



Main

Range	Masterpact
Device short name	Micrologic 7.0 X
Product or component type	Control unit
Device application	Equipment protection, monitoring and control
Circuit breaker application	Distribution IEC standard
Range compatibility	Masterpact MTZ1 circuit breaker
Poles	3P 4P
Protected poles	4P 3d 3P 3d 4P 3d + OSN 4P 4d 4P 3d + N/2
[Ue] rated operational voltage	600 V AC, +/- 10 %
Network type	AC
Network frequency	50/60 Hz
Trip unit technology	Electronic
Trip unit protection functions	LSIV
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 Earth-leakage protection conforming to ANSI 51G
Trip unit rating	400 A 630 A 800 A 1000 A 1250 A 1600 A

Complementary

Mounting mode	Drawout
[Ir] long time pick-up adjustment range	0.4...1 x I _n adjustable in step of 1 A
Long time delay adjustment type	Adjustable in step of 0.5 s
[tr] long-time delay adjustment range	12.5...600 S at 1.5 x I _r 0.5...24 S at 6 x I _r 0.7...16.6 s at 7.2 x I _r
Thermal memory	Yes
[Isd] short-time pick-up adjustment range	1.5...10 x I _r adjustable in step of 0.5 x I _r with embedded HMI 1.5...10 x I _r adjustable in step of 0.1 x I _r with Ecoreach software or Masterpact MTZ mobile app
Short-time delay adjustment type	Adjustable
[tsd] short-time delay adjustment range	0.1...0.4 S I ² t=on 0...0.4 s I ² t=off
Instantaneous pick-up adjustment type li	Adjustable

[li] instantaneous pick-up adjustment range	2...15 x In adjustable in step of 0.5 x In with embedded HMI 2...15 x In adjustable in step of 0.1 x In with Ecoreach software or Masterpact MTZ mobile app li enable on/off
[li mode] instantaneous delay adjustment range	0 ms in fast 20 ms in standard
Earth-leakage protection	With
[IΔn] residual earth-leakage sensitive adjustment	0.5...30 A adjustable in step of 0.1 A
Residual earth-leakage time delay adjustment type	Adjustable
[Δt] residual earth-leakage time delay adjustment	60...800 Ms resettable time 140...1000 ms break time
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	100...1200 V AC 50/60 Hz per phase
Frequency measurement range	45...250 Hz
Measurement accuracy	Current I1, I2, I3, Iavg, Idemand for MTZ1: +/- 0.5 % 40...1600 x 1.2 A Reactive power Q, Q1, Q2, Q3, Qdemand: +/- 2 % Active power P, P1, P2, P3, Pdemand: +/- 1 % Apparent power S, S1, S2, S3, Sdemand: +/- 1 % Voltage V21, V32, V13, VLNavg: +/- 0.5 % 120...400 x 1.2 V Voltage V21, V32, V13, VLLavg: +/- 0.5 % 208...690 x 1.2 V Frequency: +/- 0.005 Hz Unbalance current: +/- 0.5 % Apparent energy Es IN/OUT/tot: +/- 1 % - 10...10 GVAh Reactive energy Ep IN/OUT/tot: +/- 2 % - 10...10 GVARh Active energy Ep IN/OUT/tot: +/- 1 % - 10...10 GWh Power factor: +/- 1 %
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

Communication port protocol	Bluetooth 4.0 LE peer to peer 30 kbit/s NFC peer to peer 28800 bauds conforming to ISO 15963 USB peer to peer 115 kbauds
Data recording	Time stamping Data logs Event logs Maintenance logs Min/Max of instantaneous values Alarm logs

Environment

Standards	EN/IEC 60947-1 EN/IEC 60092-202 EN/IEC 60947-2 EN/IEC 60255-1 EN/IEC 61010-1
Mounting location	Indoor use only
Environmental characteristic	Wet location not approved for use conforming to IEC 61010-1
Electromagnetic compatibility	Electrostatic discharge immunity test conforming to IEC 61000-4-2 Susceptibility to electromagnetic fields conforming to IEC 61000-4-3 Electrical fast transient/burst immunity test conforming to IEC 61000-4-4 1.2/50 µs shock waves immunity test conforming to IEC 61000-4-5 Conducted RF disturbances conforming to IEC 61000-4-6 Conducted and radiated emissions A conforming to CISPR 22
Overvoltage category	IV conforming to IEC 61010-1
Measurement category	Category IV conforming to IEC 61010-2-30
Pollution degree	3 conforming to IEC 60947-1
Ambient air temperature for operation	-25...70 °C (operating) -35 °C (for start-up of product)
Relative humidity	95 % at 55 °C conforming to IEC 60068-2-30
Operating altitude	<= 2000 m without derating <= 4000 m with operational voltage derating 600 V AC <= 5000 m with operational voltage derating 560 V AC

Offer Sustainability

Sustainable offer status	Green Premium product
REACH Regulation	 REACH Declaration
EU RoHS Directive	Compliant  EU RoHS Declaration
Mercury free	Yes
RoHS exemption information	 Yes
China RoHS Regulation	 China RoHS Declaration
Environmental Disclosure	 Product Environmental Profile
Circularity Profile	 End Of Life Information
PVC free	Yes
Halogen content performance	Halogen free plastic parts product

Contractual warranty

Warranty	18 months
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