

# Bulletin 845PY Digital Tachometer

NEMA Type 4, Size 20, 5PY Mounting



5PY Mount  
845PY-FW-2



## Specifications

Electrical	
<b>Code Format</b>	Incremental, 2 channels
<b>Quadrature</b>	90° ±22° Channel A leads B CCW
<b>Symmetry</b>	50% ±10%
<b>Power Requirements</b>	Determined by catalog number: 5V DC ±5% @ 150mA maximum 11–20V DC @ 150mA maximum 24V DC @ 150mA maximum
<b>Frequency Response</b>	100kHz
<b>Operating Speed</b>	(100kHz x 60)/pulses per revolution = RPM or 15,000 RPM, whichever is lower
<b>Resolution</b>	Up to 3000 PPR on code disk
<b>Output Drive Capability</b>	Differential line driver = ±20mA @ 5V DC
Mechanical	
<b>Starting Torque</b>	2.5Ncm typical [3.5in-oz]
<b>Running Torque</b>	2.5Ncm typical [3.5in-oz]
<b>Slew Speed</b>	15,000 RPM
<b>Shaft Loading</b>	Axial: 359N [80lbs] Radial: 222N [50lbs]
<b>Shaft Size</b>	7.94mm [5/16in] diameter
Environmental	
<b>Housing</b>	NEMA Type 4, IP66 (IEC 529)
<b>Temperature</b>	0°C to +60°C (+32°F to +140°F) — operating –25°C to +90°C(–13°F to +194°F) — storage
<b>Humidity</b>	98%, noncondensing
<b>Shock</b>	50g (11ms duration)
<b>Vibration</b>	20g (5 to 2000Hz)
<b>Approximate Ship Weight</b>	0.56kg (20oz)

## Description

Bulletin 845PY digital tachometer is an optical encoder that determines the angular velocity of a rotating shaft and is a direct digital replacement for the standard 5PY analog tachometer. The Bulletin 845PY will mount on the same bolt hole pattern and use the same flexible coupling.

The Bulletin 845PY digital tachometer is a heavy duty, NEMA Type 4, and IP66 (IEC 529) rated optical incremental shaft encoder that is housed in a two-inch diameter enclosure. Typical applications for the 845PY include velocity feedback to a variety of DC drives, and machine tools.

## Features

- Digital replacement for the 5PY Analog Tachometer
- Direct 1395 digital DC drive interface
- Code disk resolution up to 3000 PPR
- Input reverse polarity protection
- CE marked for all applicable directives

## Accessories

Description	Page Number
Pre-Wired Cables	7–52
Mating Connectors	7–55
Differential Encoder Buffer Board	7–58

Selection Guide

845PY — **FW** — **2** — **C**  
*a*                      *b*                      *c*

**a**

Resolution	
Code	Description (PPR)
CA	50
CB	60
CG	100
CH	200
CJ	250
CW	256
CK	360
CL	400
CM	500
EH	600
DL	800
CN	1000
FW	1024
CD	1250
EM	1500
DN	2000
CS	2048
CR	2500
CY	2540
LJ	2750
EN	3000

**b**

Power Supply Option	
Code	Description
1	5V DC ±5%
2	11–20V DC
3	24V DC ±10%

**c**

Mating Connector	
Code	Description
Blank	Without Mating Connector
C	With Mating Connector

Electrical Connections

10-Pin Connector (ACS02E18–1P (023))

Differential Line Driver Outputs

Pin	Function	Pin	Function
A	Channel A Output	F	DC Return
B	Channel B Output	G	No Connection
C	No Connection	H	Channel Ā Output
D	DC+ Input	I	Channel B̄ Output
E	No Connection	J	No Connection

Dimensions—mm (inches)

