


Instrument Data Sheet

General	1	Product	Motion Control Sensor(Explosion Proof)
	2	Model Number	MSD-1X
	3	Manufacturer	Conveyor Components Company
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Environment	5	Ambient Temperature	-10 to 55 °C [14 to 131 °F]
	6	Enclosure Material	319 Cast Aluminum
	7	Enclosure Rating	NEMA Type 7: Class I (Div. 1 & 2) Groups C & D; and Type 9 Class II: (Div. 1 & 2) Groups F & G compliant
	8	Mounting	Surface mount, sensor shaft should be mounted in line or parallel to the driving shaft. Mounting brackets are available
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Electrical	10		
	11	Sensor Type	Infrared tracked rotating disc
	12	Input Power	12V DC from control unit
	13	Output Signal	12V DC NPN square wave; 50 pulse per rotation
	14	Electrical Connection	¾" NPT x 2
	15	Cable Type	2+1 conductor shielded cable; Belden 8760 or equivalent
	16	Cable Length	Maximum 4000 ft. [1220 m] between sensor an and MSD-800 series controller
Mechanical	17		
	18	Shaft Connection	Direct drive, chain drive, or gear drive
	19	Maximum Shaft Load	125 lbs. radial, 100 lbs. end thrust
	20	Rotation Direction	Clockwise or Counterclockwise
	21	Minimum Normal Running Speed	1 RPM (MSD-800 Series controller will register 0 RPM between 0 RPM and approximately 0.6 RPM)
	22	Maximum Operating Speed	1000 RPM
	23	Drive Torque	1 inch-pound
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Options	25		NEMA Type 3S, 4, 4X compliant (MSD-1)
	26	Sensor Enclosure	NEMA Type 7: Class I (Div. 1 & 2) Groups C & D; and Type 9 Class II: (Div. 1 & 2) Groups F & G compliant (MSD-1X)
	27	Finish	Uncoated (standard) or epoxy coating (option E)
Accessories	28	Stub Shaft	Stub shaft (303): adaptor for coupling; 5/8"- 11 N.C. right hand thread with a jam nut on one end, 3/16" key slot on the other
	29	Shaft Extension	Flexible Coupling (304): for connecting CMS to the driving shaft
	30	Coupling Guard	Coupling Guard (305): protective cover for the coupling assembly
	31	Mounting Brackets	Mounting bracket (310) for mounting to a perpendicular surface
	32		Bearing bracket (311) for 1 7/16" shaft diameter
	33		Bearing bracket (312) for 1 15/16" to 2 7/16" shaft diameter
	34		Bearing bracket (313) for 2 15/16" to 3 7/16" shaft diameter
	35	Additional Cable	2+1 conductor shielded cable (MSD-14); Belden 8760 or equivalent
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Certifications	37		
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Manufacturer	40		Conveyor Components Company Division of Material Control, Inc. 130 Seltzer Road, PO Box 167 Croswell, MI 48422 USA Phone: (810) 679-4211 Fax: (810) 679-4510 info@conveyorcomponents.com www.conveyorcomponents.com
<p>Notes:</p> <ol style="list-style-type: none"> 1. Switch shaft should be mounted in line or parallel to the driving shaft 2. Sensor can be driven by flexible coupling, belt drive, chain drive, or gear drive. 3. The recommended signal point is 15-20% above or below running speed. This will reduce nuisance shutdowns and improve response time. An excessively low trigger setting may result in an increased delay in switch response. 			