



**1:1**  
PHASE

**3:3**  
PHASE

# **FREQUENCY CONVERTERS**

## **10 - 120 kVA**





MARITIME



MEDICAL



TRANSPORTATION



INDUSTRY



TELE-  
COMMUNICATIONS



## SPECIAL PRODUCTS

# FREQUENCY CONVERTERS

CNV Series 1 and 3 phase output frequency converters are completely microprocessor controlled products to provide quality energy to critical loads. It can provide energy at the frequency required by any device fed from the network.

It can be used in sectors where different and heavy conditions required and it can be specially designed for the input/output values you need.

- ♦ 3-Level IGBT Technology
- ♦ Multiprocessor Digital Control
- ♦ 256 detailed real-time event logs
- ♦ Data analysis via the user panel
- ♦ Battery connection feature
- ♦ RS232, RS485 communication port and dry contact outputs
- ♦ Special production input-output values according to needs
- ♦ Models with 1-phase or 3-phase output
- ♦ SNMP compatible communication
- ♦ Remote monitoring and management software

# FREQUENCY CONVERTER CNV SERİSİ

| MODEL                                 | CNV 3310U1<br>CNV 3310U2                                                       | CNV 3315U1<br>CNV 3315U2 | CNV 3320U1<br>CNV 3320U2                                    | CNV 3330U1<br>CNV 3330U2 | CNV 3340U1<br>CNV 3340U2                                    | CNV 3360U1<br>CNV 3360U2 | CNV 3380U1<br>CNV 3380U2   | CNV 33100U1<br>CNV 33100U2 | CNV 33120U1<br>CNV 33120U2 |
|---------------------------------------|--------------------------------------------------------------------------------|--------------------------|-------------------------------------------------------------|--------------------------|-------------------------------------------------------------|--------------------------|----------------------------|----------------------------|----------------------------|
| Nominal power (kVA)                   | 10                                                                             | 15                       | 20                                                          | 30                       | 40                                                          | 60                       | 80                         | 100                        | 120                        |
| General                               |                                                                                |                          |                                                             |                          |                                                             |                          |                            |                            |                            |
| Technology                            | 3-Level, Çift Çevrim Online VFI-SS-111                                         |                          |                                                             |                          |                                                             |                          |                            |                            |                            |
| Waveform                              | Sinusoidal                                                                     |                          |                                                             |                          |                                                             |                          |                            |                            |                            |
| Architecture                          | Stand Alone or Optional Parallel                                               |                          |                                                             |                          |                                                             |                          |                            |                            |                            |
| Input                                 |                                                                                |                          |                                                             |                          |                                                             |                          |                            |                            |                            |
| Input Voltage                         | 380, 400, 415 Vac 3Ph+N+PE                                                     |                          |                                                             |                          |                                                             |                          |                            |                            |                            |
| Input Frequency                       | 50-60-400 Hz                                                                   |                          |                                                             |                          |                                                             |                          |                            |                            |                            |
| Voltage Tolerance (%100 load)         | %(-20) %(+20)                                                                  |                          |                                                             |                          |                                                             |                          |                            |                            |                            |
| Voltage Tolerance (%50 load)          | %(-36) %(+20)                                                                  |                          |                                                             |                          |                                                             |                          |                            |                            |                            |
| Input Power Factor                    | ≥0,99                                                                          |                          |                                                             |                          |                                                             |                          |                            |                            |                            |
| Input Current Harmonic                | ≤3%                                                                            |                          |                                                             |                          |                                                             |                          |                            |                            |                            |
| Output                                |                                                                                |                          |                                                             |                          |                                                             |                          |                            |                            |                            |
| Output Voltage                        | 380, 400, 415 Vac 3F+N+PE                                                      |                          |                                                             |                          |                                                             |                          |                            |                            |                            |
| Output Voltage Tolerance              | ±%1                                                                            |                          |                                                             |                          |                                                             |                          |                            |                            |                            |
| Overall Efficiency* (AC-AC)           | Up 96% (%50 load) // Up to %96 (%100 load)                                     |                          |                                                             |                          |                                                             |                          |                            |                            |                            |
| Ecomode Efficiency                    | Up to 98% (Optional)                                                           |                          |                                                             |                          |                                                             |                          |                            |                            |                            |
| Nominal Output Frequency              | 50/ 60Hz +0,01 free run (Adjustable from LCD Panel)                            |                          |                                                             |                          |                                                             |                          |                            |                            |                            |
| Crest Factor                          | 3:1                                                                            |                          |                                                             |                          |                                                             |                          |                            |                            |                            |
| Output Power Factor                   | 1 (U1 model) / 0,9 (U2 model)                                                  |                          |                                                             |                          |                                                             |                          |                            |                            |                            |
| THD of Output Voltage                 |                                                                                |                          |                                                             |                          |                                                             |                          |                            |                            |                            |
| Communication and management          |                                                                                |                          |                                                             |                          |                                                             |                          |                            |                            |                            |
| LCD Display                           | Graphical lcd screen, Led bar status                                           |                          |                                                             |                          |                                                             |                          |                            |                            |                            |
| Communication Ports (Optional)        | RS485, Genset, SNMP, GSM Modem, Relay Contacts, Input Contacts, Modbus and USB |                          |                                                             |                          |                                                             |                          |                            |                            |                            |
| Battery Temperature Sensor Contact    | Available                                                                      |                          |                                                             |                          |                                                             |                          |                            |                            |                            |
| Emergency Power Off (Epo)             | Available                                                                      |                          |                                                             |                          |                                                             |                          |                            |                            |                            |
| Accessories (Optional)                | Galvanic Isolation Transformer, Remote Monitoring Panel                        |                          |                                                             |                          |                                                             |                          |                            |                            |                            |
| Physical characteristics              |                                                                                |                          |                                                             |                          |                                                             |                          |                            |                            |                            |
| Dimensions W x D x H (mm)             | 305 x 735 x 855 (U1 & U2)                                                      |                          | 325 x 895 x 1078 (U1 & U2)<br>305 x 735 x 855 (U2 - 20 kVA) |                          | 420 x 940 x 1330 (U1- 40 kVA)<br>325 x 895 x 1078 (U1 & U2) |                          | 432 x 930 x 1257 (U1 & U2) |                            |                            |
| Net Weight (kg)                       | 48                                                                             | 51                       | 65(U1)/54(U2)                                               | 71(U1)/65(U2)            | 90(U1)/71(U2)                                               | 115(U1)/95(U2)           | 125(U1)/115(U2)            | 135(U1)/125(U2)            | 140(U1)/130(U2)            |
| Boyutlar E x D x Y (mm) / IP 54+      | 1950 x 1100 x 1580                                                             |                          |                                                             |                          |                                                             |                          |                            |                            |                            |
| Ambient conditions                    |                                                                                |                          |                                                             |                          |                                                             |                          |                            |                            |                            |
| Operating temperature (°C)            | 0°C - 40°C                                                                     |                          |                                                             |                          |                                                             |                          |                            |                            |                            |
| StorageTempature                      | -15°C/+ 55°C                                                                   |                          |                                                             |                          |                                                             |                          |                            |                            |                            |
| Proposed Temp. to Extend Battery Life | 20 - 25°C                                                                      |                          |                                                             |                          |                                                             |                          |                            |                            |                            |
| Relative Humidity (%)                 | < 95% (condensing)                                                             |                          |                                                             |                          |                                                             |                          |                            |                            |                            |
| Altitude                              | < 1500m                                                                        |                          |                                                             |                          |                                                             |                          |                            |                            |                            |
| Noise (at 1 meter)                    | <55 dBA                                                                        |                          | <58 dBA                                                     |                          |                                                             |                          | <60 dBA                    |                            |                            |
| Protection Class                      | IP20 (Higher IP Ratings are optional)                                          |                          |                                                             |                          |                                                             |                          |                            |                            |                            |
| Compliance                            |                                                                                |                          |                                                             |                          |                                                             |                          |                            |                            |                            |
| Reference Product Standards           | EN 62040-1 (Safety), EN 62040-2 (EMC), EN 62040-3 (Performance)                |                          |                                                             |                          |                                                             |                          |                            |                            |                            |

\*Depends on Input/Output voltage conditions and power



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