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Digital Ring Kit — NEMA C Frame

DRK Single Channel Output & QDRK Quadrature Output

- High speed digital pulse train
- Easy retrofit, impervious to dust, oil, water, etc.
- Kit includes mounting ring, hardware, magnet wheel & sensor
- 60 or 120 pulses per revolution, NPN open collector output
- Line Driver Option available 5 -15 Vdc — contact factory
- ETL approved to UL 913-1988



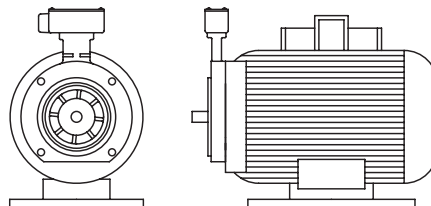
Product Information

Description

Electro-Sensor's **Digital Ring Kit** provides digital feedback from motors with NEMA C face end bells. It can generate pulses down to zero speed, and transmit without amplification up to 1500 feet. This is an ideal pulse generator for speed monitoring, motor control, counting, process control, cut-to-length, and ratio/draw controlling applications. The **DRK Series Ring Kits** can be quickly and easily installed on NEMA C face motors or between a motor and gear box. Each kit features a non-contacting digital pulse generator system. This system includes a 199SM magnet wheel (120 magnets of alternating polarity) with a mounting hub bored to the exact motor shaft size, and the option of a Hall effect, quadrature, or magneto-resistive sensor with 10' of shielded cable. The output of the Hall effect #1101 Sensor is 60 pulses per revolution. The output when using the #1102 magneto-resistive sensor is 120 pulses per revolution. The **DRK Ring Kit System** includes a cast aluminum mounting ring with a removable gasketed junction box, and all mounting hardware. Motor frame size and the number of pulses per revolution needed (60 or 120) must be specified when ordering.

The **QDRK Quadrature Ring Kit** provides a 60-pulse per revolution quadrature signal, for use with electronic control equipment requiring rotational-direction information. Two signals, 90° out-of-phase, are produced by the sensor. When the leading edge of signal A precedes the leading edge of signal B, shaft rotation is forward. When the opposite is true, the monitored shaft is rotating in reverse.

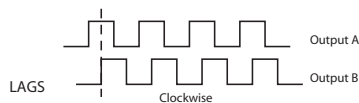
Mounting Illustration:



Part No.	Fits NEMA Frame	Shaft Size
(Q)DRK-56C	.....56C	.....5/8"
(Q)DRK-143TC	.....143TC, 145TC, 182C, 184C	.....7/8"
(Q)DRK-182TC	.....182TC, 184TC, 213C, 254C	.....1-1/8"
(Q)DRK-213TC	.....213TC, 215TC, 254UC, 256UC	.....1-3/8"
(Q)DRK-254TC	.....254TC, 256TC	.....1-5/8"

Quadrature Output (QDRK Series)

Provides two square wave output pulses offset from each other by 90°. **The pulses lead or lag each other depending on the direction of shaft rotation.**



Quadrature Sensor Adjustment (QDRK Series)

All Ring Kits are factory gapped to 0.020", and aligned for a 90° phase shift. To adjust the gap distance between the magnet ring and the sensor, use the following steps (see figure 1):

1. With the mounting ring and magnet wheel mounted, set the gap adjustment screw so that it extends approximately 1/8" below the adjustment block.
2. Place the sensor with the guide post fitting into the guide hole and the barrel of the sensor down the neck of the ring. The sensor face should be resting on the magnet wheel.
3. Apply a slight downward pressure on the sensor and turn the gap adjustment screw clockwise until it rests on the base of the junction box.
4. With continued pressure on the sensor, adjust the gap adjustment screw 3/4 turn clockwise, raising the face of the sensor slightly off the magnet ring, and tighten the set screws on the neck of the Ring Kit. This procedure will result in the sensor being gapped to approximately 0.020". The kit is now ready to run.

Figure 1

