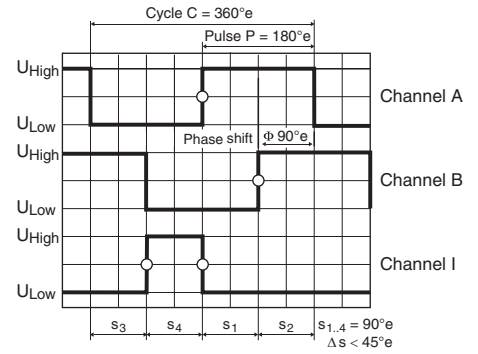
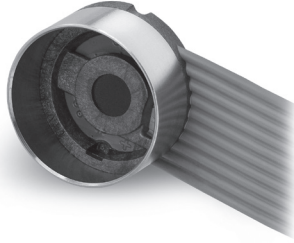
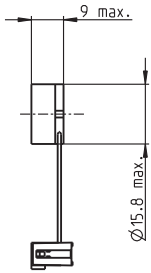


Encoder 16 EASY 128–1024 CPT, 3 Channels, with Line Driver RS 422



Direction of rotation cw (definition cw p. 150)

- Stock program
- Standard program
- Special program (on request)

Part Numbers

499356	499357	499358	499359	499360	499361
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Type (provisional)

Counts per turn	128	256	500	512	1000	1024
Number of channels	3	3	3	3	3	3
Max. operating frequency (kHz)	200	400	800	800	1600	1600
Max. speed (rpm)	30000	30000	30000	30000	30000	30000
Phase shift Φ (°e)	90 ± 45	90 ± 45	90 ± 60	90 ± 45	90 ± 80	90 ± 70
Index pulse width (°e)	90 ± 45	90 ± 45	90 ± 60	90 ± 45	90 ± 80	90 ± 70



maxon Modular System

+ Motor	Page	+ Gearhead	Page	+ Brake	Page	Overall length [mm] / ● see Gearhead					
EC-i 40, 50 W	281/282					37.7	37.7	37.7	37.7	37.7	37.7
EC-i 40, 50 W	281	GP 32, 1 - 6 Nm	343			●	●	●	●	●	●
EC-i 40, 50 W	281	GP 32 S	370-372			●	●	●	●	●	●
EC-i 40, 50 W	281/282	GP 42, 3 - 15 Nm	350			●	●	●	●	●	●
EC-i 40, 70 W	283/284					47.7	47.7	47.7	47.7	47.7	47.7
EC-i 40, 70 W	283	GP 32, 1 - 6 Nm	343			●	●	●	●	●	●
EC-i 40, 70 W	283	GP 32 S	370-372			●	●	●	●	●	●
EC-i 40, 70 W	283/284	GP 42, 3 - 15 Nm	350			●	●	●	●	●	●
EC-i 40, 100 W	285					67.7	67.7	67.7	67.7	67.7	67.7
EC-i 40, 100 W	285	GP 42, 3 - 15 Nm	350			●	●	●	●	●	●
EC-i 52, 180 W	286					93.7	93.7	93.7	93.7	93.7	93.7
EC-i 52, 180 W	286	GP 52, 4 - 30 Nm	354			●	●	●	●	●	●

Technical Data

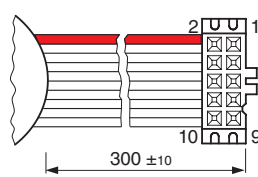
Supply voltage V_{CC}	5 V ± 10%
Output signal	EIA Standard RS 422
Operating temperature range	-40...+100 °C
Moment of inertia of code wheel	≤ 0.09 gcm ²
Output current per channel	± 20 mA
Hysteresis	0.17 °m
Min. state duration s	125 ns
Signal rise and fall times (typically, at $C_L = 200$ pF, $R_L = 100$ Ω)	20 ns

The angle value 0 is matched to the commutation phase of winding 1 (in acc. with Hall 1 signal on motors with Hall sensors, block commutation), see p. 34.

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

The index signal I is synchronized with channel A or B.

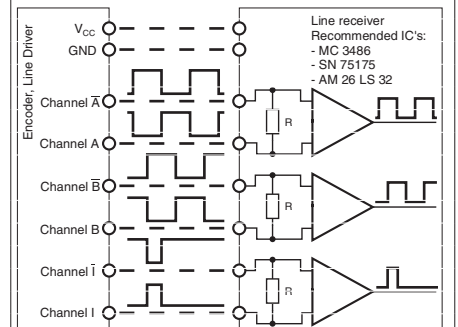
Pin Allocation



- 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 (Index)
- 10 Channel I (Index)

DIN Connector 41651/
EN 60603-13
flat band cable AWG 28

Connection example



Opt. terminal resistance R = typical 120 Ω