

CC451AEMT ABSOLUTE PROGRAMMABLE MULTI-TURN ENCODER



*CC451AEMT Multi-Turn Absolute Encoder
USER PROGRAMMABLE
Accuracy You Can Count On Us*

GENERAL

The CC451AEMT Multiturn Absolute Encoder is used as a position feedback device where absolute measurement is required. It is a rugged electrical device and does not contain any shock-sensitive component, such as glass scales.

The maximum resolution per turn is 16 bits (65536 positions) at 4096 turns, standard coding for the output is Natural Binary or Gray Code. A reset input is provided to electronically set the position of zero. Information is formatted as serial (RS-232, RS-422, RS-485 or SSI) or as a parallel 28 bit word. The output can be customer programmed over the RS232 port by using Hyperterminal over an arbitrary number of turns (or fraction of turns and any number of counts per turns). In RS-485 mode, the encoder is addressable to allow operation of up to 32 units over a single I/O line.

ELECTRICAL SPECIFICATIONS

Resolution	Up to 28-bit Multi-turn(65536 steps per Revolution, 4096 Revolution)
Maximum Step per Revolution	65536 (16 Bit)
Maximum number Revolution	4096 (12 Bit)
Measuring step	19.78 Second of Arc.
Accuracy	± 19.78 Second of Arc.
Maximum Operation Speed	12000 RPM
Code	Gray Code or Natural Binary
Supply Voltage	5, 11-17, or 11-30VDC
Supply Current	150mA max
Maximum Power Demand	15W.
Output Format	Parallel or Serial
Operating Temperature	-40° to 85° C

Electrical Interface in Accordance to Profibus DP RS485

Data Transmission Rate	9.5 kBit/s- 12Mbit/s
Electrical Connection	Terminal Block or Male-Female Plug
Bus Termination Resistor	DIP or BCD Switch
Address Setting	-Preset Button or ProfiBus DP
Setting Counting Direction	-ProfiBus DP or DIP Switch
Operating Temperature	-40° to 85° C

MECHANICAL SPECIFICATIONS

Housing	NEMA 13 Material - 6061 Aluminum, Anodized Seal - O Ring
Fasteners	316 Stainless Steel
Shaft Size	0.6250" (+.0000, -.0005) 303 Stainless Steel 3/16" Keyway
Shaft Seal	Teflon Graphite
Moment of Inertia	1550g/cm ²
Bearing Life	2 x 10 ⁸ revs at rated shaft loading
Shaft Torque	0.5 to 1.0 oz - in, w/o seal
Shaft Runout	0.0005 T.I.R.
Speed	1500 RPM
Weight	12 lb.

ORDERING INFORMATION

How to build your **CC451AEMT** Model Number

EXAMPLE:

CC451AEMT	-	<u>G</u>	-	<u>4096</u>	-	<u>256</u>	-	<u>S422</u>	-	<u>12</u>	-	<u>FM</u>	-	<u>C</u>
		1		2		3		4		5		6		7

MODEL = CC451AEMT = BASIC (Mill Duty) DESIGN

1 = ABSOLUTE ENCODER CONFIGURATION

_____ **G** = Gray Code

_____ **N** = Natural Binary

Note: All of these options are programmable and can be changed, reference "General" section at top.

2 = COUNTS PER TURN UP TO 65536

Note: All parameters are programmable and can be changed, reference "General" section at top

3 = NUMBER OF TURNS UP TO 4096

Note: All parameters are programmable and can be changed, reference "General" section at top.

4 = OUTPUTS: Serial Outputs

- _____ **S 232** = RS - 232
- _____ **S 422** = RS - 422
- _____ **S 485** = RS - 485
- _____ **SSI** = Synchronous Serial Interface
- _____ **SFO** = Fiberoptic Data link Parallel
- _____ **PLD** = 5V Differential Linedriver
- _____ **PSR** = Parallel Source Driver
- _____ **PSK** = Parallel Sink Driver

5 = POWER SUPPLY

- _____ **5** = 5 VDC Supply
- _____ **12** = 11-17 VDC Supply
- _____ **24** = 11- 30 VDC Supply

6 = MOUNTING

- _____ **FM** = Foot Mount
- _____ **56C** = NEMA 56C Flange
- _____ **MM** = Motor Mount NEMA 56C Motor Mount
- _____ **DS** = Base Plate to replace DS3820 - together with (Foot Mount) FM
- _____ **S** = Base Plate to replace Selsyn - together with (Foot Mount) FM
- _____ **46FM** = Equivalent with BC46 & BC42 Foot Mounts and NEMA 56C Face Mount (MM)
- _____ **56FM** = CC56FM Foot Mount
- _____ **FC** = Motor Mount - Direct Mounting to 8.500" dia motor pilot with (4) 1/2-13 mounting holes on a 7.250" B.C., includes coupling kit.
- _____ **45P** = CC45P Flange Mount
- _____ **45C** = CC45C Flange Mount

Also available, various Adapter Plates for interfacing with existing devices.

For example: Selsyns, Limit Switches, etc..

7 = OUTPUT TERMINATION

- _____ **MS** = MS Connector, with mate
- _____ **C** = Conduit, 1/2" NPT tapped hole

Note: CCI provides computer cable for programming sensor.

PRODUCT DIMENSIONS

Dimensions = Inches (mm)

- Multiple mounting options available:
Foot Mounts, Flange Mounts, Face Mounts, etc.
- 5.70(145) O.D. max x 8.5(216) long w/o mounting options

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