Product datasheet

Specifications



Circuit breaker, MasterPact MTZ2 20H1 (66kA/415VAC), 3P, 2000A, drawout, manually operated, MicroLogic 5.0X control unit

MTZ220H15X3PMD

Main

Range	MasterPact
Product name	MasterPact MTZ2
Product or component type	Circuit breaker
Device short name	MTZ2 20 H1
Device application	Distribution
Poles description	3P
Protected poles description	3D
Control unit	ON/OFF push-button
[In] rated current	2000 A at 40 °C
Performance type	H1 66 kA 415 V AC
[Ue] rated operational voltage	690 V AC 50/60 Hz conforming to EN/IEC 60947-2
Suitability for isolation	Yes conforming to EN/IEC 60947-2
Selectivity category	Category B
Control type	Manually operated
Mounting mode	Drawout
Trip unit name	MicroLogic 5.0 X
Trip unit technology	Electronic
Trip unit protection functions	LSI

Complementary

[Icu] rated ultimate short-circuit breaking capacity	66 kA Icu at 220/415 V AC 50/60 Hz conforming to EN/IEC 60947-2 66 kA Icu at 440 V AC 50/60 Hz conforming to EN/IEC 60947-2 66 kA Icu at 500/525 V AC 50/60 Hz conforming to EN/IEC 60947-2 66 kA Icu at 660/690 V AC 50/60 Hz conforming to EN/IEC 60947-2
[Ics] rated service short-circuit breaking capacity	66 kA at 220/415 V AC 50/60 Hz conforming to EN/IEC 60947-2 66 kA at 440 V AC 50/60 Hz conforming to EN/IEC 60947-2 66 kA at 500/525 V AC 50/60 Hz conforming to EN/IEC 60947-2 66 kA at 660/690 V AC 50/60 Hz conforming to EN/IEC 60947-2
[Icw] rated short-time withstand current	66 kA 0.5 s conforming to EN/IEC 60947-2 66 kA 1 s conforming to EN/IEC 60947-2 36 kA 3 s conforming to EN/IEC 60947-2
[Icm] rated short-circuit making capacity	145 kA (Icm) at 220/415 V AC 50/60 Hz conforming to EN/IEC 60947-2 145 kA (Icm) at 440 V AC 50/60 Hz conforming to EN/IEC 60947-2 145 kA (Icm) at 500/525 V AC 50/60 Hz conforming to EN/IEC 60947-2 145 kA (Icm) at 660/690 V AC 50/60 Hz conforming to EN/IEC 60947-2
[Ui] rated insulation voltage	1000 V AC 50/60 Hz conforming to EN/IEC 60947-2
[Uimp] rated impulse withstand voltage	12 kV conforming to EN/IEC 60947-2

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

Power dissipation per pole	156.7 W
Maximum breaking time	25 ms
Maximum closing response time	70 ms
Mounting support	Base plate Rails
Upside connection	Horizontal Rear
Downside connection	Vertical Rear
Connection pitch	115 mm
Mechanical durability	20000 cycles with periodic preventive maintenance conforming to EN/IEC 60947-2
Electrical durability	8000 cycles 440 V AC 50/60 Hz conforming to EN/IEC 60947-2 6000 cycles 690 V AC 50/60 Hz conforming to EN/IEC 60947-2
Protection type	Overload protection (long time) conforming to ANSI 49 Instantaneous short-circuit protection conforming to ANSI 50 Short time short-circuit protection conforming to ANSI 51
Trip unit rating	2000 A at 40 °C
[Ir] long-time protection pick-up adjustment range	0.4...1 x In adjustable in step of 1 A
Long-time protection delay adjustment type tr	Adjustable in step of 0.5 s
[tr] long-time protection delay adjustment range	12.5…600 s at 1.5 x Ir 0.5…24 s at 6 x Ir 0.34…16.6 s at 7.2 x Ir
Thermal memory	Yes
[Isd] Short-time protection pick-up adjustment range	1.5...10 x Ir adjustable in step of 0.5 x Ir with embedded HMI
Short-time protection delay adjustment type tsd	Adjustable
[tsd] Short-time protection delay adjustment range	0.1…0.4 s I^2t=on 0…0.4 s I^2t=off
[Ii] instantaneous protection pick-up adjustment range	2...15 x In adjustable in step of 0.5 x In with embedded HMI Ii enable on/off
[Ii mode] instantaneous delay adjustment range	20...50 ms in standard
Earth-leakage protection	Without
Zone selective interlocking ZSI	With
Network and machine diagnosis type	System (HMI) health state overview: circuit breaker health state standard) Contacts state: circuit breaker health state standard) MicroLogic service life: circuit breaker health state standard) Tripping cause indication: circuit breaker tripping cause standard) Identification card: diagnostic data standard) Configured alarms synthesis: diagnostic data standard) Monitored function: diagnostic data standard) Operation: diagnostic data standard) MicroLogic test: test standard) Protection test: test standard) Selectivity test: test standard) Trip context information: crisis management standard) Operation: advanced diagnostic standard) Breaker service life: circuit breaker health state standard)
Type of measurement	Power meter
Energy management	Measurement ,active, reactive and apparent energy (standard) Measurement ,electrical network (standard) Measurement ,energy (standard)

Metering type	Current I1, I2, I3, In, Ig: maximum standard) Average voltage Vavg standard) Active power P, P1, P2, P3 standard) Reactive power Q, Q1, Q2, Q3 standard) Apparent power S, S1, S2, S3 standard) Power factor standard) Frequency standard) Total current harmonic distortion THD (I): inst, avg, avg min, avg max fundamental voltage standard) Total current harmonic distortion THD (I): inst, avg, avg min, avg max RMS voltage standard) Voltage V21, V32, V13, V1, V2, V3: instantaneous standard) Voltage V21, V32, V13, V1, V2, V3: minimum standard) Voltage V21, V32, V13, V1, V2, V3: maximum standard) Total voltage harmonic distortion THD (V): inst, avg, avg min, avg max fundamental voltage standard) Total voltage harmonic distortion THD (V): inst, avg, avg min, avg max RMS voltage standard) Demand current I1, I2, I3, In, Iavg standard) Demand power P, Q, S standard)
Measurement voltage	145.6…828 V AC 50/60 Hz per phase
Frequency measurement range	45…250 Hz
Measurement accuracy	Power factor: +/- 1 % Active energy Ep IN/OUT/tot: +/- 1 % - 10...10 GWh Reactive energy Ep IN/OUT/tot: +/- 2 % - 10...10 GVARh Apparent energy Es IN/OUT/tot: +/- 1 % - 10...10 GVAh Unbalance current: +/- 0.5 % Frequency: +/- 0.005 Hz Voltage V21, V32, V13, VLLavg: +/- 0.5 % 208...690 x 1.2 V Voltage V21, V32, V13, VLNavg: +/- 0.5 % 120...400 x 1.2 V Apparent power S, S1, S2, S3, Sdemand: +/- 1 % Active power P, P1, P2, P3, Pdemand: +/- 1 % Reactive power Q, Q1, Q2, Q3, Qdemand: +/- 2 % Current I1, I2, I3, Iavg, Idemand for MTZ1: +/- 0.5 % 40...1600 x 1.2 A Current I1, I2, I3, Iavg, Idemand for MTZ2: +/- 0.5 % 40...4000 x 1.2 A Current I1, I2, I3, Iavg, Idemand for MTZ3: +/- 0.5 % 80...6300 x 1.2 A
Accuracy class	Class 5: total current harmonic distortion THD (I) Class 0.5: unbalance voltage Class 1: active and reactive energy by pulse counting (+/- W.h, +/- VAR.h) Class 2: total voltage harmonic distortion THD (V)
Display type	LCD display - 128 x 96 pixels
Local signalling	3 LEDs (red) for trip causes 1 LED (red/orange) for overload 1 LED (green) for ready to operate 1 LED (red/orange) for service
Communication port protocol	Bluetooth 4.0 LE peer to peer 30 kbit/s conforming to IEEE 802.15.1 NFC peer to peer 28800 bauds conforming to ISO 15963 USB peer to peer 115 kbauds
Data recording	Min/max of instantaneous values Alarm logs Maintenance logs Event logs Time stamping Data logs
Commissioning interface	EcoStruxure Power Commission
End user smartphone application	EcoStruxure Power Device
Locking options description	Padlock in OFF position Keylock in OFF position
Provision for padlocking	3 padlocks
Width (W)	441 mm
Height (H)	439 mm
Depth (D)	403 mm
Net weight	90 kg

Environment

Standards	EN/IEC 60947-1 EN/IEC 60947-2 EN/IEC 61010-1
Product certifications	IECEE CB Scheme
IP degree of protection	IP30 conforming to EN/IEC 60529
IK degree of protection	IK07 conforming to EN/IEC 62262
Pollution degree	3 conforming to EN/IEC 60947-1
Overvoltage category	IV conforming to EN/IEC 61010-1
Environmental characteristic	Wet location not approved for use conforming to EN/IEC 61010-1
Electromagnetic compatibility	Electrostatic discharge immunity test conforming to EN/IEC 61000-4-2 Susceptibility to electromagnetic fields conforming to EN/IEC 61000-4-3 Electrical fast transient/burst immunity test conforming to EN/IEC 61000-4-4 1.2/50 µs shock waves immunity test conforming to EN/IEC 61000-4-5 Conducted RF disturbances A conforming to EN/IEC 61000-4-6 Conducted and radiated emissions conforming to CISPR 22
Measurement category	Category IV conforming to IEC 61010-2-30
Ambient air temperature for operation	-25…70 °C (operating) -35 °C (for start-up of product)
Ambient air temperature for storage	-40…85 °C
Relative humidity	0…95 % conforming to IEC 60068-2-30
Operating altitude	<= 2000 m without derating <= 3000 m 99 % of In <= 4000 m 96 % of In <= 5000 m 94 % of In

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	66.000 cm
Package 1 Width	60.000 cm
Package 1 Length	80.000 cm
Package 1 Weight	177.999 kg

Contractual warranty

Warranty (in months)	18

Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

Environmental Data explained >

How we assess product sustainability >

Environmental footprint

Total lifecycle Carbon footprint	**3 299 kg CO2 eq.**
Carbon footprint of the manufacturing phase [A1 to A3]	**524 kg CO2 eq.**
Carbon footprint of the distribution phase [A4]	**11 kg CO2 eq.**
Carbon footprint of the installation phase [A5]	**13 kg CO2 eq.**
Carbon footprint of the use phase [B2, B3, B4, B6]	**2 579 kg CO2 eq.**
Carbon footprint of the end-of-life phase [C1 to C4]	**172 kg CO2 eq.**
Environmental Disclosure	**Product Environmental Profile**

Use Better

Materials and Substances

Packaging made with recycled cardboard	**Yes**
Packaging without single use plastic	**No, we have minimized the use of plastic in the packaging in compliance with regulations and considering quality and safety standards**
SCIP Number	**F31d8a4d-e9cb-4afc-bf2c-5965742ce772**
EU RoHS Directive	**Compliant By Exemption**
REACh Regulation	**Reference contains Substances of Very High Concern above the threshold**
Halogen-free status	**Product contains halogen above thresholds**
PVC free	**Yes**
Silicone-free	**No**

Use Again

Repack and remanufacture

Recyclability potential, in %	**71**
End of life manual availability	**End of Life Information**
Removable battery	**User replaceable**
Take-back	**No**
WEEE Label	**The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins**

Image of product / Alternate images

Alternative



