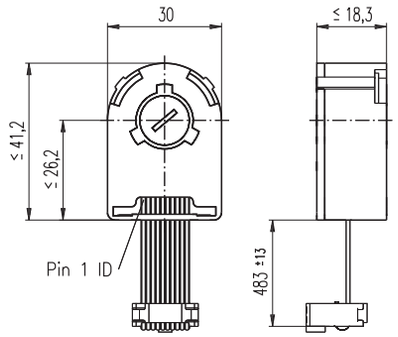
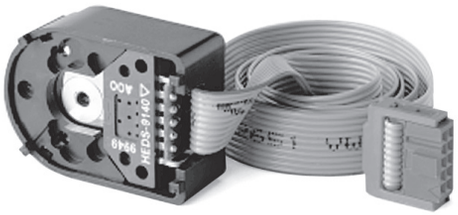
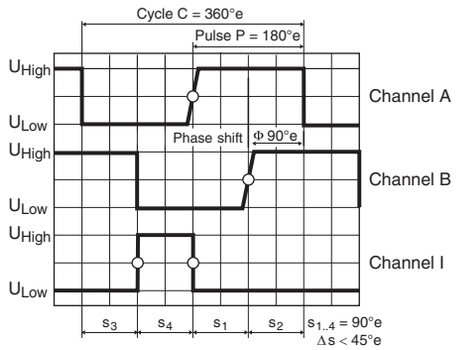
Encoder HEDL 5540 500 CPT, 3 Channels, with Line Driver RS 422







Direction of rotation cw (definition cw p. 150)

Stock program
Standard program
Special program (on request)

Part Numbers	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

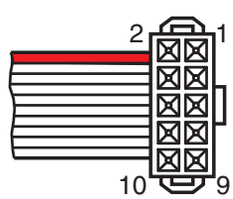
+ Motor	Page	+ Gearhead	Page	+ Brake	Page	Overall length [mm] / ● see Gearhead
RE 25	179/181					75.3
RE 25	179/181	GP 26/GP 32	336/338			●
RE 25	179/181	KD 32, 1.0 - 4.5 Nm	347			●
RE 25	179/181	GP 32, 0.75 - 6.0 Nm	339/342			●
RE 25	179/181	GP 32 S	370-372			●
RE 25, 20 W	180					63.8
RE 25, 20 W	180	GP 26/GP 32	336/338			●
RE 25, 20 W	180	KD 32, 1.0 - 4.5 Nm	347			●
RE 25, 20 W	180	GP 32, 0.75 - 6.0 Nm	339/342			●
RE 25, 20 W	180	GP 32 S	370-372			●
RE 25, 20 W	180			AB 28	446	94.3
RE 25, 20 W	180	GP 26/GP 32	336/338	AB 28	446	●
RE 25, 20 W	180	KD 32, 1.0 - 4.5 Nm	347	AB 28	446	●
RE 25, 20 W	180	GP 32, 0.75 - 6.0 Nm	339/342	AB 28	446	●
RE 25, 20 W	180	GP 32 S	370-372	AB 28	446	●
RE 25, 20 W	181			AB 28	446	105.8
RE 25, 20 W	181	GP 26/GP 32	336/338	AB 28	446	●
RE 25, 20 W	181	KD 32, 1.0 - 4.5 Nm	347	AB 28	446	●
RE 25, 20 W	181	GP 32, 0.75 - 6.0 Nm	339/342	AB 28	446	●
RE 25, 20 W	181	GP 32 S	370-372	AB 28	446	●
RE 30, 15 W	182					88.8
RE 30, 15 W	182	GP 32, 0.75 - 4.5 Nm	340			●
RE 30, 60 W	183					88.8
RE 30, 60 W	183	GP 32, 0.75 - 6.0 Nm	338-344			●
RE 30, 60 W	183	KD 32, 1.0 - 4.5 Nm	347			●
RE 30, 60 W	183	GP 32 S	370-372			●
RE 35, 90 W	184					91.7
RE 35, 90 W	184	GP 32, 0.75 - 8.0 Nm	338-345			●
RE 35, 90 W	184	GP 42, 3.0 - 15 Nm	349			●
RE 35, 90 W	184	GP 32 S	370-372			●
RE 35, 90 W	184			AB 28	446	124.3
RE 35, 90 W	184	GP 32, 0.75 - 8.0 Nm	338-345	AB 28	446	●
RE 35, 90 W	184	GP 42, 3.0 - 15 Nm	349	AB 28	446	●
RE 35, 90 W	184	GP 32 S	370-372	AB 28	446	●

Technical Data

Supply voltage V_{CC}	5 V ± 10%
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	min. -20 mA, max. 20 mA
Option	1000 Counts per turn, 2 Channels

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

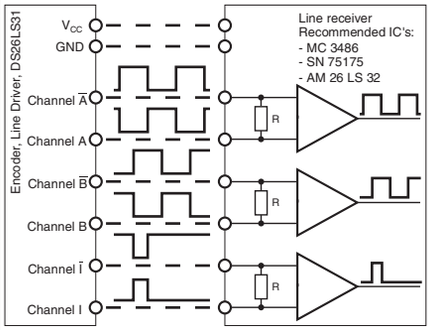
Pin Allocation



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)

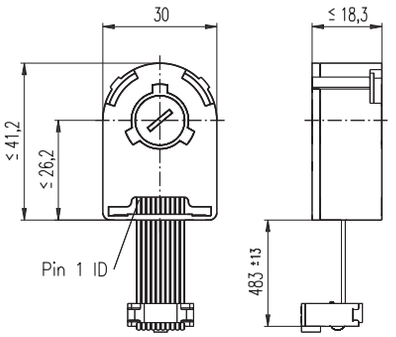
Pin type DIN 41651/
EN 60603-13
flat band cable AWG 28

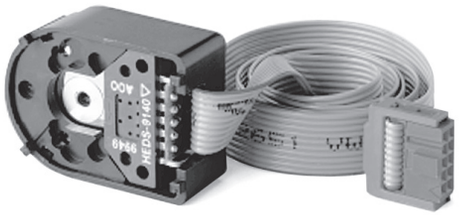
Connection example

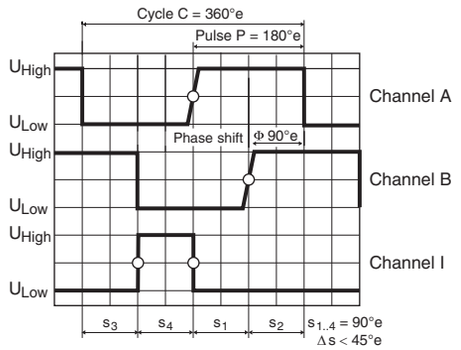


Terminal resistance R = typical 120 Ω

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







Direction of rotation cw (definition cw p. 150)

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

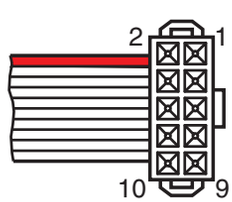
+ Motor	Page	+ Gearhead	Page	+ Brake	Page	Overall length [mm] / ● see Gearhead			
RE 40, 25 W	185						91.7		
RE 40, 150 W	186						91.7		
RE 40, 150 W	186	GP 42, 3.0 - 15 Nm	349				●		
RE 40, 150 W	186	GP 52, 4.0 - 30 Nm	354				●		
RE 40, 150 W	186			AB 28	446	124.3			
RE 40, 150 W	186	GP 42, 3.0 - 15 Nm	349	AB 28	446	●			
RE 40, 150 W	186	GP 52, 4.0 - 30 Nm	354	AB 28	446	●			
RE 50, 200 W	187								128.7
RE 50, 200 W	187	GP 52, 4 - 30 Nm	355						●
RE 50, 200 W	187	GP 62, 8 - 50 Nm	356						●
RE 65, 250 W	188								157.3
RE 65, 250 W	188	GP 81, 20 - 120 Nm	357						●
A-max 26	206-212					63.1			
A-max 26	206-212	GP 26, 0.75 - 4.5 Nm	336			●			
A-max 26	206-212	GS 30/GP 32	337/340			●			
A-max 26	206-212	GP 32, 0.75 - 6.0 Nm	339/343			●			
A-max 26	206-212	GS 38, 0.1 - 0.6 Nm	348			●			
A-max 26	206-212	GP 32 S	370-372			●			
A-max 32	214/216						82.3		
A-max 32	214/216	GP 32, 0.75 - 6.0 Nm	338-343				●		
A-max 32	214/216	GS 38, 0.1 - 0.6 Nm	348				●		
A-max 32	214/216	GP 32 S	370-372				●		
EC 32, 80 W	251						78.4		
EC 32, 80 W	251	GP 32, 0.75 - 6.0 Nm	338-344				●		
EC 32, 80 W	251	GP 32 S	370-372				●		
EC 40, 170 W	252							103.4	
EC 40, 170 W	252	GP 42, 3.0 - 15 Nm	349					●	
EC 40, 170 W	252	GP 52, 4.0 - 30 Nm	354					●	

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 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	min. -20 mA, max. 20 mA
Option	1000 Counts per turn, 2 Channels

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

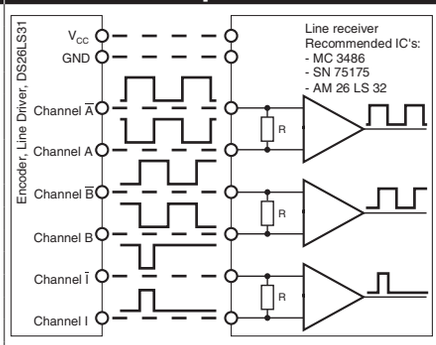
Pin Allocation



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)

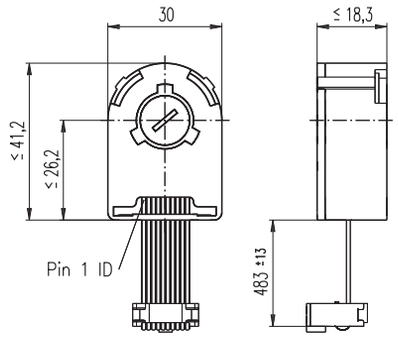
Pin type DIN 41651/
EN 60603-13
flat band cable AWG 28

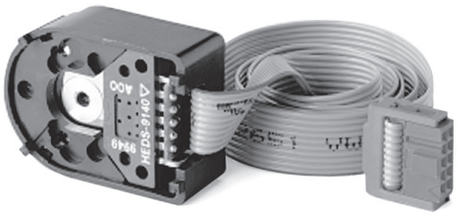
Connection example

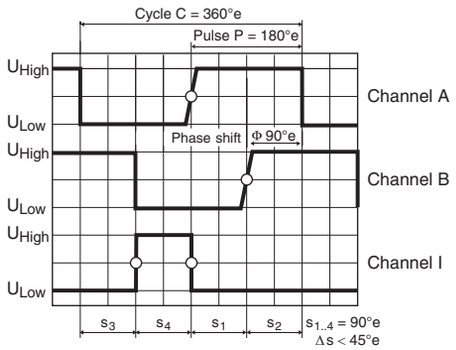


Terminal resistance R = typical 120 Ω

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







Direction of rotation cw (definition cw p. 150)

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

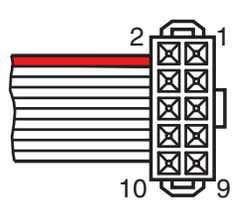
+ Motor	Page	+ Gearhead	Page	+ Brake	Page	Overall length [mm] / ● see Gearhead		
EC-max 30, 40 W	264					62.6		
EC-max 30, 40 W	264	GP 32, 1.0 - 8.0 Nm	343/345			●		
EC-max 30, 40 W	264	KD 32, 1.0 - 4.5 Nm	347			●		
EC-max 30, 40 W	264	GP 32 S	370-372			●		
EC-max 30, 40 W	264			AB 20	444	98.4		
EC-max 30, 40 W	264	GP 32, 1.0 - 8.0 Nm	343/345	AB 20	444	●		
EC-max 30, 40 W	264	KD 32, 1.0 - 4.5 Nm	347	AB 20	444	●		
EC-max 30, 40 W	264	GP 32 S	370-372	AB 20	444	●		
EC-max 30, 60 W	265					84.6		
EC-max 30, 60 W	265	GP 32, 1.0 - 8.0 Nm	343/345			●		
EC-max 30, 60 W	265	KD 32, 1.0 - 4.5 Nm	347			●		
EC-max 30, 60 W	265	GP 42, 3 - 15 Nm	350			●		
EC-max 30, 60 W	265			AB 20	444	120.4		
EC-max 30, 60 W	265	GP 32, 1.0 - 8.0 Nm	343/345	AB 20	444	●		
EC-max 30, 60 W	265	KD 32, 1.0 - 4.5 Nm	347	AB 20	444	●		
EC-max 30, 60 W	265	GP 42, 3 - 15 Nm	350	AB 20	444	●		
EC-max 40, 70 W	266						81.4	
EC-max 40, 70 W	266	GP 42, 3 - 15 Nm	350				●	
EC-max 40, 70 W	266			AB 28	445		110.7	
EC-max 40, 70 W	266	GP 42, 3 - 15 Nm	350	AB 28	445		●	
EC-max 40, 120 W	267						111.4	
EC-max 40, 120 W	267	GP 52, 4 - 30 Nm	355				●	
EC-max 40, 120 W	267			AB 28	445		140.7	
EC-max 40, 120 W	267	GP 52, 4 - 30 Nm	355	AB 28	445		●	
EC-4pole 22, 90 W	271					70.1		
EC-4pole 22, 90 W	271	GP 22/GP 32	333/343			●		
EC-4pole 22, 90 W	271	GP 32 S	370-372			●		
EC-4pole 22, 120 W	272					87.5		
EC-4pole 22, 120 W	272	GP 22/GP 32	333/343			●		
EC-4pole 22, 120 W	272	GP 32 S	370-372			●		

Technical Data

Supply voltage V_{CC}	5 V ± 10%
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	min. -20 mA, max. 20 mA
Option	1000 Counts per turn, 2 Channels

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

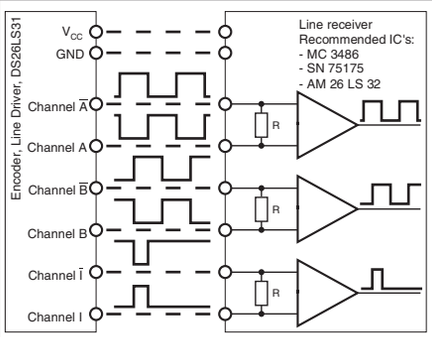
Pin Allocation



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)

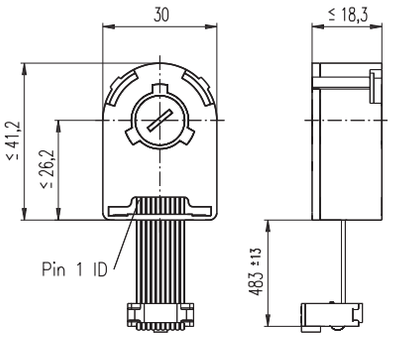
Pin type DIN 41651/
EN 60603-13
flat band cable AWG 28

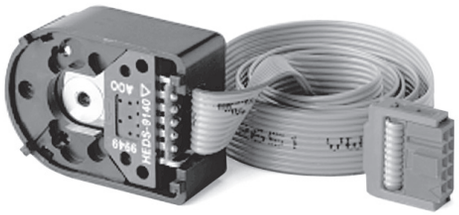
Connection example

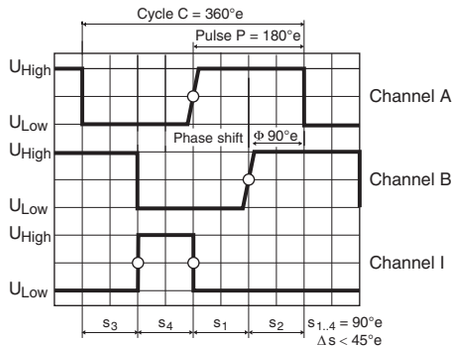


Terminal resistance R = typical 120 Ω

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







Direction of rotation cw (definition cw p. 150)

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

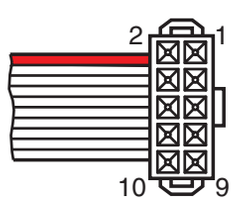
+ Motor	Page	+ Gearhead	Page	+ Brake	Page	Overall length [mm] / ● see Gearhead				
EC-4pole 30, 100 W	273					67.6				
EC-4pole 30, 100 W	273	GP 32, 4.0 - 8.0 Nm	345			●				
EC-4pole 30, 100 W	273	GP 42, 3 - 15 Nm	350			●				
EC-4pole 30, 100 W	273			AB 20	444	104.0				
EC-4pole 30, 100 W	273	GP 32, 4.0 - 8.0 Nm	345	AB 20	444	●				
EC-4pole 30, 100 W	273	GP 42, 3 - 15 Nm	350	AB 20	444	●				
EC-4pole 30, 200 W	275					84.6				
EC-4pole 30, 200 W	275	GP 32, 4.0 - 8.0 Nm	345			●				
EC-4pole 30, 200 W	275	GP 42, 3 - 15 Nm	350			●				
EC-4pole 30, 200 W	275			AB 20	444	121.0				
EC-4pole 30, 200 W	275	GP 32, 4.0 - 8.0 Nm	345	AB 20	444	●				
EC-4pole 30, 200 W	275	GP 42, 3 - 15 Nm	350	AB 20	444	●				
EC-i 40, 50 W	281/282						49.0			
EC-i 40, 50 W	281	GP 32, 1 - 6 Nm	343				●			
EC-i 40, 50 W	281/282	GP 42, 3 - 15 Nm	350				●			
EC-i 40, 50 W	281	GP 32 S	370-372				●			
EC-i 40, 70 W	283/284						59.0			
EC-i 40, 70 W	283	GP 32, 1 - 6 Nm	343				●			
EC-i 40, 70 W	283/284	GP 42, 3 - 15 Nm	350				●			
EC-i 40, 70 W	283	GP 32 S	370-372				●			
EC-i 40, 100 W	285						79.0			
EC-i 40, 100 W	285	GP 42, 3 - 15 Nm	350				●			
EC-i 52, 180 W	286							100.7		
EC-i 52, 180 W	286	GP 52, 4 - 30 Nm	354					●		
DCX 22 S	76-77									online
DCX 22 L	78-79									online
DCX 26 L	80-81									online
DCX 32 L	82									online
DCX 35 L	83									online

Technical Data

Supply voltage V_{CC}	5 V ± 10%
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	min. -20 mA, max. 20 mA
Option	1000 Counts per turn, 2 Channels

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

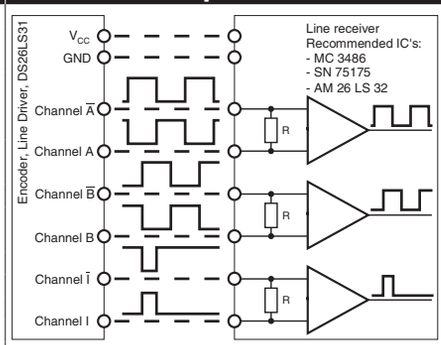
Pin Allocation



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