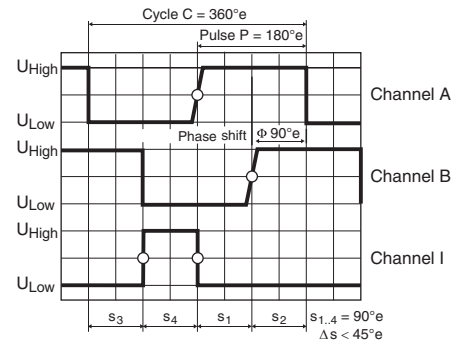
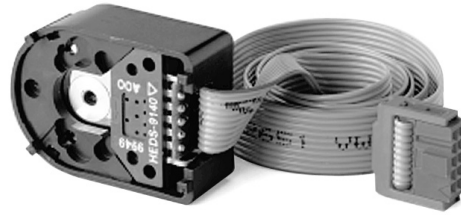
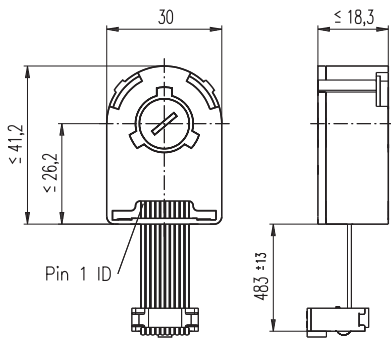


Encoder HEDL 5540 500 CPT, 3 Channels, with Line Driver RS 422



Direction of rotation cw (definition cw p. 48)

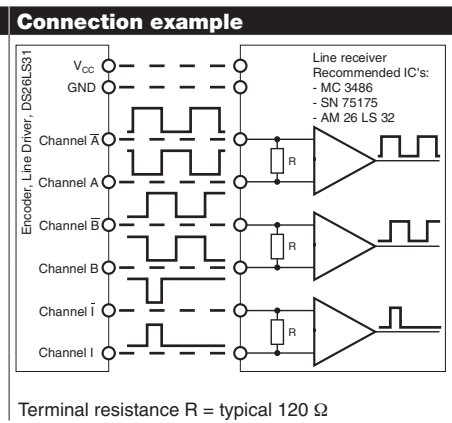
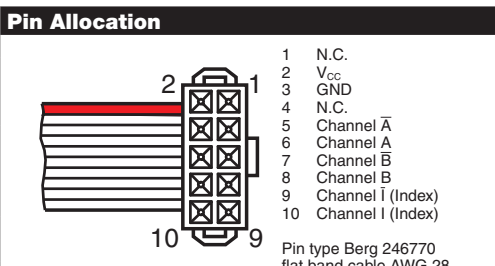
- Stock program
- Standard program
- Special program (on request)

Order Number		
110512	110514	110516

Type			
Counts per turn	500	500	500
Number of channels	3	3	3
Max. operating frequency (kHz)	100	100	100
Max. speed (rpm)	12000	12000	12000
Shaft diameter (mm)	3	4	6

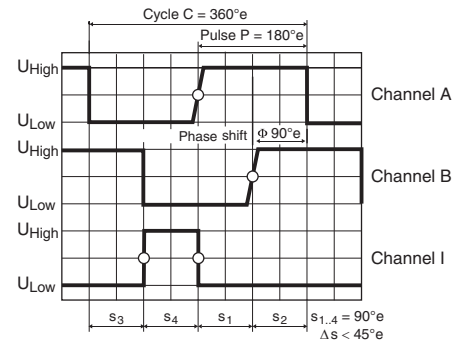
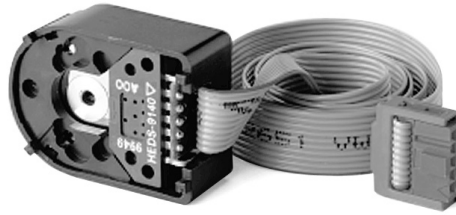
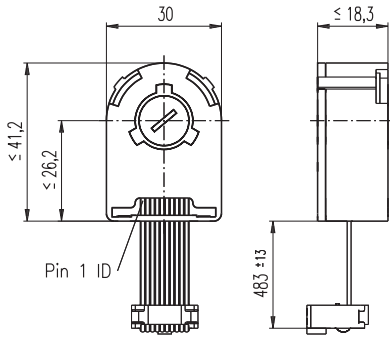
maxon Modular System						
+ Motor	Page	+ Gearhead	Page	+ Brake	Page	Overall length [mm] / ● see Gearhead
RE 25	77/79					75.3
RE 25	77/79	GP 26 / GP 32	227/229			●
RE 25	77/79	KD 32, 1.0 - 4.5 Nm	235			●
RE 25	77/79	GP 32, 0.75 - 6.0 Nm	230/232			●
RE 25	77/79	GP 32 S	249-251			●
RE 25, 20 W	79			AB 28	318	105.7
RE 25, 20 W	79	GP 26 / GP 32	227/229	AB 28	318	●
RE 25, 20 W	79	KD 32, 1.0 - 4.5 Nm	235	AB 28	318	●
RE 25, 20 W	79	GP 32, 0.75 - 6.0 Nm	230/232	AB 28	318	●
RE 25, 20 W	79	GP 32 S	249-251	AB 28	318	●
RE 35, 90 W	81					91.7
RE 35, 90 W	81	GP 32, 0.75 - 4.5 Nm	229			●
RE 35, 90 W	81	GP 32, 0.75 - 6.0 Nm	231/232			●
RE 35, 90 W	81	GP 32, 4.0 - 8.0 Nm	234			●
RE 35, 90 W	81	GP 42, 3.0 - 15 Nm	237			●
RE 35, 90 W	81	GP 32 S	249-251			●
RE 35, 90 W	81			AB 28	318	124.2
RE 35, 90 W	81	GP 32, 0.75 - 4.5 Nm	229	AB 28	318	●
RE 35, 90 W	81	GP 32, 0.75 - 6.0 Nm	231/232	AB 28	318	●
RE 35, 90 W	81	GP 42, 3.0 - 15 Nm	237	AB 28	318	●
RE 35, 90 W	81	GP 32 S	249-251	AB 28	318	●
RE 35, 90 W	81	GP 32, 4.0 - 8.0 Nm	234	AB 28	318	●
RE 40, 150 W	82					91.7
RE 40, 150 W	82	GP 42, 3.0 - 15 Nm	237			●
RE 40, 150 W	82	GP 52, 4.0 - 30 Nm	240			●
RE 40, 150 W	82			AB 28	318	124.2
RE 40, 150 W	82	GP 42, 3.0 - 15 Nm	237	AB 28	318	●
RE 40, 150 W	82	GP 52, 4.0 - 30 Nm	240	AB 28	318	●
A-max 26	102-108					63.5
A-max 26	102-108	GP 26, GS 30	227/228			●
A-max 26	102-108	GP 32, 0.4 - 2.0 Nm	231			●
A-max 26	102-108	GP 32, 0.75 - 6.0 Nm	230/233			●
A-max 26	102-108	GS 38, 0.1 - 0.6 Nm	236			●
A-max 26	102-108	GP 32 S	249-251			●
A-max 32	110/112					82.3
A-max 32	110/112	GP 32, 0.75 - 6.0 Nm	231/233			●
A-max 32	110/112	GS 38, 0.1 - 0.6 Nm	236			●
A-max 32	110/112	GP 32 S	249-251			●

Technical Data	
Supply voltage V_{CC}	$5 V \pm 10\%$
Output signal driver used:	EIA Standard RS 422 DS26LS31
Phase shift Φ	$90^\circ e \pm 45^\circ e$
Signal rise time (typically, at $C_L = 25 pF, R_L = 2.7 k\Omega, 25^\circ C$)	180 ns
Signal fall time (typically, at $C_L = 25 pF, R_L = 2.7 k\Omega, 25^\circ C$)	40 ns
Index pulse width	$90^\circ e$
Operating temperature range	$-40 \dots +100^\circ C$
Moment of inertia of code wheel	$\leq 0.6 gcm^2$
Max. angular acceleration	$250000 rad s^{-2}$
Output current per channel	min. -20 mA, max. 20 mA
Option	1000 Counts per turn, 2 Channels



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

Encoder HEDL 5540 500 CPT, 3 Channels, with Line Driver RS 422



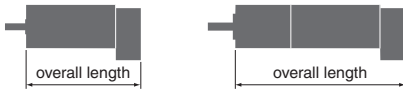
Direction of rotation cw (definition cw p. 48)

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

Order Number

110512	110514	110516	110518
--------	--------	--------	--------

Type	110512	110514	110516	110518
Counts per turn	500	500	500	500
Number of channels	3	3	3	3
Max. operating frequency (kHz)	100	100	100	100
Max. speed (rpm)	12000	12000	12000	12000
Shaft diameter (mm)	3	4	6	8



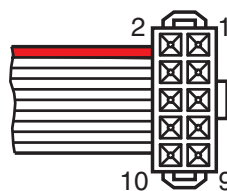
maxon Modular System

+ Motor	Page	+ Gearhead	Page	+ Brake	Page	Overall length [mm] / ● see Gearhead
RE 50, 200 W	83					128.7
RE 50, 200 W	83	GP 52, 4 - 30 Nm	241			●
RE 50, 200 W	83	GP 62, 8 - 50 Nm	242			●
RE 65, 250 W	84					157.3
RE 65, 250 W	84	GP 81, 20 - 120 Nm	243			●
EC 32, 80 W	154					78.4
EC 32, 80 W	154	GP 32, 0.75 - 4.5 Nm	229			●
EC 32, 80 W	154	GP 32, 0.75 - 6.0 Nm	231/233			●
EC 32, 80 W	154	GP 32 S	249-251			●
EC 40, 170 W	155					103.3
EC 40, 170 W	155	GP 42, 3.0 - 15 Nm	237			●
EC 40, 170 W	155	GP 52, 4.0 - 30 Nm	240			●
EC-max 30, 40 W	166					62.6
EC-max 30, 40 W	166	GP 32, 1 - 6 Nm	233			●
EC-max 30, 40 W	166			AB 20	316	101.7
EC-max 30, 40 W	166	GP 32, 1 - 6 Nm	233	AB 20	316	●
EC-max 30, 40 W	166	GP 32 S				●
EC-max 30, 40 W	166	GP 32, 4.0 - 8.0 Nm	234			●
EC-max 30, 60 W	167					84.6
EC-max 30, 60 W	167	GP 32, 4.0 - 8.0 Nm	234			●
EC-max 30, 60 W	167	GP 42, 3 - 15 Nm	238			●
EC-max 30, 60 W	167			AB 20	316	120.4
EC-max 30, 60 W	167	GP 42, 3 - 15 Nm	238	AB 20	316	●
EC-max 40, 70 W	168					81.4
EC-max 40, 70 W	168	GP 42, 3 - 15 Nm	238			●
EC-max 40, 70 W	168			AB 28	317	121.4
EC-max 40, 70 W	168	GP 42, 3 - 15 Nm	238	AB 28	317	●
EC-max 40, 120 W	169					111.4
EC-max 40, 120 W	169	GP 52, 4 - 30 Nm	241			●
EC-max 40, 120 W	169			AB 28	317	140.8
EC-max 40, 120 W	169	GP 52, 4 - 30 Nm	241	AB 28	317	●

Technical Data

Supply voltage V_{CC}	5 V ± 10%
Output signal driver used:	EIA Standard RS 422 DS26LS31
Phase shift ϕ	90°e ± 45°e
Signal rise time (typically, at $C_L = 25$ pF, $R_L = 2.7$ k Ω , 25°C)	180 ns
Signal fall time (typically, at $C_L = 25$ pF, $R_L = 2.7$ k Ω , 25°C)	40 ns
Index pulse width	90°e
Operating temperature range	-40 ... +100°C
Moment of inertia of code wheel	≤ 0.6 gcm ²
Max. angular acceleration	250 000 rad s ⁻²
Output current per channel	min. -20 mA, max. 20 mA
Option	1000 Counts per turn, 2 Channels

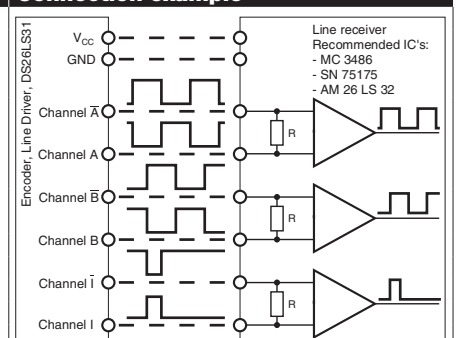
Pin Allocation



- 1 N.C.
- 2 V_{CC}
- 3 GND
- 4 N.C.
- 5 Channel \bar{A}
- 6 Channel A
- 7 Channel \bar{B}
- 8 Channel B
- 9 Channel \bar{I} (Index)
- 10 Channel I (Index)

Pin type Berg 246770 flat band cable AWG 28

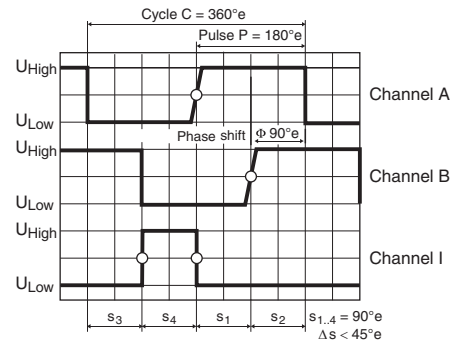
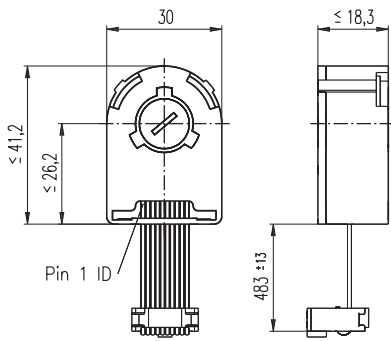
Connection example



Terminal resistance R = typical 120 Ω

Encoder HEDL 5540 500 CPT, 3 Channels, with Line Driver RS 422

maxon sensor



Direction of rotation cw (definition cw p. 48)

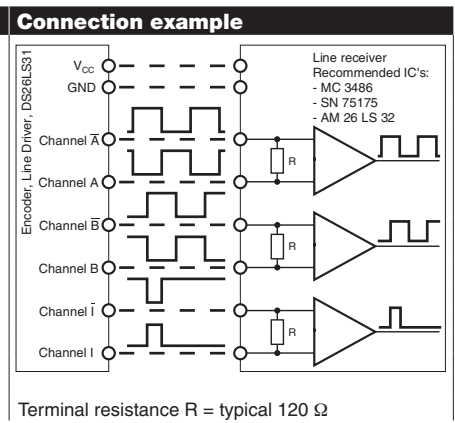
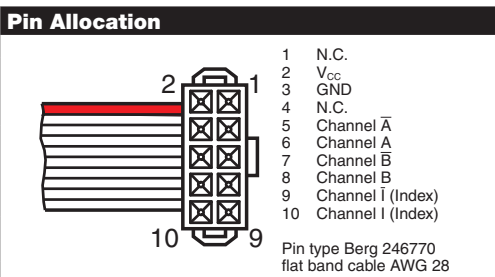
- Stock program
- Standard program
- Special program (on request)

Order Number		
110512	110514	110516

Type			
Counts per turn	500	500	500
Number of channels	3	3	3
Max. operating frequency (kHz)	100	100	100
Max. speed (rpm)	12000	12000	12000
Shaft diameter (mm)	3	4	6

maxon Modular System						Overall length [mm] / ● see Gearhead
+ Motor	Page	+ Gearhead	Page	+ Brake	Page	
RE 25	78					63.8
RE 25	78	GP 26 / GP 32	227/229			●
RE 25	78	KD 32, 1.0 - 4.5 Nm	235			●
RE 25	78	GP 32, 0.75 - 6.0 Nm	230/232			●
RE 25	78	GP 32 S	249-251			●
RE 25, 20 W	78			AB 28	318	94.3
RE 25, 20 W	78	GP 26 / GP 32	227/229	AB 28	318	●
RE 25, 20 W	78	KD 32, 1.0 - 4.5 Nm	235	AB 28	318	●
RE 25, 20 W	78	GP 32, 0.75 - 6.0 Nm	230/232	AB 28	318	●
RE 25, 20 W	78	GP 32 S	249-251	AB 28	318	●
EC-4pole 22	173					70.1
EC-4pole 22	173	GP 22 / GP 32	224/233			●
EC-4pole 22	173	GP 32 S	249-251			●
EC-4pole 22	174					87.5
EC-4pole 22	174	GP 22 / GP 32	224/233			●
EC-4pole 22	174	GP 32 S	249-251			●
EC-4pole 30	175					67.6
EC-4pole 30	175	GP 32, 4.0 - 8.0 Nm	234			●
EC-4pole 30	175	GP 42, 3 - 15 Nm	238			●
EC-4pole 30	175			AB 20	316	79.1
EC-4pole 30	175	GP 32, 4.0 - 8.0 Nm	234	AB 20	316	●
EC-4pole 30	175	GP 42, 3 - 15 Nm	238	AB 20	316	●
EC-4pole 30	176					84.6
EC-4pole 30	176	GP 32, 4.0 - 8.0 Nm	234			●
EC-4pole 30	176	GP 42, 3 - 15 Nm	238			●
EC-4pole 30	176			AB 20	316	96.1
EC-4pole 30	176	GP 32, 4.0 - 8.0 Nm	234	AB 20	316	●
EC-4pole 30	176	GP 42, 3 - 15 Nm	238	AB 20	316	●
EC-i 40, 50 W	190					49.0
EC-i 40, 50 W	190	GP 32, 1 - 6 Nm	233			●
EC-i 40, 50 W	190	GP 32 S	249-251			●
EC-i 40, 70 W	191					59.0
EC-i 40, 70 W	191	GP 32, 1 - 6 Nm	233			●
EC-i 40, 70 W	191	GP 32 S	249-251			●

Technical Data	
Supply voltage V_{CC}	$5V \pm 10\%$
Output signal driver used:	EIA Standard RS 422 DS26LS31
Phase shift Φ	$90^\circ e \pm 45^\circ e$
Signal rise time (typically, at $C_L = 25\text{ pF}$, $R_L = 2.7\text{ k}\Omega$, 25°C)	180 ns
Signal fall time (typically, at $C_L = 25\text{ pF}$, $R_L = 2.7\text{ k}\Omega$, 25°C)	40 ns
Index pulse width	$90^\circ e$
Operating temperature range	$-40 \dots +100^\circ\text{C}$
Moment of inertia of code wheel	$\leq 0.6\text{ gcm}^2$
Max. angular acceleration	250000 rad s^{-2}
Output current per channel	min. -20 mA, max. 20 mA
Option	1000 Counts per turn, 2 Channels



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