

**CONV-MAK Series 160kVA Frequency Converter** <http://www.mak-powersis.de/160kva-frequency-converter.html>

<b>INPUT</b>	
Input Voltage	380 V AC Three Phase + Neutral (230 - 400V - 415 - 480 V AC Optional)
Input Voltage Tolerance	330V – 437V ( Phase – Notr) // -%15 / +%15 (Wide Range Optional)
Input Frequency	50 Hz. ( 60Hz – 83Hz – 200Hz – 400Hz. Optional) + %5
Input Connection	Suitable Terminal
Input Power Factor	0.99

<b>OUTPUT</b>	
Output Voltage	380 V AC Three Phase + Neutral ( 230V - 400V – 415 - 480 V -690V AC Optional)
Output Voltage Tolerance	<u>+ %1</u>
Output Power Factor	<u>0.8</u>
Output Frequency	400Hz / (60Hz – 83Hz – 400Hz Optional)
Output Frequency Tolerance	%0.1
Over Load	% 101 - %125 Load 3 Min. % 126 - %150 Load 10 Sec. % 151 - Load Output Off in 0,2 Sec.
Efficiency	> %93 @ %100 Load
Output 1)	Optional
Output 2)	Optional
Output Connection	Suitable Terminal

<b>GENERAL</b>	
LCD Display	With 4x16 character LCD Display: Input Voltage, Output Voltage, % Output Load, Output Frequency, Regulator Condition and Failure Info, Over Load, Over Temperature, Input Failure warning ext.
Emergency Stop Button	On the machine
Communication	Through a software support and “Remote Management System”( Optional RS-232 Communication port, Ethernet), the ability of monitoring and controlling

<b>PROTECTION</b>	
Output Voltage Protection	When output voltage, frequency, temperature, over current and short circuit the converter will be auto off will give signal from dry contact card.
Current Protection	1- Fuse protection with MCB at Input or Output 2 – Electronic Over Current Protection Via Microprocessors
Surge Arrester	Suitable Surge Arrester unit for lightning and high voltage (Optional)
RFI Filter / Harmonic Filter	RFI Filter / Harmonic Filter can be used to eliminate Input High frequency noises and Harmonic current (Optional)
Isolation Transformer	Input and Output Isolation Transformer for special usage (Optional)
Operating Temperature	-10 oC ~ +40 oC (-15 oC ~ +55 oC Optional)
Altitude	< 3000 m
Humidity	% 90 non condensed
Acoustic Noise	< 50 dB
Dimension (WxDxH)	140cm x 120cm x 180cm (Max Dimensions)
Weight	275kg (Max Weight)

<b>OPTIONS</b>	
Wide Input Voltage Range	Please let us know needed input voltage range
Output Temperature	-20 / +55 Celcius is Optional
Customized Solution	Harmonic Filter / IP21 / IP22 / IP31 / IP41 / IP55 / IP65