Product data sheet
Characteristics

LV848499
MicroLogic 5.0X control unit, MasterPact MTZ2/MTZ3, drawout circuit breakers, LSI protections



Main

Range	MasterPacT
Device short name	MicroLogic 5.0 X
Product or component type	Control unit
Device application	Equipment protection, monitoring and control
Circuit breaker application	Distribution IEC standard
Range compatibility	MasterPact MTZ2 circuit breaker MasterPact MTZ3 circuit breaker
Poles description	3P 4P
Protected poles description	3P 3d 4P 3d 4P 3d + N/2 4P 4d 4P 3d + OSN
[Ue] rated operational voltage	690 V AC, +/- 10 %
Network type	AC
Network frequency	50/60 Hz
Trip unit technology	Electronic
Trip unit protection functions	LSI
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	400 A 630 A 800 A 1000 A 1250 A 1600 A 2000 A 2500 A 3200 A 4000 A 5000 A 6300 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)
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
Thermal memory	Yes
[Isd] short-time pick-up adjustment range	1.5...10 x Ir adjustable in step of 0.5 x Ir with embedded HMI 1.5...10 x Ir adjustable in step of 0.1 x Ir 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 I²t=on 0…0.4 S I²t=off
Instantaneous pick-up adjustment type Ii	Adjustable
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 Ii enable on/off
Operating time	0 ms in fast 20 ms in standard
Zone selective interlocking ZSI	With
Network and machine diagnosis type	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
Type of measurement	Power meter
Energy management	Measurement ,active, reactive and apparent energy Measurement ,electrical network Measurement ,energy
Metering type	Current I1, I2, I3, Iavg RMS Neutral current IN RMS Ground fault current Ig RMS Voltage V12, V23, V31, VLLavg RMS Voltage V1N, V2N, V3N, VLNavg 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 Ep IN/OUT/tot Reactive energy Eq IN/OUT/tot Apparent energy Es IN/OUT/tot Demand current I1, I2, I3, In, Iavg 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
Measurement voltage	208…828 V AC 50/60 Hz phase to phase 120…480 V AC 50/60 Hz phase to neutral
Frequency measurement range	40…70 Hz

Measurement accuracy	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 Neutral current IN: +/- 1 % Ground fault current Ig: +/- 5 % Voltage V12, V23, V31, VLLavg: +/- 0.5 % 208...690 x 1.2 V Voltage V1N, V2N, V3N, VLNavg: +/- 0.5 % 120...400 x 1.2 V Active power P, P1, P2, P3, Pdemand: +/- 1 % Reactive power Q, Q1, Q2, Q3, Qdemand: +/- 2 % Apparent power S, S1, S2, S3, Sdemand: +/- 1 % Power factor: +/- 2 % Active energy Ep IN/OUT/tot: +/- 1 % Reactive energy Ep IN/OUT/tot: +/- 2 % Apparent energy Es IN/OUT/tot: +/- 1 % Frequency: +/- 0.005 Hz Earth leakage current: +/- 10 % Unbalance current: +/- 0.5 %
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 conforming to ISO 15963 USB peer to peer 115 kbauds
Data recording	Event logs Data logs Time stamping Alarm logs Min/Max of instantaneous values Maintenance logs

Environment

Standards	EN/IEC 60947-2 EN/IEC 60947-1 EN/IEC 60255-1 EN/IEC 60092-202 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

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	6.7 Cm
Package 1 Width	7.9 Cm
Package 1 Length	21.6 Cm
Package 1 Weight	369.0 G

Offer Sustainability

Recyclability potential, in %	4
Total lifecycle Carbon footprint	51 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	29.3322855799758
Carbon footprint of the manufacturing phase [A1 to A3]	29 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	0.04035780485952502
Carbon footprint of the distribution phase [A4]	0 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0.0539491872699603
Carbon footprint of the installation phase [A5]	0.1 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	20.37930829321257
Carbon footprint of the use phase [B2, B3, B4, B6]	20 kg CO2 eq.
Mercury free	Yes
Sustainable packaging	Yes
Carbon footprint of the end-of-life phase [C1 to C4]	0.8210899091215862
Carbon footprint of the end-of-life phase [C1 to C4]	0.8 kg CO2 eq.
Environmental Disclosure	Product Environmental Profile
Total lifecycle Carbon footprint	51
Packaging made with recycled cardboard	Yes
Packaging without single use plastic	Yes
SCIP Number	Fe0e6f4e-df3c-4360-9977-32248ec09b55
REACh Regulation	Reference contains Substances of Very High Concern above the threshold
EU RoHS Directive	Compliant By Exemption
California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which
POP Directive	No POPs
Halogen-free status	Product contains halogen above thresholds
PVC free	Yes
Silicone-free	No
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

Contractual warranty

Warranty (in months)	18

Product Life Status : Commercialised