

Circuit-breaker, 3 pole, 2000 A, 105 kA, P measurement, IEC, Fixed

Powering Business Worldwide[™]

IZMX40H3-P20F-1 Part no. Article no. 183638

Delivery program

| Delivery program | | | |
|---|--------------------------|----|--|
| Product range | | | Air circuit-breakers/switch-disconnectors |
| Product range | | | Open circuit-breakers |
| Current Range | | | Up to 4000 A |
| Protective function | | | P measurement |
| Installation type | | | Fixed |
| Construction size | | | IZMX40 |
| Release system | | | Electronic release |
| Standard/Approval | | | IEC |
| Number of poles | | | 3 pole |
| Degree of Protection | | | IP31 with door seals, IP55 with protective cover |
| | | | suitable for zone selectivity suitable for communication with integrated system monitor with integrated test possibility With graphic LCD display optionally fittable by user with comprehensive accessories |
| Rated current = rated uninterrupted current | $I_n = I_u$ | Α | 2000 |
| up to 440 V 50/60 Hz | I _{cu} | kA | 105 |
| up to 440 V 50/60 Hz | I _{cs} | kA | 105 |
| Overload release, min. | I _r | Α | 800 |
| Overload release, max. | I _r | Α | 2000 |
| Non-delayed | $I_i = I_n \times \dots$ | | 2 - 15, OFF |
| Delayed XI > | $I_{sd} = I_r x \dots$ | | 1,5 - 10 |

Technical data

Rated uninterrupted current at 60 °C

| l echnical data | | | |
|---|----------------|----|--|
| General | | | |
| Standards | | | IEC/EN 60947 |
| Ambient temperature | | | |
| Storage | 9 | °C | -20 - +70 |
| Operating (open) | | °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 | 2000 |
| Rated uninterrupted current at 50 °C | I _u | Α | 2000 |

2000

| Risked implainer williand currents 270 °C Up VAC 2000 Rated implainer williand velotage VAC 2000 Rated operational voltage Up VAC Up VAC Up VAC Up Up VAC Up Up Up Up Up Up Up U | 2000 |
|--|--|
| Rated operational voltage | |
| Bus in IT electrical power networks up to U = 400 V | |
| Use in | |
| Overroitage catagory/pollution degree Ui V 10/0 Rated insulation voltage Ui V 1000 Switching capacity Incompanie V Rated short-circuit making capacity Icm LA 231 up to 4804 V 5080 Hz Icm LA 231 up to 4804 V 5080 Hz Icm LA 231 1 = 3 s Icm LA 85 1 = 3 s Icm LA 85 attended short-circuit transking capacity Icm Icm LA 85 IECEN 80847 operating sequence Icm 0-FCO Icm LA 155 up to 480 V 5000 Hz Icm LA 155 Up to 480 V 5000 Hz Icm LA 155 IECEN 80947 operating sequence Icm 0-FCO+CCO Icm LA 155 Up to 480 V 5000 Hz Icm LA 155 Up to 480 V 5000 Hz Icm LA 155 Up to 480 V 5000 Hz Icm Icm To 3 165 Up to 480 V 5000 Hz Icm <td></td> | |
| Name | 0 |
| Switching capacity Icm IA 231 up to 480 V 5080 Nz 2000 N | III/3 |
| Rated short-circuit making capacity Interpretation of the companience of the companien | 1000 |
| up to 440 V 50/60 Hz up to 890 V 50/80 Hz t = 1 s t = 1 s t = 1 s t = 1 lew | |
| Leman Lema | |
| Retack short-time withistand current \$0\text{50\text{1}} t | 231 |
| L=1 s | 166 |
| t=3 s tow kA 66 Rated short-circuit breaking capacity tow to | |
| Rated short-circuit breaking capacity lea IEC/EN 80947 operating sequence lea 0-t-CO up to 240 V 50/80 Hz up to 440 V 50/80 Hz up to 690 V 50/80 Hz lea kA IEC/EN 80947 operating sequence lea 0-t-CO-t-CO up to 240 V 50/80 Hz up to 690 V 50/80 Hz lea kA IES kA ID5 Operating times Closing dolay via spring rolease Total opening delay via undervoltage release Total opening delay on non-delayed short-circuit release (up to complete arc quenching) Lifespan, mechanical Lifespan, mechanical with maintenance Lifespan, mechanical with maintenance Switching cycles (DN/ OFF) Lifespan, electrical with | 85 |
| EC/EN 68947 operating sequence cu O+CO | 66 |
| Lifespan, mechanical | |
| up to 440 V 50/60 Hz Icu kA 105 up to 690 V 50/60 Hz Icu kA 75 IEC/EN 60947 operating sequence I _{cs} 0-t-C0-t-C0 Ics kA 105 up to 240 V 50/60 Hz Ics kA 105 up to 490 V 50/60 Hz Ics kA 105 up to 690 V 50/60 Hz Ics kA 75 Operating times ms 35 Closing delay via spring release ms 35 Total opening delay via undervoltage release ms 40 Total opening delay via undervoltage release ms 40 Lifespan ms 52 Lifespan, mechanical Switching cycles (ON) OFF) 10000 Lifespan, mechanical with maintenance Switching cycles (ON) OFF) 20000 Lifespan, electrical with maintenance Switching cycles (ON) OFF) 60 Maximum operating frequency Operations/h 60 Meat dissipation at rated current In fixed mounting W 150 Fixed mounting W 150 Weight </td <td></td> | |
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| Up to 240 V 50/60 Hz | - |
| up to 440 V 50/60 Hz up to 690 V 50/60 Hz up to 690 V 50/60 Hz lcs kA 75 Operating times Closing delay via spring release 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 Lifespan, mechanical with maintenance Switching cycles (DN OPF) Lifespan, electrical Lifespan, electrical with maintenance Switching cycles (ON OPF) Lifespan, electrical wi | 105 |
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| Lifespan, electrical with maintenance Switching cycles (ON/ OFF) Maximum operating frequency Operations/h Fixed mounting W 150 Weight Fixed mounting 3-pole kg 43 Terminal capacities | 8000 |
| Cycles (ON/OFF) Maximum operating frequency Operations/h Heat dissipation at rated current In Fixed mounting W 150 Weight Fixed mounting 3-pole kg 43 Terminal capacities | |
| Heat dissipation at rated current In Fixed mounting W 150 Weight Fixed mounting 3-pole kg 43 Terminal capacities | 16000. |
| Fixed mounting W 150 Weight Fixed mounting | 60 |
| Weight Fixed mounting 3-pole kg 43 Terminal capacities | |
| Weight Fixed mounting 3-pole kg 43 Terminal capacities | 150 |
| 3-pole kg 43 Terminal capacities | |
| Terminal capacities | |
| | 43 |
| Copper bar | |
| | |
| Fixed mounting | |
| the temperature around the circuit-breaker, which is influenced temperature, the degree of protection (IP), the mounting height any external ventilation. Depending on the specific switchgear result in derating, which can then be compensated for by incre | 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 |

| | 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. |
|-------|---|
| Notes | External IZMX-DTP-PTM-1 voltage measuring module required (1 module is suitable for 16 circuit-breakers) |

Design verification as per IEC/EN 61439

| Technical data for design verification | | | |
|--|------------------|----|--|
| Rated operational current for specified heat dissipation | In | Α | 2000 |
| Equipment heat dissipation, current-dependent | P _{vid} | W | 150 |
| 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 (ecl@ss8.1-27-37-04-09 [AJZ716010]) | | |
|---|----|--|
| Rated permanent current lu | А | 2000 |
| Rated voltage | V | 690 - 690 |
| Rated short-circuit breaking capacity Icu at 400 V, 50 Hz | kA | 105 |
| Overload release current setting | Α | 1000 - 2000 |
| Adjustment range short-term delayed short-circuit release | Α | 4000 - 20000 |
| Adjustment range undelayed short-circuit release | Α | 4000 - 24000 |
| Integrated earth fault protection | | No |
| Type of electrical connection of main circuit | | Rail connection |
| Device construction | | Built-in device fixed built-in technique |
| 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 | 3 |
| 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

