



# POWERFACTORY

# PowerFactory 2021

## Technical Reference

# Schneider MasterPact MTZ

**POWER SYSTEM SOLUTIONS**  
MADE IN GERMANY

F2021

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November 16, 2020  
PowerFactory 2021  
Revision 1031

## Contents

<b>1</b>	<b>Model information</b>	<b>1</b>
<b>2</b>	<b>General description</b>	<b>1</b>
<b>3</b>	<b>Electronic trip unit</b>	<b>1</b>
<b>4</b>	<b>Variants</b>	<b>2</b>
<b>5</b>	<b>References</b>	<b>3</b>

#### Disclaimer

*DlgSILENT* protection device models are developed using publicly accessible information, such as user manuals, and are not validated or tested by the respective manufacturers.

## 1 Model information

**Manufacturer** Schneider

**Model** MasterPact MTZ

**Variants** The Schneider MasterPact MTZ series contains the electronic trip unit "*MicroLogic 6.0 X*" available for circuit breakers MTZ1, MTZ2 and MTZ3 based on the information given in [1]. Each combination of model and available sensor rating is a dedicated type.

## 2 General description

The electronic trip unit is modelled as LSIG which corresponds to "*MicroLogic 6.0 X*". The units are modelled as 3-pole without neutral. The Earth fault input is calculated from the phase currents.

#### Current transformer

The "*CT*" slot holds the assigned ideal 3-phase current transformers which has to be modelled with a ratio of 1/1 A.

#### Measurement unit

The "*Measurement*" slot processes the transformer inputs and holds the rated current value of the circuit breaker. The zero-sequence current is determined from the phase values.

#### Trip logic

The "*Trip Logic*" holds an OR functionality for generating the tripping signal.

## 3 Electronic trip unit

The electronic trip unit "*MicroLogic 6.0 X*" consists of three phase current stages and one zero-sequence current stage. The underlying phase current stage blocks the overlaying phase current stage if started, e.g. if the short-time stage is started, the long-time stage is blocked.

## 4 Variants

Address	Relay Setting	Model Unit	Model Parameter	Note
	Current Setting Ir	Long-time	Pickup Current	
	Time Setting tr	Long-time	Time Setting	
	Pick-up Isd	Short-time	Pickup Current	
	Time Setting tsd for I2t Off	Short-time	Time Setting	for max breaking time
	Time Setting tsd for I2t On	Short-time	Time Setting	for max breaking time
	Pick-up Ii	Instantaneous	Pickup Current	
	Operating time	Instantaneous	Time Setting	see 1)
	Pick-up Ig	Earth fault	Pickup Current	see 2)
	Time Setting tg for I2t Off	Short-time	Time Setting	for max breaking time
	Time Setting tg for I2t On	Short-time	Time Setting	for max breaking time

Notes:

- 1) – Instantaneous Ii tripping mode is "*Standard*", i.e. fixed tripping time of 20 to 50 ms (non tripping time to max breaking time).
- 2) – Current range depending on sensor rating:
  - \* In ≤ 400 A: Ig = 0.3 to 1
  - \* In > 400 A: Ig = 0.2 to 1

## 4 Variants

Type	Sensor rating	Trip unit
MTZ1 06	400; 630 A	Electronic
MTZ1 08	400; 630; 800 A	Electronic
MTZ1 10	400; 630; 800; 1000 A	Electronic
MTZ1 12	630; 800; 1000; 1250 A	Electronic
MTZ1 16	800; 1000; 1250; 1600 A	Electronic
MTZ2 08	400; 630; 800 A	Electronic
MTZ2 10	400; 630; 800; 1000 A	Electronic
MTZ2 12	630; 800; 1000; 1250 A	Electronic
MTZ2 16	800; 1000; 1250; 1600 A	Electronic
MTZ2 20	1000; 1250; 1600; 2000 A	Electronic
MTZ2 25	1250; 1600; 2000; 2500 A	Electronic
MTZ2 32	1600; 2000; 2500; 3200 A	Electronic
MTZ2 40	2000; 2500; 3200; 4000 A	Electronic
MTZ3 40	2000; 2500; 3200; 4000 A	Electronic
MTZ3 50	2500; 3200; 4000; 5000 A	Electronic
MTZ3 63	3200; 4000; 5000; 6300 A	Electronic

## 5 References

- [1] Schneider Electric Industries SAS, 35 rue Joseph Monier, 92506 Rueil-Malmaison, FRANCE.  
*MasterPact MTZ Catalogue 2020*. LVPED216026EN.