Technical specifications

5

5.1 Technical specifications

The following table shows the technical specifications of the PDC100 (6BK1 630-1AA10-0AA0) and PDC100F(6BK1 630-2AA10-0AA0) as of 10/2019.

You can find a data sheet including daily updated technical specifications on the Internet (https://support.industry.siemens.com/cs/ww/en/pv/6BK1630-2AA10-0AA0/td?dl=en) or (https://support.industry.siemens.com/cs/ww/en/pv/6BK1630-2AA10-0AA0/td?dl=en).

Article number	6BK1630-1AA10-0AA0	6BK1630-2AA10-0AA0
General information		
Product type designation	DC and EC motor controller	
HW functional status	FS01	
Product description	Control of DC and EC motors	
Mean time between failures (MTBF)	100 000 h	
Product function		
• Isochronous mode	Yes	
• Four-quadrant operation	Yes	
• Speed control with encoder	Yes	
• Speed control without encoder	No	
• Safety Functions	Yes; STO	Yes; STO, SS1, SLT, SLS, SSM
Protection function		
• Undervoltage protection	Yes	
• Overvoltage protection	Yes	
• Overload protection	Yes	
• Ground-fault protection	Yes	
• Short-circuit protection	Yes	
Engineering with		
• STEP 7 TIA Portal configurable/integrated from version	V14 SP1	
Installation type/mounting		
Mounting type	35 mm rail, screw mounting	
Type of ventilation	Convection cooling	
Supply voltage		
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	

Article number	6BK1630-1AA10-0AA0	6BK1630-2AA10-0AA0
Supply voltage of the motor		
• Type of motor voltage	24 ... 48 V DC, SELV / PELV	
• permissible range, lower limit (DC)	19.2 V	
Input current		
Current consumption for the electronics, max.	0.9 A	
Inrush current, max.	1.6 A	
Output current		
Current output (rated value)	1.56 A	
Output current, max.	2.3 A	
Power loss		
Power loss, max.	8 W	
Digital inputs		
Number of digital inputs	4	
Number of safety inputs	1; For STO, antivalent (2-pin) - 24 V DC	
Input characteristic according to IEC 61131	Permissible DC leakage current (0 signal) to 2 mA	
Digital outputs		
Type of digital output	Source output (PNP, current-sourcing)	
Number of digital outputs	2	
Number of safety outputs	0	
Encoder		
Connectable encoders		
• Incremental encoder (symmetrical)	Yes; Up to 200 kHz	
• Incremental encoder (asymmetrical)	Yes	
• Absolute encoder (SSI)	Yes; 350 kHz	
Interfaces		
Number of industrial Ethernet interfaces	0	
Number of PROFINET interfaces	2	
Standards, approvals, certificates		
CE mark	Yes	
CSA approval	No	
cULus	Yes	
FM approval	Yes	
RCM (formerly C-TICK)	Yes	
KC approval	Yes	
EAC (formerly Gost-R)	Yes	
China RoHS compliance	Yes	
Highest safety class achievable in safety mode		
• Performance level according to ISO 13849-1	d	
• SIL acc. to IEC 61508	SIL 2	

Article number	6BK1630-1AA10-0AA0	6BK1630-2AA10-0AA0
Ambient conditions		
Ambient temperature during operation		
• min.	-20 °C	
• max.	60 °C	
• horizontal installation, max.	40 °C	
Ambient temperature during storage/transportation		
• Storage, min.	-20 °C	
• Storage, max.	80 °C	
Relative humidity		
• Operation, max.	95 %; no condensation	
• Storage, max.	95 %; no condensation	
Vibrations		
• 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	
Shock testing		
• 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	
Cables		
Cable length for motor, shielded, max.	10 m	
Dimensions		
Width	50 mm	
Height	125 mm; 136 mm with protective collar for PN connector	
Depth	120 mm	
Weights		
Weight, approx.	350 g	
Other		
Brake design	Holding brake	
Braking chopper	Yes; Onboard, expandable	
Note:	Maximum 30 J per braking process, maximum 30 J per minute	

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/ps/25460).