### Drive specifications

- **Model:** General Purpose Inverter E3
- **Type:** Cost-effective, user-friendly industrial inverters for rugged, reliable control

#### Technical Data

<table>
<thead>
<tr>
<th>Model</th>
<th>Height (mm)</th>
<th>Width (mm)</th>
<th>Depth (mm)</th>
<th>Weight (kg)</th>
<th>Package</th>
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</thead>
<tbody>
<tr>
<td>E3 IP66</td>
<td>232</td>
<td>161</td>
<td>162</td>
<td>2.5</td>
<td>6x185</td>
</tr>
<tr>
<td></td>
<td>237</td>
<td>198</td>
<td>192</td>
<td>2.5</td>
<td>6x185</td>
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<td>260</td>
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<th>Model</th>
<th>Height (mm)</th>
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<th>Package</th>
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</thead>
<tbody>
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<td>E3 IP20</td>
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<td>83</td>
<td>123</td>
<td>1.0</td>
<td>6x185</td>
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<td>297</td>
<td>200</td>
<td>215</td>
<td>3.2</td>
<td>6x185</td>
</tr>
</tbody>
</table>

- **Ambient conditions:**
  - Height (mm) Width (mm) Depth (mm) Weight (kg) Fixings
    - Size 2: 221 161 162 2.5 4 × M4
    - Size 4: 261 131 175 3.2 4 × M5

- **Conformance:** CE, UL, RCM
  - Machinery directive 2006/42/EC
  - EMC directive 2014/30/EC

- **Standards compliance:**
  - Conforms to IEC 61800-5-1
  - Vibration: 2 to 50 Hz, 1.5 mm peak
  - Altitude: Up to 1000m ASL without/ Up to 2000m maximum

- **Typical efficiency:** > 98%
- **Output frequency:** 0-500Hz, 0.1Hz resolution
- **Overload capacity:** 150% for 60 seconds, 175% for 2.5 seconds
- **Displacement power factor:** > 0.98
- **Output voltage:** 0-50V, 0.1V resolution

- **Power supply:** 24 V DC, 100mA, short circuit protected
- **Setpoint control:** 0 to 10 V, 10-0
- **Braking:** Motor flux braking, built in brake transistor
  - Sensorless vector speed control/ PM vector control/
  - Optional remote mountable keypad

- **App for Android and IOS:** BFI-Tools Mobile
- **PC-software:** BFI Tools
- **Display:** 7 segment LED

- **Input/output:**
  - Analog inputs: Resolution: 12 bits
  - Analog outputs: 0 to 10 V, 10 to 0
  - Programmable inputs: 2 digital
  - Programmable outputs: 1 analog/digital, 1 relay

- **Data logging:**
  - Logging of data prior to trip for diagnostic purposes:
- **Analog outputs:**
  - 0 to 20mA, 20 to 0mA, 4 to 20mA, 20 to 4 mA

- **Switching current capacity:** 6A AC, 5A DC
- **Parameter adjustable:** scaling and offset
- **Accuracy:** < 2% full scale
- **Response time:** < 4ms

- **Optional remote mountable keypad**

- **Order number:** BREN613E

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General Purpose Inverter E3

The E3 range is available with IP20 and IP66 enclosures to suit customer needs. Dust-tight and ready for washdown, the IP66-rated general purpose inverters can be mounted directly on your processing equipment. The IP20-rated inverters can be mounted in control cabinets or in machine parts providing the required protection. The E3 range also features the world’s first fully digital drive for low power single phase motors. Designed for use with permanent split capacitor (PSC) or shaded pole, single phase induction motors.

Ideal for:
• Bottling
• Pumping
• Waste water
• HVAC
• Conveyor
• Bagage handling

Exercise
• Packaging
• Woodworking
• Ceramics
• Building automation

Recommended for:
• Paper
• Petroleum
• Food processing
• Aggregate/cement
• Mining

Options
• Dynamic braking resistor
• Mains supply input chokes
• Motor output filter, recommended for long cable runs
• 2 Relay output option
• Remote mounting keypad
• RJ-45 cables and splitters
• Isolated RS485 USB adaptor
• Commissioning and storage software for PC
• PC-program for settings
• Parameter Optistick with RJ-45 connection and Bluetooth communication

IP20
• IP20
  The IP20-rated inverters can be mounted in control cabinets or in machine parts providing the required protection.
  
  IP20 explained:
  Protection against fingers or other object not greater than 80 mm in length and 12 mm in diameter. No moisture protection.

IP66
• Dust-tight design
  Install in-situ and be sure of protection from dust and contaminants.

• Ready for washdown
  With a sealed ABS enclosure and corrosion resistant heatsink, the General Purpose inverter E3 is ideal for high pressure washdown applications.

• On-drive control
  Switched IP66 models feature convenient controls for speed control, REV/OFF/FWD and Power ON/OFF, complete with safety lock.

• Indoor or outdoor mounting
  Non-switched IP66 models available.

The easy-to-use, cost competitive solution to motor control

The Beijer Electronics General Purpose Inverter E3 range is dedicated to low power applications, combining innovative technology, reliability, robustness and ease-of-use.

Intuitive keypad control
Precise digital control at the touch of a button.

Simple commissioning
14 parameter basic setup. Default settings suitable for most applications. Contactor style connection for simple wiring.

Integral RFI filter
• Built-in filter for full EMC compliance removable by a screw
• Vector control
• For applications requiring high starting torque and constant speed

Modbus RTU and CANopen
Easy integration with your control and monitoring systems.

Brake chopper (sizes 2, 3 and 4)
Dynamic and compact options with heatsink mounted resistor.

High overload capability
• 150% overload for 60 sec
• 175% overload for 2 sec

Industrial ambient ratings
• IP20 enclosure: 50°C
• IP66 enclosure: 50°C for outdoor mounting

OEM
Smartstick with RJ-45 connection to inverter for easy parameter up or download. The Smartstick can also communicate with the PC software tool BFI Tools or a smartphone with the BFI Mobile app installed.

Fire mode
For building automation safety systems.

Modbus
• Paper
• Petroleum
• Food processing
• Aggregate/cement
• Mining

Wireless
• Textile
• Horticultural
• Chemical
• Agricultural

Options
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• Mains supply input chokes
• Motor output filter, recommended for long cable runs
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