

Adapter Micromotor

Adapter to connect maxon DCX and ECX motors of diameters of 4...8 mm with maxon controllers.

With integrated Line Driver RS 422 and selectable encoder supply voltage $V_{Enc} = 3.3\text{ V}$ (from V_{CC} via linear regulator) or $V_{Enc} = V_{CC} = 5\text{ V}$.

MECHANICAL DATA

Dimensions: 45 x 40 mm (L x W)

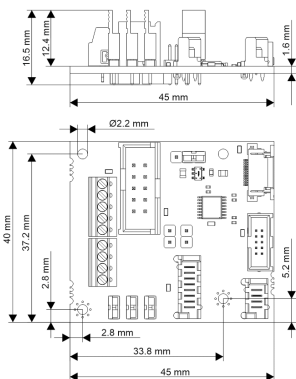
Mounting: 4 holes $\varnothing 2.2\text{ mm}$ (for M2 screws)

RIBBON CABLE 10-POLE

Cable: AWG 28, length 0.5 m

Connector: 2 x DIN 41651, 1:1 pinout

Max. continuous current: 1 A



PIN ASSIGNMENT

Controller Side			
J1 Screw-type terminal block 4-pole Pitch: 2.54 mm Suitable for wire size AWG 26...20 (0.14...0.5 mm ²)	ECX motor W1 Motor winding 1 W2 Motor winding 2 W3 Motor winding 3 Shield1 Cable shield	DCX motor Motor + Motor - n.c. Cable shield	
J2 Screw-type terminal block 5-pole Pitch: 2.54 mm Suitable for wire size AWG 26...20 (0.14...0.5 mm ²)	H1 Hall sensor 1 H2 Hall sensor 2 H3 Hall sensor 3 +VH V_{Hall} GND Ground		
J3 DIN 41651 connector 10-pole Pitch: 2.54 mm	Jumpers M+, M- open 1 n.c. 2 V_{CC} 3 GND 4 n.c. 5 Channel A/ 6 Channel A 7 Channel B/ 8 Channel B 9 Channel I/ 10 Channel I	Jumpers M+, M- closed 1 Motor + 2 V_{CC} 3 GND 4 Motor - 5 Channel A/ 6 Channel A 7 Channel B/ 8 Channel B 9 Channel I/ 10 Channel I	

Motor Side		
J4 Plug-in screw terminals for Flexprint connector 12-pole Pitch: 0.5 mm FPC thickness: 0.3 mm Contact position: top	ECX motor 1 Motor winding 1 2 Motor winding 2 3 Motor winding 3 4 GND 5 V_{Enc} 6 Channel A 7 Channel B 8 Channel I 9 Hall sensor 1 10 Hall sensor 2 11 Hall sensor 3 12 n.c.	DCX motor 1 Motor + 2 Motor - 3 n.c. 4 GND 5 V_{Enc} 6 Channel A 7 Channel B 8 Channel I 9 n.c. 10 n.c. 11 n.c. 12 n.c.
J5 Fine Pitch Connector 10-pole Pitch: 1.27 mm	1 n.c. 2 V_{Enc} 3 GND 4 n.c. 5 Hall sensor 1 6 Channel A 7 Hall sensor 2 8 Channel B 9 Hall sensor 3 10 Channel I	
J6 Lumberg MICS multipoint connector 4-pole Pitch: 1.27 mm	1 Motor winding 1 2 Motor winding 2 3 Motor winding 3 4 Shield2	1 Motor + 2 Motor - 3 n.c. 4 Shield2
J7 Lumberg MICS multipoint connector 8-pole Pitch: 1.27 mm	1 Motor winding 1 2 Motor winding 2 3 Motor winding 3 4 V_{Hall} 5 GND 6 Hall sensor 1 7 Hall sensor 2 8 Hall sensor 3	

FUNCTION OF JUMPERS

L1, L2, L3 The PCB is designed to permit soldering of additional motor inductance (SRU6025) on the reverse side.	Open The additional motor inductance is active.	Closed The motor windings are directly connected. Possible additional motor inductance is bypassed.
M+, M- The motor leads of a maxon DC motor can be looped with the encoder ribbon cable.	Open Connector J3 is only connected with the encoder signals	Closed Connector J3 additionally carries the motor leads.

+3.3V / +5V

As encoder supply voltage V_{Enc} , either 3.3 V (from V_{CC} via linear regulator) or 5 V = V_{CC} can be selected.