ENX 16 EASY INT Encoder ⌀16 mm,
1...1024 CPT / 4096 steps, Single Turn
Sterilizable, integrated into motor
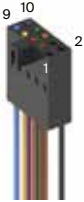
BiSS INTERFACE CERTIFIED

Key data		EASY incremental differential	EASY Absolute
Number of channels		3	
Max. counts per turn		1024	
Steps per turn			4096
Resolution (bit single turn)			12
Encoder length L	mm	-1 (integrated into motor)	-1 (integrated into motor)
Ambient temperature	°C	-40...+125	-40...+125
Weight	g	<5	<5

Selection criteria	EASY incremental differential	EASY Absolute
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	EASY Absolute
Supply voltage Vcc	V	5 ±0.5	5 ±0.5
Typical current draw	mA	22	22
Max. operating frequency	kHz	4000	
Max. Speed	rpm	200 000	200 000
Connector[2]		10-pin 2.54 mm multipoint connector (IEC/EN 60603-13 / DIN41651) cable AWG 28	without connector cable AWG 28

EASY incremental differential:

Pin 1   not connected
Pin 2 (black) V_{cc}
Pin 3 (brown)   GND
Pin 4   not connected
Pin 5 (red)   channel $\overline{A}$
Pin 6 (orange)   channel A
Pin 7 (yellow)   channel $\overline{B}$
Pin 8 (green)   channel B
Pin 9 (blue)   channel $\overline{I}$
Pin 10 (violet)   channel I
Output signal: EIA-Standard RS 422
Output current per channel: ±20 mA

EASY Absolute:

green   Data
black V_{cc}
brown   GND
yellow   CLK

Output signal: CMOS compatible
Output current per channel +20 mA

Configuration		EASY incremental differential	EASY Absolute
Counts per turn[1]		1...1024	
Signalprotokoll			BiSS-C, SSI
Cable length	mm	200, 500	200, 500
Electric connection			cable length/pin connection/connector

Modular system	Page
EC motor	
ECX SPEED 16 M	209–212
ECX SPEED 16 L	213–216

Sterilization information

135°C

Typically 1000 autoclave cycles

Sterilization with steam
Temperature   +134 ±4 °C
Compression pressure up to   2.3 bar
Rel. humidity   100%
Cycle length   18 minutes

The connector is not sterilizable and needs to be removed first.

Notes

[1] maxon controllers require a resolution of at least 16 counts per turn and commutation signals.

[2] H1, index and angle zero are aligned with angle commutation zero (see p. 66).

Further technical details can be found in the product information in the online shop under Downloads.