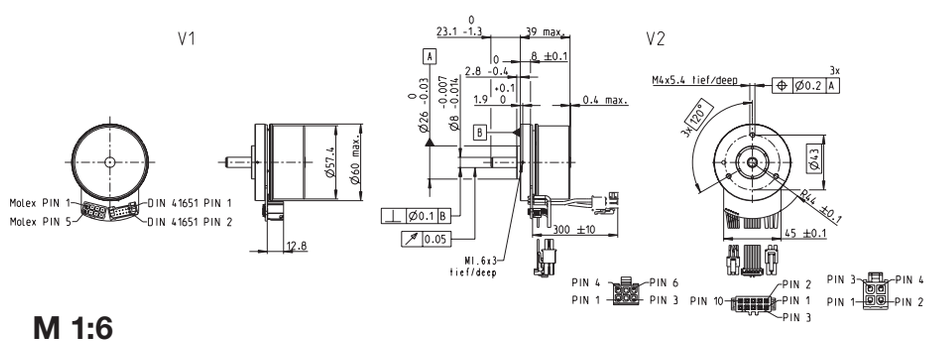
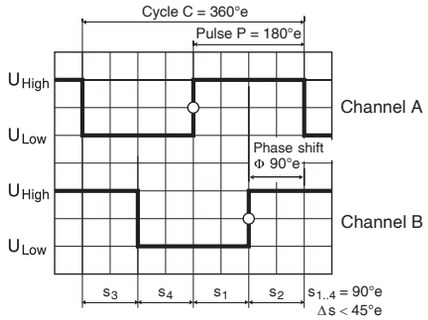
Encoder MILE 512–4096 CPT, 2 Channels, with Line Driver

Integrated into motor



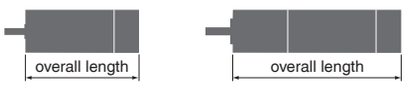
M 1:6



Direction of rotation cw (definition cw p. 64)

Stock program
Standard program
Special program (on request)

	Part Numbers			
V1 with connector	651156	651163	651166	**651168**
V2 with cable and connector	421985	421986	421987	421988
Type				
Counts per turn	512	1024	2048	4096
Number of channels	2	2	2	2
Max. operating frequency (kHz)	1000	1000	1000	1000
Max. speed (rpm)	6000	6000	6000	6000



maxon Modular System									
+ Motor	Page	**+ Gearhead**	Page	**+ Brake**	Page	**Overall length [mm] / ● see Gearhead**			
EC 60 flat, 100 W	267					39.0	39.0	39.0	39.0
EC 60 flat, 100 W	267	GP 52, 4 - 30 Nm	367			●	●	●	●
EC 60 flat, 150 W	268					39.0	39.0	39.0	39.0
EC 60 flat, 150 W	268	GP 52, 4 - 30 Nm	367			●	●	●	●

Technical Data

Supply voltage V_{CC}	5 V ± 10%
Typical current draw	15 mA
Output signal	CMOS compatible
State length s_n (1000 rpm)	90°e ± <45°e
Signal rise time (typically, at C_L = 25 pF, R_L = 1 kΩ, 25 °C)	100 ns
Signal fall time (typically, at C_L = 25 pF, R_L = 1 kΩ, 25 °C)	100 ns
Operating temperature range	-40…+100 °C
Moment of inertia of code wheel	≤ 13 gcm²
Output current per channel	max. 4 mA
Open collector output of the Hall sensors with integrated pull-up resistor	10 kΩ ± 20%
Wiring diagram for Hall sensors see p. 47	

Additional information can be found under ‘Downloads’ in the maxon online shop.

Pin Allocation

Connection V1
Motor + Sensors
Pin 1 Hall sensor 1
Pin 2 Hall sensor 2
Pin 3 V_{Hall} 4.5...18 VDC
Pin 4 Motor winding 3
Pin 5 Hall sensor 3
Pin 6 GND
Pin 7 Motor winding 1
Pin 8 Motor winding 2

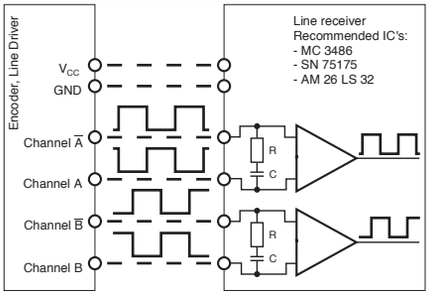
Encoder
Pin 1 N.C.
Pin 2 V_{CC}
Pin 3 GND
Pin 4 N.C.
Pin 5 Channel $\overline{A}$
Pin 6 Channel A
Pin 7 Channel $\overline{B}$
Pin 8 Channel B
Pin 9 Do not connect
Pin 10 Do not connect

Pin type:
46015-0806 Molex
DIN 41651/EN 60603-13

Connection V2
Sensors (AWG 24)
Pin 1 Hall sensor 1
Pin 2 Hall sensor 2
Pin 3 Hall sensor 3
Pin 4 GND
Pin 5 V_{Hall} 4.5...18 VDC
Pin 6 N.C.
Motor (AWG 16)
Pin 1 Motor winding 1
Pin 2 Motor winding 2
Pin 3 Motor winding 3
Pin 4 Not connected
Encoder (AWG 28)
Pin 1 N.C.
Pin 2 V_{CC}
Pin 3 GND
Pin 4 N.C.
Pin 5 Channel $\overline{A}$
Pin 6 Channel A
Pin 7 Channel $\overline{B}$
Pin 8 Channel B
Pin 9 Do not connect
Pin 10 Do not connect

43025-600 Molex
39-01-2040 Molex
DIN 41651/EN 60603-13

Connection example



Opt. terminal resistance R = typical 120 Ω
Capacitor C ≥ 0.1 nF per m line length