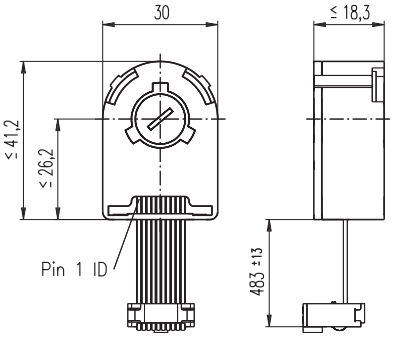
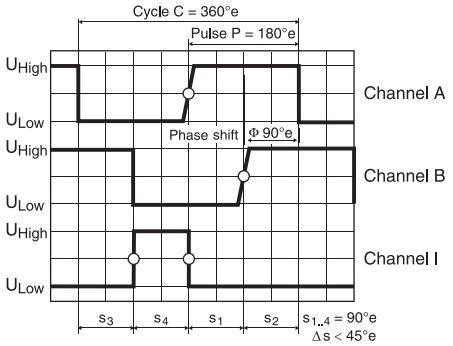
Encoder HEDL 5540, 500 CPT, 3 Channels, with Line Driver RS 422





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

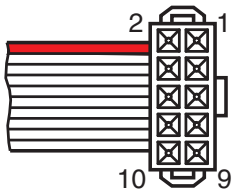
+ Motor	Page	+ Gearhead	Page	+ Brake	Page	Overall length [mm] / ● see Gearhead		
RE 25	77/79					75.3		
RE 25	77/79	GP 26 / GP 32	230/232			●		
RE 25	77/79	KD 32, 1.0 - 4.5 Nm	238			●		
RE 25	77/79	GP 32, 0.75 - 6.0 Nm	233/235			●		
RE 25	77/79	GP 32 S	251-253			●		
RE 25, 20 W	79			AB 28	316	105.7		
RE 25, 20 W	79	GP 26 / GP 32	230/232	AB 28	316	●		
RE 25, 20 W	79	KD 32, 1.0 - 4.5 Nm	238	AB 28	316	●		
RE 25, 20 W	79	GP 32, 0.75 - 6.0 Nm	233/235	AB 28	316	●		
RE 25, 20 W	79	GP 32 S	251-253	AB 28	316	●		
RE 35, 90 W	81						91.7	
RE 35, 90 W	81	GP 32, 0.75 - 4.5 Nm	232				●	
RE 35, 90 W	81	GP 32, 0.75 - 6.0 Nm	234/235				●	
RE 35, 90 W	81	GP 32, 4.0 - 8.0 Nm	237				●	
RE 35, 90 W	81	GP 42, 3.0 - 15 Nm	240				●	
RE 35, 90 W	81	GP 32 S	251-253				●	
RE 35, 90 W	81			AB 28	316	124.1		
RE 35, 90 W	81	GP 32, 0.75 - 4.5 Nm	232	AB 28	316	●		
RE 35, 90 W	81	GP 32, 0.75 - 6.0 Nm	234/235	AB 28	316	●		
RE 35, 90 W	81	GP 42, 3.0 - 15 Nm	240	AB 28	316	●		
RE 35, 90 W	81	GP 32 S	251-253	AB 28	316	●		
RE 35, 90 W	81	GP 32, 4.0 - 8.0 Nm	237	AB 28	316	●		
RE 40, 150 W	82						91.7	
RE 40, 150 W	82	GP 42, 3.0 - 15 Nm	240				●	
RE 40, 150 W	82	GP 52, 4.0 - 30 Nm	243				●	
RE 40, 150 W	82			AB 28	316	124.2		
RE 40, 150 W	82	GP 42, 3.0 - 15 Nm	240	AB 28	316	●		
RE 40, 150 W	82	GP 52, 4.0 - 30 Nm	243	AB 28	316	●		
A-max 26	106-112					63.5		
A-max 26	106-112	GP 26, GS 30	230/231			●		
A-max 26	106-112	GP 32, 0.4 - 2.0 Nm	234			●		
A-max 26	106-112	GP 32, 0.75 - 6.0 Nm	233/236			●		
A-max 26	106-112	GS 38, 0.1 - 0.6 Nm	239			●		
A-max 26	106-112	GP 32 S	251-253			●		
A-max 32	114/116						82.3	
A-max 32	114/116	GP 32, 0.75 - 6.0 Nm	234/236				●	
A-max 32	114/116	GS 38, 0.1 - 0.6 Nm	239				●	
A-max 32	114/116	GP 32 S	251-253				●	

Technical Data

Supply voltage	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 kΩ, 25°C)	180 ns
Signal fall time (typically, at C_L = 25 pF, R_L = 2.7 kΩ, 25°C)	40 ns
Index pulse width	90°e
Operating temperature rang	-40 ... +100°Ce
Moment of inertia of code wheel	≤ 0.6 gcm²
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

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

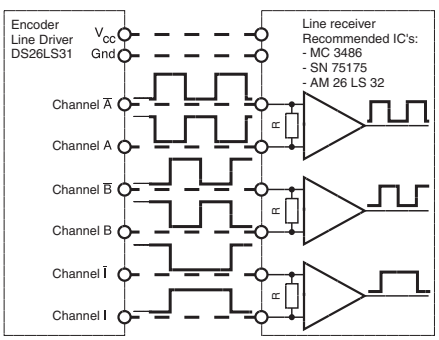
Pin Allocation



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

Pin type Berg 246770
flat band cable AWG 28

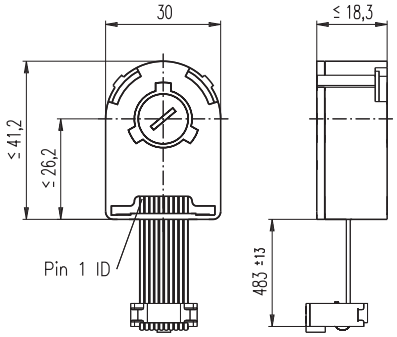
Connection example

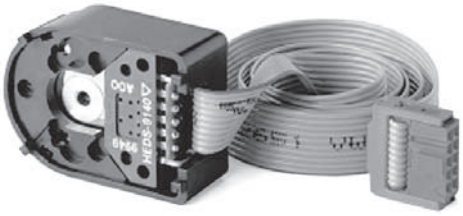


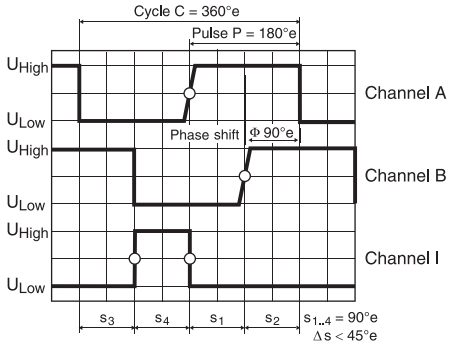
Terminal resistance R = typical 100 Ω

May 2009 edition / subject to change

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

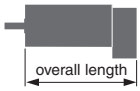


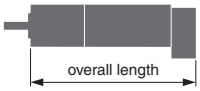




Stock program
Standard program
Special program (on request)

Order Number	110512	110514	110516	110518
Type				
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, 150 W	83								128.7
RE 50, 150 W	83	GP 52, 4 - 30 Nm	243						●
RE 50, 150 W	83	GP 62, 8 - 50 Nm	245						●
RE 65, 250 W	84								157.3
RE 65, 250 W	84	GP 81, 20 - 120 Nm	246						●
EC 32, 80 W*	156						78.4		
EC 32, 80 W*	156	GP 32, 0.75 - 4.5 Nm	232				●		
EC 32, 80 W*	156	GP 32, 0.75 - 6.0 Nm	234/236				●		
EC 32, 80 W*	156	GP 32 S	251-253				●		
EC 40, 120 W*	157							88.4	
EC 40, 120 W*	157	GP 42, 3.0 - 15 Nm	240					●	
EC 40, 120 W*	157	GP 52, 4.0 - 30 Nm	243					●	
EC-max 30, 40 W	170						62.6		
EC-max 30, 40 W	170	GP 32, 1 - 6 Nm	236				●		
EC-max 30, 40 W	170			AB 20	314		101.7		
EC-max 30, 40 W	170	GP 32, 1 - 6 Nm	236	AB 20	314		●		
EC-max 30, 40 W	170	GP 32 S					●		
EC-max 30, 40 W	170	GP 32, 4.0 - 8.0 Nm	237						
EC-max 30, 60 W	171						84.6		
EC-max 30, 60 W	171	GP 32, 4.0 - 8.0 Nm	237						
EC-max 30, 60 W	171	GP 42, 3 - 15 Nm	241				●		
EC-max 30, 60 W	171			AB 20	314		123.7		
EC-max 30, 60 W	171	GP 42, 3 - 15 Nm	241	AB 20	314		●		
EC-max 40, 70 W	172							81.4	
EC-max 40, 70 W	172	GP 42, 3 - 15 Nm	241					●	
EC-max 40, 70 W	172			AB 28	315			121.4	
EC-max 40, 70 W	172	GP 42, 3 - 15 Nm	241	AB 28	315			●	
EC-max 40, 120 W	173							111.4	
EC-max 40, 120 W	173	GP 52, 4 - 30 Nm	244					●	
EC-max 40, 120 W	173			AB 28	315			151.4	
EC-max 40, 120 W	173	GP 52, 4 - 30 Nm	244	AB 28	315			●	

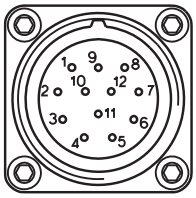
* Pin Allocation siehe Page 270

Technical Data

Supply voltage	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 kΩ, 25°C)	180 ns
Signal fall time (typically, at C_L = 25 pF, R_L = 2.7 kΩ, 25°C)	40 ns
Index pulse width	90°e
Operating temperature rang	-40 ... +100°Ce
Moment of inertia of code wheel	≤ 0.6 gcm²
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

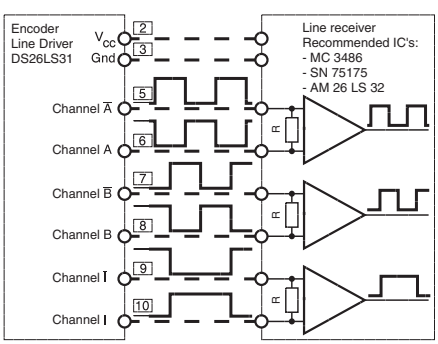
The index signal I is synchronised with channel A or B.

Pin Allocation for motor RE 75



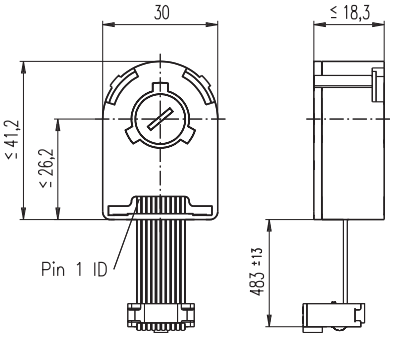
Flanged connector
Type SOURIAU 8GM-QL2-12P
1 V_{CC}
2 N.C. (do not connect)
3 GND
4 N.C. (do not connect)
5 Channel I (Index)
6 Channel $\overline{I}$
7 Channel B
8 Channel $\overline{B}$
9 Channel A
10 Channel $\overline{A}$
11 N.C. (do not connect)
12 N.C. (do not connect)
recommended cable plug
Type SOURIAU 8GM-DM2-12S
(metal, straight exit:
maxon Art. No. 2675.538) or
8G-V2-12S (plastic, 90° angle:
maxon Art. No. 2675.539)

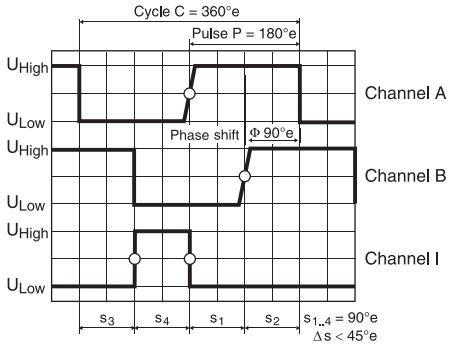
Connection example



Terminal resistance R = typical 100 Ω

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





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

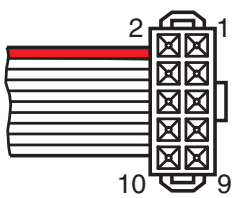
+ Motor	Page	+ Gearhead	Page	+ Brake	Page	Overall length [mm] / ● see Gearhead		
RE 25	78					63.8		
RE 25	78	GP 26 / GP 32	230/232			●		
RE 25	78	KD 32, 1.0 - 4.5 Nm	238			●		
RE 25	78	GP 32, 0.75 - 6.0 Nm	233/235			●		
RE 25	78	GP 32 S	251-253			●		
RE 25, 20 W	78			AB 28	316	94.3		
RE 25, 20 W	78	GP 26 / GP 32	230/232	AB 28	316	●		
RE 25, 20 W	78	KD 32, 1.0 - 4.5 Nm	238	AB 28	316	●		
RE 25, 20 W	78	GP 32, 0.75 - 6.0 Nm	233/235	AB 28	316	●		
RE 25, 20 W	78	GP 32 S	251-253	AB 28	316	●		
EC-powermax 22	177					70.1		
EC-powermax 22	177	GP 22 / GP 32	227/236			●		
EC-powermax 22	177	GP 32 S	251-253			●		
EC-powermax 22	178					87.5		
EC-powermax 22	178	GP 22 / GP 32	227/236			●		
EC-powermax 22	178	GP 32 S	251-253			●		
EC-powermax 30	179						67.6	
EC-powermax 30	179	GP 32, 4.0 - 8.0 Nm	237				●	
EC-powermax 30	179	GP 42, 3 - 15 Nm	241				●	
EC-powermax 30	179			AB 20	314		79.1	
EC-powermax 30	179	GP 32, 4.0 - 8.0 Nm	237	AB 20	314		●	
EC-powermax 30	179	GP 42, 3 - 15 Nm	241	AB 20	314		●	
EC-powermax 30	180						84.6	
EC-powermax 30	180	GP 32, 4.0 - 8.0 Nm	237				●	
EC-powermax 30	180	GP 42, 3 - 15 Nm	241				●	
EC-powermax 30	180			AB 20	314		96.1	
EC-powermax 30	180	GP 32, 4.0 - 8.0 Nm	237	AB 20	314		●	
EC-powermax 30	180	GP 42, 3 - 15 Nm	241	AB 20	314		●	
EC-i 40, 50 W	192							49.0
EC-i 40, 50 W	192	GP 32, 1 - 6 Nm	236					●
EC-i 40, 50 W	192	GP 32 S	251-253					●
EC-i 40, 70 W	193							59.0
EC-i 40, 70 W	193	GP 32, 1 - 6 Nm	236					●
EC-i 40, 70 W	193	GP 32 S	251-253					●

Technical Data

Supply voltage	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 kΩ, 25°C)	180 ns
Signal fall time (typically, at C_L = 25 pF, R_L = 2.7 kΩ, 25°C)	40 ns
Index pulse width	90°e
Operating temperature rang	-40 ... +100°Ce
Moment of inertia of code wheel	≤ 0.6 gcm²
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

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

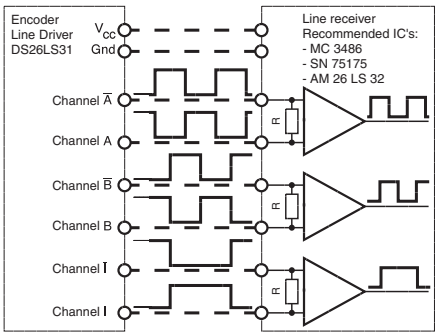
Pin Allocation



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

Pin type Berg 246770
flat band cable AWG 28

Connection example



Terminal resistance R = typical 100 Ω