

Magnetically operated switches

Switches for NFPA aluminum and steel, Series SS (1-1/2" to 8" bore), Series N (1-1/8" to 4" bore), and Tiny Tim

Note: 1-1/2" to 2-1/2" bore NFPA steel cylinders are supplied with an aluminum tube as standard. If a 3-1/4" to 12" bore steel cylinder requires switches the aluminum tube and magnetic piston options must be selected. CS7 and CS8 switches are NEMA 6 and CSA.



CS8



CS7

Reed	Solid state	Switching type	Function	Switching voltage	Switching current	Switching power	Max voltage drop
CS8-2-04		Reed *MOV & light	SPST NO	5-120 VDC/VAC 50/60 Hz	.5 Amp max	10 VA	3.5
	CS8-2-31	solid state /light sourcing PNP	Normally open	6-24 VDC	.5 Amp max	12 Watts max	.5 volts
	CS8-2-32	solid state /Light sinking NPN	Normally open	6-24 VDC	.5 Amp max	12 Watts max	.5 volts
CS7-04		Reed switch *MOV & Light	Normally open	5-240 VDC/VAC 50/60 Hz	1 Amp max	30 Watts max	3 volts
CS7-24		Reed switch *MOV & Light 3 wire	Normally open	24 - 240 VAC 50/60 Hz	4 Amp max 50 Amp inrush	100 Watts max	N/A
	CS7-31	solid state /Light Sourcing PNP	Normally open	6-24 VDC	1 Amp max	24 Watts max	.5 Volts
	CS7-32	solid state /Light Sinking NPN	Normally open	6-24 VDC	1 Amp max	24 Watts max	.5 Volts

* Metal Oxide Varsistor Surge Suppression. NOTE: All CS8 series switches are supplied with 9' leads.

Switches for Compact interchangeable cylinders

Switches



Female cordsets



Model		
Reed	QM/348/RSU/2,75	QM/348/RSU/CP
	QM/348/LSU/2,75	QM/348/LSU/CP
Solid state	QM/348/EAP/2,75	QM/348/EAP/CP
	QM/348/EAN/2,75	QM/348/EAN/CP

Model	Length
M/P73326/1	1 m
M/P73326/2	2 m
M/P73326/5	5 m

Note: Quick disconnect styles are supplied with 6 inch pigtail with male connector. Order female cordsets separately.

Model	Reed	Solid state	Voltage V a.c.	V d.c.	Current max.	Temperature °F°	Temperature C	LED	Features	Cable/plug length	Cable type
QM/348/RSU/2.75			0 ... 120	0 ... 120	500 mA	-4° ... +176°	(-20° ... +80°)	-	-	9 ft. (2.75 m)	26-3 PVC
QM/348/LSU/2.75			5 ... 120	5 ... 120	30 mA	-4° ... +176°	(-20° ... +80°)	●	-	9 ft. (2.75 m)	26-3 PVC
		QM/348/EAP/2.75	-	6 ... 24	200 mA	-4° ... +176°	(-20° ... +80°)	●	PNP	9 ft. (2.75 m)	26-3 PVC
		QM/348/EAN/2.75	-	6 ... 24	200 mA	-4° ... +176°	(-20° ... +80°)	●	NPN	9 ft. (2.75 m)	26-3 PVC

Full information on switches (technical data, cable materials, dimensions etc.) please refer to relevant catalogue pages

Magnetically operated switches

Position Sensing Systems

Attach to Series S Cylinders with an adjustable band

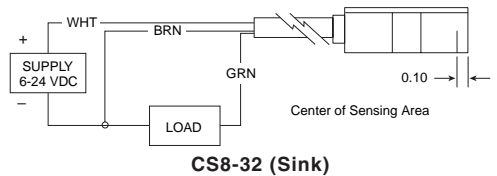
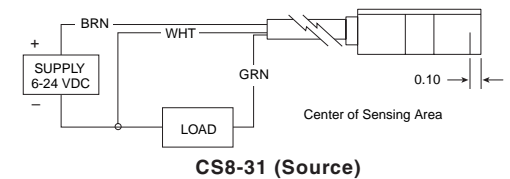
Switches can be positioned anywhere along the range of piston travel.

LED indicator light facilitates installation and trouble shooting.

Several switches can be mounted to a cylinder to control or initiate any sequence function.

All switches are supplied with 9-ft leads and brackets.

Wiring Diagram

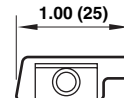
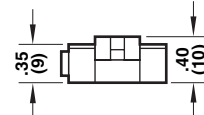
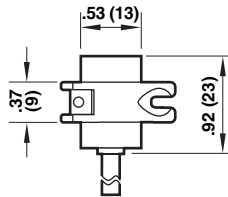
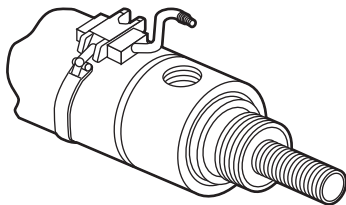


Switches for Roundline

Model Number	CS8-04	CS8-31	CS8-32
Switch Type	Reed Switch *MOV & Light	Hall Effect & Light, Sourcing	Hall Effect & Light, Sinking
Function	SPST (Normally Open)	Normally Open	Normally Open
Switching Voltage	5-120 VDC/VAC 50/60 Hz	6-24 VDC	6-24 VDC
Switching Current	0.5 Amp Max. 0.005 Amp Min.	0.5 Amp Max.	0.5 Amp Max.
Switching Power	10 VA	12 Watts Max.	12 Watts Max.
Max. Voltage Drop	3.5 Volts	0.5 Volts	0.5 Volts
Magnetic Sensitivity	85 Gauss	85 Gauss	85 Gauss
Enclosure Classification	NEMA 6	NEMA 6	NEMA 6
Temperature Range	-22°F to + 176°F	-22°F to + 176°F	-22°F to + 176°F

Bore Size	9/16	3/4	1-1/16	1-1/4	1-1/2	2	2-1/2
Change in overall cylinder length when specifying a magnetic piston	+0.25	+0.31	+0.41	-0.09	+0.43	+0.47	+0.72

CS8 Series Switch & Mounting Strap Dimensions — In inches



To order Mounting Strap only, reference P/N 1A940-01

CS8 Reed & Hall Effect Application Recommendations and Precautions

All Switches have been carefully engineered and tested, but since they may be installed in virtually an unlimited number of applications under a great variety of plant conditions, they should be installed as outlined to provide maximum reliability.



1. Always stay within the specifications and power rating limitations of the unit installed.
2. Primary and control circuit wiring should not be mixed in the same conduit. Motors will produce high pulses that will be introduced into the control wiring if the wiring is carried in the same conduit.
3. Never connect the switch without a load present. The switch will be destroyed.

In order to obtain optimum performance and long life, magnetically operated limit switches should not be subjected to: (1) strong magnetic fields, (2) extreme temperature and (3) excessive ferrous filing or chip buildup.

Improper wiring may damage or destroy the switch. Therefore, the wiring diagram along with the listed power ratings, should be carefully observed before connecting power to the switch. Lower power switches are designed for signalling electronic circuits. Do not use on relay loads or with incandescent bulbs. Resistive loads only.

Magnetically operated switches

These switches are delivered with an adaptor as standard. This combination allows you to use M/50 switches instead of QM/33, QM/34 and QM/134

	Model		Voltage		Current max.	Temperature °C	Function NO	LED	Features	Output	Cable length	Cable type
	Reed	Solid state	V a.c.	V d.c.								
 IP 66	M/50/LSU/*V		10 ... 240	10 ... 170	180 mA	-20° ... +80°	●	●	–	–	2, 5, 10 m	PVC 2 x 0,25
	M/50/LSU/5U		10 ... 240	10 ... 170	180 mA	-20° ... +80°	●	●	–	–	5 m	PUR 2 x 0,25
	TM/50/RAU/2S		10 ... 240	10 ... 170	180 mA	-20° ... +150°	●	–	High temperature	–	2 m	Silicon 2 x 0,25
	M/50/RAC/5V		10 ... 240	10 ... 170	180 mA	-20° ... +80°	–	–	Changeover	–	5 m	PVC 3 x 0,25
 IP 66 with plug-in cable		M/50/EAP/*V	–	10 ... 30	150 mA	-20° ... +80°	●	●	–	PNP	2, 5, 10 m	PVC 3 x 0,25
		M/50/EAN/*V	–	10 ... 30	150 mA	-20° ... +80°	●	●	–	NPN	2, 5, 10 m	PVC 3 x 0,25
		M/50/LSU/CP	10 ... 60	10 ... 75	180 mA	-20° ... +80°	●	●	–	Plug M8x1	5 m	PVC 3 x 0,25
		M/50/EAP/CP	–	10 ... 30	150 mA	-20° ... +80°	●	●	–	PNP, plug M8x1	5 m	PVC 3 x 0,25
		M/50/EAN/CP	–	10 ... 30	150 mA	-20° ... +80°	●	●	–	NPN, plug M8x1	5 m	PVC 3 x 0,25

Switch mounting

M50 switches can be mounted to the cylinders below without additional brackets



Ø 32 ... 125 mm	Ø 32 ... 80 mm	Groove cover
PRA/180000/M	M/46000/M	M/P72725/1000
	M/46100/M	
	M/46200/M	
	VM/46000/M	
	VM/46100/M	

Cylinders below require additional switch mounting brackets. Refer to bottom table for bracket numbers

					
Ø 32 ... 200 mm	Ø 1¼ ... 4"	Ø 10 ... 25 mm		Ø 25 ... 40 mm	Ø 12 ... 100 mm
RA/8000/M	RM/900/M	RM/8000/M		A44000	RM/91000/M
KA/8000/M		RM/28000/M			RM/92000/M
RA/28000/M		KM/8000/M			RM/93000/M
RA/28300/M					
					
Ø 32 ... 200 mm		Ø10 ... 25 mm Stroke length >=15 mm		Ø10 ... 25 mm Stroke length < 15 mm	
Ø32	QM/27/2/1	Ø10	QM/33/010/22	Ø10	QM/33/010/23
Ø40	QM/27/2/1	Ø12	QM/33/012/22	Ø12	QM/33/016/23
Ø50	QM/27/2/1	Ø16	QM/33/016/22	Ø16	QM/33/016/23
Ø63	QM/27/2/1	Ø20	QM/33/020/22	Ø20	QM/33/020/23
Ø80	QM/27/2/1	Ø25	QM/33/025/22	Ø25	QM/33/025/23
Ø100	QM/27/2/1				
Ø125	QM/27/2/1				
Ø160	QM/27/2/1				
Ø200	QM/27/2/1				
				M/P72487	M/P72487