Product data sheet
Characteristics

SD328AU25S2
motion control stepper motor drive - SD328 - <= 2.5 A

Main

Range of product	Lexium SD3
Product or component type	Motion stepper drive
Device short name	SD328
Supply voltage limits	100...120 V 200...240 V
Bus type	Fieldbus

Complementary

Format of the drive	Block
Network number of phases	Single phase
[Us] rated supply voltage	200...230 V (- 15...10 %) 100...120 V (- 15...10 %)
Supply voltage type	AC/DC
Network frequency limits	50...60 Hz (- 15...10 %)
Communication interface	Integrated Modbus Integrated analogue input Integrated CANopen
Motor phase current	<= 2.5 A
Current consumption	<= 0.2 mA (24 V control voltage) 4 A at 115 V (main supply) 3 A at 230 V (main supply)
Nominal power	270 W at 230 V 180 W at 115 V
Short-circuit current	0.5 kA
Power losses	<= 26 W
Associated fuse rating	6 A at 230 V 6 A at 115 V
Overvoltage category	III
Inrush current	< 60 A
Leakage current	< 30 mA (cable length: < 10 m) conforming to IEC 60990-3
Voltage state 0 guaranteed	-3...5 V (24 V input signals)
Voltage state1 guaranteed	15...30 V (24 V input signals)
Input current	<= 10 mA (24 V input signals)
Input frequency	<= 400 kHz, signal input ENC_A, ENC_B, ENC_I, A/B <= 200 kHz, signal input ENC_A, ENC_B, ENC_I, pulse/direction
Output frequency	<= 200 kHz, pulse/direction interface, pulse/direction < 400 kHz, pulse/direction interface, A/B
Maximum switching current	<= 50 mA (24 V output signals)
Voltage drop	1 V, 50 mA load (24 V output signals)
Physical interface	RS422 - signal input ENC_A, ENC_B, ENC_I RS422 - pulse/direction interface 2-wire RS 485 Modbus :
Output voltage	4.75...5.25 V (ENC+5V_OUT signal output) <= 30 V (24 V output signals)

Input voltage	-10...10 V (analogue input signals) 24 V -15 %/+20 % (24 V control voltage)
Residual ripple	< 5 % (24 V control voltage)
Resistance	>= 10 Ohm (analogue input signals) 5 kOhm (pulse/direction interface)
Analogue input type	Voltage - 10...10 V, resolution: 14 bits, duration: 0.25 ms
Electrical connection	Spring terminal for CANopen interface) Connector RJ45 for Modbus interface) Connector RJ45 for CANopen interface)
Mode of transmission	RTU (Modbus)
Method of access	Slave (CANopen)
Transmission rate	9600, 19200, 38400 bps (Modbus) 125 kbps, 250 kbps, 500 kbps, 1 Mbps (CANopen)
Number of addresses	1...247 (Modbus) 1...127 (CANopen)
Installed device	31 stepper motor drives for Modbus 127 stepper motor drives for CANopen
Data format	8 bits, odd parity, 1 stop for Modbus 8 bits, no parity, 2 stop for Modbus 8 bits, no parity, 1 stop for Modbus 8 bits, 1 stop, even parity for Modbus
Communication service	Write single register (06) for Modbus Write multiple registers (16), maximum 61 words for Modbus Read/Write multiple registers (23), maximum 63/59 words for Modbus Read hold register (03), maximum 63 words for Modbus Read device identification (43) for Modbus Note guarding, heartbeat for CANopen Emergency for CANopen Diagnostics (08) for Modbus CiA DSP 402 profile for CANopen 3 PDOs as per DSP 402 for CANopen 2 SDOs send for CANopen 2 SDOs receive for CANopen 1 PDO configurable for CANopen
Local signalling	1 LED - RUN for CANopen 1 LED - ERR for CANopen
Safety function	Safe torque off safety function for system process conforming to IEC/EN 61800-5-2 Safe torque off safety function for system process conforming to EN/IEC 61508 level SIL2 Safe torque off safety function for machine conforming to ISO 13849-1 level d Safe torque off safety function for machine conforming to IEC/EN 61800-5-2
Type of cooling	Natural convection
Maximum mechanical speed	3000 rpm
Height	145 mm
Width	72 mm
Depth	140 mm
Shock resistance	15 gn for 11 ms conforming to EN/IEC 60068-2-27
Product weight	1.1 kg

Environment

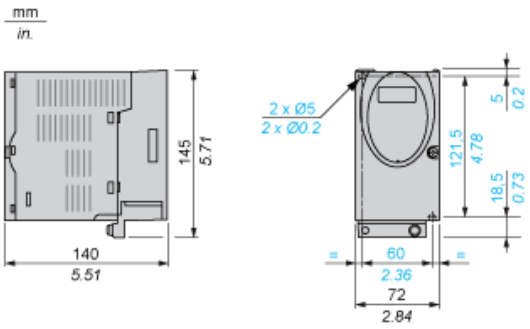
Electromagnetic compatibility	Voltage/Current impulse level 3 conforming to EN/IEC 61000-4-5 Immunity to radiated radio-electrical interference level 3 conforming to EN/IEC 61000-4-3 Immunity to electrical transients level 4 conforming to EN/IEC 61000-4-4 Electrostatic discharge level 3 conforming to EN/IEC 61000-4-2
Standards	EN/IEC 50178 EN/IEC 61800-3 EN/IEC 61800-3 environment 1 EN/IEC 61800-3 environment 2 EN/IEC 61800-5-1
Product certifications	CUL TÜV UL
Marking	CE
Ambient air temperature for operation	0...50 °C
Ambient air temperature for storage	-25...70 °C

Pollution degree	Level 2
Relative humidity	5...85 % without condensation
Operating altitude	> 1000...< 2000 m without derating (maximum ambient temperature 40°C, no protective film, lateral distance of > 50mm) <= 1000 m without derating
Vibration resistance	1.5 mm (f = 3...13 Hz) conforming to EN/IEC 60068-2-6 1 gn (f = 13...150 Hz) conforming to EN/IEC 60068-2-6
IP degree of protection	IP40 on upper part without removal of protective film IP20

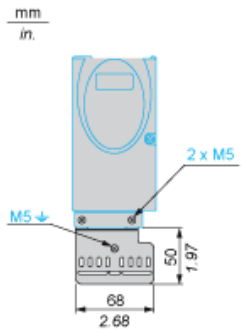
Offer Sustainability

Sustainable offer status	Green Premium product
RoHS (date code: YYWW)	Compliant - since 0921 - Schneider Electric declaration of conformity
REACh	Reference contains SVHC above the threshold - go to CaP for more details
Product environmental profile	Available Download Product Environmental
Product end of life instructions	Available Download End Of Life Manual

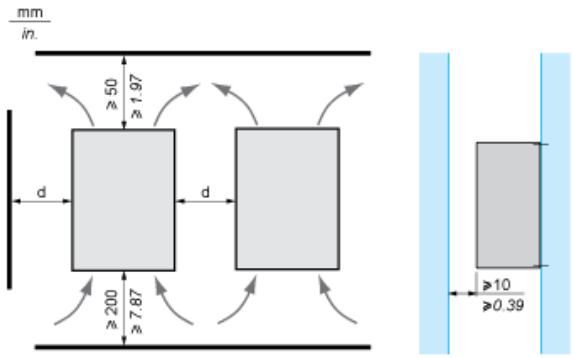
Dimensions



EMC mounting plate (included)

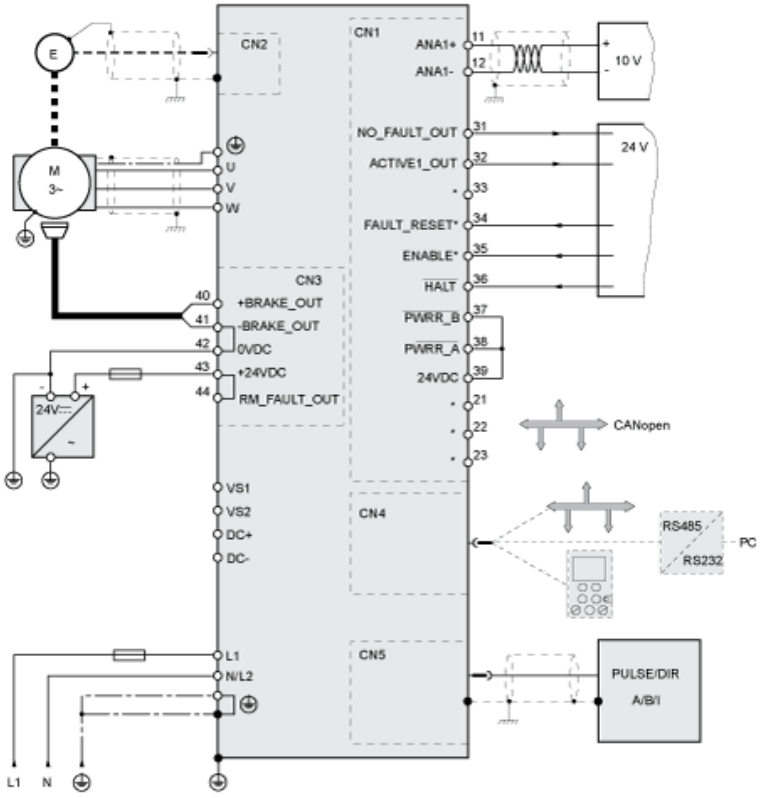


Mounting and Clearance

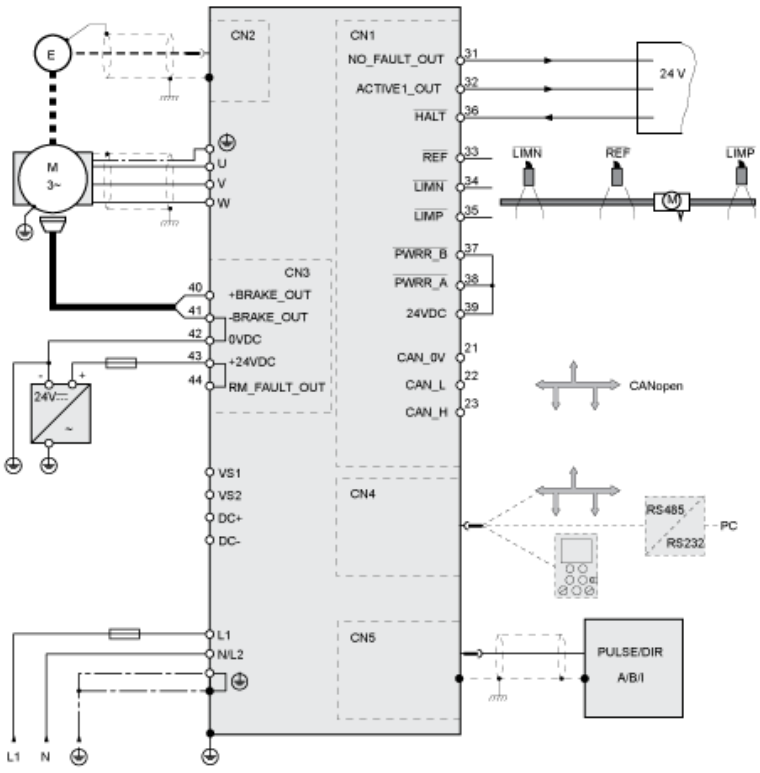


Ambient temperature	Mounting distances	Mounting recommendations	
		Without protective film (1)	With protective film
0 ... +40 °C	d > 50 mm/1.97 in.	None	None
d > 50 mm/1.97 in.	None	d > 10 mm/0.39 in.	
+40 ... +50 °C	d > 50 mm/1.97 in.	None	Reduce nominal and continuous current by 2.2 % per °C above 40 °C
d > 50 mm/1.97 in.	Reduce nominal and continuous current	Operation not possible	
(1) Recommendation: remove protective film after installation.			

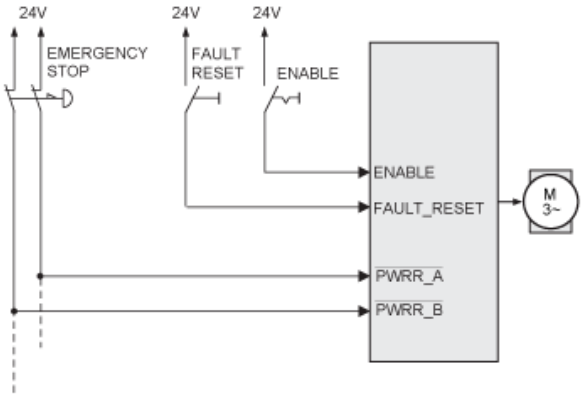
SD328A Connection Example with Local Control



SD328A Connection Example with Fieldbus Control



Example of Application of the Safety Function: Category 0 Stop



Example of Application of the Safety Function: Category 1 Stop