

# Demonstration Board MI 2891 Power Simulator

NEW

Equipment for laboratories and Schools



The MI 2891 Power Simulator is a multi-purpose three phase power simulator for simulating typical situations in low voltage power supply systems. It is an excellent tool for training, demonstration purposes, or as an electrical didactic tool. The simulator has some pre-programmed scenarios, and also the option of a complete manual mode. The user can decide between different Load character adjustments, adjustable current and voltage level with a simulation of various different faulty conditions

## MEASURING FUNCTIONS

- Voltage
- Current
- Frequency
- Harmonics (U,I)
- Phase angle (U,I)
- Flicker
- Phase sequence (U,I)

## KEY FEATURES

- Simple and powerful waveform generator with various settings,
- 4 voltage channels with wide simulation range: up to 350 Vrms,
- 4 current channels with current clamps simulation up to 2kA,
- Simultaneous voltage and current (8 channels) simulation, 16 bit DA conversion for accurate signal generation,
- Dip, swell, interrupt, signalling, transient and inrush events simulation,
- Voltage and current harmonics waveform simulation.
- Unbalanced voltage and current waveform simulation.
- Square flicker simulation.
- Various character load/character type combination simulation.
- Thorough signal parameters settings.
- Saving current system settings on power off.
- 4.3" TFT colour display.

## APPLICATION

- Training purposes
- Demonstration of PQA testing equipment by sales personnel
- Education of students of electro technical specialities

## STANDARDS

### Safety:

- EN 61010-1: 2010

### Electromagnetic compatibility (EMC):

- EN 61326-2-2: 2013

## TECHNICAL SPECIFICATION

Fundamental RMS voltage output				
<b>Output voltage AC</b>	<b>Resolution</b>	<b>Accuracy</b>		
50 ... 300 V	10V	± 0.1 %		
Event RMS voltage output				
<b>Output voltage AC</b>	<b>Resolution</b>	<b>Accuracy</b>		
0 ... 350 V	10V	± 0.1 %		
Fundamental RMS current				
<b>Range</b>	<b>Output voltage</b>	<b>Overall current accuracy</b>		
A 1033 (100 A ... 2000 A)	100 mV ... 1 V	± 0.1 %		
Inrush RMS current output				
<b>Inrush current</b>	<b>Accuracy</b>	<b>Crest factor</b>		
Range 1: 2.0 mVRMS ... 200.0 mVRMS	± 0.5 % · URMS	1.5		
Range 2: 20.0 mVRMS ... 2.0000 VRMS	± 0.5 % · URMS	1.5		
Frequency				
<b>Output range</b>	<b>Resolution</b>	<b>Accuracy</b>		
45 Hz ... 70 Hz	1 Hz	± 10 mHz		
Flickers				
<b>Flicker type</b>	<b>Measuring range</b>	<b>Resolution</b>	<b>Accuracy*</b>	
Pst	0.5 ... 5.0	0.1	± 1 %	
Voltage harmonics				
<b>Measuring range</b>	<b>Resolution</b>	<b>Accuracy</b>		
UhN 1 % ... 100 % of fundamental output voltage	1%	± 5 % of UhN		
UhN:	generated harmonic voltage			
N:	harmonic component 2nd ... 50th			
Current harmonics and THD				
<b>Measuring range</b>	<b>Resolution</b>	<b>Accuracy</b>		
IhN 1 % ... 100 % of fundamental current	1%	± 5 % of IhN		
IhN:	measured harmonic current			
N:	harmonic component 2th ... 50th			
Unbalance				
	<b>Unbalance range</b>	<b>Resolution</b>	<b>Accuracy</b>	
u-	0.5 % ... 5.0 %	0.1 %	± 0.15 %	
u0				
i-	0.0 % ... 20 %	0.1 %	± 1 %	
i0				
Overdeviation and Underdeviation				
	<b>Measuring range</b>	<b>Resolution</b>	<b>Accuracy</b>	
UOver	0 ... 50 % UNom	0.001 %	± 0.15 %	
UUnder	0 ... 90 % UNom	0.001 %	± 0.15 %	
Event duration and recorder time-stamp and uncertainty				
	<b>Measuring Range</b>	<b>Resolution</b>	<b>Error</b>	
Event Duration	10 ms ... 7 days	1 ms	± 1 cycle	
Record and Event Time stamp	N/A	1 ms	± 1 cycle	
General				
Measuring category	CAT I / 300 V			
Dimensions	23 cm x 14cm x 8 cm			
Weight (with batteries)	1,34 kg			
Display	Colour 4.3 TFT liquid crystal display (LCD) with backlight, 480 x 272 dots.			
Batteries	6 x 1.2 V NiMH rechargeable batteries type HR 6 (AA)			
Working temperature range	-20 °C ... +40 °C			

## ORDERING INFORMATION



### MI 2891

- Instrument Power Simulator
- Voltage measurement lead, (brown, black, grey, green, blue), 5 pcs
- Current measurement leads, 4pcs
- Labels for color coding
- Power supply adapter
- 1.2 V NiMH rechargeable battery, 6 pcs
- Soft carrying bag
- USB cable
- Instruction manual

### METREL D.D.

Measuring and Regulation Equipment Manufacturer  
 Ljubljanska 77, SI-1354 Horjul, Slovenia  
 T +386 (0)1 75 58 200, F +386 (0)1 75 49 226  
 metrel@metrel.si, www.metrel.si