

HAMLIN

Magnetic Reed Switches



Reed Switches consists of two ferromagnetic reeds that when introduced to a magnetic field, attract toward each other to close. Once the magnetic field is removed, the contacts again spring open. Reed switches are ideal in auto, marine and moist environments including water, fuels, and dust-laden atmospheres. The smaller Ampere Turns number, the more sensitive the reed switch to magnetic fields.

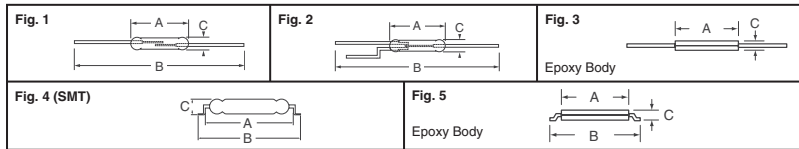


Fig.	Circuit	Ampere Turns	Maximum DC Contact Rating		Switching Current (Amp)	Carry Current (Amp)	Operate/Release (ms)			Dimensions (mm)			Digi-Key Part No.	Price Each			Hamlin Part No.
			Watts	Volts			A	B	C	1	10	50					
Axial Lead Reed Switches																	
1	SPST	6-12	10	170	0.5	0.5	45/2	7.00	46.00	1.80	HE516-ND	.99	.84	.71	MITI-3V1 6-12.5		
		22-28	20	200	1.0	1.5	8/25	19.05	56.64	2.66	HE545-ND	.99	.84	.71	MLRR-2 22-28		
		27-33	20	200	1.0	1.5	8/25	19.05	56.64	2.66	HE536-ND	.99	.84	.71	MLRR-2 27-33		
		32-38	20	200	1.0	1.5	8/25	19.05	56.64	2.66	HE537-ND	.99	.84	.71	MLRR-2 32-38		
		17-23	20	200	1.0	1.2	7/2	15.24	56.64	2.66	HE133-ND	.59	.50	.42	MLRR-3 17-23		
		22-28	20	200	1.0	1.2	7/2	15.24	56.64	2.66	HE538-ND	.59	.50	.42	MLRR-3 22-28		
		32-38	20	200	1.0	1.2	7/2	15.24	56.64	2.66	HE539-ND	.59	.50	.42	MLRR-3 32-38		
		17-23	20	200	1.0	1.0	6/2	15.24	40.38	2.66	HE540-ND	.62	.52	.44	MLRR-4 17-23		
		22-28	20	200	1.0	1.0	6/2	15.24	40.38	2.66	HE541-ND	.62	.52	.44	MLRR-4 22-28		
		10-20	10	200	0.5	0.8	6/2	12.70	40.39	1.83	HE500-ND	.59	.50	.42	MDSR-7 10-20		
		20-25	10	200	0.5	0.8	6/2	12.70	40.39	1.80	HE535-ND	.59	.50	.42	MDSR-7 20-25		
		17-28	10	300	0.5	1.5	6/2	15.24	40.38	2.28	HE501-ND	.76	.64	.54	MDSR-6 17-28		
		27-33	10	200	0.5	1.5	6/2	15.24	40.38	2.28	HE530-ND	.76	.64	.54	MDSR-6 27-33		
		37-43	10	200	0.5	1.5	6/2	15.24	40.38	2.28	HE531-ND	.76	.64	.54	MDSR-6 37-43		
		12-23	10	200	0.5	1.2	6/2	15.24	40.39	2.29	HE502-ND	.45	.38	.32	MDSR-4 12-23		
		27-33	10	200	0.5	1.2	6/2	15.24	40.39	2.29	HE533-ND	.45	.38	.32	MDSR-4 27-33		
		32-38	10	200	0.5	1.2	6/2	15.24	40.39	2.29	HE534-ND	.52	.44	.37	MDSR-4 32-38		
		12-33	10	200	0.5	1.2	6/2	15.24	40.39	2.29	HE503-ND	.52	.44	.37	MDCG-4 12-33		
		17-23	10	200	0.75	1.5	75/3	19.687	56.77	2.66	HE135-ND	.71	.60	.51	MARR-2 17-23		
		22-28	10	200	0.75	1.5	75/3	19.05	56.64	2.66	HE136-ND	.71	.60	.51	MARR-2 22-28		
		27-33	10	200	0.75	1.5	75/3	19.05	56.64	2.66	HE527-ND	.71	.60	.51	MARR-2 27-33		
		32-38	10	200	0.75	1.5	75/3	19.05	56.64	2.66	HE528-ND	.71	.60	.51	MARR-2 32-38		
		17-23	10	1000	0.5	1.3	75/3	19.05	56.77	2.66	HE544-ND	1.70	1.44	1.21	MARR-5 17-23		
		22-33	10	1000	0.5	1.3	75/3	19.69	56.77	2.66	HE504-ND	1.70	1.44	1.21	MARR-5 22-33		
		32-38	10	1000	0.5	1.3	75/3	19.69	56.77	2.66	HE529-ND	1.70	1.44	1.21	MARR-5 32-38		
		27-33	50	200	1.5	3.0	75/3	19.69	56.64	2.84	HE546-ND	.76	.64	.54	MRPR-3 27-33		
		32-38	50	200	1.5	3.0	75/3	19.69	56.64	2.84	HE547-ND	.76	.64	.54	MRPR-3 32-38		
		37-43	50	200	1.5	3.0	75/3	19.69	56.64	2.84	HE542-ND	.76	.64	.54	MRPR-3 37-43		
		17-23	50	250	1.0	2.5	75/3	20.32	56.64	2.84	HE543-ND	.94	.80	.67	MRPR-8 17-23		
		22-38	50	250	1.0	2.5	75/3	20.32	56.64	2.84	HE505-ND	.94	.80	.67	MRPR-8 22-38		
2	SPDT	15-25	5	175	0.25	1.5	.7/1	14.73	51.66	2.54	HE506-ND	2.15	1.82	1.52	MDRR-DT 15-25 F		
		30-35	5	175	0.25	1.5	.7/1	14.73	51.66	2.54	HE532-ND	2.13	1.80	1.51	MDRR-DT 30-35 U		
		50-65	50	500	1.5	2.0	5/8	39.37	85.73	5.33	HE508-ND	11.35	9.61	8.04	DRT-DTH 50-65		
		70-75	50	500	1.5	2.0	5/8	38.10	85.73	5.33	HE525-ND	11.35	9.61	8.04	DRT-DTH 70-75		
		80-85	50	500	1.5	2.0	5/8	38.10	85.73	5.33	HE526-ND	11.35	9.61	8.04	DRT-DTH 80-85		
		75-80	30	500	0.5	3.0	4.5/7.0	38.10	85.73	5.33	HE134-ND	8.28	7.01	5.87	DRR-DTH 75-80		
		40-45	30	500	0.5	3.0	4.5/7	38.10	85.73	5.33	HE521-ND	8.28	7.01	5.87	DRR-DTH 40-45		
		45-50	30	500	0.5	3.0	4.5/7	38.10	85.73	5.33	HE522-ND	8.28	7.01	5.87	DRR-DTH 45-50		
		65-70	30	500	0.5	3.0	4.5/7	38.10	85.73	5.33	HE523-ND	8.28	7.01	5.87	DRR-DTH 65-70		
		85-90	30	500	0.5	3.0	4.5/7	38.10	85.73	5.33	HE524-ND	8.28	7.01	5.87	DRR-DTH 85-90		
1	SPST	42-48	100	400	3.0	6.0	4.5/2.5	50.80	82.55	5.25	HE517-ND	2.45	2.08	1.74	DRR-129 42-48		
		47-68	100	400	3.0	6.0	4.5/2.5	50.80	82.55	5.25	HE509-ND	2.45	2.08	1.74	DRR-129 47-68		
		67-73	100	400	3.0	6.0	4.5/2.5	50.80	82.55	5.25	HE518-ND	2.45	2.08	1.74	DRR-129 67-73		
		77-83	100	400	3.0	6.0	4.5/2.5	50.80	82.55	5.25	HE519-ND	2.45	2.08	1.74	DRR-129 77-83		
		87-93	100	400	3.0	6.0	4.5/2.5	50.80	82.55	5.25	HE520-ND	2.45	2.08	1.74	DRR-129 87-93		
3	SPST	10-15	10	200	0.5	0.8	1.0/0.5	11.43	—	0.43	HE548-ND	.81	.68	.57	59170-1-S-00-A		
		20-25	10	200	0.5	0.8	1.0/0.5	11.43	—	0.43	HE550-ND	.81	.68	.57	59170-1-T-00-A		
3	SPST	20-25	10	200	0.5	0.8	1.0/0.5	11.43	—	0.43	HE552-ND	.81	.68	.57	59170-1-U-00-A		

Fig.	Circuit	Operate Time (ms)	Release Time (ms)	Switching Volt. (max.)	Switching Current	Carry Current	Dimensions (mm)			Digi-Key Part No.	Cut Tape Price Each			Digi-Key Part No.	Tape and Reel		Hamlin Part No.
							A	B	C		1	10	50		Qty.	Pricing	
SMT Reed Switches																	
4	SPST	0.6	0.2	200VDC	0.5	1.2	17.52	19.30	2.84	HE151CT-ND	.61	.53	.44	HE151TR-ND	3,000	217.80/M	MDSM-4R 12-18
					0.5	0.8	16.64	21.03	1.27	HE152CT-ND	.91	.79	.66	—	—	—	MDSM-7R 10-15
5	SPST	1.0	0.5	200VDC	0.5	0.8	11.43	16.25	1.52	HE549CT-ND	1.05	.90	.75	HE549TR-ND	2,000	402.21/M	59170-1-S-00-D
					0.5	0.8	11.43	16.25	1.52	HE551CT-ND	1.05	.90	.75	HE551TR-ND	2,000	402.21/M	59170-1-T-00-D
					0.5	0.8	11.43	16.25	1.52	HE553CT-ND	1.05	.90	.75	HE553TR-ND	2,000	402.21/M	59170-1-U-00-D

Magnets

A permanent magnet is the most common source for operating the magnetic reed switch. The method used to position the magnet depends upon the switching requirement but can be used in one of four basic techniques; perpendicular or parallel motion (up and down, side to side) rotation (revolving magnet or switch), shielding (passing a ferromagnetic material between the switch and magnet) or biasing which is using one magnet of opposite polarity to cancel another magnet's lines of force.

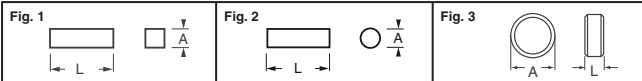


Fig.	Dim. (mm) A x L	Use with A.T. Range	Gauss Strength	Digi-Key Part No.	1	Price Each 10	50	Hamlin Part No.
1	1.57 Sq. x 12.70	10-38	45	HE510-ND	.87	.74	.62	H-31
	4.83 Sq. x 25.40	10-38	200	HE511-ND	2.17	1.84	1.54	H-32
	3.2 Sq. x 19.1	10-38	135	HE512-ND	1.18	1.00	.84	H-33
	6.35 Sq. x 25.4	10-68	260	HE513-ND	2.48	2.10	1.76	H-34
2	3.05 Dia. x 14.99	10-38	120	HE155-ND	1.34	1.14	.96	315
	4.62 Dia x 25.40	10-68	155	HE154-ND	1.44	1.22	1.02	H-36
	3.81 Dia. x 19.81	10-38	175	HE514-ND	1.15	.98	.82	420
	6.00 Dia. x 25.00	10-68	235	HE515-ND	3.28	2.78	2.33	625
3	12.70 Dia. x 5.08	10-38	800	HE153-ND	.85	.72	.61	CM-1

CHERRY

Magnetic Reed Position Sensors

- Features:
- Operating Temperature: -40°C - 105°C
 - Leads: 24 AWG PVC, Pre-tinned, 12" long

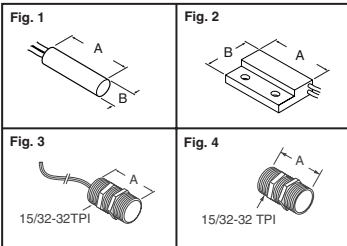


Fig.	Description	Dim. (Inch)	Digi-Key Part No.	1	Price Each 10	50	Cherry Part No.
1	Magnetic Position Sensor, 10W, SPST-NO, .5A	1.00 x .243	CH402-ND	2.37	2.11	1.76	MP201701
	Magnetic Position Sensor, 3W, SPST-NC, .2A	1.00 x .243	CH403-ND	3.94	3.51	2.92	MP201702
	Smooth Barrel Actuator	1.00 x .243	CH411-ND	2.24	1.99	1.66	AS201701
2	Mini Flange Mount Proximity Sensors, 10W, SPST-NO, .5A	.906 x .550	CH405-ND	2.58	2.30	1.92	MP201801
	Mini Flange Mount Proximity Sensors, 3W, SPST-NC, .2A	.906 x .550	CH406-ND	3.98	3.54	2.95	MP201802
	Mini Flange Mount Actuator	.906 x .550	CH412-ND	2.33	2.08	1.73	AS201801
	Flange Mount Proximity Sensors, 10W, SPST-NO, .5A	1.125 x .750	CH407-ND	2.69	2.39	1.99	MP201901
	Flange Mount Proximity Sensors, 3W, SPST-NC, .2A	1.125 x .750	CH409-ND	4.45	3.96	3.30	MP201903
	Flange Mount Actuator	1.125 x .750	CH413-ND	2.53	2.25	1.88	AS201901
3	Magnetic Position Sensor Aluminum 10W, SPST-NO, .5A	1.00	CH410-ND	7.59	6.75	5.62	MP200701
	Magnetic Position Sensor Aluminum 3W, SPST-NC, .2A	1.00	CH709-ND	9.39	8.35	6.96	MP200702
	Magnetic Position Sensor Aluminum 3W, SPST-NC, .2A	1.00	CH710-ND	9.80	8.72	7.26	MP200703
4	Threaded Actuator, South pole magnet	1.00	CH397-ND	10.49	9.33	7.77	HE610400

† Wire leads extend from opposite side of switch ♦ RoHS Compliant

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