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Data sheet 6BK1136-6AB00-0BU0

SIMATIC F-TM ServoDrive ST, drive controller for servo drives in the protective extra low voltage range <(><<)>60V, 24VDC to 48VDC motor supply voltage, output current 5A,for SIMATIC ET 200SP, integrated brake chopper, STO hardwired



General information	
Product type designation	F-TM ServoDrive 1x24 ... 48 V 5 A ST
HW functional status	V1.0
Firmware version	V1.0
• FW update possible	Yes
Product description	Control of EC motors
usable BaseUnits	BU type U0
Product function	
• I&M data	Yes
• Isochronous mode	No
• Four-quadrant operation	Yes
• Safety Functions	Yes; Drive controller with hardwired STO
Protection function	
• Undervoltage protection	Yes
• Overvoltage protection	Yes
• Overload protection	Yes
• Ground-fault protection	No
• Short-circuit protection	Yes

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Installation type/mounting	
Type of ventilation	Convection cooling
Supply voltage	
Design of the power supply	24 ... 48 V DC, SELV / PELV
permissible range, lower limit (DC)	16.8 V
permissible range, upper limit (DC)	57.6 V
Input current	
Current consumption (rated value)	6 A
Current consumption, max.	10 A
Current consumption for the electronics, max.	0.1 A; at 24 V
Inrush current, max.	25 A; at 24 V
Output voltage	
Rated value, min.	24 V
Rated value, max.	48 V
Output current	
Current output (rated value)	5 A
Output current, max.	10 A
Output frequency	420 Hz
Encoder supply	
Number of outputs	1
5 V encoder supply	
• 5 V	Yes
• Short-circuit protection	Yes
• Output current, max.	120 mA
Power	
DC power consumption	300 W; At 50 V
Power loss	
Power loss, typ.	3.5 W
Digital inputs	
Number of digital inputs	1; + 1 input for message signal
Number of safety inputs	1; For STO, antivalent (2-pin) - 24 V DC
Encoder	
Connectable encoders	
• Incremental encoder (symmetrical)	No
Interrupts/diagnostics/status information	
Alarms	
• Diagnostic alarm	Yes
• Hardware interrupt	No
Diagnoses	

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• Monitoring the supply voltage	Yes
• Wire-break	Yes
• Short-circuit	No
• Group error	Yes
Diagnostics indication LED	
• RUN LED	Yes
• ERROR LED	Yes

Integrated Functions	
Position detection	
• Incremental acquisition	Yes

Potential separation	
Potential separation channels	
• between the channels and backplane bus	Yes

Isolation	
Isolation tested with	707 V DC/1 min, type test (between backplane bus and functional ground)
Overvoltage category	2
Degree of pollution	2 according to EN 61800-5-1

Degree and class of protection	
IP degree of protection	IP20

Standards, approvals, certificates	
CE mark	Yes
cULus	No
Standard for EMC according to EN 61800-3	Yes, according to second environment Category C2 acc. EN 61800-3
Standard for drive acc. to EN 61800-5-1	Yes
Standard for drive acc. to EN 61800-5-2	Yes
reference designation according to IEC 81346-2 (2009)	T
Highest safety class achievable in safety mode	
• Performance level according to ISO 13849-1	Category 3, performance level d, according to EN ISO 13849-1:2015
• SIL according to DIN EN 61800-5-2	SIL 2 according to EN 61800-5-2:2017

Ambient conditions	
Pollution degree during storage and transport	2
Ambient temperature during operation	
• horizontal installation, min.	-30 °C; No condensation, splash water, icing, salt spray or oil mist permitted.
• horizontal installation, max.	60 °C; No condensation, splash water, icing, salt spray or oil mist permitted. Note the derating data!

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• vertical installation, min.	-30 °C; No condensation, splash water, icing, salt spray or oil mist permitted.
• vertical installation, max.	50 °C; No condensation, splash water, icing, salt spray or oil mist permitted. Note the derating data!
Ambient temperature during storage/transportation	
• Storage, min.	-40 °C
• Storage, max.	70 °C
Altitude during operation relating to sea level	
• Installation altitude above sea level, max.	3 000 m
Cables	
Cable length for motor, shielded, max.	10 m
Dimensions	
Width	20 mm
Height	73 mm
Depth	58 mm
Weights	
Weight, approx.	55 g
Other	
Braking chopper	Yes
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