

- 120 alternating magnets on wheel face
- Generate 60 pulse/revolution with 1101/1201/1202/Series 18 Sensors
- Generate 120 pulse/revolution with 1102 & Series 18 sensors
- Non-contact sensing
- End-of-shaft (198EM) or over-shaft (199SM models) mounting
- NEMA C Digital Ring Kit compatible
- 10,000 rpm maximum speed



Description

The 199SM and 198 EM Magnet wheels are made of an aluminum hub with a magnetized ferromagnetic nylon ring attached to the outer circumference. The ring is magnetized with 120 alternating magnets that are rectangular and uniform in size. The outside diameter of the wheel including the hub is 3.75". The wheel is typically mounted on a shaft up to 3" in diameter. Our shaft mount wheels are custom-bored to slide snugly onto the shaft, and are then secured with two set screws. Many standard hub sizes are in stock, including common NEMA C Frame Motor sizes.

Sensor Compatibility

The 199SM and 198EM Magnet Wheels are compatible with Electro-Sensors' Hall Effect and Magneto-resistive sensors.

Compatible Ring Kit Sensors

Type of Sensor	Hall Effect	Magneto-resistive
Models	1101/1201/1202	1102
Pulses per Revolution	60	120
Wave Type	Square	Square
Output Type	NPN	NPN
Duty Cycle of Pulses	50/50	Varied
Ring kit compatibility	Yes	Yes
Gap Distance	0.025-+/-0.015	

Installation

Mount the sensor so that the sensing surface is centered and perpendicular to the magnetic surface on the outside edge of the magnet wheel. Use the chart to the right to determine appropriate gap distances.

Mounting

End Mount: The 198EM mounts on the end of a shaft. Center-drill the shaft to a depth of 0.5" with a No. 21 drill, then tap for a 10-32 UNF screw. Apply Loctite® or a similar adhesive to the screw threads and secure onto the end of the shaft with the provided 10-32 mounting screw. Torque the mounting screw to a maximum of 8-10 foot pounds.

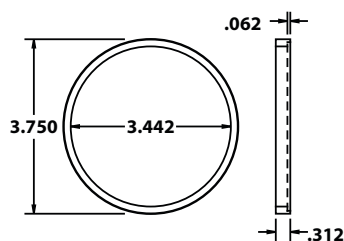
Shaft Mount: The 199SM models mount around shafts up to 3" in diameter and are secured with the provided set screws.

Non Compatible Ring Kit Sensors

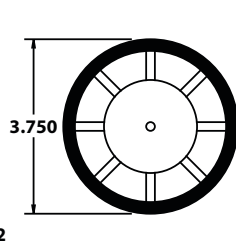
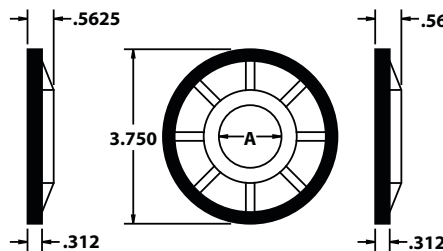
Type of Sensor	Hall Effect	Magneto-resistive
Models*	Series 18BHxxxxxx Series 18EHxxxxxx	Series 18BMxxxxxx Series 18EMxxxxxx
Pulses per Revolution	60	120
Wave Type	Square	Square
Output Type	NPN/PNP	NPN/PNP
Duty Cycle of Pulses	50/50	Varied
Ring kit compatibility	No	No
Gap Distance	0.025-+/-0.015	

* Series 18 sensors with an open faced body are the B & E option only

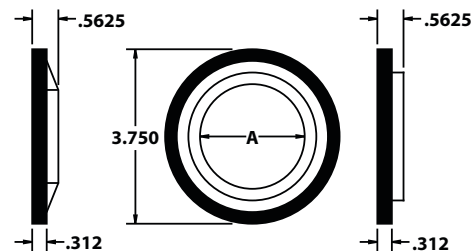
Magnet Ring only



Magnet wheel with hub for end mount

Magnet wheel with hub for shaft mount ≤ 1.875 "

Magnet wheel with hub for shaft diameters 1.875" to 3.0" max.



Ordering (Standard Models)

Model	Bore	Part Number
198EM 60PP	0.196 in	700-002400
199SM, 0.375, 60PP	3/8 in	700-210375
199SM, 0.500, 60PP	1/2 in	700-210500
199SM, 0.625, 60PP	5/8 in	700-210625
199SM, 0.750, 60PP	3/4 in	700-210750
199SM, 0.875, 60PP	7/8 in	700-210875
199SM, 1.00, 60PP	1 in	700-211000
199SM, 1.125, 60PP	1-1/8 in	700-211125
199SM, 1.250, 60PP	1-1/4 in	700-211250
199SM, 1.375, 60PP	1-3/8 in	700-211375
199SM, 1.4375, 60PP	1-7/16 in	700-211437
199SM, 1.500, 60PP	1-1/2 in	700-211500
199SM, 1.625, 60PP	1-5/8 in	700-211625
199SM, 1.875, 60PP	1-7/8 in	700-211875

Product Specifications

Magnet Wheel Specifications	
Material	Ferro-magnetic nylon
Number of Magnet Poles	60 North, 60 South (alternating)
Gauss Rating of Magnets	400 Typical
Operating Temperature	-40° C → +150° C
Maximum Speed	10,000 rpm at ambient temp.
Hub Material	Aluminum
Maximum Hub Bore	3 inches

Specifications subject to change without notice.

Customization

If one of our standard products does not meet your specifications, please call one of our applications specialists. Many of our products can be customized to fit specific needs.

Additional Information

For more information about magnet wheels, please contact us at:

Email: sales@electro-sensors.com

Tel: (800)328-6170

Fax: (952)930-0130

We also have more information online at:
www.electro-sensors.com