Encoder MILE 512–6400 CPT, 2 Channels, with Line Driver RS 422
Integrated into motor

Cycle C = 360°e
Pulse P = 180°e

U_{High} / U_{Low} — Channel A
U_{High} / U_{Low} — Channel B

Phase shift Φ 90°e

s_3 s_4 s_1 s_2 $s_{1..4} = 90°e$ $Δs < 45°e$

Direction of rotation cw (definition cw p. 150)

M 1:3
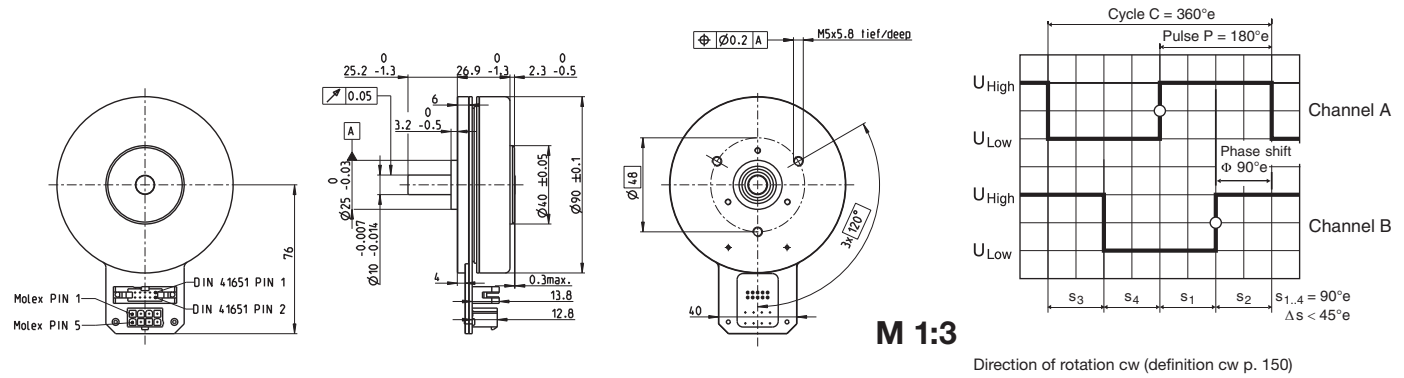
■ Stock program
□ Standard program
▨ Special program (on request)

Part Numbers							
453234	409996	453233	411964	453232	411965	453231	411966

Type								
Counts per turn	512	800	1024	1600	2048	3200	4096	6400
Number of channels	2	2	2	2	2	2	2	2
Max. operating frequency (kHz)	500	500	500	500	500	500	500	500
Max. speed (rpm)	5000	5000	5000	5000	5000	5000	5000	4650

overall length   overall length

maxon Modular System													
+ Motor	Page	+ Gearhead	Page	+ Brake	Page	Overall length [mm] / ● see Gearhead							
EC 90 flat	305					29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2
EC 90 flat	305	GP 52, 4 - 30 Nm	355			●	●	●	●	●	●	●	●

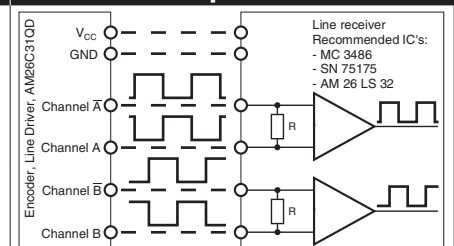| Technical Data	
Supply voltage V_{CC}	5 V ± 10%
Output signal	EIA Standard RS422
driver used:	AM26C31QD
State length s_n (500 rpm)	90°e ± <45°e
Signal rise and fall times	
(typically, at C_L = 120 pF, R_L = 100 Ω)	20 ns
Operating temperature range	-40…+100 °C
Moment of inertia of code wheel	≤ 65 gcm²
Output current per channel min. -20 mA, max. 20 mA	
Wiring diagram for Hall sensors see p. 37	

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

Pin Allocation

Connection motor
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

*Internal pull-up (10 kΩ) on pin 3
(V_{Hall})

Connection 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

Connector:
39-28-1083 Molex
DIN 41651/EN 60603-13

Connection example

Encoder, Line Driver, AM26C31QD
V_{CC}
GND
Channel $\overline{A}$
Channel A
Channel $\overline{B}$
Channel B

Line receiver
Recommended IC's:
- MC 3486
- SN 75175
- AM 26 LS 32

R

Opt. terminal resistance R = typical 120 Ω