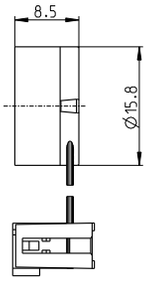
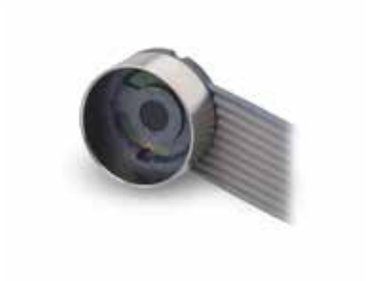
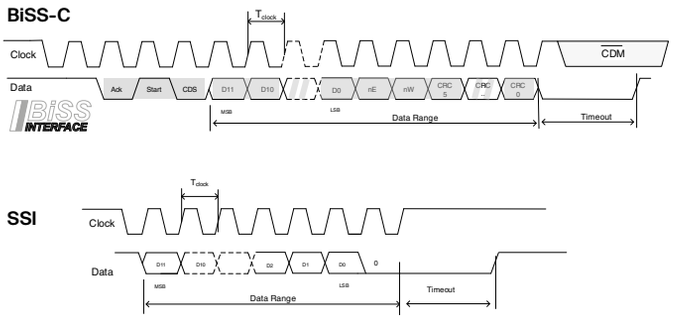
Encoder 16 EASY Absolute 4096 steps, single turn



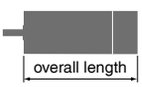




Angle values increase when direction of rotation is cw (definition of 'cw' on p. 78)

Stock program
Standard program
Special program (on request)

Part numbers	488783	488782
Type (provisional)		
Steps per turn	4096	4096
Resolution (bit single turn)	12	12
Signal protocol	BiSS-C	SSI
Max. mech. speed (rpm)	25000	25000
Data encoding	Binary	Gray Symmetric
Min. clock frequency CLK (MHz)	0.6	0.04
Max. clock frequency CLK (MHz)	10	4
Min. timeout (µs)	2	16



maxon Modular System

+ Motor	Page	+ Gearhead	Page	+ Brake	Page	Overall length [mm] / • see Gearhead	
EC-4pole 22, 90 W	257					60.8	60.8
EC-4pole 22, 90 W	257	GP 22, 2.0 - 3.4 Nm	387			•	•
EC-4pole 22, 90 W	257	GP 32, 1.0 - 6.0 Nm	398			•	•
EC-4pole 22, 90 W	257	GP 32 S	426-433			•	•
EC-4pole 22, 120 W	258					78.2	78.2
EC-4pole 22, 120 W	258	GP 22, 2.0 - 3.4 Nm	387			•	•
EC-4pole 22, 120 W	258	GP 32, 1.0 - 6.0 Nm	398			•	•
EC-4pole 22, 120 W	258	GP 32 S	426-433			•	•
EC-4pole 30, 100 W	259					60.9	60.9
EC-4pole 30, 100 W	259	GP 32, 1.0 - 6.0 Nm	398			•	•
EC-4pole 30, 100 W	259	GP 32, 4.0 - 8.0 Nm	400			•	•
EC-4pole 30, 100 W	259	GP 42, 3.0 - 15.0 Nm	406			•	•
EC-4pole 30, 100 W	259	GP 32 S	426-433			•	•
EC-4pole 30, 100 W	259			AB 20	532	97.3	97.3
EC-4pole 30, 100 W	259	GP 32, 1.0 - 6.0 Nm	398	AB 20	532	•	•
EC-4pole 30, 100 W	259	GP 32, 4.0 - 8.0 Nm	400	AB 20	532	•	•
EC-4pole 30, 100 W	259	GP 42, 3.0 - 15.0 Nm	406	AB 20	532	•	•
EC-4pole 30, 100 W	259	GP 32 S	426-433	AB 20	532	•	•
EC-4pole 30, 200 W	261					77.9	77.9
EC-4pole 30, 200 W	261	GP 32, 1.0 - 6.0 Nm	398			•	•
EC-4pole 30, 200 W	261	GP 32, 4.0 - 8.0 Nm	400			•	•
EC-4pole 30, 200 W	261	GP 42, 3.0 - 15.0 Nm	406			•	•
EC-4pole 30, 200W	261	GP 32 S	426-433			•	•
EC-4pole 30, 200 W	261			AB 20	532	114.3	114.3
EC-4pole 30, 200 W	261	GP 32, 1.0 - 6.0 Nm	398	AB 20	532	•	•
EC-4pole 30, 200 W	261	GP 32, 4.0 - 8.0 Nm	400	AB 20	532	•	•
EC-4pole 30, 200 W	261	GP 42, 3.0 - 15.0 Nm	406	AB 20	532	•	•
EC-4pole 30, 200 W	261	GP 32 S	426-433	AB 20	532	•	•

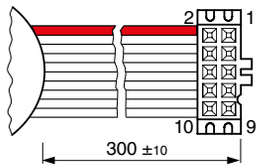
Technical data

Supply voltage V_{CC}	5 V ± 10%
Typical current draw	17 mA
Output signal	CMOS compatible
Output current, data	max. 20 mA
Setup time after Power On	max. 4 ms
Hysteresis	0.17° mech
Moment of inertia of code wheel	≤ 0.09 gcm²
Operating temperature range	-40...+100 °C

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. 56.

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

Pin assignment



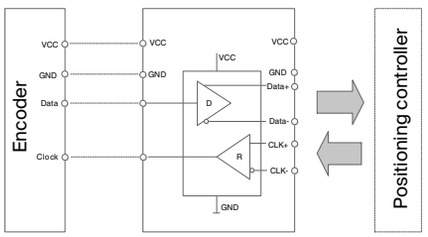
1 Data
2 V_{CC}
3 GND
4 CLK
5 Do not connect (Ā)
6 Do not connect (A)
7 Do not connect (B̄)
8 Do not connect (B)
9 Do not connect (Ī)
10 Do not connect (I)

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

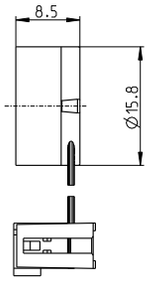
Adapter EASY Absolute **488167**
(required for all maxon controllers).

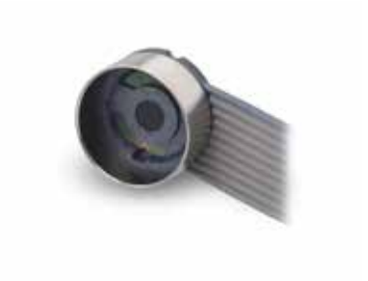
Connection example

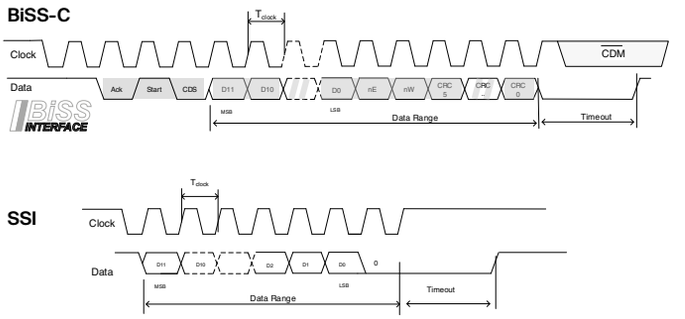
Adapter EASY Absolute **488167**



Encoder 16 EASY Absolute 4096 steps, single turn







Angle values increase when direction of rotation is cw (definition of 'cw' on p. 78)

Stock program
Standard program
Special program (on request)

Part numbers	488783	488782
Type (provisional)		
Steps per turn	4096	4096
Resolution (bit single turn)	12	12
Signal protocol	BiSS-C	SSI
Max. mech. speed (rpm)	25000	25000
Data encoding	Binary	Gray Symmetric
Min. clock frequency CLK (MHz)	0.6	0.04
Max. clock frequency CLK (MHz)	10	4
Min. timeout (µs)	2	16

maxon Modular System

+ Motor	Page	+ Gearhead	Page	+ Brake	Page	Overall length [mm] / ● see Gearhead	
EC-i 30, 30 W	268					53.7	53.7
EC-i 30, 30 W	268	GP 32, 1.0 - 6.0 Nm	398			●	●
EC-i 30, 30 W	268	GP 32 S	426-433			●	●
EC-i 30, 45 W	269					53.7	53.7
EC-i 30, 45 W	269	GP 32, 1.0 - 6.0 Nm	398			●	●
EC-i 30, 45 W	269	GP 32 S	426-433			●	●
EC-i 30, 50 W	270					75.7	75.7
EC-i 30, 50 W	270	GP 32, 1.0 - 6.0 Nm	398			●	●
EC-i 30, 50 W	270	GP 32 S	426-433			●	●
EC-i 30, 75 W	271					75.7	75.7
EC-i 30, 75 W	271	GP 32, 1.0 - 6.0 Nm	398			●	●
EC-i 30, 75 W	271	GP 32 S	426-433			●	●
EC-i 40, 50 W	272-273					37.7	37.7
EC-i 40, 50 W	272	GP 32, 1.0 - 6.0 Nm	398			●	●
EC-i 40, 50 W	272	GP 32 S	426-433			●	●
EC-i 40, 50 W	272-273	GP 42, 3.0 - 15.0 Nm	405			●	●
EC-i 40, 70 W	274-275					47.7	47.7
EC-i 40, 70 W	274	GP 32, 1.0 - 6.0 Nm	398			●	●
EC-i 40, 70 W	274	GP 32 S	426-433			●	●
EC-i 40, 70 W	274-275	GP 42, 3.0 - 15.0 Nm	405			●	●
EC-i 40, 100 W	276					67.7	67.7
EC-i 40, 100 W	276	GP 42, 3.0 - 15.0 Nm	405			●	●
EC-i 40, 130 W	277					102.5	102.5
EC-i 40, 130 W	277	GP 42, 3.0 - 15.0 Nm	405			●	●
EC-i 52, 180 W	278					93.7	93.7
EC-i 52, 180 W	278	GP 52, 4.0 - 30.0 Nm	410			●	●
EC-i 52, 200 W	279					123.7	123.7
EC-i 52, 200 W	279	GP 52, 4.0 - 30.0 Nm	410			●	●
EC-i 52, 250 W	280					93.7	93.7
EC-i 52, 420 W	281					93.7	93.7

Technical data

Supply voltage V_{CC}	5 V ± 10%
Typical current draw	17 mA
Output signal	CMOS compatible
Output current, data	max. 20 mA
Setup time after Power On	max. 4 ms
Hysteresis	0.17° mech
Moment of inertia of code wheel	≤ 0.09 gcm²
Operating temperature range	-40...+100 °C

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. 56.

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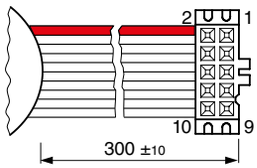

1 Data
2 V_{CC}
3 GND
4 CLK
5 Do not connect ($\overline{A}$)
6 Do not connect (A)
7 Do not connect ($\overline{B}$)
8 Do not connect (B)
9 Do not connect ($\overline{I}$)
10 Do not connect (I)

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

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Connection example

Adapter EASY Absolute **488167**