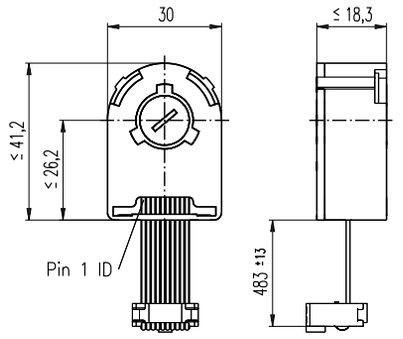
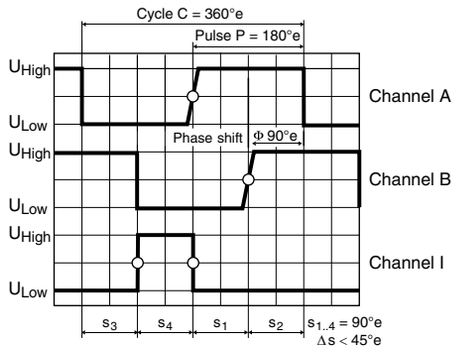
Encoder HEDL 5540 500 CPT, 3 Channels, with Line Driver RS 422

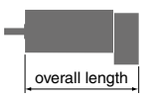


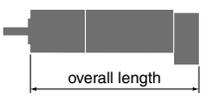


Direction of rotation cw (definition cw p. 60)

Stock program
Standard program
Special program (on request)

Part Numbers	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

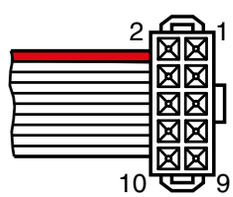
+ Motor	Page	+ Gearhead	Page	+ Brake	Page	Overall length [mm] / ● see Gearhead		
RE 25	125/127					75.3		
RE 25	125/127	GP 26/GP 32	332/334			●		
RE 25	125/127	KD 32, 1.0 - 4.5 Nm	343			●		
RE 25	125/127	GP 32, 0.75 - 6.0 Nm	335/338			●		
RE 25	125/127	GP 32 S	366-368			●		
RE 25, 20 W	126					63.8		
RE 25, 20 W	126	GP 26/GP 32	332/334			●		
RE 25, 20 W	126	KD 32, 1.0 - 4.5 Nm	343			●		
RE 25, 20 W	126	GP 32, 0.75 - 6.0 Nm	335/338			●		
RE 25, 20 W	126	GP 32 S	366-368			●		
RE 25, 20 W	126			AB 28	458	94.3		
RE 25, 20 W	126	GP 26/GP 32	332/334	AB 28	458	●		
RE 25, 20 W	126	KD 32, 1.0 - 4.5 Nm	343	AB 28	458	●		
RE 25, 20 W	126	GP 32, 0.75 - 6.0 Nm	335/338	AB 28	458	●		
RE 25, 20 W	126	GP 32 S	366-368	AB 28	458	●		
RE 25, 20 W	127			AB 28	458	105.8		
RE 25, 20 W	127	GP 26/GP 32	332/334	AB 28	458	●		
RE 25, 20 W	127	KD 32, 1.0 - 4.5 Nm	343	AB 28	458	●		
RE 25, 20 W	127	GP 32, 0.75 - 6.0 Nm	335/338	AB 28	458	●		
RE 25, 20 W	127	GP 32 S	366-368	AB 28	458	●		
RE 30, 15 W	128					88.8		
RE 30, 15 W	128	GP 32, 0.75 - 4.5 Nm	336			●		
RE 30, 60 W	129					88.8		
RE 30, 60 W	129	GP 32, 0.75 - 6.0 Nm	334-340			●		
RE 30, 60 W	129	KD 32, 1.0 - 4.5 Nm	343			●		
RE 30, 60 W	129	GP 32 S	366-368			●		
RE 35, 90 W	130						91.7	
RE 35, 90 W	130	GP 32, 0.75 - 8.0 Nm	334-341				●	
RE 35, 90 W	130	GP 42, 3.0 - 15 Nm	345				●	
RE 35, 90 W	130	GP 32 S	366-368				●	
RE 35, 90 W	130			AB 28	458	124.3		
RE 35, 90 W	130	GP 32, 0.75 - 8.0 Nm	334-341	AB 28	458	●		
RE 35, 90 W	130	GP 42, 3.0 - 15 Nm	345	AB 28	458	●		
RE 35, 90 W	130	GP 32 S	366-368	AB 28	458	●		

Technical Data

Supply voltage V_{CC}	5 V ± 10%
Typical current draw	55 mA
Output signal	EIA Standard RS 422
driver used:	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 range	-40…+100 °C
Moment of inertia of code wheel	≤ 0.6 gcm²
Max. angular acceleration	250000 rad s^{-2}
Output current per channel	± 20 mA

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

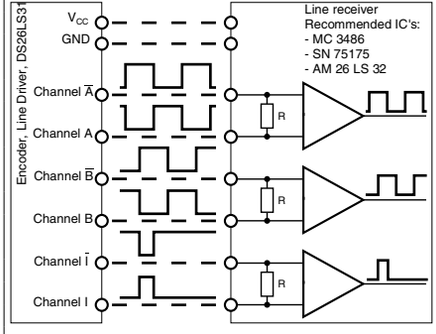
Pin Allocation



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

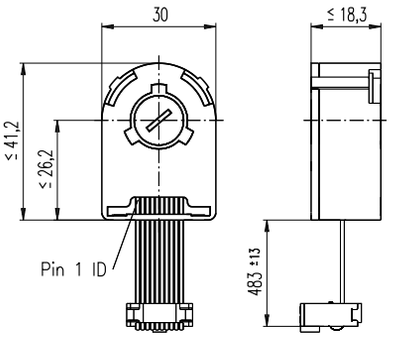
Pin type DIN 41651/
EN 60603-13
flat band cable AWG 28

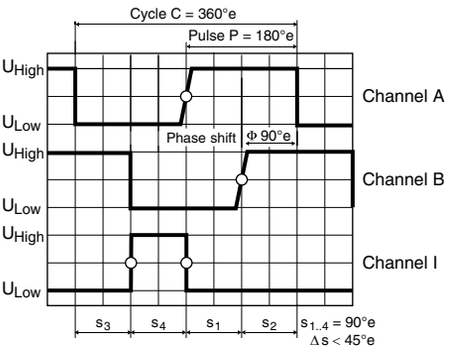
Connection example



Terminal resistance R = typical 120 Ω

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

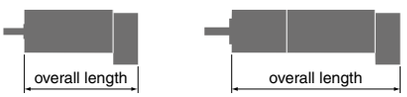




Direction of rotation cw (definition cw p. 60)

Stock program
Standard program
Special program (on request)

Part Numbers	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

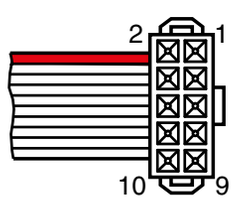
+ Motor	Page	+ Gearhead	Page	+ Brake	Page	Overall length [mm] / ● see Gearhead			
RE 40, 25 W	131						91.7		
RE 40, 150 W	132						91.7		
RE 40, 150 W	132	GP 42, 3.0 - 15 Nm	345				●		
RE 40, 150 W	132	GP 52, 4.0 - 30 Nm	350				●		
RE 40, 150 W	132			AB 28	458	124.3			
RE 40, 150 W	132	GP 42, 3.0 - 15 Nm	345	AB 28	458	●			
RE 40, 150 W	132	GP 52, 4.0 - 30 Nm	350	AB 28	458	●			
RE 50, 200 W	133								128.7
RE 50, 200 W	133	GP 52, 4 - 30 Nm	351						●
RE 50, 200 W	133	GP 62, 8 - 50 Nm	352						●
RE 65, 250 W	134								157.3
RE 65, 250 W	134	GP 81, 20 - 120 Nm	353						●
A-max 26	148/150					63.1			
A-max 26	148/150	GP 26, 0.75 - 4.5 Nm	332			●			
A-max 26	148/150	GS 30/GP 32	333/336			●			
A-max 26	148/150	GP 32, 0.75 - 6.0 Nm	335/339			●			
A-max 26	148/150	GS 38, 0.1 - 0.6 Nm	344			●			
A-max 26	148/150	GP 32 S	366-368			●			
A-max 32	160/162						82.3		
A-max 32	160/162	GP 32, 0.75 - 6.0 Nm	334-339				●		
A-max 32	160/162	GS 38, 0.1 - 0.6 Nm	344				●		
A-max 32	160/162	GP 32 S	366-368				●		
EC 32, 80 W	218						78.4		
EC 32, 80 W	218	GP 32, 0.75 - 6.0 Nm	334-340				●		
EC 32, 80 W	218	GP 32 S	366-368				●		
EC 40, 170 W	219							103.4	
EC 40, 170 W	219	GP 42, 3.0 - 15 Nm	345					●	
EC 40, 170 W	219	GP 52, 4.0 - 30 Nm	350					●	

Technical Data

Supply voltage V_{CC}	5 V ± 10%
Typical current draw	55 mA
Output signal	EIA Standard RS 422
driver used:	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 range	-40…+100 °C
Moment of inertia of code wheel	≤ 0.6 gcm²
Max. angular acceleration	250000 rad s⁻²
Output current per channel	± 20 mA

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

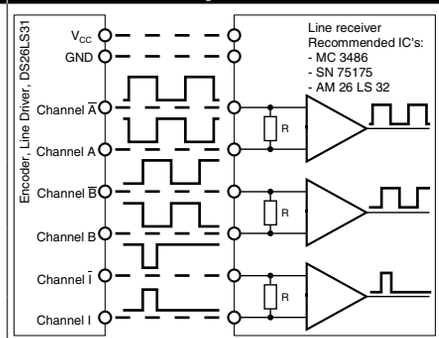
Pin Allocation



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

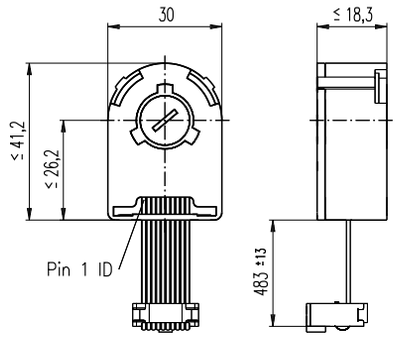
Pin type DIN 41651/
EN 60603-13
flat band cable AWG 28

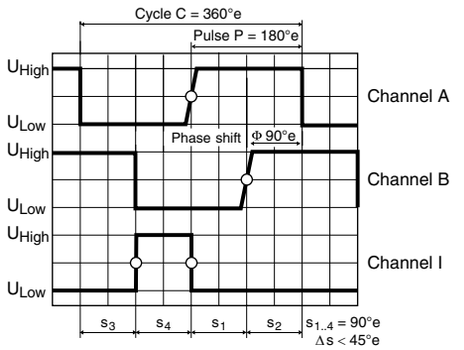
Connection example



Terminal resistance R = typical 120 Ω

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

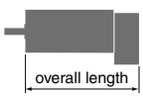


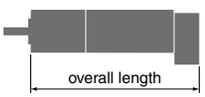


Direction of rotation cw (definition cw p. 60)

Stock program
Standard program
Special program (on request)

Part Numbers	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

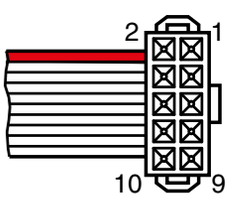
+ Motor	Page	+ Gearhead	Page	+ Brake	Page	Overall length [mm] / ● see Gearhead		
EC-max 30, 40 W	230					62.6		
EC-max 30, 40 W	230	GP 32, 1.0 - 8.0 Nm	339/341			●		
EC-max 30, 40 W	230	KD 32, 1.0 - 4.5 Nm	343			●		
EC-max 30, 40 W	230	GP 32 S	366-368			●		
EC-max 30, 40 W	230			AB 20	456	98.4		
EC-max 30, 40 W	230	GP 32, 1.0 - 8.0 Nm	339/341	AB 20	456	●		
EC-max 30, 40 W	230	KD 32, 1.0 - 4.5 Nm	343	AB 20	456	●		
EC-max 30, 40 W	230	GP 32 S	366-368	AB 20	456	●		
EC-max 30, 60 W	231					84.6		
EC-max 30, 60 W	231	GP 32, 1.0 - 8.0 Nm	339/341			●		
EC-max 30, 60 W	231	KD 32, 1.0 - 4.5 Nm	343			●		
EC-max 30, 60 W	231	GP 42, 3 - 15 Nm	346			●		
EC-max 30, 60 W	231			AB 20	456	120.4		
EC-max 30, 60 W	231	GP 32, 1.0 - 8.0 Nm	339/341	AB 20	456	●		
EC-max 30, 60 W	231	KD 32, 1.0 - 4.5 Nm	343	AB 20	456	●		
EC-max 30, 60 W	231	GP 42, 3 - 15 Nm	346	AB 20	456	●		
EC-max 40, 70 W	232						81.4	
EC-max 40, 70 W	232	GP 42, 3 - 15 Nm	346				●	
EC-max 40, 70 W	232			AB 28	457		110.7	
EC-max 40, 70 W	232	GP 42, 3 - 15 Nm	346	AB 28	457		●	
EC-max 40, 120 W	233						111.4	
EC-max 40, 120 W	233	GP 52, 4 - 30 Nm	351				●	
EC-max 40, 120 W	233			AB 28	457		140.7	
EC-max 40, 120 W	233	GP 52, 4 - 30 Nm	351	AB 28	457		●	
EC-4pole 22, 90 W	237					70.1		
EC-4pole 22, 90 W	237	GP 22/GP 32	329/339			●		
EC-4pole 22, 90 W	237	GP 32 S	366-368			●		
EC-4pole 22, 120 W	238					87.5		
EC-4pole 22, 120 W	238	GP 22/GP 32	329/339			●		
EC-4pole 22, 120 W	238	GP 32 S	366-368			●		

Technical Data

Supply voltage V_{CC}	5 V ± 10%
Typical current draw	55 mA
Output signal	EIA Standard RS 422
driver used:	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 range	-40…+100 °C
Moment of inertia of code wheel	≤ 0.6 gcm²
Max. angular acceleration	250000 rad s^{-2}
Output current per channel	± 20 mA

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

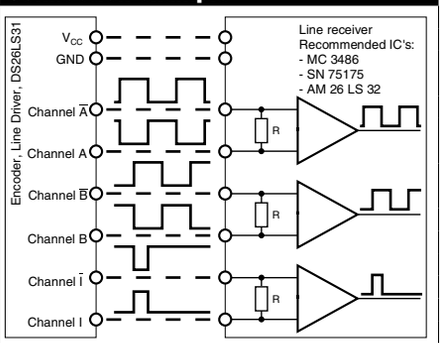
Pin Allocation



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

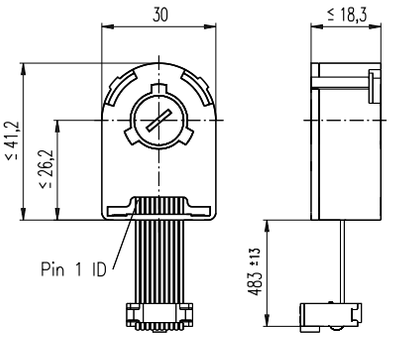
Pin type DIN 41651/
EN 60603-13
flat band cable AWG 28

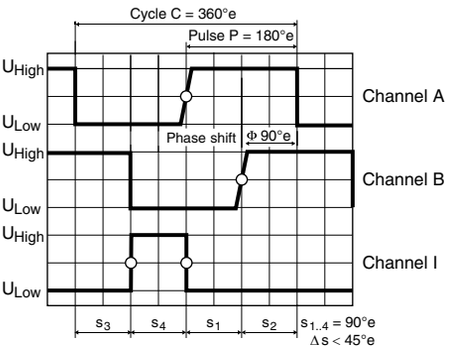
Connection example



Terminal resistance R = typical 120 Ω

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

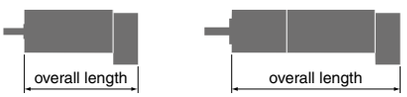




Direction of rotation cw (definition cw p. 60)

Stock program
Standard program
Special program (on request)

Part Numbers	110512	110514	110516	110518	X drives
Type					
Counts per turn	500	500	500	500	500
Number of channels	3	3	3	3	3
Max. operating frequency (kHz)	100	100	100	100	100
Max. speed (rpm)	12000	12000	12000	12000	12000
Shaft diameter (mm)	3	4	6	8	2–4



maxon Modular System

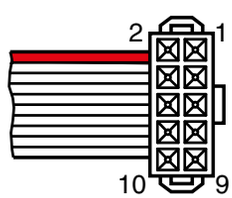
+ Motor	Page	+ Gearhead	Page	+ Brake	Page	Overall length [mm] / ● see Gearhead				
EC-4pole 30, 100 W	239					67.6				
EC-4pole 30, 100 W	239	GP 32, 4.0 - 8.0 Nm	341			●				
EC-4pole 30, 100 W	239	GP 42, 3 - 15 Nm	346			●				
EC-4pole 30, 100 W	239			AB 20	456	104.0				
EC-4pole 30, 100 W	239	GP 32, 4.0 - 8.0 Nm	341	AB 20	456	●				
EC-4pole 30, 100 W	239	GP 42, 3 - 15 Nm	346	AB 20	456	●				
EC-4pole 30, 200 W	241					84.6				
EC-4pole 30, 200 W	241	GP 32, 4.0 - 8.0 Nm	341			●				
EC-4pole 30, 200 W	241	GP 42, 3 - 15 Nm	346			●				
EC-4pole 30, 200 W	241			AB 20	456	121.0				
EC-4pole 30, 200 W	241	GP 32, 4.0 - 8.0 Nm	341	AB 20	456	●				
EC-4pole 30, 200 W	241	GP 42, 3 - 15 Nm	346	AB 20	456	●				
EC-i 40, 50 W	247-248						49.0			
EC-i 40, 50 W	247	GP 32, 1 - 6 Nm	339				●			
EC-i 40, 50 W	247-248	GP 42, 3 - 15 Nm	346				●			
EC-i 40, 50 W	247	GP 32 S	366-368				●			
EC-i 40, 70 W	249/250						59.0			
EC-i 40, 70 W	249	GP 32, 1 - 6 Nm	339				●			
EC-i 40, 70 W	249/250	GP 42, 3 - 15 Nm	346				●			
EC-i 40, 70 W	249	GP 32 S	366-368				●			
EC-i 40, 100 W	251						79.0			
EC-i 40, 100 W	251	GP 42, 3 - 15 Nm	346				●			
EC-i 52, 180 W	252							102.8		
EC-i 52, 180 W	252	GP 52, 4 - 30 Nm	350					●		
DCX 22 S	80-81									online
DCX 22 L	82-83									online
DCX 26 L	84-85									online
DCX 32 L	86									online
DCX 35 L	87									online

Technical Data

Supply voltage V_{CC}	5 V ± 10%
Typical current draw	55 mA
Output signal	EIA Standard RS 422
driver used:	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 range	-40…+100 °C
Moment of inertia of code wheel	≤ 0.6 gcm²
Max. angular acceleration	250000 rad s⁻²
Output current per channel	± 20 mA

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

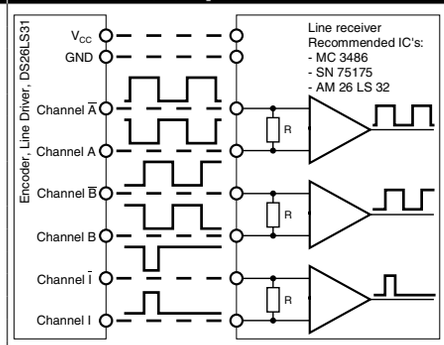
Pin Allocation



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

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

Connection example



Terminal resistance R = typical 120 Ω