

# Product datasheet

Specifications



## Micrologic 7.0 X control unit - for drawout Masterpact MTZ1

LV865307

### 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 description	3P 3d 4P 3d 4P 3d + N/2 4P 4d 4P 3d + OSN
[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
Neutral protection setting	1 x Ir (4P 4d) 0.5 x Ir (4P 3d + N/2) 1.6 x Ir (4P 3d + OSN) No protection (4P 3d)
[Ir] long time pick-up adjustment range	0.4...1 x In 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 Ir 0.5...24 s at 6 x Ir 0.7...16.6 s at 7.2 x Ir

Excluding VAT, FCA Jabal Ali & amp; are subject to change – check with your local distributor.

<b>Thermal memory</b>	Yes
<b>[I<sub>sd</sub>] short-time pick-up adjustment range</b>	1.5...10 x I <sub>r</sub> adjustable in step of 0.5 x I <sub>r</sub> with embedded HMI 1.5...10 x I <sub>r</sub> adjustable in step of 0.1 x I <sub>r</sub> with Ecoreach software or MasterPact MTZ mobile app
<b>Short-time delay adjustment type</b>	Adjustable
<b>[I<sub>sd</sub>] short-time delay adjustment range</b>	0.1...0.4 s I <sub>r</sub> <sup>2</sup> =on 0...0.4 s I <sub>r</sub> <sup>2</sup> =off
<b>Instantaneous pick-up adjustment type II</b>	Adjustable
<b>[I<sub>I</sub>] instantaneous pick-up adjustment range</b>	2...15 x I <sub>n</sub> adjustable in step of 0.5 x I <sub>n</sub> with embedded HMI 2...15 x I <sub>n</sub> adjustable in step of 0.1 x I <sub>n</sub> with Ecoreach software or MasterPact MTZ mobile app I <sub>I</sub> enable on/off
<b>[I<sub>I</sub> mode] instantaneous delay adjustment range</b>	0 ms in fast 20 ms in standard
<b>Earth-leakage protection</b>	With
<b>[I<sub>Δn</sub>] residual earth-leakage sensitive adjustment</b>	0.5...30 A adjustable in step of 0.1 A
<b>Residual earth-leakage time delay adjustment type</b>	Adjustable
<b>[Δt] residual earth-leakage time delay adjustment</b>	60...800 ms resettable time 140...1000 ms break time
<b>Zone selective interlocking ZSI</b>	With
<b>Network and machine diagnosis type</b>	System (HMI) health state overview: circuit breaker health state Contacts state: circuit breaker health state MicroLogic service life: circuit breaker health state Tripping cause indication: circuit breaker tripping cause Identification card: diagnostic data Configured alarms synthesis: diagnostic data Monitored function: diagnostic data Operation: diagnostic data MicroLogic test: test Protection test: test Selectivity test: test Trip context information: crisis management Operation: advanced diagnostic Breaker service life: circuit breaker health state
<b>Type of measurement</b>	Power meter
<b>Energy management</b>	Measurement ,active, reactive and apparent energy Measurement ,electrical network Measurement ,energy
<b>Metering type</b>	Current I1, I2, I3, I <sub>avg</sub> RMS Neutral current I <sub>N</sub> RMS Ground fault current I <sub>g</sub> RMS Voltage V12, V23, V31, V <sub>LL</sub> avg RMS Voltage V1N, V2N, V3N, V <sub>LN</sub> avg RMS Active power P, P1, P2, P3 total Reactive power Q, Q1, Q2, Q3 total Apparent power S, S1, S2, S3 total Power factor Active energy E <sub>p</sub> IN/OUT/tot Reactive energy E <sub>q</sub> IN/OUT/tot Apparent energy E <sub>s</sub> IN/OUT/tot Demand current I1, I2, I3, I <sub>n</sub> , I <sub>avg</sub> Demand power P, Q, S Frequency Phase sequence Earth leakage current Total current harmonic distortion THD (I) Total voltage harmonic distortion THD (V) Unbalance current Unbalance voltage
<b>Measurement voltage</b>	208...828 V AC 50/60 Hz phase to phase 120...480 V AC 50/60 Hz phase to neutral
<b>Frequency measurement range</b>	40...70 Hz

<b>Measurement accuracy</b>	<p>Current I1, I2, I3, Iavg, Idemand for MTZ1: +/- 0.5 % 40...1600 x 1.2 A</p> <p>Current I1, I2, I3, Iavg, Idemand for MTZ2: +/- 0.5 % 40...4000 x 1.2 A</p> <p>Current I1, I2, I3, Iavg, Idemand for MTZ3: +/- 0.5 % 80...6300 x 1.2 A</p> <p>Neutral current IN: +/- 1 %</p> <p>Ground fault current Ig: +/- 5 %</p> <p>Voltage V12, V23, V31, VLLavg: +/- 0.5 % 208...690 x 1.2 V</p> <p>Voltage V1N, V2N, V3N, VLLnavg: +/- 0.5 % 120...400 x 1.2 V</p> <p>Active power P, P1, P2, P3, Pdemand: +/- 1 %</p> <p>Reactive power Q, Q1, Q2, Q3, Qdemand: +/- 2 %</p> <p>Apparent power S, S1, S2, S3, Sdemand: +/- 1 %</p> <p>Power factor: +/- 2 %</p> <p>Active energy Ep IN/OUT/tot: +/- 1 %</p> <p>Reactive energy Ep IN/OUT/tot: +/- 2 %</p> <p>Apparent energy Es IN/OUT/tot: +/- 1 %</p> <p>Frequency: +/- 0.005 Hz</p> <p>Earth leakage current: +/- 10 %</p> <p>Unbalance current: +/- 0.5 %</p>
<b>Accuracy class</b>	<p>Class 5: total current harmonic distortion THD (I)</p> <p>Class 0.5: unbalance voltage</p> <p>Class 1: active and reactive energy by pulse counting (+/- W.h, +/- VAR.h)</p> <p>Class 2: total voltage harmonic distortion THD (V)</p>
<b>Display type</b>	LCD display - 128 x 96 pixels
<b>Communication port protocol</b>	<p>Bluetooth 4.0 LE peer to peer 30 kbit/s</p> <p>NFC peer to peer 28800 bauds conforming to ISO 15963</p> <p>USB peer to peer 115 kbauds</p>
<b>Data recording</b>	<p>Time stamping</p> <p>Data logs</p> <p>Event logs</p> <p>Maintenance logs</p> <p>Min/max of instantaneous values</p> <p>Alarm logs</p>

## Environment

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

## Packing Units

<b>Unit Type of Package 1</b>	PCE
<b>Number of Units in Package 1</b>	1
<b>Package 1 Height</b>	6.8 cm

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Package 1 Width	8.0 cm
Package 1 Length	21.5 cm
Package 1 Weight	318.0 g

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## Contractual warranty

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Warranty (in months)	18
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## 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	51 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	29 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	0 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0.1 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	20 kg CO2 eq.
Carbon footprint of the end-of-life phase [C1 to C4]	0.8 kg CO2 eq.
Environmental Disclosure	<a href="#">Product Environmental Profile</a>

## Use Better



### Materials and Substances

Packaging made with recycled cardboard	Yes
Packaging without single use plastic	Yes
SCIP Number	Fe0e6f4e-df3c-4360-9977-32248ec09b55
EU RoHS Directive	<a href="#">Compliant By Exemption</a>
REACH Regulation	<a href="#">Reference contains Substances of Very High Concern above the threshold</a>
Halogen-free status	Product contains halogen above thresholds
PVC free	Yes
Silicone-free	No

## Use Longer



### Lifetime extension

Repair	No
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## Use Again



### Repack and remanufacture

Recyclability potential, in %	4
End of life manual availability	<a href="#">End of Life Information</a>
Removable battery	User replaceable
Take-back	Nej

WEEE Label



The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

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