MAGNETIC PROXIMITY SWITCH

Features:

- Used for Roto-meters, Direction sensing, Level Sensing etc.
- High Counting speed
- It senses ferrous object/magnets

Technical Specification:

- Diameter: M8, M12, M18, M30
- Sensing Distance: 10-50 mm
- Basic Connection: 2 wire / 3 wire
- Output Logic: NO / NC / RO / PNP-NO / PNP-NC / NPN-NO / NPN-NC
- Supply Voltage: 24/110/240 V AC, 5/24/30/48/65/110/220 V DC
- Mounting type: Flush / Non-Flush
- Load Current: 500 mA (max.)

MAGNETIC PROXIMITY SWITCHES / SPEED SENSORS

Series SW 705 / SW 715 / MSP 706/MSP /716 MSP 707/MSP 717

The series SW 705 Magnetic Proximity Switches are available in two broad categories.

- **Position sensing switches with Reed Element.**
- **2-Wire / 3-Wire Magnetic pick-up Sensors.**

These switches are available in different shapes and sizes. Tubular models are available in Brass/SS enclosures in sizes M12, M18 and M30 and above.

SWITCHES WITH REED ELEMENT

These switches are used only for position sensing application. These incorporate a hermetically sealed sensitive reed element. The object should necessarily be a magnet. These are provided with 2-core built-in cable. The output is a potential free contact and can switch external load directly.

The switching voltage and contact rating depends upon switch size. Special models of latching type switches are available for direction sensing applications.

GENERAL SPECIFICATIONS

Sensing Range: 10 to 50 mm depending upon Strength of object magnet.

Termination	:	Integrated 2/3-core cable
Load	:	500 mA Max.
Object	:	Magnet
Operating Temp	:	70°C / 200°C
Protection Grade	:	IP-67

APPLICATIONS

Position sensing in hydraulic cylinders,

Roto-meters,

Direction sensing applications

Level sensing of liquids

MAGNETIC PICK-UP SENSORS
(Series MSP 706/MSP 716)

HALL EFFECT SENSORS
(Series MSP 707/MSP 717)

These sensors can be used only for sensing motion of a ferrous object e.g. Gear Wheel. These incorporate a special high strength ALNICO Magnet with a properly designed coil. Special high frequency sensors incorporate a Hall effect sensor.

These switches are available in 2/3-wire design. The 3-wire type switches have output logics / operating voltages similar to other types of switches described earlier.

The 2-wire switches should be necessarily used with a special controller / amplifier unit.

APPLICATIONS

- Turbine high-speed sensor.
- Bucket Elevator high temperature sensor.

AUTOMOBILE SENSORS

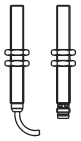
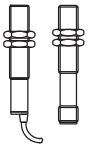
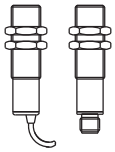
Special / custom built models are available for Automobile applications as below;

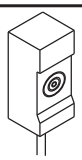
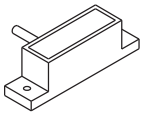
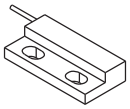
- Transfer case speed sensor.
- Wheel Rotation sensor for Fare-meter.
- Door close sensor.
- Timing Sensor.
- Clutch worn-out sensor.

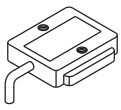
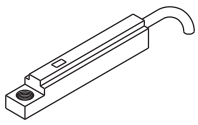
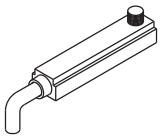
MAGNETIC PROXIMITY SWITCHES

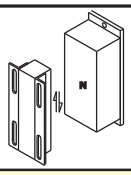
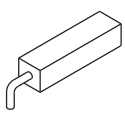
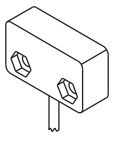


DC SW7051/ AC SW7055

MAGNETIC		M8	M12	M18
				
Dimension :	Dia.	M8	M12	M18
	Length (mm)	50, 65	50, 65	50, 65
Sensing Distance	Sn. (mm)	F - 1.5	F - 1.5	F - 3
Enclosure		B, S	B, A, S	B, A, S, T
Load Current	(mA)	200	200	400
Supply Voltage	(V DC)	D1 to D6	D1 to D6	D1 to D6
Switching Frequency	(Hz)	25	25	50
Logic Available		NO, NC	NO, NC	NO, NC

MAGNETIC				
				
Dimension :	Dia.	H1211	H6520	H2814
	Length (mm)	26 x 12 x 11	65 x 16 x 20	28 x 14 x 6
Sensing Distance	Sn. (mm)	10	20	3
Enclosure		H	H	A
Load Current	(mA)	50	200	50
Supply Voltage	(V DC)	D1 to D6	D1 to D6	D1 to D6
Switching Frequency	(Hz)	50	50	50
Logic Available		NO, NC	NO, NC	NO, NC

MAGNETIC				
				
Dimension :	Dia.	H2526	H5*26	H5*30
	Length (mm)	25 x 26 x 6	4 x 5 x 26	5 x 7 x 30
Sensing Distance	Sn. (mm)	20	20	10
Enclosure		A	H	A
Load Current	(mA)	100	100	100
Supply Voltage	(V DC)	D1 to D6	D1 to D6	D1 to D6
Switching Frequency	(Hz)	50	50	50
Logic Available		NO, NC	NO, NC	NO, NC

MAGNETIC				
				
Dimension :	Dia.	H5625	H7*30	H3822
	Length (mm)	110 x 56 x 25	7 x 8 x 30	38 x 22 x 12
Sensing Distance	Sn. (mm)	100	10	20
Enclosure		A	H	A
Load Current	(mA)	100	100	50
Supply Voltage	(V AC/DC)	D1 to D6	D1 to D6	D1 to D6
Switching Frequency	(Hz)	50	50	50
Logic Available		NO, NC	NO, NC	NO, NC

MAGNETIC PROXIMITY SWITCHES



DC SW7061

MAGNETIC			M12	M18	M30
					
Dimension :	Dia.		M12	M18	M30
	Length	(mm)	50, 65	50, 65	50, 65
Sensing Distance	Sn.	(mm)	F - 1.5	F - 3	F - 10
Enclosure			B, A, S	B, A, S, T	B, A, S, T
Load Current	(mA)		N.A.	N.A.	N.A.
Supply Voltage	(V DC)		N.A.	N.A.	N.A.
Switching Frequency	(Hz)		5000	5000	5000
Logic Available			N.A.	N.A.	N.A.

DC SW7071

MAGNETIC					
Dimension :	Dia.		M8	M10	M12
	Length	(mm)	35, 50, 65	50, 65	50, 65
Sensing Distance	Sn.	(mm)	F - 1.5	F - 1.5	F - 1.5
Enclosure			B, S	B, S	B, A, S
Load Current	(mA)		50	50	50
Supply Voltage	(V DC)		D1 to D6	D1 to D6	D1 to D6
Switching Frequency	(Hz)		5000	5000	5000
Logic Available			PO, NO	PO, NO	PO, NO

MAGNETIC					
Dimension :	Dia.		M16	M18	C10.7
	Length	(mm)	35, 50, 65	50, 65	50
Sensing Distance	Sn.	(mm)	F - 3 / NF - 5	F - 3	F - 3
Enclosure			B, S	B, A, S, T	B
Load Current	(mA)		50	50	50
Supply Voltage	(V DC)		D1 to D6	D1 to D6	D1 to D6
Switching Frequency	(Hz)		5000	5000	5000
Logic Available			PO, NO	PO, NO	PO, NO

SELECTION CHART

While selecting a switch please follow this nomenclature

SW 4 0 5 1 NO D1 B X 18 XX XX

Basic Type
- 3 - Ultrasonic
- 4 - Inductive
- 5 - Capacitive
- 6 - Optical
- 7 - Magnetic

Termination
- 0 - Integrated Cable
- 1 - Built-in Connector

Basic Connection
- 1 - 3 Wire/4 Wire DC
- 2 - 2 Wire DC NAMUR
- 3 - 2 Wire DC
- 4 - 2 Wire 20-250 V AC
- 5 - 2 Wire AC
- 6 - 2 Wire AC/DC
- 8 - 4 Wire with Relay O/P

Basic Connection
AC : NO - Normally Open
NC - Normally Closed
RO - Relay Output
DC : PO - PNP-NO
PC - PNP NC
NO - NPN NO
NC - NPN NC
PDO : PNP-NO+NC Dual Output
NDO : NPN-NO+NC Dual Output
LOV : Linear Output Voltage
LOI : Linear Output Current

Supply Voltage

D1 : 10-30 V DC	**A1** : 24 V AC
D2 : 5 V DC	**A2** : 110 V AC
D3 : 5-30 V DC	**A3** : 240 V AC
D4 : 8-5 V DC	**A4** : 90-250 V AC
D5 : 10-65 V DC	**A5** : 20-250 V AC
D6 : 24 V DC	**A6** : 20-250 V AC/DC
D7 : 110 V DC	
D8 : 220 V DC	
D9 : 48 V DC	
D10 : 15-30 V DC	

Special Feature
- **HT** - High Temperature
- **HP** - High Pressure
- **WI** - Weld Immune
- **AM** - All Metal

Special Function
- **DS** - Diffuse Scan
- **RR** - Retro Reflective
- **TB** - Through Beam
- **NF** - Non Ferrous
- **TD** - Built-in Time Delay
- **CM** - Colour Mark Sensor
- **Any Other Function**

Dimensions
Tubular - Diameter
Rectangular - L x W

Mounting
- **F** - Flush
- **N** - Non Flush

Enclosure
- **A** - Tubular Threaded ABS-Plastic
- **B** - Tubular Threaded Brass Tube
- **C** - Plain tube (Nickel Plated Brass)
- **D** - Plastic Block (ABS)
  (DF-Front Sensing DT-Top Sensing
  DR-Right Sensing DL-Left Sensing
  DV-Variable Sensing Head)
- **G** - Slot / Gap Type, Plastic
- **H** - Rectangular Block (Metal or Plastic)
- **IN** - Insert Type Plastic
- **R** - Ring Type Plastic
- **S** - Stainless Steel

The Sensing Distance, Load Current, Switch Length, Cable Length, Operating Temperature will be as per factory standard unless otherwise specifically mentioned.

Example : Inductive Proximity Switch of 3-Wire DC PNP tubular type with 24 mm diameter will have following type no. **SW 4051 PO D1 B24**