit-breaker, which is influenced by the ambie temperature, the degree of protection (IP), the mounting height, the partitions any external ventilation. Depending on the specific switchgear design, this m | | | | These are values used in separate switchgear. The actual values will depend on the temperature around the circuit-breaker, which is influenced by the ambient temperature, the degree of protection (IP), the mounting height, the partitions, and any external ventilation. Depending on the specific switchgear design, this may result in derating, which can then be compensated for by increasing the cross- |

| sectional area. Temperature rise tests in the specific switchgear can provide |
|---|
| specific and detailed information. |

Permissible continuous current for circuit-breakers operating in switchboards at various internal ambient temperatures. The switchboard's internal ambient temperature should be estimated using the calculation methods of IEC regulation.

Design verification as per IEC/EN 61439

| Technical data for design verification | | | |
|--|------------------|----|--|
| Rated operational current for specified heat dissipation | In | Α | 1250 |
| Equipment heat dissipation, current-dependent | P _{vid} | W | 180 |
| Operating ambient temperature min. | | °C | -20 |
| Operating ambient temperature max. | | °C | 70 |
| IEC/EN 61439 design verification | | | |
| 10.2 Strength of materials and parts | | | |
| 10.2.2 Corrosion resistance | | | Meets the product standard's requirements. |
| 10.2.3.1 Verification of thermal stability of enclosures | | | Meets the product standard's requirements. |
| 10.2.3.2 Verification of resistance of insulating materials to normal heat | | | Meets the product standard's requirements. |
| $10.2.3.3\ Verification\ of\ resistance\ of\ insulating\ materials\ to\ abnormal\ heat\ and\ fire\ due\ to\ internal\ electric\ effects$ | | | Meets the product standard's requirements. |
| 10.2.4 Resistance to ultra-violet (UV) radiation | | | Meets the product standard's requirements. |
| 10.2.5 Lifting | | | Does not apply, since the entire switchgear needs to be evaluated. |
| 10.2.6 Mechanical impact | | | Does not apply, since the entire switchgear needs to be evaluated. |
| 10.2.7 Inscriptions | | | Meets the product standard's requirements. |
| 10.3 Degree of protection of ASSEMBLIES | | | Does not apply, since the entire switchgear needs to be evaluated. |
| 10.4 Clearances and creepage distances | | | Meets the product standard's requirements. |
| 10.5 Protection against electric shock | | | Does not apply, since the entire switchgear needs to be evaluated. |
| 10.6 Incorporation of switching devices and components | | | Does not apply, since the entire switchgear needs to be evaluated. |
| 10.7 Internal electrical circuits and connections | | | Is the panel builder's responsibility. |
| 10.8 Connections for external conductors | | | Is the panel builder's responsibility. |
| 10.9 Insulation properties | | | |
| 10.9.2 Power-frequency electric strength | | | Is the panel builder's responsibility. |
| 10.9.3 Impulse withstand voltage | | | Is the panel builder's responsibility. |
| 10.9.4 Testing of enclosures made of insulating material | | | Is the panel builder's responsibility. |
| 10.10 Temperature rise | | | The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices. |
| 10.11 Short-circuit rating | | | Is the panel builder's responsibility. The specifications for the switchgear must be observed. |
| 10.12 Electromagnetic compatibility | | | Is the panel builder's responsibility. The specifications for the switchgear must be observed. |
| 10.13 Mechanical function | | | The device meets the requirements, provided the information in the instruction leaflet (IL) is observed. |

Technical data ETIM 6.0

Low-voltage industrial components (EG000017) / Power circuit-breaker for trafo/generator/installation prot. (EC000228)

Electric engineering, automation, process control engineering / Low-voltage switch technology / Circuit breaker (LV < 1 kV) / Circuit breaker for power transformer, generator and system protection (ecl@ss8.1-27-37-04-09 [AJZ716010])

| protection (eci@330.1-27-07-04-03 [A02710010]) | | | |
|---|---|----|---|
| Rated permanent current lu | Α | 4 | 1250 |
| Rated voltage | V | / | 690 - 690 |
| Rated short-circuit breaking capacity Icu at 400 V, 50 Hz | k | κA | 50 |
| Overload release current setting | А | 4 | 625 - 1250 |
| Adjustment range short-term delayed short-circuit release | А | 4 | 2500 - 12500 |
| Adjustment range undelayed short-circuit release | Α | 4 | 2500 - 15000 |
| Integrated earth fault protection | | | No |
| Type of electrical connection of main circuit | | | Rail connection |
| Device construction | | | Built-in device slide-in technique (withdrawable) |
| Suitable for DIN rail (top hat rail) mounting | | | No |
| DIN rail (top hat rail) mounting optional | | | No |
| Number of auxiliary contacts as normally closed contact | | | 0 |

| Number of auxiliary contacts as normally open contact | 0 |
|---|-------------|
| Number of auxiliary contacts as change-over contact | 2 |
| Switched-off indicator available | Yes |
| With under voltage release | No |
| Number of poles | 4 |
| Position of connection for main current circuit | Back side |
| Type of control element | Push button |
| Complete device with protection unit | Yes |
| Motor drive integrated | No |
| Motor drive optional | Yes |
| Degree of protection (IP) | IP31 |

Dimensions

