

Installation Instructions

Size 20 Absolute Encoder, Bulletin 845GM–NXC8024

IMPORTANT: SAVE THESE INSTRUCTIONS FOR FUTURE USE.

Specifications

Electrical	
Code Format	Gray Code
Resolution Counts per Rev. (CPR)	256 CPR (8 bit)
Accuracy	± 1 bit
Requency Response	16K words/sec
Power Requirements	8–24V DC @ 150mA maximum
Output Drive Capability	16mA—NPN Open Collector
Output Logic	High True Logic “0” = 0.0 to 0.6V DC Logic “1” = 24V DC maximum (Open Collector)
Direction Control	Field selectable for increasing counts (CW or CCW)
Reset	Reset position value to zero. Only with shaft stationary.
Mechanical	
Starting Torque	3.5in–oz. Typical [0.025 N•m]
Running Torque	3.5in–oz. Typical [0.025 N•m]
Shaft Loading	Axial 40lbs [178N] Radial 40lbs [178N]
Shaft Size	9.517mm (3/8in) w/flat
Moment of Inertia	0.30oz–in ² (54gcm ²) maximum
Slew Sped	5000RPM
Environmental	
Housing	NEMA Type 4, 13; IP66
Temperature	0°C to +85°C (+32°F to +185°F)—Operating –20°C to +85°C (–4°F to +185°F)—Max Working –40°C to +100°C (–40°F to +212°F)—Storage
Humidity	90%, Noncondensing
Shock	50g (11ms duration)
Vibration	20g (58–150Hz), 1.5mm displacement (10–58Hz)
Approximate Shipping Weight	1lb (0.45kg)



ATTENTION: The shielded cables, output devices, and power supplies must be properly grounded. All National Electric Code and applicable local codes and ordinances must be observed when wiring the system.

Electrical Connections

Wire Color	Function
Black	DC Common
Red	+DC
White	Reset to Zero
Green	MSBC
Orange	Bit 0
Blue	Bit 1
Brown	Bit 2
Yellow	Bit 3
Violet	Bit 4
Gray	Bit 5
Pink	Bit 6
Tan	Bit 7
Shield	Not Connected

Accessories

Description	Part Number
High Performance Flexible Coupling	845-FC-*-*
Measuring Wheels	845-MW-A-*
Servo Clamps	845-SC

*See *Sensors* catalog for selection.

Direction Control

Counterclockwise rotation of the shaft will produce increasing counts. For increasing counts with a clockwise rotation, use the Most Significant Bit Complement instead of the Most Significant Bit. See Electrical Connection table for wire designation.



ATTENTION: For parallel gray code: connecting the MSB or MSBC to +DC will result in permanent damage to the encoder.

Reset Pin

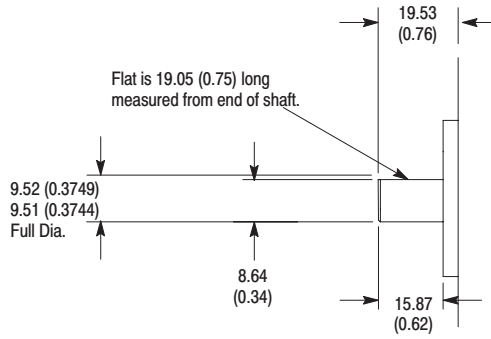
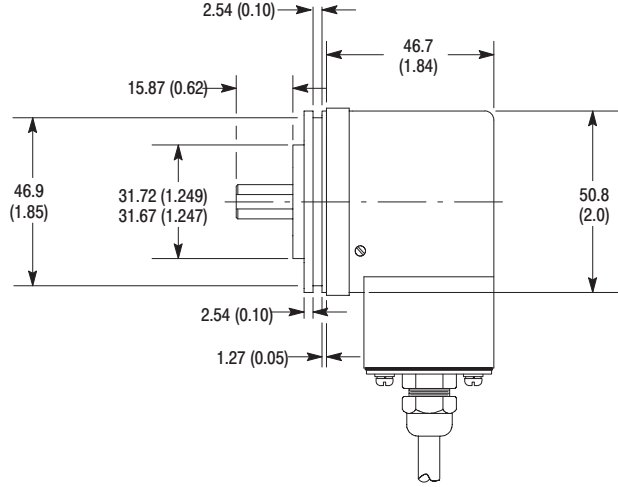
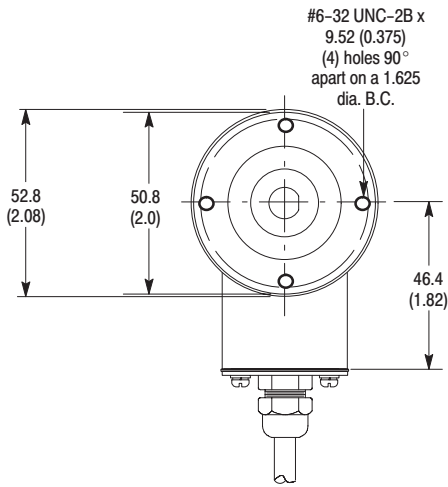
The shaft must be stationary before using the reset function. Connecting the Reset Wire to +DC will reset Gray Code position value to maximum (e.g., 255) if MSBC is used, to zero if MSB is used. The reset function requires a connection to +DC for 0.1 seconds or longer.



ATTENTION: Activating the Reset results in a change of position reading. This can cause unexpected motion which could result in damage to the product, equipment, or personal injury.

Rotation is viewed from the end of the encoder shaft.

Dimensions—mm (inches)



3/8 inch Shaft with Flat