

# Technical specifications

## 5.1 Technical specifications

### Technical specifications of the PDC1000 (article number 6BK1630-1BA00-0AA0)

The following table shows the technical specifications of the PDC1000 as of 02/2020.

You can find a data sheet including daily updated technical specifications on the Internet (<https://support.industry.siemens.com/cs/ww/en/pv/6BK1630-1BA00-0AA0/td?dl=en>).

Article number	6BK1630-1BA00-0AA0
<b>General information</b>	
Product type designation	EC motor controller
HW functional status	FS02
Product description	Control of EC motors
Mean time between failures (MTBF)	100 000 h
<b>Product function</b>	
• Isochronous mode	Yes
• Four-quadrant operation	Yes
• Speed control with encoder	Yes
• Speed control without encoder	No
• Safety Functions	No
<b>Protection function</b>	
• Undervoltage protection	Yes
• Overvoltage protection	Yes
• Overload protection	Yes
• Short-circuit protection	Yes
<b>Installation type/mounting</b>	
Mounting type	35 millimeter rail and mounting plate screw connection
Type of ventilation	Convection cooling
<b>Supply voltage</b>	
Design of the power supply	DC
Rated value (DC)	24 V
permissible range, lower limit (DC)	19.2 V
permissible range, upper limit (DC)	28.8 V

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<b>Article number</b>	<b>6BK1630-1BA00-0AA0</b>
<b>Supply voltage of the motor</b>	
<ul style="list-style-type: none"> <li>Type of motor voltage</li> </ul>	24 ... 48 V DC, SELV / PELV
<ul style="list-style-type: none"> <li>permissible range, lower limit (DC)</li> </ul>	16.8 V
<ul style="list-style-type: none"> <li>supply voltage / of the motor / at DC / rated value / maximum</li> </ul>	52.8 V
<b>Input current</b>	
Current consumption for the electronics, max.	0.9 A
Inrush current, max.	1.6 A
<b>Output current</b>	
Current output (rated value)	17.3 A
Output current, max.	34.6 A
Output frequency	500 Hz
<b>Power loss</b>	
Power loss, max.	22 W
<b>Digital inputs</b>	
Number of digital inputs	5
Number of safety inputs	0
<b>Digital outputs</b>	
Number of digital outputs	2; 24 V DC, 1 A
Number of safety outputs	0
<b>Encoder</b>	
<b>Connectable encoders</b>	
<ul style="list-style-type: none"> <li>Incremental encoder (symmetrical)</li> </ul>	Yes; Up to 200 kHz
<ul style="list-style-type: none"> <li>Absolute encoder (SSI)</li> </ul>	Yes; With SSI interface
<b>Interfaces</b>	
Number of industrial Ethernet interfaces	0
Number of PROFINET interfaces	2
<b>Standards, approvals, certificates</b>	
CE mark	Yes
CSA approval	No
UL approval	No
cULus	No
FM approval	No
RCM (formerly C-TICK)	No
KC approval	No
EAC (formerly Gost-R)	Yes
RoHS conformity	Yes
China RoHS compliance	No
<b>Ambient conditions</b>	
<b>Ambient temperature during operation</b>	
<ul style="list-style-type: none"> <li>min.</li> </ul>	-20 °C
<ul style="list-style-type: none"> <li>max.</li> </ul>	60 °C

<b>Article number</b>	<b>6BK1630-1BA00-0AA0</b>
<b>Ambient temperature during storage/transportation</b>	
• Storage, min.	-20 °C
• Storage, max.	80 °C
<b>Relative humidity</b>	
• Operation, max.	90 %; no condensation
• Storage, max.	95 %; no condensation
<b>Vibrations</b>	
• Vibration resistance during operation acc. to IEC 60068-2-6	5 ... 8.5 Hz / 3.5 mm, 8.5 ... 150 Hz / 1 g; for wall mounting: 9 ... 29 Hz / 1.5 mm, 29 ... 200 Hz / 5 g
• Vibration resistance during storage acc. to IEC 60068-2-6	5 ... 9 Hz / 3.5 mm, 9 ... 500 Hz / 1 g
<b>Shock testing</b>	
• Shock resistance during operation acc. to IEC 60068-2-27	15 g / 11 ms; for wall mounting: 10 g / 30 ms, 25 g / 6 ms
<b>Cables</b>	
Cable length for motor, shielded, max.	10 m
<b>Connection method</b>	
Type of connection	Plug-in terminal
<b>Dimensions</b>	
Width	90 mm
Height	125 mm; 136 mm with protective collar for PN connector
Depth	120 mm
<b>Weights</b>	
Weight, approx.	0.65 kg
<b>Other</b>	
Brake design	Holding brake
Braking chopper	Yes; External resistance

You can find information on the general technical specifications, such as standards and approvals, electromagnetic compatibility, protection class, etc., in the System Manual SIMATIC MICRO-DRIVE Drive controller PDC (<https://support.industry.siemens.com/cs/ww/en/view/109774126>).