Pickering - Reed Relay Finder

HIGH DENSITY VERTICAL

Series Name	124-1-A	122-1-A		120-1-A		117-1-A	117-2-A	116-1-A		116-2-A		115-1-A		115-2-A		112-1-A		110-1-A	
Physical Outline	4mm^2™	4mm^2™		4mm^2™															
Features	Highest Quality Instrumentation Grade Reed Switches; Ultra High Packing Density															High Packing Density			
Dimensions mm (inches) Depth	3.9 (0.153)	3.9 (0.153)		3.9 (0.153)		3.7 (0.145)		3.7 (0.145)				3.7 (0.145)				3.7 (0.145)		3.7 (0.145)	
Width	3.9 (0.153)	3.9 (0.153)		3.9 (0.153)		6.6 (0.26)	9.9 (0.39)	6.6 (0.26)		9.9 (0.39)		6.6 (0.26)		9.9 (0.39)		10.0 (0.395)		10 (0.39)	
Height	9.5 (0.375)	12.5 (0.49)		15.5 (0.61)		9.52 (0.375)		12.45 (0.49)				15.5 (0.61)				11.0 (0.43)		15.2 (0.6)	
Footprint (0.1 inch grid)																			
Contact Configuration	1A (SPST)	1A (SPST)		1A (SPST)		1A (SPST)	2A (DPST)	1A (SPST)		2A (DPST)		1A (SPST)		2A (DPST)		1A (SPST)		1A (SPST)	
Switch Schematic																			
Reed Switch Type	Low Level Dry Reed	General Dry Reed	Low Level Dry Reed	General Dry Reed	Low Level Dry Reed	Low Level Dry Reed		General Dry Reed	Low Level Dry Reed	General Dry Reed	Low Level Dry Reed	General Dry Reed	Low Level Dry Reed	General Dry Reed	Low Level Dry Reed	General Dry Reed	Low Level Dry Reed	General Dry Reed	Low Level Dry Reed
Switch Number	2	1	2	1	2	2		1	2	1	2	1	2	1	2	1	2	1	2
Diode Available	No	No		No		Yes		Yes				Yes				Yes		Yes	
Switching Voltage/V	170 V	200 V	200 V	200 V		170 V		200 V	200 V	200 V	200 V	200 V				200 V	200 V	200 V	
Switching Current/A	0.5 A	1.0 A	0.5 A	1.0 A	0.5 A	0.5 A		1.0 A	0.5 A	1.0 A	0.5 A	1.0 A	0.5 A	1.0 A	0.5 A	1.0 A	0.5 A	1.0 A	0.5 A
Carry Current/A	0.5 A	1.0 A	0.5 A	1.2 A		0.5 A		1.0 A	0.5 A	1.0 A	0.5 A	1.2 A	1.2 A	1.2A	1.2 A	1.0 A	0.5 A	1.2 A	
Switch Power/W	10 W	15 W	10 W	15(3 V), 20	10 W	10 W		15 (3&5 V), 20	10 W	15(5 V), 20	10 W	15(3 V), 20	10 W	15 W	10 W	15 (3 V), 20	10 W	20 W	10 W
Max Initial Contact Resistance/mΩ	180 mΩ	180 mΩ		180 mΩ		120 mΩ		120 mΩ				120 mΩ				120 mΩ		150 mΩ	120 mΩ
Life Expectancy/ operations Min Load	2.5 x 10^{8}	2.5 x 10^{8}		10^{9}		2.5 x 10^{8}		2.5 x 10^{8}				10^{9}				10^{9}		10^{9}	
Typical	10^{7}	10^{7}		10^{8}		10^{7}		10^{7}				10^{8}				10^{7}		10^{8}	
Max Load	10^{6}	10^{6}		10^{7}		10^{6}		10^{6}				10^{7}				10^{6}		10^{7}	
Operate Time/ms	0.2 ms	0.5 ms	0.2 ms	0.5 ms		0.3 ms		0.5 ms				0.5 ms				0.5 ms		0.5 ms	
Release Time/ms	0.1 ms	0.2 ms	0.1 ms	0.2 ms		0.15 ms		0.2 ms				0.2 ms				0.2 ms		0.2 ms	
Insulation Resistance/Ω	10^{12} Ω	10^{12} Ω		10^{12} Ω		10^{12} Ω		10^{12} Ω				10^{12} Ω				10^{12} Ω		10^{12} Ω	
Coil Resistance 3 V/Ω	75 Ω	125 Ω		200 Ω	200 Ω	200 Ω	–	250 Ω		–		250 Ω		–	–	250 Ω		–	250 Ω
5 V/Ω	200 Ω	350 Ω		300 Ω	500 Ω	400 Ω	250 Ω	500 Ω		375 Ω		500 Ω		250 Ω	375 Ω	500 Ω		500 Ω	
12 V/Ω	–	–		800 Ω	800 Ω	–		750 Ω		750 Ω		1000 Ω		750 Ω	750 Ω	750 Ω		1000 Ω	
24 V/Ω	–	–		–	–	–		–				–		–	–	–		–	–

PLASTIC PACKAGE SIL

Series Name	113-1-A		113SP-1-A	113-2-A		113-1-C	111P-1-A	109P-1-A		106-1-A		106-1-C	105-1-A					105-1-C	105-1-B		105-2-A			103-1-A & 103M-1-A	
Physical Outline																									
Features	Highest Quality Instrumentation Grade Reed Switches; High Packing Density					Smallest Form C	High Packing Density			Standard 0.2" Pitch			Wide Range of Configurations											Low Capacitance	
Dimensions mm (inches) Depth	3.7 (0.145)						3.7 (0.145)	3.7 (0.145)		4.8 (0.19)			6.6 (0.26)											4.8 (0.19)	
Width	12.5 (0.49)						10.0 (0.39)	15.1 (0.595)		19.1 (0.75)			19.1 (0.75)											19.1 (0.75)	
Height	6.6 (0.26)			8.9 (0.35)		6.6 (0.26)	6.6 (0.26)	6.6 (0.26)		8.1 (0.32)			7.9 (0.31)						10.7 (0.42)					8.1 (0.32)	
Footprint (0.1 inch grid)																									
Contact Configuration	1A (SPST)		1A (SPST)	2A (DPST)		1C (SPDT)	1A (SPST)	1A (SPST)		1A (SPST)		1C (SPDT)	1A (SPST)					1C (SPDT)	1B (SPNC)		2A (DPST)			1A (SPST)	
Switch Schematic																									
Reed Switch Type	General Dry Reed	Low Level Dry Reed		General Dry Reed	Low Level Dry Reed	Dry Reed	General Dry Reed	General Dry Reed	Low Level Dry Reed	General Dry Reed	Low Level Dry Reed	Dry Reed	General Dry Reed	Low Level Dry Reed	High Voltage Switch	Standard Mercury Switch	Position Insensitive Switch	Dry Reed	General Dry Reed	Low Level Dry Reed	General Dry Reed	Low Level Dry Reed	Standard Mercury Switch	General Dry Reed	Low Level Dry Reed
Switch Number	1	2		1	2	3	1	1	2	1	2	3	1	2	4	6	8	3	1	2	1	2	6	1	2
Diode Available		Yes					Yes	Yes		Yes			Yes											Yes	
Switching Voltage/V	200 V	200 V	200 V	200 V	200 V	30 V	170 V	200 V		200 V			200 V		500 V			200 V					500 V	200 V	
Switching Current/A	1.0 A	0.5 A	0.5 A	1.0 A	0.5 A	0.1 A	0.5 A	1.0 A	0.5 A	1.0 A	0.5 A	0.25 A	1A	0.5 A	0.5 A	2 A	2 A	0.25 A	1A	0.5 A	1A	0.5 A	2 A	1A	0.5 A
Carry Current/A	1.0 A	0.5 A	0.5 A	1.0 A	0.5 A	0.1 A	0.5 A	1.2 A		1.2 A			1.2 A			3 A	3 A	1.2 A					3 A	1.2 A	
Switch Power/W	15(3 V),20	10 W	10 W	20 W	10 W	2 W	10 W	15(5L),20	10 W	20 W	10 W	3 W	15(3 V), 20	10 W	10 W	50 W	50 W	3 W	15(5V), 20	10 W	15(5V), 20	10 W	50 W	15 W	10 W
Max Initial Contact Resistance/mΩ	120 mΩ					250 mΩ	150 mΩ	150 mΩ	120 mΩ	150 mΩ	120 mΩ	200 mΩ	150 mΩ	120 mΩ	150 mΩ	75 mΩ	100 mΩ	200 mΩ	150 mΩ		170 mΩ	150 mΩ	100 mΩ	150 mΩ	120 mΩ
Life Expectancy/ operations Min Load	2.5 x 10^{8}					2.5 x 10^{8}	2.5 x 10^{8}	10^{9}		10^{9}		10^{8}	10^{9}		10^{8}	10^{9}		10^{8}	10^{9}					10^{9}	
Typical	10^{7}					10^{7}	10^{7}	10^{8}		10^{8}		10^{7}	10^{8}		10^{7}	10^{8}		10^{7}	10^{8}					10^{8}	
Max Load	10^{6}					10^{6}	10^{6}	10^{7}		10^{7}		10^{6}	10^{7}		10^{6}	10^{7}		10^{6}	10^{7}					10^{7}	
Operate Time/ms	0.5 ms					1 ms	0.5 ms	0.5 ms		0.5 ms		1 ms	0.5 ms		0.75	1.5 ms	1.5 ms	1 ms	0.5 ms				1.5 ms	0.5 ms	
Release Time/ms	0.2 ms					0.2 ms	0.2 ms	0.2 ms		0.2 ms		0.5 ms	0.2 ms		0.5	1 ms	1 ms	0.5 ms	0.2 ms				1 ms	0.2 ms	
Insulation Resistance/Ω	10^{12} Ω					10^{10} Ω	10^{12} Ω	10^{12} Ω		10^{12} Ω		10^{10} Ω	10^{12} Ω			10^{11} Ω		10^{1} Ω	10^{12} Ω				10^{11} Ω	10^{12} Ω	
Coil Resistance 3 V/Ω	250 Ω		–	–		–	200 Ω	–	250 Ω	–	500 Ω	–	500 Ω	500 Ω	–	–	–	–	–		–	–	–	–	–
5 V/Ω	500 Ω			150 Ω		150 Ω	400 Ω	500 (1000 for high sensitivity version)		500 Ω			500 Ω			140 Ω		500 Ω	1000 Ω		500 Ω		100 Ω	150 Ω	
12 V/Ω	650 Ω			–		–	–	1000		1000 Ω			1000 Ω			500 Ω		1000 Ω	3000 Ω		1000 Ω		375 Ω	–	–
24 V/Ω	–		–	–		–	–	–	–	–	–	–	3000 Ω			1500 Ω		3000 Ω	3000 Ω		3000 Ω		1000 Ω	–	–

COAXIAL/RF/HIGH SPEED DIGITAL REED RELAYS

Series Name	111RF-1-A	113RF-1-A	109RF50-1-A		109RF75-1-A		103G-1-A		103GM-1-A		102M-1-A		102M-1-B	
Physical Outline		NEW												
Features	Highest Quality Instrumentation Grade Reed Switches; SoftCenter™		SoftCenter™ Construction in Mu-Metal Can				Low Capacitance				Up to 20 W Switching			
Dimensions mm (inches) Depth	3.7 (0.145)	3.7 (0.145)	3.7 (0.145)				4.8 (0.19)				4.8 (0.19)			
Width	10.0 (0.39)	12.5 (0.49)	15.1 (0.595)				19.1 (0.75)				19.1 (0.75)			
Height	6.6 (0.26)	6.6 (0.26)	6.6 (0.26)				8.1 (0.32)				7.6 (0.3)		10.2 (0.4)	
Footprint (0.1 inch grid)														
Contact Configuration	1A (SPST)	1A (SPST)	1A (SPST)				1A (SPST)		1A (SPST)		1A (SPST)		1B (SPNC)	
Switch Schematic														
Reed Switch Type	General Dry Reed	General Dry Reed	General Dry Reed	Low Level Dry Reed	General Dry Reed	Low Level Dry Reed	General Dry Reed	Low Level Dry Reed	General Dry Reed	Low Level Dry Reed	General Dry Reed	Higher Power Dry Reed	General Dry Reed	Higher Power Dry Reed
Switch Number	1	2	1	2	1	2	1	2	1	2	1	2	1	2
Diode Available	Yes	Yes	Yes				Yes				Yes			
Switching Voltage/V	170 V	200 V	200 V				200 V		200 V		200 V			
Switching Current/A	0.5 A	0.5 A	1A	0.5 A	1A	0.5 A	1A	0.5 A	1A	0.5 A	0.5 A	1A	0.5 A	1A
Carry Current/A	0.5 A	0.5 A	1.2 A				1.2 A		1.2 A		1.2 A			
Switch Power/W	10 W	10 W	20 W	10 W	20 W	10 W	15(5 V), 20	10 W	20 W	10 W	10 W	20 W	10 W	20 W
Max Initial Contact Resistance/mΩ	150 mΩ	120 mΩ	150 mΩ	120 mΩ	150 mΩ	120 mΩ	150 mΩ	120 mΩ	150 mΩ	120 mΩ	150 mΩ	150 mΩ	150 mΩ	150 mΩ
Life Expectancy/ operations Min Load	2.5 x 10^{8}	2.5 x 10^{8}	10^{9}				10^{9}		10^{9}		10^{9}			
Typical	10^{7}	10^{7}	10^{8}				10^{8}		10^{8}		10^{8}			
Max Load	10^{6}	10^{6}	10^{7}				10^{7}		10^{7}		10^{7}			
Operate Time/ms	0.5 ms	0.5 ms	0.5 ms				0.5 ms		0.5 ms		0.5 ms			
Release Time/ms	0.2 ms	0.2 ms	0.2 ms				0.2 ms		0.2 ms		0.2 ms			
Insulation Resistance/Ω	10^{12} Ω	10^{12} Ω	10^{12} Ω				10^{12} Ω		10^{12} Ω		10^{12} Ω			
Coil Resistance 3 V/Ω	–	100 Ω	–	200 Ω	–	–	–	300 Ω		300 Ω	250 Ω	–	–	–
5 V/Ω	180 Ω	300 Ω	375 Ω				500 Ω	500 Ω	500 Ω	500 Ω	500 Ω	375 Ω	1000 Ω	1000 Ω
12 V/Ω	–	–	600 Ω				1000 Ω	1000 Ω	1000 Ω	1000 Ω	1000 Ω		1500 Ω	
24 V/Ω	–	–	–	–	–	–	–	–			–	–	–	–

METAL PACKAGE SIL

Series Name	111-1-A	109-1-A		109-1-C	109-1-B	109-2-A	108-1-A		108-1-C	108-2-A		107-1-A					107-1-C	107-1-B		107-2-A			107-2-C
Physical Outline																							
Features	Highest Quality Instrumentation Grade Reed Switches; SoftCenter™ Construction in Mu-Metal Can																						
Dimensions mm (inches) Depth	3.7 (0.145)	3.7 (0.145)					3.7 (0.145)					4.8 (0.19)											
Width	10.0 (0.39)	15.1 (0.595)					20.0 (0.79)					19.1 (0.75)											24.1 (0.95)
Height	6.6 (0.26)	6.6 (0.26)			8.9 (0.35)		6.6 (0.26)			8.9 (0.35)		7.6 (0.3)						10.2 (0.4)					
Footprint (0.1 inch grid)																							
Contact Configuration	1A (SPST)	1A (SPST)		1C (SPDT)	1B (SPNC)	2A (DPST)	1A (SPST)		1C (SPDT)	2A (DPST)		1A (SPST)					1C (SPDT)	1B (SPNC)		2A (DPST)			2C (DPDT)
Switch Schematic																							
Reed Switch Type	General Dry Reed	General Dry Reed	Low Level Dry Reed	Dry Reed	Low Level Dry Reed		General Dry Reed	Low Level Dry Reed	Dry Reed	General Dry Reed	Low Level Dry Reed	General Dry Reed	Low Level Dry Reed	High Voltage Switch	Standard Mercury Switch	Position Insensitive Switch	Dry Reed	General Dry Reed	Low Level Dry Reed	General Dry Reed	Low Level Dry Reed	Standard Mercury Switch	Dry Reed
Switch Number	1	1	2	3	2		1	2	3	1	2	1	2	4	6	8	3	1	2	1	2	6	3
Diode Available	Yes	Yes					Yes					Yes											
Switching Voltage/V	170 V	200 V		30 V	200 V		200 V					200 V		400 V	500 V	500 V	200 V					500 V	200 V
Switching Current/A	0.5 A	1A	0.5 A	0.1 A	0.5 A		1A	0.5 A	0.25 A	1A	0.5 A	1A	0.5 A		2 A	2 A	0.25 A	1A	0.5 A	1A	0.5 A	2 A	0.25 A
Carry Current/A	0.5 A	1.2 A		0.1 A	1.2 A		1.2 A					1.2 A			3 A	3 A	1.2 A					3 A	1.2 A
Switch Power/W	10 W	15(5L), 20	10 W	2 W	10 W		20 W	10 W	3 W	15(5 V), 20	10 W	15(3 V), 20	10 W		50 W	50 W	3 W	15(5 V), 20	10 W	15(5 V), 20	10 W	50 W	3 W
Max Initial Contact Resistance/mΩ	150 mΩ	150 mΩ	120 mΩ	250 mΩ	120 mΩ	140 mΩ	150 mΩ	120 mΩ	200 mΩ	170 mΩ	150 mΩ	150 mΩ	120 mΩ	150 mΩ	75 mΩ	100 mΩ	200 mΩ	150 mΩ		170 mΩ	150 mΩ	100 mΩ	220 mΩ
Life Expectancy/ operations Min Load	2.5 x 10^{8}	10^{9}		10^{8}	10^{9}		10^{9}		10^{8}	10^{9}		10^{9}		10^{8}	10^{9}		10^{8}	10^{9}					10^{8}
Typical	10^{7}	10^{8}		10^{7}	10^{8}		10^{8}		10^{7}	10^{8}		10^{8}		10^{7}	10^{8}		10^{7}	10^{8}					10^{7}
Max Load	10^{6}	10^{7}		10^{6}	10^{7}		10^{7}		10^{6}	10^{7}		10^{7}		10^{6}	10^{7}		10^{6}	10^{7}					10^{6}
Operate Time/ms	0.5 ms	0.5 ms		0.75 ms	0.5 ms		0.5 ms		1 ms	0.5 ms		0.5 ms		0.75	2 ms		1 ms	0.5 ms				2 ms	1 ms
Release Time/ms	0.2 ms	0.2 ms		0.5 ms	0.2 ms		0.2 ms		0.5 ms	0.2 ms		0.2 ms		0.5 ms	1.25 ms		0.5 ms	0.2 ms				1.25 ms	0.5 ms
Insulation Resistance/Ω	10^{12} Ω	10^{12} Ω		10^{11} Ω	10^{12} Ω		10^{12} Ω		10^{10} Ω	10^{12} Ω		10^{12} Ω			10^{11} Ω		10^{10} Ω	10^{12} Ω				10^{11} Ω	10^{10} Ω
Coil Resistance 3 V/Ω	200 Ω	–	330 Ω	100 Ω	–	200 Ω	–	330 Ω	–	–	–	500 Ω	500 Ω	–	–	–	–	–		–	–	–	200 Ω
5 V/Ω	500 Ω	500 (1000 for high sensitivity version)		150 Ω	750 Ω	375 Ω	500 Ω			375 Ω		500 Ω			140 Ω		500 Ω	1000 Ω		500 Ω	500 Ω	100 Ω	375 Ω
12 V/Ω	–	1000 Ω		–	–	750 Ω	1000 Ω			1000 Ω		1000 Ω			500 Ω		1000 Ω	3000 Ω		1000 Ω	1000 Ω	375 Ω	1000 Ω
24 V/Ω	–	–	–	–	–	–	–	–	–	–	–	3000 Ω			1500 Ω		3000 Ω	3000 Ω		3000 Ω	3000 Ω	1000 Ω	2700 Ω

LOW COIL POWER/LOW THERMAL EMF

Series Name	118-1-A		101-1-A						101-1-C	101-1-B		101-2-A			100-1-A					100-1-C	100-1-B		100-2-A		
Physical Outline																									
Features	Highest Quality Instrumentation Grade Reed Switches; Direct Drive From CMOS														Highest Quality Instrumentation Grade Reed Switches; Direct Drive From CMOS - Low Thermal EMF										
Dimensions mm (inches) Depth	5.08 (0.2)		7.4 (0.29)												10.2 (0.40)										
Width	8.38 (0.33)		20.1 (0.79)												24.1 (0.95)										
Height	15.5 (0.61)		9.4 (0.37)							12.5 (0.49)					12.7 (0.5)						15.2 (0.60)				
Footprint (0.1 inch grid)																									
Contact Configuration	1A (SPST)		1A (SPST)						1C (SPDT)	1B (SPNC)		2A (DPST)			1A (SPST)					1C (SPDT)	1B (SPNC)		2A (DPST)		
Switch Schematic																									
Reed Switch Type	General Dry Reed	Low Level Dry Reed	General Dry Reed	Low Level Dry Reed	Low Level Dry Reed (Special)	High Voltage Switch	Standard Mercury Switch	Position Insensitive Switch	Dry Reed	General Dry Reed	Low Level Dry Reed	General Dry Reed	Low Level Dry Reed	Standard Mercury Switch	General Dry Reed	Low Level Dry Reed	High Voltage Switch	Standard Mercury Switch	Position Insensitive Switch	Dry Reed	General Dry Reed	Low Level Dry Reed	General Dry Reed	Low Level Dry Reed	Standard Mercury Switch
Switch Number	1	2	1	2	2 (17D)	4	6	8	3	1	2	1	2	6	1	2	4	6	8	3	1	2	1	2	6
Diode Available	Yes		Yes												Yes										
Switching Voltage/V	200 V		200 V			500 V			200 V					500 V	200 V		500 V			200 V					500 V
Switching Current/A	1A	0.5 A	1A	0.5 A			2 A	2 A	0.25 A	1A	0.5 A	1A	0.5 A	2 A	1A	0.5 A		2 A	2 A	0.25 A	1A	0.5 A	1A	0.5 A	2 A
Carry Current/A	1.2 A		1.2 A				3 A	3 A	1.2 A					3 A	1.2 A			3 A	3 A	1.2 A					3 A
Switch Power/W	15 W	10 W	15(3 V), 20	10 W			50 W	50 W	3 W	15(5 V), 20	10 W	15(5 V), 20	10 W	50 W	15(5 V), 20	10 W		50 W	50 W	3 W	15(5 V), 20	10 W	15(5 V), 20	10 W	50 W
Max Initial Contact Resistance/mΩ	120 mΩ		150 mΩ	120 mΩ		150 mΩ	75 mΩ	100 mΩ	200 mΩ	150 mΩ		170 mΩ	150 mΩ	100 mΩ	150 mΩ	120 mΩ	150 mΩ	100 mΩ	120 mΩ	200 mΩ	170 mΩ		200 mΩ	180 mΩ	150 mΩ
Life Expectancy/ operations Min Load	10^{9}		10^{9}						10^{8}	10^{9}					10^{9}					10^{8}	10^{9}				
Typical	10^{8}		10^{8}						10^{7}	10^{8}					10^{8}					10^{7}	10^{8}				
Max Load	10^{7}		10^{7}						10^{6}	10^{7}					10^{7}					10^{6}	10^{7}				
Operate Time/ms	0.6 ms		1 ms			1.75 ms			1.25 ms	1 ms		1 ms		1.75 ms	1 ms		1.75 ms	2 ms		1 ms	1 ms		1 ms	1 ms	2 ms
Release Time/ms	0.35 ms		0.75 ms			1.75 ms			1 ms	0.75 ms				1.75 ms	1 ms		1.75 ms	2 ms		1 ms	1 ms		1 ms	1 ms	2 ms
Insulation Resistance/Ω	10^{12} Ω		10^{12} Ω			10^{11} Ω			10^{10} Ω	10^{12} Ω				10^{11} Ω	10^{12} Ω			10^{12} Ω	10^{11} Ω	10^{10} Ω	10^{12} Ω				10^{11} Ω
Coil Resistance 3 V/Ω	–	1000 Ω	800 Ω	1600 Ω	–	–	–	–	700 Ω	–		–	1000 Ω	–	–	2000 Ω	–	–	–	–	–		–	–	–
5 V/Ω	1500 Ω	2200 Ω	1600 Ω		3000 Ω	1600 Ω	375 Ω		1600 Ω	3000 Ω		1000 Ω		150 Ω	3300 Ω		2200 Ω	500 Ω	370 Ω	3300 Ω	2700 Ω				370 Ω
12 V/Ω	–		6000 Ω		–	6000 Ω	1000 Ω		6000 Ω	6000 Ω		3000 Ω		650 Ω	6800 Ω			2000 Ω	1000 Ω	6800 Ω	6000 Ω				1000 Ω
24 V/Ω	–		6000 Ω		–	6000 Ω	3000 Ω		6000 Ω	6000 Ω		6000 Ω		2000 Ω	6800 Ω			3300 Ω		6800 Ω	6000 Ω				3300 Ω

HIGH VOLTAGE

For Surface Mount High Voltage Relays please see the Surface Mount Panel

Series Name	131-1-A		119-1-A					119-2-A		119-1-B			106-1-A
Physical Outline	NEW												
Features	Highest Quality Instrumentation Grade Reed Switches; High Voltage												
Dimensions mm (inches) Depth	3.7 (0.145)		3.7 (0.145)							3.7 (0.145)			4.8 (0.19)
Width	12.5 (0.49)		15.1 (0.595)				20.1 (0.79)			15.1 (0.595)			19.1 (0.75)
Height	6.6 (0.26)		6.6 (0.26)					8.9 (0.35)		8.9 (0.35)			8.1 (0.32)
Footprint (0.1 inch grid)													
Contact Configuration	1A (SPST)		1A (SPST)					2A (DPST)		1B (SPNC)			1A (SPST)
Switch Schematic													
Reed Switch Stand Off/kV	1 kV Min	1.5 kV Min	1 kV Min	1.5 kV Min		2 kV Min	3 kV Min	1 kV Min	1.5 kV Min	1 kV Min	1.5 kV Min	2 kV Min	1.5 kV Min
Switch Number	1 (L)	1	1 (L)	1	2 (L)	2	3	1 (L)	1	1 (L)	1	2	5
Diode Available	Yes		Yes										Yes
Switching Voltage/V	1000 V		1000 V										500 V
Switching Current/A	0.7 A		0.7 A										0.5 A
Carry Current/A	1.25 A		1.25 A										1.2 A
Switch Power/W	10 W		10 W										10 W
Max Initial Contact Resistance/mΩ	170 mΩ		170 mΩ										150 mΩ
Life Expectancy/ operations Min Load	10^{8}		10^{9}										10^{9}
Typical	-		10^{8}										10^{8}
Max Load	10^{7}		10^{7}										10^{7}
Operate Time/ms	0.5 ms		0.5 ms										0.5 ms
Release Time/ms	0.2 ms		0.2 ms										0.2 ms
Insulation Resistance/Ω	10^{12} Ω		10^{12} Ω										10^{12} Ω
Coil Resistance 3 V/Ω	100 Ω		100 Ω	100 Ω	50 Ω	75 Ω	50 Ω	50 Ω	50 Ω	50 Ω	50 Ω	50 Ω	-
5 V/Ω	250 Ω		250 Ω	250 Ω	125 Ω	200 Ω	125 Ω	100 Ω	100 Ω	100 Ω	100 Ω	100 Ω	375 Ω
12 V/Ω	750 Ω		750 Ω	750 Ω	400 Ω	500 Ω	400 Ω	400 Ω	400 Ω	400 Ω	400 Ω	400 Ω	1000 Ω
24 V/Ω	–		–	–	–	–	–	–	–	–	–	–	-

Series Name	104-1-A & 104HT-1-A											104ES-1-A			104-1-B		104-2-A		
Physical Outline	NEW																		
Features	Highest Quality Instrumentation Grade Reed Switches; High Voltage																		
Dimensions mm (inches) Depth	6.3 (0.245)																		
Width	24.1 (0.95)											24.1 (0.95)			29 (1.14)				
Height	8.2 (0.32)											8.2 (0.32)			12.5 (0.49)				
Footprint (0.1 inch grid)																			
Contact Configuration	1A (SPST)											1A (SPST)			1B (SPNC)		2A (DPST)		
Switch Schematic												Electrostatic Screened							
Reed Switch Stand Off/kV	1.5 kV Min (Inc High Temp)		2 kV Min (Inc High Temp)		1.5 kV Min (Mercury)	3 kV Min (Inc High Temp)		4 kV Min (Inc High Temp)		5 kV Min (Inc High Temp)		1.5 kV Min	2 kV Min	3 kV Min	1.5 kV Min	2 kV Min	1.5 kV Min	2 kV Min	1.5 kV Min (Mercury)
Switch Number	1		2		6	3		4		5		1	2	3	1	2	1	2	6
Diode Available	Yes																		
Switching Voltage/V	1000 V		1000 V		500 V	1000 (1500) V				1000 (1500) V		1000 V			1000 V	1000 V	500 V	1000 V	500 V
Switching Current/A	1A				2 A	1A				1A		1A			1A				2 A
Carry Current/A	1.5 A				3 A	1.5 A				1.5 A		1.5 A			1.5 A				3 A
Switch Power/W	25 W				50 W	25 (3) W				25 (3) W		25 W			25 W				50 W
Max Initial Contact Resistance/mΩ	150 mΩ				120 mΩ	150 mΩ				150 mΩ		150 mΩ			200 mΩ				150 mΩ
Life Expectancy/ operations Min Load	10^{9}																		
Typical	10^{8}																		
Max Load	10^{7}																		
Operate Time/ms	1 ms				1.5 ms	1 ms				1 ms		1 ms							1.5 ms
Release Time/ms	0.3 ms				1 ms	0.3 ms				0.3 ms		0.3 ms							1 ms
Insulation Resistance/Ω	10^{12} Ω				10^{11} Ω	10^{12} Ω				10^{12} Ω		10^{12} Ω			10^{12} Ω	10^{12} Ω	10^{12} Ω	10^{12} Ω	10^{11} Ω
Coil Resistance 3 V/Ω	–				–	–				–		–			–		–	–	–
5 V/Ω	375 Ω	300 Ω	375 Ω	300 Ω	100 Ω	220 Ω	125 Ω	220 Ω	125 Ω	220 Ω	125 Ω	150 Ω		50 Ω	750 Ω		250 Ω		50 Ω
12 V/Ω	1000 Ω	750 Ω	1000 Ω	750 Ω	500 Ω	500 Ω	500 Ω	500 Ω	500 Ω	500 Ω	500 Ω	600 Ω		400 Ω	2000 Ω		750 Ω		275 Ω
24 V/Ω	3000 Ω	3000 Ω	3000 Ω	3000 Ω	1500 Ω	3000 Ω	2500 Ω	3000 Ω	2500 Ω	3000 Ω	2500 Ω	2000 Ω		1200 Ω	3000 Ω		2000 Ω		1000 Ω

Series Name	100HV-1-A			100HV-1-B		100HV-2-A		62/63-1-A			62/63-1-B		60/65-1-A			60/65-1-B	
Physical Outline	NEW																
Features	Highest Quality Instrumentation Grade Reed Switches; High Voltage							Robust Tungsten Plated Switches; High Voltage									
Dimensions mm (inches) Depth	10.2 (0.40)							19.05 (0.75)					16.0 (0.63)				
Width	24.1 (0.95)			29.0 (1.14)				63.5 (2.5)					57.9 (2.28)				
Height	12.7 (0.50)			15.2 (0.60)				21.3 (0.84)					18.0 (0.71)				
Footprint (0.1 inch grid)								Scaled 50%					Scaled 50%			Bottom Pins (Package Type 3)	
Contact Configuration	1A (SPST)			1B (SPNC)		2A (DPST)		1A (SPST)			1B (SPNC)		1A (SPST)			1B (SPNC)	
Switch Schematic																	
Reed Switch Stand Off/kV	1.5 kV Min	2 kV Min	3 kV Min	1.5 kV Min	2 kV Min	1.5 kV Min	2 kV Min	5 kV	10 kV	15 kV	5 kV	10 kV	5 kV	10 kV	15 kV	5 kV	10 kV
Switch Number	1	2	3	1	2	1	2	1	2	3	1	2	1	2		1	2
Diode Available	Yes							No					No				
Switching Voltage/V	1000 V							3500 V	7500	12500	3500 V	7500 V	3500	7500	12500	3500 V	7500 V
Switching Current/A	1A							3 A					3 A				
Carry Current/A	1.5 A							3.5 A					3.5 A				
Switch Power/W	25 W							50 W					50 W				
Max Initial Contact Resistance/mΩ	150 mΩ			200 mΩ				120 mΩ					120 mΩ				
Life Expectancy/ operations Min Load	10^{9}							10^{8}					10^{8}				
Typical	10^{8}							10^{7}					10^{7}				
Max Load	10^{7}							10^{6}					10^{6}				
Operate Time/ms	2 ms							3 ms					3 ms				
Release Time/ms	1 ms							2 ms					2 ms				
Insulation Resistance/Ω	10^{12} Ω							10^{12} Ω					10^{12} Ω				
Coil Resistance 3 V/Ω	–	–	–	–	–	–	–	–		–	–		–		–	–	
5 V/Ω	2200 Ω	1000 Ω	500 Ω	500 Ω	500 Ω	500 Ω	500 Ω	50 Ω		25 Ω	50 Ω		35 Ω		20 Ω	35 Ω	
12 V/Ω	6800 Ω	3300 Ω	2000 Ω	2500 Ω	2000 Ω	2500 Ω	2000 Ω	150 Ω		75 Ω	150 Ω		150 Ω		50 Ω	150 Ω	
24 V/Ω	6800 Ω	6800 Ω	6800 Ω	6000 Ω	4000 Ω	6000 Ω	4000 Ω	500 Ω		350 Ω	500 Ω		500 Ω		200 Ω	500 Ω	

Series Name	67-1-A			67ES-1-A	67-1-C	68-1-A		68ES-1-A	
Physical Outline	NEW								
Features	Robust Tungsten Plated Switches; High Voltage								
Dimensions mm (inches) Depth	12.6 (0.495)								
Width	58.4 (2.3)								
Height	14.5 (0.57)								
Footprint (0.1 inch grid)	Scaled 50%								
Contact Configuration	1A (SPST)			1A (SPST)	1C (SPDT)	1A (SPST)		1A (SPST)	
Switch Schematic				Electrostatic Screened				Electrostatic Screened	
Reed Switch Stand Off/kV	5 kV	10 kV	8 kV	5 kV	5 kV	5 kV	10 kV	5 kV	10 kV
Switch Number	1	2	4	1	5	1	2	1	2
Diode Available	Yes								
Switching Voltage/V	3500 V	7500 V	6000 V	3500 V	2500 V	3500 V	7500 V	3500 V	7500 V
Switching Current/A	3 A			3 A	3 A	3 A		3 A	3 A
Carry Current/A	3.5 A	3.5 A	5 A	3.5 A	3.2 A	3.5 A		3.5 A	3.5 A
Switch Power/W	50 W	50 W	200 W	50 W	100 W	50 W		50 W	50 W
Max Initial Contact Resistance/mΩ	120 mΩ		500 mΩ	120 mΩ	500 mΩ	120 mΩ		120 mΩ	120 mΩ
Life Expectancy/ operations Min Load	10^{8}			10^{8}	10^{8}	10^{8}		10^{8}	10^{8}
Typical	10^{7}			10^{7}	10^{7}	10^{7}		10^{7}	10^{7}
Max Load	10^{6}			10^{6}	10^{6}	10^{6}		10^{6}	10^{6}
Operate Time/ms	3 ms		6 ms	3 ms	4 ms	3 ms		3 ms	3 ms
Release Time/ms	2 ms			2 ms	4 ms	2 ms		2 ms	2 ms
Insulation Resistance/Ω	10^{12} Ω		10^{10} Ω	10^{12} Ω	10^{10} Ω	10^{12} Ω		10^{12} Ω	10^{12} Ω
Coil Resistance 3 V/Ω	–			–	–	–		–	–
5 V/Ω	40 Ω			15 Ω	40 Ω	40 Ω		15 Ω	15 Ω
12 V/Ω	150 Ω			100 Ω	150 Ω	150 Ω		100 Ω	100 Ω
24 V/Ω	600 Ω			200 Ω	600 Ω	600 Ω		200 Ω	200 Ω

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pickeringrelay.com

Custom Reed Relays

Pickering may be able to adapt an existing relay or design a special part to suit your needs. Some examples are below:

- Standard parts: Custom pinouts or pin length

- Specialized Applications, for example, current operated relays

- Copper plated switches for RF/HF applications
- 1 and 2 Form A available

- 2-Pole Mercury Wet relay with custom pinout, an equivalent to a competitor's discontinued part

- 2-Pole Mercury Wet Changeover relay where a common open time is required

Help with your Custom Requirements

Go to: pickeringrelay.com/reed-relays/custom-reed-relays

If your questions are not answered there please call
+44 (0) 1255 428141 or e-mail: techsales@pickeringrelay.com

- Standard Catalog parts tested to a higher spec. For example, the Series 104 has been modified for applications requiring an increased voltage

For a **free evaluation sample** call technical sales on
+44 (0) 1255 428141, or e-mail sales@pickeringrelay.com

Free Literature, Relay Selection and Samples

The Reed RelayMate

This book from Pickering Electronics is a publication which looks in detail at reed relays. In it you'll find out how reed relays are constructed, what types there are, how they work, what parameters affect their operation, how to choose the correct relay, a comparison with other relay technologies and how to drive and place reed relay coils.

The Reed RelayMate is available **FREE** from the Pickering Electronics' website in printed copy or pdf format.

The Concise Technical Guide

This guide will help you to maximise the reliability of your design whilst using Reed Relays. Contents includes: temperature effects, contact abuse, magnetic interaction, as well as Pickering's unique manufacturing techniques such as former-less coils and ***SoftCenter***™ construction; offering many benefits over other relay manufacturers.

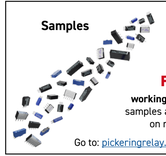
The Concise Technical Guide is available **FREE** from the Pickering Electronics' website in printed copy or pdf format.

The Reed Relay Selector Tool

Because Pickering offer the largest range of high-quality reed relays, sometimes it can be diffcult to find the right reed relay you require. That is why we created the Reed Relay Selector. The tool will help you narrow down our offering to get you the correct reed relay for your application. Once you narrow your selections down you can download a reed relay datasheet for more information, purchase in stock items or request a quote to find out lead times of made to order (MTO) relays.

Go to: pickeringrelay.com/reed-relay-selector-tool

Samples



FREE
working evaluation samples are available on request.

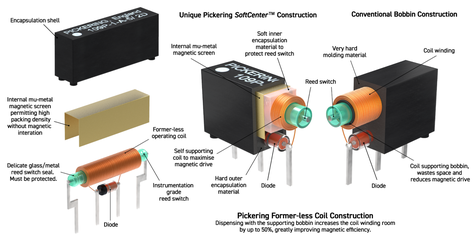
Go to: pickeringrelay.com/samples

Glossary of Relay Terms

For a glossary of terms used in Reed Relay manufacture visit: pickeringrelay.com/glossary/

Pickering *SoftCenter*™ Technology

Typical Pickering Construction using Former-less Coils and our *SoftCenter*™ technology



Pickering Former-less Coil Construction
Dispensing with the supporting bobbin increases the coil winding room by up to 50%, greatly improving magnetic efficiency.

To learn more visit: **pickeringrelay.com/softcenter**

Choosing a Reed Relay

Signal Voltage, Current and Power Specification

All reed relays have specified voltage and current ratings that need to be kept within if the reed relay is to have a long service life. It important to be clear if the application envisages hot switch or cold switching, it can have a substantial impact on the cost and size of the relay used. If hot switching is likely to occur the most common mistake is to ignore the power rating of the reed relay, the fact a particular relay may be capable of 100 V and 1A does not mean it can hot switch a signal with these extremes of value. A 10 W reed relay for example will only switch a 100 V, 100 mA signal reliably.

If hot switching is not expected to happen then the user can rely on the carry current rating and to withstand the rated voltage across the contacts.

SMD or Thru Hole Mounting

Users often have a choice of using thru hole components or surface mount packages for reed relays.

With other component types the choice may be driven in part by the density that can be achieved on a PCB, however this is not always the case with reed relays. Reed relays are not particularly small devices by modern standards as magnetic interaction can be a real problem on some systems (though not on Pickering Electronics based solutions where the built in magnetic shield prevents problems).

Manufacturing processes may prefer to use SMD components, in which case there are solutions which are available for most applications. However, the choice is more diffcult when the relay is considered to be a potential service item. The relay could be considered to be a service item if it is frequently exposed to hot switching events which might wear out the contact materials or where (as is the case in ATE systems) connection to faulty devices or even programming errors can result in the relay being damaged.

Removing surface mounted components is an intrusive procedure – even using specialist de-soldering tools not only the component to be removed but also adjacent components are subject to heating, solder reflow and stress. In these circumstances thru hole components are much easier to manage and require no specialist de-soldering tools or high operator skills. It is more likely the item can be serviced locally, and it is less likely to cause damage elsewhere in the assembly.

For applications where relays may have to be serviced Pickering Electronics recommend that thru hole components are used. Outside of these applications the choice is driven by user manufacturing preferences and the component choices such as footprint area, relay ratings and relay height.

Diode or No Diode

Reed relays often have a choice to include an internal protection diode or not (in comparison this is never the case with EMRs).

The purpose of this diode is sometimes misunderstood, it is present primarily to protect the device that is driving the relay coil from the Back EMF that is generated when the current flow is interrupted.

Assuming the relay coil driver operates with an open collector drive then while the driving device is on the current flow is limited by the resistance of the relay coil. When the open collector is turned off the voltage on the output tries to rise and the current tries to drop, but the open collector drive has no conduction path to allow this to happen. The conducted current has to fall to zero to collapse the magnetic field in the coil. So the driver output voltage rises rapidly, the rate of rise being limited only by characteristics such as coil or driver capacitance. Eventually the voltage rise will limit as the driver output starts to enter voltage breakdown. This is a large impulse load for the driver and may result in premature failure.

Pickering's solution for this is to include a diode to protect the driver, when the driver output rises above the coil supply voltage the diode conducts and clamps the output voltage. As the diode clamp voltage is much less than the breakdown voltage the peak instantaneous energy dissipated is much lower, and a diode is generally designed to better handle this surge than a transistor.

Coil Voltage

Reed relays are supplied with a wide variety of coil voltage options. For logic driving 3.3 V and 5 V drives are the preferred choice since these voltages are directly compatible with common logic families. However, all the coils for a given reed switch have to have a certain number of Ampere Turns as previously noted, so as coil voltage is dropped the coil current required is increased. For some applications high coil currents are undesirable – they might lead to power loss in power supplies (low voltage supplies are commonly less efficient than higher voltage supplies), losses on PCB traces and the creation of larger EMC transients.

LED drivers can directly support either 5 V or 12 V coils, open collector drivers can support even higher voltages. However, as coil voltage increases the wire used to create the relay coil becomes finer and harder to wind without breakages. Ultimately this limits the highest voltage coils that can be offered.

For many applications 5 V coils are considered a good compromise.

One factor often ignored by users is the impact of temperature on coil current. Data sheets for relays will commonly show a pick up voltage and release voltage and this is usually at a significantly lower voltage than the nominal coil voltage required. There are four principal reasons for this margin:

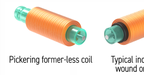
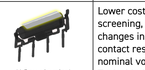
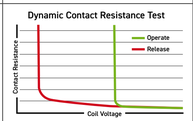
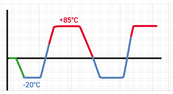
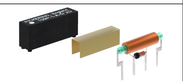
As temperature rises the coil resistance rises (by 0.39% per °C), the voltages are measured at more typical temperatures (25 °C), so by the time the maximum rated temperature of the relay is reached the coil current can have dropped very significantly.

The coil drivers will have an output resistance which may be significant.

Actual power supply voltage can vary both from product to product and across a PCB used to distribute it.

External magnetic fields might alter the coil current needed to achieve the required field strength.

Consequently reed relays should have a reasonable operating margin to ensure reliable operation in all conditions. The lowest voltage relay coils are the most vulnerable to this type of problem.

Key Benefit	Pickering Reed Relays		Typical Industry Reed Relays
1 **Instrumentation Grade Reed Switches**	Instrumentation Grade Reed Switches with vacuum sputtered Ruthenium plating to ensure stable, long life up to 5x10E9 operations.		Often low grade Reed Switches with electroplated Rhodium plating resulting in higher, less stable contact resistance.
2 **Formerless Coil Construction**	Formerless coil construction increases the coil winding volume, maximizing magnetic efficiency, allowing the use of less sensitive reed switches resulting in optimal switching action and extended lifetime at operational extremes.	 Pickering former-less coil  Typical industry coil wound on bobbin	Use of bobbins decreases the coil winding volume, resulting in having less magnetic drive and a need to use more sensitive reed switches which are inherently less stable with greatly reduced restoring forces.
3 **Magnetic Screening**	Mu-metal magnetic screening (either external or internal), enables ultra-high PCB side-by-side packing densities with minimal magnetic interaction, saving significant cost and space. Pickering Mu-Metal magnetic screen - interaction approx. 5%	 X-Ray of Pickering mu-metal magnetic screen  X-Ray of typical industry magnetic screen	Lower cost reed relays have minimal or no magnetic screening, resulting in magnetic interaction issues causing changes in operating and release voltages, timing and contact resistance, causing switches to not operate at their nominal voltages. **Typical industry screen - interaction approx. 30%**
4 ***SoftCenter***™ **Technology**	*SoftCenter*™ technology, provides maximum cushioned protection of the reed switch, minimising internal lifetime stresses and extending the working life and contact stability.	 Pickering soft center protection of the reed switch  Typical industry thermo-setting hard moulded protection of the reed switch	Transfer moulded reed relays (produced using high temperature/pressure), result in significant stresses to the glass reed switch which can cause the switch blades to deflect or misalign leading to changes in the operating characteristics, contact resistance stability and operating lifetime.
5 **100% Dynamic Testing**	100% testing for all operating parameters including dynamic contact wave-shape analysis with full data scrutiny to maintain consistency.		Simple dc testing or just batch testing which may result in non operational devices being supplied.
6 **100% Inspection at Every Stage of Manufacturing**	Inspection at every stage of manufacturing maintaining high levels of quality.		Often limited batch inspection.
7 **100% Thermal Cycling**	Stress testing of the manufacturing processes, from -20 °C to +85 °C to -20 °C, repeated 3 times.		Rarely included resulting in field failures.
8 **Flexible Manufacturing Process**	Flexible manufacturing processes allow quick-turn manufacturing of small batches.		Mass production: Usually large batch sizes and with no quick-turn manufacturing.
9 **Custom Reed Relays**	Our reed relays can be customized easily, e.g. special pin configurations, enhanced specifications, non-standard coil or resistance figures, special life testing, low capacitance, and more.		Limited ability to customize.
10 **Product Longevity**	Pickering are committed to product longevity; our reed relays are manufactured and supported for more than 25 years from introduction, typically much longer.		Most other manufacturers discontinue parts when they reach a low sales threshold; costing purchasing and R&D a great deal of unnecessary time and money to redesign and maintain supply.

SURFACE MOUNT

Series Name		200-1-A	200-2-A	200-1-C	200-1-B	219-1-A	219-2-A	219-1-B	200RF	102F-1-A
Physical Outline						NEW 				
Features		Highest Quality Instrumentation Grade Reed Switches Only Surface Mount Reed Relay Available with SoftCenter™ Construction								
Dimensions mm (inches)	Depth	3.9 (0.154)	5.85 (0.23)			10.5 (0.413)			4.00 (0.154)	7.6 (0.3)
	Width	15.25 (0.6)	20.0 (0.79)	15.25 (0.6)	20.0 (0.79)	15.25 (0.6)	17.2 (0.677)		15.25 (0.6)	13.5 (0.53)
	Height	6.8 (0.27)	9.0 (0.35)	6.8 (0.27)	9.0 (0.35)	6.8 (0.27)	8.5 (0.335)		6.8 (0.27)	4.8 (0.19)
Contact Configuration		1A (SPST)	2A (DPST)	1C (SPDT)	1B (SPNC)	1A (SPST)	2A (DPST)	1B (SPNC)	1A (SPST)	1A (SPST)
Switch Schematic										
Reed Switch Type		General Dry Reed	Low Level/ Dry Reed	High Volt Dry Reed	Standard Mercury Wet Reed	Position Insensitive Mercury Wet Reed	Low Level Dry Reed	Dry Reed	Low Level Dry Reed	1.5kV Min Stand Off	2kV Min Stand Off	3kV Min Stand Off	1.5kV Min Stand Off	1.5kV Min Stand Off	2kV Min Stand Off	Low Level Dry Reed	General Dry Reed	Higher Power Dry Reed
Switch Number		1	2	4	6	8	2	3	2	1	2	3	1	1	2	2	1	2
Diode Available		Yes								Yes						Yes		
Switching Voltage/V		200 V	500 V	500 V	500 V	200 V	200 V	200 V	1000 V				1000 V	1000 V	1000 V	200 V		200 V
Switching Current/A		1 A	0.5 A	0.5 A	2 A	2 A	0.5 A	0.25 A	0.5 A	0.7 A			0.7 A	0.7 A	0.7 A	0.5 A	0.5 A	1 A
Carry Current/A		1.2 A	1.2 A	1.2 A	3 A	3 A	1.2 A	1.2 A	1.2 A	1.25 A			1.25 A	1.25 A	1.25 A	1.2 A	1.2 A	1.2 A
Switch Power/W		15(5V), 20	10 W	10 W	50 W	50 W	10 W	3 W	10 W	10 W			10 W	10 W	10 W	10 W	10 W	20 W
Max Initial Contact Resistance/mΩ		150 mΩ	120 mΩ	150 mΩ	75 mΩ	100 mΩ	120 mΩ	200 mΩ	120 mΩ	170 mΩ			170 mΩ	170 mΩ	170 mΩ	120 mΩ		100 mΩ
Life Expectancy/ operations	Min Load	10^9						10^8	10^9	10^8			10^8	10^8	10^8	10^9		10^9
	Typical	10^8						10^7	10^8	10^7			10^7	10^7	10^7	10^8		10^8
	Max Load	10^7						10^6	10^7	10^6			10^6	10^6	10^6	10^7		10^7
Operate Time/ms		0.5 ms	0.5 ms	2 ms		0.5 ms	1 ms	0.5 ms	0.5 ms				0.5 ms	0.5 ms	0.5 ms	0.5 ms		0.5 ms
Release Time/ms		0.2 ms	0.2 ms	1.25 ms		0.2 ms	0.5 ms	0.2 ms	0.2 ms				0.2 ms	0.2 ms	0.2 ms	0.2 ms		0.2 ms
Insulation Resistance/Ω		10^{12} Ω		10^{10} Ω		10^{12} Ω	10^{11} Ω	10^{12} Ω	10^{12} Ω				10^{12} Ω	10^{12} Ω	10^{12} Ω	10^{12} Ω		10^{12} Ω
Coil Resistance	3 V/Ω	-	250 Ω	-	-	-	-	-	-	100 Ω	75 Ω	50 Ω	50 Ω	50 Ω	-	-	250 Ω	-
	5 V/Ω	500 Ω		140 Ω	140 Ω	400 Ω	500 Ω	750 Ω	250 Ω	200 Ω	125 Ω	100 Ω	100 Ω	100 Ω	250 Ω	500 Ω	375 Ω	
	12 V/Ω	1000 Ω		500 Ω	500 Ω	1000 Ω	1000 Ω	1000 Ω	750 Ω	500 Ω	400 Ω	400 Ω	400 Ω	400 Ω	-	1000 Ω	1000 Ω	

HIGH SWITCHING POWER

Series Name		114-1-A	114-2-A	114-1-B	144-1-A	144-2-A	144-1-B	100HC-1-A	100HC-2-A	100HC-1-B
Physical Outline					NEW			NEW		
Features		Highest Quality Instrumentation Grade Reed Switches High Power								
Dimensions mm (inches)	Depth	6.3 (0.245)			6.3 (0.245)			10.2 (0.40)		
	Width	24.1 (0.95)	29.0 (1.14)		24.1 (0.95)	29 (1.14)		24.1 (0.95)	29.0 (1.14)	
	Height	8.2 (0.32)	12.5 (0.49)		8.2 (0.32)	12.5 (0.49)		12.7 (0.50)	15.2 (0.60)	
Footprint (0.1 inch grid)										
Contact Configuration		1A (SPST)	2A (DPST)	1B (SPNC)	1A (SPST)	2A (DPST)	1B (SPNC)	1A (SPST)	2A (DPST)	1B (SPNC)
Switch Schematic										
Reed Switch Type		High Power Dry Reed			2kV Min Stand Off	3kV Min Stand Off	2kV Min Stand Off	2kV Min Stand Off	High Power Dry Reed	
Switch Number		1			2	3	2	2	1	
Diode Available		Yes			Yes				Yes	
Switching Voltage/V		200 VDC 240 VAC (500 V min stand off)			1000 (250) V			200 VDC 240 VAC (500 V min stand off)		
Switching Current/A		1A			2 (1 / 0.01) A			1A		
Carry Current/A		3 A			3 A			3 A		
Switch Power/W		40 W			80 (60 / 10) W			40 W		
Max Initial Contact Resistance/mΩ		150 mΩ	250 mΩ	200 mΩ	150 mΩ	200 mΩ		200 mΩ	250 mΩ	200 mΩ
Life Expectancy/ operations	Min Load	10^9			10^9			10^9		
	Typical	10^8			10^8			10^8		
	Max Load	10^7			10^7			10^7		
Operate Time/ms		1 ms			1.0 ms			2 ms		
Release Time/ms		0.5 ms			0.5 ms			1 ms		
Insulation Resistance/Ω		10^{12} Ω			10^{12} Ω			10^{12} Ω		
Coil Resistance	3 V/Ω	75 Ω	-	-	-	-	-	-	-	-
	5 V/Ω	250 Ω	150 Ω	350 Ω	200 Ω	200 Ω	300 Ω	100 Ω	500 Ω	300 Ω	300 Ω
	12 V/Ω	750 Ω	350 Ω	1000 Ω	750 Ω	750 Ω	1000 Ω	350 Ω	2000 Ω	1000 Ω	1000 Ω
	24 V/Ω	2000 Ω	1000 Ω	2200 Ω	2000 Ω	2000 Ω	2200 Ω	1000 Ω	6000 Ω	4000 Ω	4000 Ω

LIT-028

pickering Reed Relay Finder

- Highest Quality Instrumentation Grade Reed Switches
- RF/High Speed Digital Switching
- Coaxial/RF/High Speed Digital
- Ultra High Packing Density
- SoftCenter™ Technology
- Up to 200 W Switching
- Custom Reed Relays
- Low Thermal EMF
- Low Capacitance
- Data Acquisition
- High Voltage
- High Power

The **Reed Relay Finder** is a single sheet reference to Pickering's high quality range of Reed Relays, including their basic specifications.

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pickering Reed Relay Finder

About Pickering Electronics

Pickering Electronics was formed in January 1968 to design and manufacture high quality reed relays, intended principally for use in instrumentation and automatic test equipment.

Today, the UK facility is responsible for Product Development, Technical Back-up, Sales, Marketing and Administration.

Manufacturing is shared between the UK factory and a large modern plant in Trinec, Czech Republic, with strict Quality Control and ISO 9001 certification at both facilities. Pickering Electronics s.r.o. is 100% owned by Pickering Electronics Ltd., England.

Pickering Electronics offer an extensive range of high quality instrumentation grade reed relays designed for applications requiring the highest levels of performance and reliability at an affordable price. Through the experience of supporting the most demanding manufacturers of large ATE systems with high relay counts the company has refined its assembly and quality control methods to optimise its manufacturing methods.

Working with its sister company, Pickering Interfaces (pickeringtest.com), Pickering Electronics has developed innovative reed relay solutions designed to provide high coil efficiency, low switch volume and low PCB footprint solutions to meet the demands of modern equipment manufacturers.

Faster Switching Speeds | Extended Lifetime > 10 Billion Operations | Use 75% Less PCB Space

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Pickering Electronics maintains a commitment to continuous product development, consequently we reserve the right to vary from the descriptions given in this document.

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