

ENX 6 MAG

Encoder Ø6 mm, 1...256 CPT



Key Data	ENX 6 MAG Incremental	ENX 6 MAG Incremental, Commutation Signal
Number of channels	3	3
Max. counts per turn	256	256
Additional length at motor	mm 6.2	2.1
Ambient temperature	°C -40...100	-40.. 100
Weight	g 1	1

Selection criteria	ENX 6 MAG Incremental	ENX 6 MAG Incremental, Commutation Signal
Speed and rotation direction detection	■	■
Speed and position control	■	■
Compact and robust design	■	■
High resolution	▲	▲
Cost effective	■	■

■ suitable ▲ suitable to a limited extent ● not suitable

Specifications	ENX 6 MAG Incremental	ENX 6 MAG Incremental, Commutation Signal
Supply voltage Vcc	V 3.0...3.6	3.0.. 3.6
Typical current draw	mA 13	13
Max. operating frequency	kHz 500	500
Max. Speed	min ⁻¹ 100000	100000
Connection	FPC, 12 pole, pitch 0.5 mm Pin 1 Motor+ Pin 2 Motor- Pin 3 Not connected Pin 4 GND Pin 5 V _{CC} Pin 6 Channel A Pin 7 Channel B Pin 8 Channel I Pin 9-12 Do not connect! Output signal: CMOS compatible Output current per channel: +4 mA	FPC, 12 pole, pitch 0.5 mm Pin 1 W1 Pin 2 W2 Pin 3 W3 Pin 4 GND Pin 5 V _{CC} Pin 6 Channel A Pin 7 Channel B Pin 8 Channel I Pin 9 H1 Pin 10 H2 Pin 11 H3 Pin 12 Do not connect! Output signal: CMOS compatible Output current per channel: +4 mA

Configuration	ENX 6 MAG Incremental	ENX 6 MAG Incremental, Commutation Signal
Counts per turn ²	1...256	1...256

maxon Modular System	Page	Dimensions Standard Version	Notes
maxon DC motor			<p>¹ Applying voltage to these pins may destroy the encoder.</p> <p>² maxon controllers require a resolution of at least 16 pulses.</p> <p>Compatible connector: Molex 52745-1297, TE 1-1734839-2 Adapter 498157 required for all maxon controllers</p> <p>Please note: max. continuous current 0.5 A</p>
DCX 6 M	70		
maxon EC motor			
ECX SPEED 6 M	164-165		

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ENX 8 MAG

Encoder Ø8 mm, 1...256 CPT



Key Data	ENX 8 MAG Incremental	ENX 8 MAG Incremental, Commutation Signal
Number of channels	3	3
Max. counts per turn	256	256
Additional length at motor	mm 7.0	1.0
Ambient temperature	°C -40...100	-40...100
Weight	g 1	1

Selection criteria	ENX 8 MAG Incremental	ENX 8 MAG Incremental, Commutation Signal
Speed and rotation direction detection	■	■
Speed and position control	■	■
Compact and robust design	■	■
High resolution	▲	▲
Cost effective	■	■

■ suitable ▲ suitable to a limited extent ● not suitable

Specifications	ENX 8 MAG Incremental	ENX 8 MAG Incremental, Commutation Signal
Supply voltage V _{cc}	V 3.0...3.6	3.0...3.6
Typical current draw	mA 13	13
Max. operating frequency	kHz 500	500
Max. Speed	min ⁻¹ 100000	100000
Connection	FPC, 12 pole, pitch 0.5 mm Pin 1 Motor+ Pin 2 Motor- Pin 3 Not connected Pin 4 GND Pin 5 V _{cc} Pin 6 Channel A Pin 7 Channel B Pin 8 Channel I Pin 9-12 Do not connect ¹ Output signal: CMOS compatible Output current per channel: +4 mA	FPC, 12 pole, pitch 0.5 mm Pin 1 W1 Pin 2 W2 Pin 3 W3 Pin 4 GND Pin 5 V _{cc} Pin 6 Channel A Pin 7 Channel B Pin 8 Channel I Pin 9 H1 Pin 10 H2 Pin 11 H3 Pin 12 Do not connect ¹ Output signal: CMOS compatible Output current per channel: +4 mA

Configuration	ENX 8 MAG Incremental	ENX 8 MAG Incremental, Commutation Signal
Counts per turn ²	1...256	1...256

maxon Modular System	Page	Dimensions Standard Version	Notes
maxon DC motor DCX 8 M	71		<p>¹ Applying voltage to these pins may destroy the encoder.</p> <p>² maxon controllers require a resolution of at least 16 pulses.</p> <p>Compatible connector: Molex 52745-1297, TE 1-1734839-2 Adapter 498157 required for all maxon controllers</p> <p>Please note: max. continuous current 0.5 A</p>
maxon EC motor ECX SPEED 8 M	166-167		

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ENX 10 EASY/QUAD

Encoder Ø10 mm, 1...1024 CPT

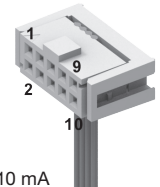
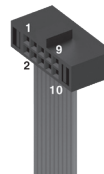


Key Data	EASY Incremental Differential	QUAD Incremental
Number of channels	3	2
Max. counts per turn	1024	1
Encoder length L ⁴	mm 8.5	9.0
Ambient temperature	°C -40 ... +100	-40 ... +100
Weight	g <5	<5

Selection criteria	EASY Incremental Differential	QUAD Incremental
Speed and rotation direction detection	■	■
Speed and position control	■	▲
Compact and robust design	■	■
High resolution	■	●
Cost effective	■	■

■ suitable ▲ suitable to a limited extent ● not suitable

Specifications	EASY Incremental Differential	QUAD Incremental
Supply voltage V _{cc}	V 5 ±0.5	3.0–24
Typical current draw	mA 22	5.5
Max. operating frequency	kHz 500	2
Max. Speed	rpm 30000	30000
Connector	10-pin 1.27 mm multipoint connector e.g. Samtec FFSD series	10-pin 2.54 mm multipoint connector (IEC/EN 60603-13 / DIN41651)
	Pin 1 Do not connect ¹ (BiSS-C Data) Pin 2 V _{cc} Pin 3 GND Pin 4 Do not connect ¹ (BiSS-C CLK) Pin 5 Channel A Pin 6 Channel A Pin 7 Channel B Pin 8 Channel B Pin 9 Channel I Pin 10 Channel I	Pin 1 Not connected Pin 2 V _{cc} Pin 3 Channel A Pin 4 Channel B Pin 5 GND Pin 6 Not connected Pin 7 Not connected Pin 8 Not connected Pin 9 Not connected Pin 10 Not connected
	Output signal: EIA-Standard RS 422 Output current per channel: ± 20 mA	Output signal: TTL compatible Output current per channel: + 10 mA



Configuration	EASY Incremental Differential	QUAD Incremental
Counts per turn ²	1 ... 1024	1
Electrical connection	Flat band cable / flexible cable FFC ³	Connector 6-pin, 10-pin
Cable length	mm 50, 100, 150, 200, 300, 500, 1000 / 138	50, 100, 150, 200, 300, 500, 1000
Alignment of cable outlet in relation to motor flange	° 15	15

maxon Modular System	Page	Dimensions Standard Configuration	M 1:1	Notes
maxon DC motor				
DCX 10 S	EASY, QUAD	72		¹ Applying voltage to these pins can destroy the encoder. ² maxon controllers require a resolution of at least 16 counts per turn. ³ FFC cable: 0.5 mm pitch, possible matching connector Molex 52745-1097; adapter 506579 required for maxon controllers. ⁴ For attachment to DCX motors: plus 2-4 mm thick intermediate plate.
DCX 10 L	EASY, QUAD	73		
DCX 12 S	EASY, QUAD	74		
DCX 12 L	EASY, QUAD	75		
DCX 14 L	EASY, QUAD	76–77		
DCX 16 S	EASY, QUAD	78–79		
DCX 16 L	EASY, QUAD	80–81		
DCX 19 S	EASY, QUAD	82–83		
DCX 22 S	EASY, QUAD	84–85		
DCX 22 L	EASY, QUAD	86–87		
DCX 26 L	EASY, QUAD	88–89		
DCX 32 L	EASY, QUAD	90		
DCX 35 L	EASY, QUAD	91		
DC-max 16 S	EASY, QUAD	94–95		
DC-max 22 S	EASY, QUAD	96–97		
DC-max 26 S	QUAD	98–99		

