


KL2531 | Stepper motor terminal 24 V DC, 1.5 A

The KL2531 Bus Terminal is intended for the direct connection of different small stepper motors. The slimline PWM output stages for two motor coils are located in the Bus Terminal together with two inputs for limit switches. The KL2531 can be adjusted to the motor and the application by changing just a few parameters. 64-fold micro-stepping ensures particularly quiet and precise motor operation. In many applications, integrated zero-speed monitoring makes an encoder system or limit switch unnecessary.

Technical data	KL2531 KS2531
Connection technology	direct motor connection
Number of outputs	1 stepper motor
Number of inputs	2
Load type	uni- or bipolar stepper motors
Max. output current	1.5 A (overload- and short-circuit-proof)
Max. step frequency	125,000 steps/s
Step pattern	full step, half step, up to 64-fold micro stepping
Current controller frequency	approx. 25 kHz
Diagnostics LED	error phase A and B, loss of step/stagnation, power, enable
Resolution	approx. 5000 positions in typ. applications (per revolution)
Power supply	8...24 V DC (for output stage over power contacts)
Electrical isolation	500 V (K-bus/signal voltage)
Current consumption power contacts	only load
Current consumption K-bus	typ. 60 mA
Bit width in the process image	input: $n \times 2 \times 16$ bit data, 2×16 bit control/status
Special features	travel distance control
Weight	approx. 50 g
Operating/storage temperature	0...+55 °C/-25...+85 °C
Relative humidity	95 %, no condensation
Vibration/shock resistance	conforms to EN 60068-2-6/EN 60068-2-27
EMC immunity/emission	conforms to EN 61000-6-2/EN 61000-6-4
Protect. class/installation pos.	IP 20/see documentation
Pluggable wiring	for all KSxxxx Bus Terminals
Approvals	CE, UL

Accessories	
AS10xx	Stepper motors 0.4 upto 5 Nm (standstill torque)
ZK47x4-04xx, ZK4000-xxxx	Supply cables for Compact Drive Technology

Related products	
KL2541	stepper motor Bus Terminal, I _{MAX} = 5 A, 50 V, IP 20
EL7031	stepper motor EtherCAT Terminal, I _{MAX} = 1.5 A, 24 V, IP 20
EL7041	stepper motor EtherCAT Terminal, I _{MAX} = 5 A, 50 V, IP 20
EP7041-0002	stepper motor EtherCAT Box (industrial housing), I _{MAX} = 5 A, 50 V, IP 67

 Product announcement	KL2531: available KS2531: estimated market release on request
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