

**INDUSTRIAL  
DC/AC  
INVERTERS**



**zutronic**<sup>®</sup>

**SINE & MICRON**

POWER: 100W to 6300W

Industrial **DC/AC** inverter range with **24Vdc**, **48Vdc** and **110Vdc** input and a power range from **650W** to **6300W**, characterized from high reliability, robust mechanical design and galvanic isolation for the most demanding environments.

The **SINE** series converts a **DC** input voltage into a perfect sinusoidal single-phase output to provide power to critical **AC** loads. A wide input voltage range allows the possibility to accept different and not stabilized dc voltages without the need of a dc/dc converter:

**48Vdc**: 39Vdc-80Vdc

**110Vdc**: 88Vdc-145Vdc.

The presence of **4000V** galvanic isolation allows high safety to the load connected and more reliability to the units.

The **SINE** systems are also the right answer for motion-systems thanks to their robust mechanics and the possibility to apply anti-shocking treatments. In addition to standard layout in **TOWER**, **RACK** or **MURALE**, design, skilled technical staff and experienced engineers are able to follow dedicated projects with all kind of customization.

**MICRON** series has been projected with the same features and high reliability levels of the **SINE** series; small and compact industrial inverters in rack **2U** version with **48V** or **110Vdc** input voltage and 100W/300W power.

The right solution for telecommunication fields and critical industrial environments.

## ► MAIN FEATURES

### WIDE INPUT VOLTAGE RANGE

Wide input voltage range allows to connect any kind of voltages request:

**48Vdc → 39-70Vdc**

**110Vdc → 89-145Vdc**

### GALVANIC ISOLATION

Output toroidal transformer to provide **4000V** galvanic isolation and total protection to the load.

### LOW VOLTAGE ELECTRONIC

Key feature in order to safeguard dedicated personnel during unit functioning.

No high voltages into the electronic section.

### UNIT MONITORING

LED on the frontal panel for easy functions monitoring.

Blue LCD display with V+I output details.

Remote free contacts to remote positioning control

### SPECIAL MECHANICAL TREATMENTS

#### TROPICALIZATION

dedicated boards treatment to protect against high humidity and strong temperatures

#### VIBRATION

mechanical treatment with a very special fixing paste against vibrations

### STATIC SWITCH BY-PASS ON EMERGENCY LINE

## ► APPLICATIONS

- TELECOMMUNICATION
- MICROWAVE LINKS
- TRANSPORTS
- NAVY
- INDUSTRY
- AIRPORTS

## FLOOR DESIGN

SIMPLE BUT ELEGANT

from **650W** to **6300W POWER** can be built inside a floor design, with different input

**24Vdc**

**48Vdc**

**110Vdc+**

## WALL-MOUNTED DESIGN

ALWAYS VERY USEFUL

from **650W** to **6300W POWER**

Wall design to save space on the floor.



## COMPACT DESIGN

INDUSTRIAL SOLUTION

**100W** and **300W POWER**

Compact industrial versions, high safety into really small dimensions



## RACK DESIGN

INDUSTRIAL SOLUTION

**650W** and **6300W POWER**

Industrial versions to be integrated into rack cabinet



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## GENERAL DATAS – SINE 48V

MODELS	TECHNICAL FEATURES	SINE 48-3	SINE 48-4	SINE 48-5	SINE 48-6	SINE 48-7	SINE 48-9	SINE 48-11	SINE 48-15	SINE 48-18	SINE 48-22	SINE 24-27		
<b>POWER</b>	OUTPUT POWER A/W	3A/650W	4A / 900W	5A/1100W	6A/1350W	7A/1700W	9A/2100W	11A/2500W	15A/3375W	18A/4050W	22A/4950W	27A/6300W		
	OUTPUT PEAK POWER	1000W	1400W	1800W	2200W	3000W	3200W	3500W	5000W	6000W	6800W	7500W		
<b>TECHNOLOGY</b>	INVERTER	Microprocessor PWM												
<b>SIGNALLINGS</b>	OPTIC /ACOUSTIC	Mains present, DC present, low DC, danger temperature, over temperature, overload/short circuit, by-pass functioning												
	REMOTE CONTACTS	DB9 Standard board: DC present, low DC Option on request à DB9 Multi-contact board: on/off, DC present, low DC, danger temperature, inverter fault, overload/short circuit, by-pass functioning												
<b>ENVIRONMENTAL CONDITIONS</b>	TEMPERATURE	Working: 0°C to +45°C / Storage: -10°C to +60°C												
	NOISE	<28dB	<30dB				<42dB				30dB to 47dB			
<b>MECHANICAL DETAILS</b>	IP / COLOUR	IP20 / RAL 9006												
	TOWER /RACK	155 x 383 x 316h/3U	243x585x482h / 4U (443+53mm)				243x585x482h / 4U (443+53mm)				355x782+53x378h / 5U (643+53mm))			
	WEIGHT / KG.	21	32	34	37	42	47	54	62	68	74	80		

## INPUT / OUTPUT DATAS – SINE 48V

MODELS	TECHNICAL FEATURES	SINE 48-3	SINE 48-4	SINE 48-5	SINE 48-6	SINE 48-7	SINE 48-9	SINE 48-11	SINE 48-15	SINE 48-18	SINE 48-22	SINE 24-27
<b>INPUT</b>	VOLTAGE RANGE	39/60Vdc	39/80Vdc									
	CONNECTIONS	Terminal block under breakers or fuse										
<b>OUTPUT</b>	VOLTAGE	230Vac single-phase										
	FREQUENCY	50Hz +/-0,01 %										
	WAVE	Pure sine wave – microprocessor generated										
	ISOLATION	4000V galvanic isolation through toroidal transformer										
	CONNECTIONS	Terminal Block										
	ELECTRONIC PROTECTION	Overload – Short circuit										
	DISTORTION	<5% Linear / <8% Non-linear										
VOLTAGE VARIATION	<1% Static / +/-3% Dynamic											
<b>BY-PASS</b>	EMERGENCY BY-PASS	Option – on request										



## GENERAL DATAS – SINE 110V

MODELS	TECHNICAL FEATURES	SINE 110-3	SINE 110-4	SINE 110-5	SINE 110-6	SINE 110-7	SINE 110-9	SINE 110-11 110-12	SINE 110-15	SINE 110-18	SINE 110-22	SINE 110-27		
<b>POWER</b>	OUTPUT POWER A/W	3A/650W	4A / 900W	5A/1100W	6A/1350W	7A/1700W	9A/2100W	11A/2500W	15A/3375W	18A/4050W	22A/4950W	27A/6300W		
	OUTPUT PEAK POWER	1000W	1400W	1800W	2200W	3000W	3200W	3500W	5000W	6000W	6800W	7500W		
<b>TECHNOLOGY</b>	INVERTER	Microprocessor PWM												
<b>SIGNALLINGS</b>	OPTIC /ACOUSTIC	Mains present, DC present, low DC, danger temperature, over temperature, overload/short circuit, by-pass functioning												
	REMOTE CONTACTS	DB9 Standard board: DC present, low DC Option on request à DB9 Multi-contact board: on/off, DC present, low DC, danger temperature, inverter fault, overload/short circuit, by-pass functioning												
<b>ENVIRONMENTAL CONDITIONS</b>	TEMPERATURE	Temperature Working: 0°C to +45°C / Storage: -10°C to +60°C												
	NOISE	<28dB	<30dB				<42dB				30dB to 47dB			
<b>MECHANICAL DETAILS</b>	IP / COLOUR	IP20 / RAL 9006												
	TOWER /RACK	155 x 383 x 316h/3U	243x585x482h / 4U (443+53mm)				243x585x482h / 4U (443+53mm)				355x782+53x378h / 5U (643+53mm)			
	WEIGHT / KG.	21	32	34	37	42	47	54	62	68	74	80		

## INPUT / OUTPUT DATAS – SINE 110V

MODELS	TECHNICAL FEATURES	SINE 110-3	SINE 110-4	SINE 110-5	SINE 110-6	SINE 110-7	SINE 110-9	SINE 110-11 110-12	SINE 110-15	SINE 110-18	SINE 110-22	SINE 110-27
<b>INPUT</b>	VOLTAGE RANGE	39/60Vdc	39/80Vdc									
	CONNECTIONS	Terminal block under breakers or fuse										
<b>OUTPUT</b>	VOLTAGE	230Vac single-phase										
	FREQUENCY	50Hz +/-0,01%										
	WAVE	Pure sine wave – microprocessor generated										
	ISOLATION	4000V galvanic isolation through toroidal transformer										
	CONNECTIONS	Terminal Block										
	ELECTRONIC PROTECTION	Overload – Short circuit										
	DISTORTION	<5% Linear / <8% Non-linear										
<b>BY-PASS</b>	VOLTAGE VARIATION	<1% Static / +/-3% Dynamic										
	EMERGENCY BY-PASS	Option – on request										

## GENERAL DATAS – MICRON 48V and 110V

MODELS	TECHNICAL FEATURES	MICRON 48-04	MICRON 48-1	MICRON 110-04	MICRON 110-1
POWER	OUTPUT POWER A/W	0,43A / 100W	1,3A / 300W	1,3A / 300W	1,3A / 300W
	OUTPUT PEAK POWER	250W	600W	250W	600W
TECHNOLOGY	INVERTER	Microprocessor PWM			
SIGNALLINGS	OPTIC /ACOUSTIC	DC present, low DC, danger temperature, over temperature, overload/short circuit			
	REMOTE CONTACTS	Two free contacts on terminals: DC present, DC low / Option on request → Multi-contact board on terminals: on/off, danger temperature, over temperature, overload/short circuit			
ENVIRONMENTAL CONDITIONS	TEMPERATURE	Working: 0°C to +60°C / Storage: -10°C to +60°C			
	NOISE	<28dB			
MECHANICAL DETAILS	IP / COLOUR	IP20 / RAL 9006			
	TOWER /RACK	440x210x90h – 2U 480x210x90h			
	WEIGHT / KG.	7	9	7	9

## INPUT / OUTPUT DATAS – MICRON 48V and 110V

MODELS	TECHNICAL FEATURES	MICRON 48-04	MICRON 48-1	MICRON 110-04	MICRON 110-1
INPUT	VOLTAGE RANGE	39/70Vdc		89/145Vdc	
	CONNECTIONS	Connector			
OUTPUT	VOLTAGE	230Vac single-phase			
	FREQUENCY	50Hz +/-0,01%			
	WAVE	Pure sine wave – microprocessor generated			
	ISOLATION	4000V galvanic isolation through toroidal transformer			
	CONNECTIONS	Nr. 2 output on connectors – nr. 1 Schuko socket			
	ELECTRONIC PROTECTION	Overload – Short circuit			
	DISTORTION	<5% Linear / <8% Non-linear			
VOLTAGE VARIATION	<1% Static / +/-3% Dynamic				





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