



Solid State Relays, Latchers, Heat Sinks and Accessories.

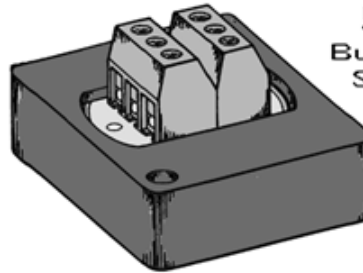
Reed switch sensors often do not have the switching capacity to handle pump motors and solenoids. Relays are used to achieve the required switching capacity. The sensor switch pilots the relay which in-turn switches the load. In other words, the relay enables the reed switch sensor to handle a bigger job than it can do by itself.

Button Packs are solid state, AC switching relays expressly designed for OEM use and this purpose. They will switch up to 5 amps, have no moving parts, are silent, easy to wire, easy to mount and low in cost. They are ideal companions for ERECTA SWITCH sensors.

Two modes of operation are possible: The first and most common, is when the sensor switch closes, the load is turned "on" and then turned "off" as the sensor switch re-opens. The second combines two sensor switches with a Button Pack relay and Button Pack latch to provide wide differential control of liquid levels. Here one switch starts the latch, turning a pump or valve "on" and the other stops the latch, turning the pump or valve "off".

Button Pack Relays are continuously powered devices. In the standby mode, they consume a tiny amount of current. (Typically, less than .001 AMP. When activated by a switch closure, supply voltage is switched to the load, turning "on" the lamp, solenoid, motor etc. Circuitry and wiring are intuitive. Eurostyle® screw type terminals accept two wires from the voltage source, two wires from the load device to be "turned on" and two wires from the Reed Switch sensor. Optional accessory wiring ferrules facilitate wiring.

Button Pack relays dissipate heat when the load is "turned on". At load currents below .76 AMP, their built-in heat sink is sufficient to dissipate the heat generated. However, at higher current, they must be attached to a supplemental heat sink or any cool metal surface of sufficient area to keep the relay from over heating.



50-BP
Button Pack
SS Relay

© Product of Beau Interconnect Systems. G50BP-1A

BUTTON PACK RELAY MODES OF OPERATION

Two common applications can be efficiently handled by Button Pack Relays. First, simple "on-off" switching of other AC control devices such as relays, solenoids and fractional HP motors. Second, latching "on" a load with a normally open momentary contact switch and unlatching the load with a normally closed momentary contact switch. A detailed description of each follows:

ON-OFF SINGLE POLE AC SWITCH

When a load is connected to load terminals A & F and line voltage is connected to line terminals B & E, the relay is in the standby condition, poised for the command to switch. If a connection is now made between sensor terminals C & D, line voltage is supplied to the load as the relay's SS switch is turned "on". The load will remain "on" as long as the connection between C & D is present. Thus, control of the load is accomplished by completing and interrupting the sensor circuit between terminals C & D.

LATCH "ON", REMAIN "ON" UNTIL "UNLATCHED"

The operating is the same as described for "on-off" AC switching except a Button Pack Latch is connected in tandem with a Button Pack Relay. See schematics on product specification pages. Start and stop sensor switches are connected to the Latch as shown in the schematic diagram. When the start sensor switch closes its contacts, the Relay is turned "on" and remains "on" until the stop sensor switch opens its contacts. This is a common operational mode for pump-in and pump-out applications.

WIRING CONSIDERATIONS

Eurostyle (R) screw type terminal blocks and wiring ferrules simplify wiring. Use AWG 20 (minimum) stranded wire for sensor circuits and AWG 18 (minimum) stranded wire for line and load circuits. Fuse line and load circuits. Check applicable equipment codes and specifications for other fuse considerations.

ELECTRICAL RATINGS

BUTTON PACK RELAY	AC5		
50-60 Hz VOLTS	24-240		
MAX LOAD AMPS	5		
MIN LOAD AMPS	.1		
MAX SURGE AMPS	15		
MAX SENSOR CIR OHMS	300		
SENSOR CIR AMPS TYP	.01		
SWITCHING MODE	SP NO		
WATT/AMP DISSIPATION	.92		
HEAT SINK REQ >	.75 AMP		
UDC BASE ISOLATION	1000		

* RESISTIVE LOAD.

BUTTON PACK LATCH			
MIN RELAY LOAD AMPS			
MIN CYCLE TIME SEC			

HEAT SINK CONSIDERATIONS

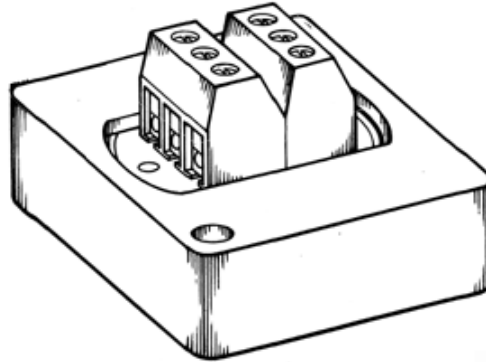
Button Pack relays dissipate .92 watts per AMP switched. If this energy is allowed to raise the temperature of the SS relay beyond a safe level, the ability of the relay to properly turn "off", may be compromised. The bottom of Button Pack is an aluminum heat transfer surface. Factors such as AMPS switched, differential temperature and power "on" time of the switched device must be taken into account. The energy dissipated will be a function of I^2RT . Thus, a short "on" time may not require a heat sink at all. Whereas, 100% duty above .75 AMP will surely require a supplemental heat sink. See product specification sheets for additional heat sink parameters.

APPLICATION ENVIRONMENT

Button packs will perform (100% duty cycle) over a temperature range of 0 to 49 °C. Assuming the device is continuously powered and triggered by opening or closing contacts in the sensor circuit, these devices are reasonably tolerant of transient power line noise. However, false, momentary operations are still possible. Consequently, these devices should not be used in any application in which a momentary false operation would cause injury to personnel or equipment.

SOLID STATE "BUTTON PACK" RELAY

50-BP-□F-AC5

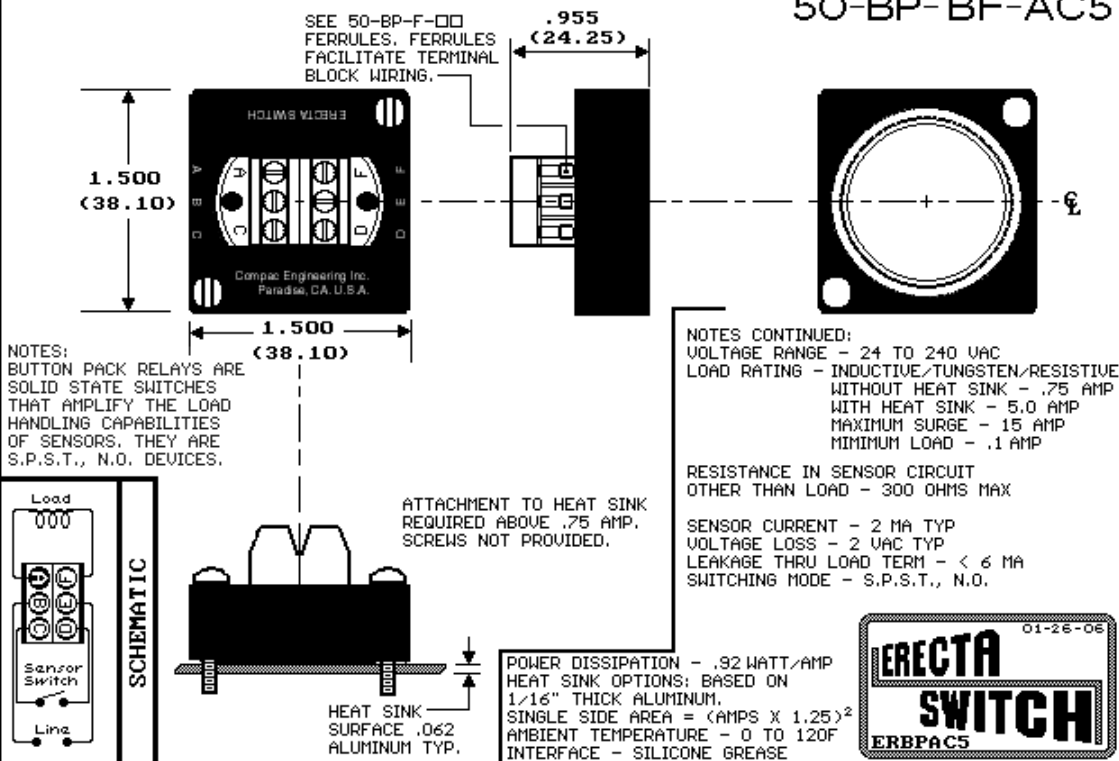


*ORDER
FAX CLUMP # 502*



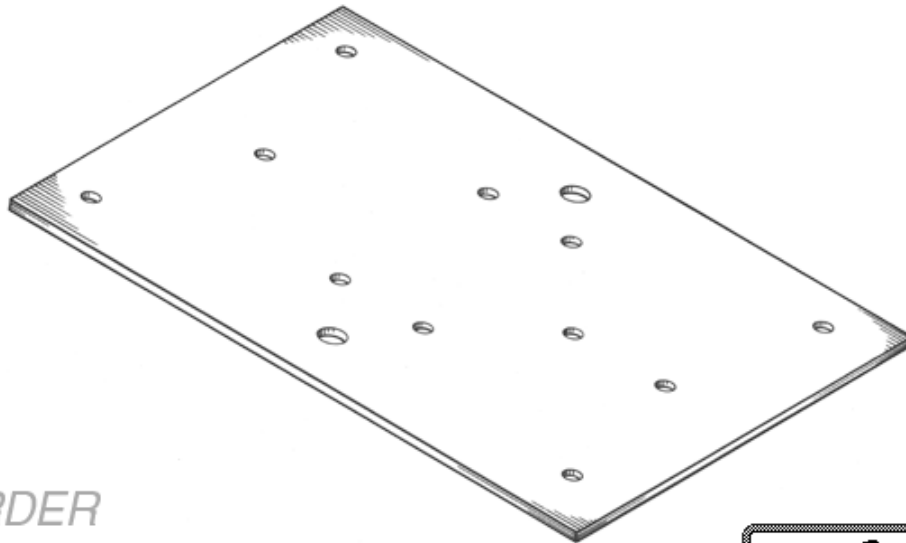
SOLID STATE "BUTTON PACK" RELAY

50-BP-BF-AC5



HEAT SINK MTG PLATE

50-HSP-L

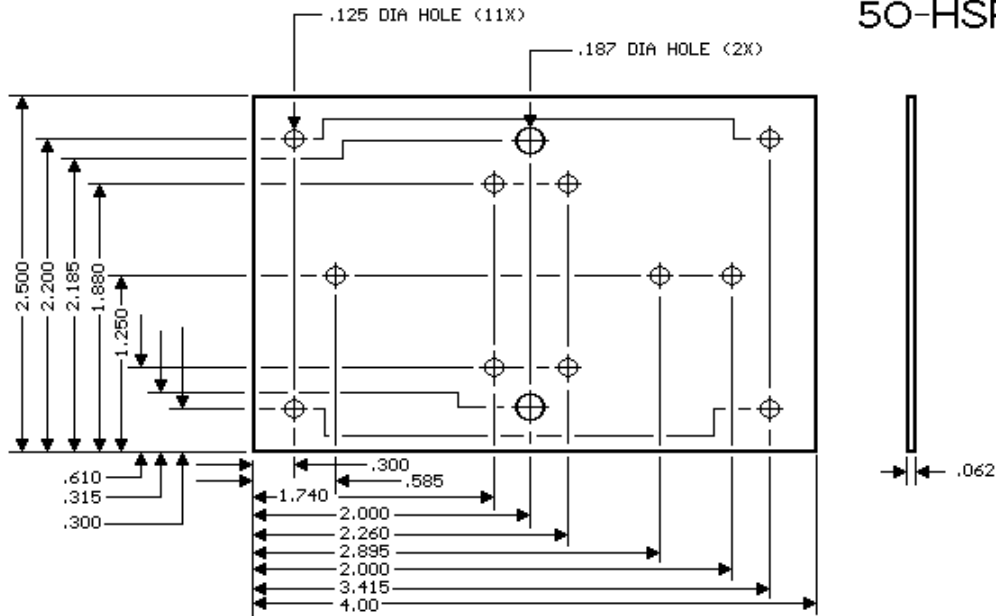


ORDER
FAX CLUMP # 503



HEAT SINK MTG PLATE

50-HSP-L

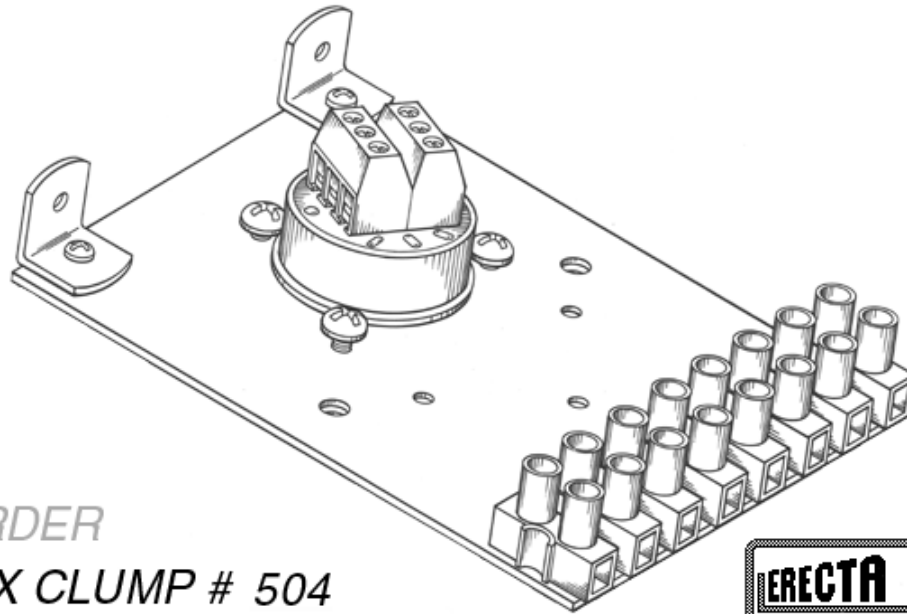


MATERIAL: 6061T6 ALUMINUM



1 AMP HEAT SINK/SS RELAY MTG SET

50-HS-1L

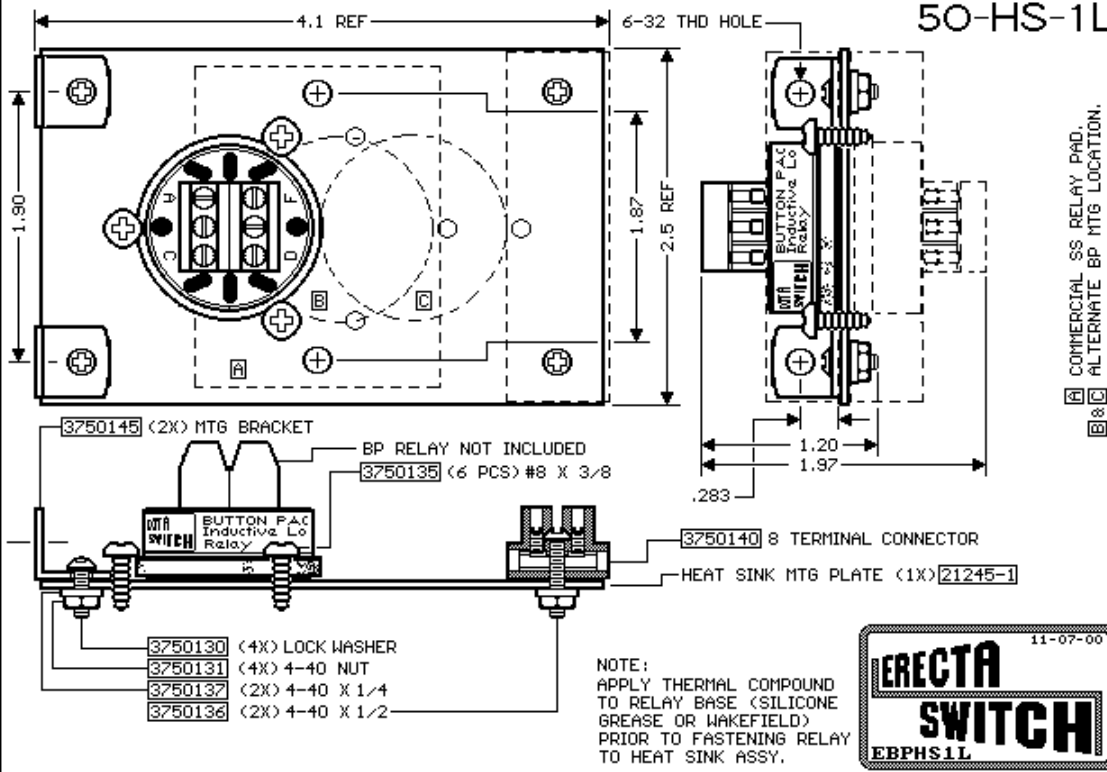


ORDER
FAX CLUMP # 504



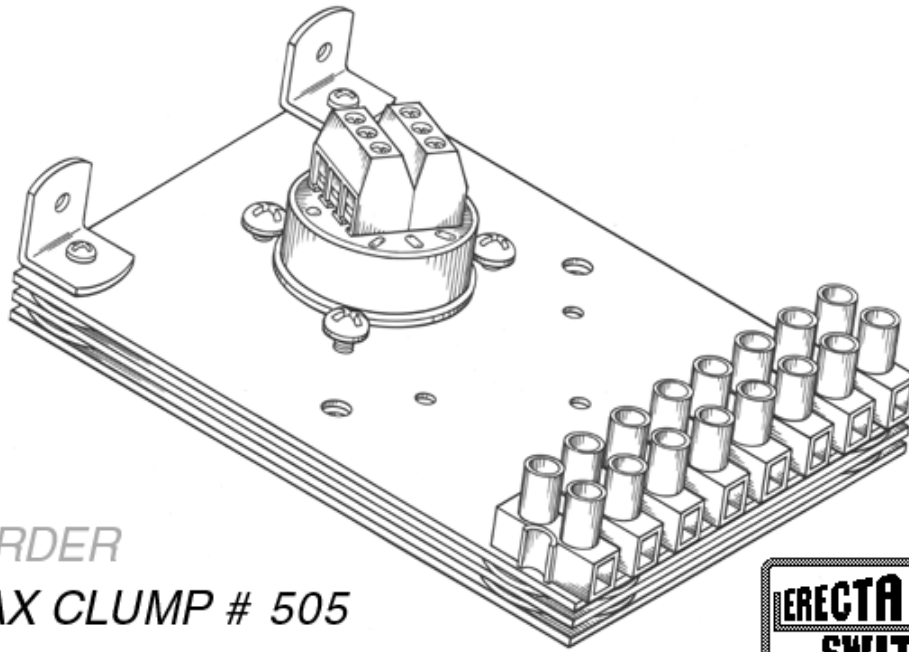
1 AMP HEAT SINK/SS RELAY MTG SET

50-HS-1L



5 AMP HEAT SINK/SS RELAY MTG SET

50-HS-5L

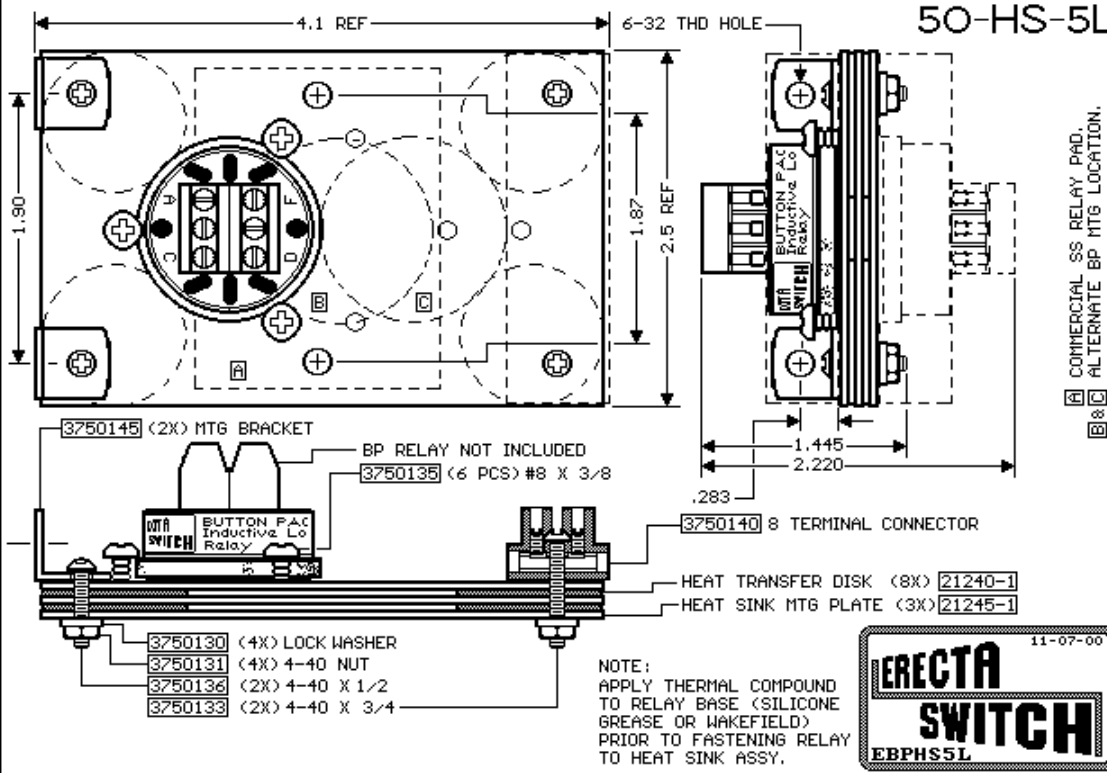


ORDER
FAX CLUMP # 505



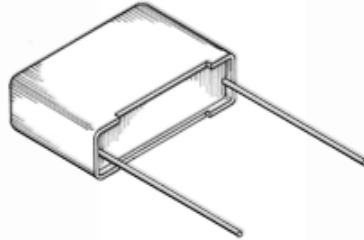
5 AMP HEAT SINK/SS RELAY MTG SET

50-HS-5L



ARC SUPPRESSOR

55-XE1201

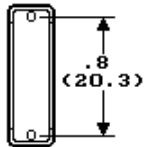
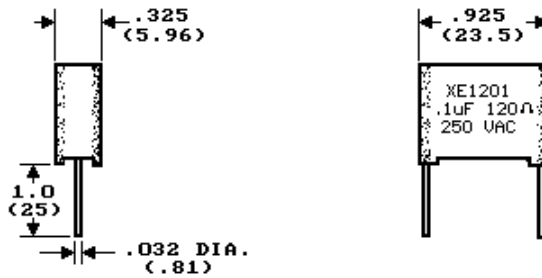


ORDER
FAX CLUMP # 506



ARC SUPPRESSOR

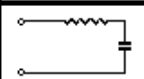
55-XE1201



PULSE CONDITIONS MAX - WIDTH 50MSEC
 PEAK TO PEAK 800V
 REP FREQUENCY 120 Hz

STANDARD - UL-1414 (File E47474) TO +85°C
 TEMPERATURE RANGE - -40 TO +85°C
 XE1201
 MANUFACTURER - OKAYA ELECTRIC AMERICA, INC.
 UALPARAISO, IN 46383

SCHEMATIC



SCREW CLAMP TERMINAL BLOCK WIRE FERRULE

50-BP-F-



ORDER
FAX CLUMP # 507



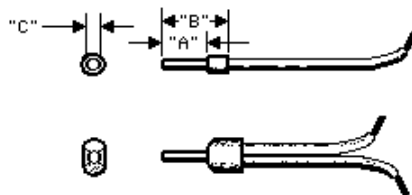
SCREW CLAMP TERMINAL BLOCK WIRE FERRULE

50-BP-F-

FERRULES INSURE RELIABLE CONNECTIONS AND PREVENT FRAYING AND BREAKING OF WIRE STRANDS WHEN TERMINATING CONDUCTORS IN SCREW CLAMP TERMINAL BLOCKS. INSULATED FERRULES HAVE MOLDED-ON POLYPROPYLENE SLEEVES AND PREVENT CONDUCTOR BREAKAGE DUE TO BENDING, STRESS OR VIBRATION. DUAL WIRE FERRULES PROVIDE RELIABLE CONNECTION OF MULTIPLE WIRES INTO THE SAME TERMINAL BLOCK CLAMP AND SIMPLIFY JUMPING BETWEEN TERMINALS.

THESE FERRULES ARE MANUFACTURED BY ALTECH COMPONENTS, 35 ROYAL ROAD, FLEMINGTON, NJ, 08822. TEL 908-806-9400 FAX 908-806-9490.

CRIMP WITH ALTECH P2U6 CRIMPER OR EQUAL.



DIM	"A"	"B"	"C"
SINGLE	.24	.47	.070
DUAL	.43	.59	.092

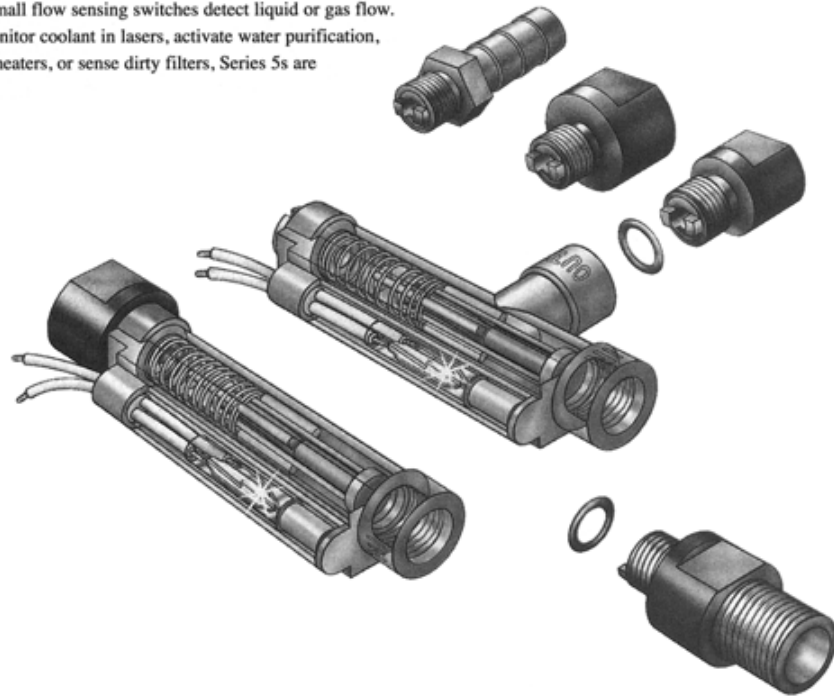
CATALOG NO	DESCRIPTION	ALTECH REF
50-BP-F-01	AWG 20 SINGLE WIRE FERRULE WHITE	H0.75/12
50-BP-F-02	AWG 20 DUAL WIRE FERRULE GRAY	H2X0.75/15
50-BP-F-03	AWG 18 SINGLE WIRE FERRULE YELLOW	H1.0/12
50-BP-F-04	AWG 18 DUAL WIRE FERRULE RED	HH2X1.0/15



FLOW SWITCHES

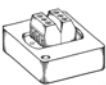
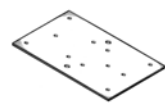
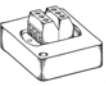
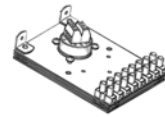
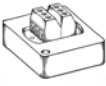

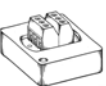



Compac's family of small flow sensing switches detect liquid or gas flow. When you want to monitor coolant in lasers, activate water purification, turn on water system heaters, or sense dirty filters, Series 5s are an unbeatable choice.



AD528

SOLID STATE "BUTTON PACK" RELAY PRICING

	50-BP-AC5 FIVEPACK NET PRICES			50-HSP-L FIVEPACK NET PRICES				
	QTY			QTY				
	1-2	108.68		1-2	24.45			
	3-4	104.19		3-4	23.26			
	5-9	97.81		5-9	22.01			
	10-14	86.94		10-14	19.56			
	15-19	76.07		15-19	17.12			
	20-XX	70.64		20-XX	15.76			
	50-BP-AC5 ONEPACK NET PRICES			50-HS-5L FIVEPACK NET PRICES				
	QTY			QTY				
	1-10	27.17		1-2	124.98			
	11-20	26.08		3-4	118.72			
	21-49	24.45		5-9	112.48			
	50-74	21.74		10-14	99.98			
	75-99	19.02		15-19	87.49			
	100-XX	17.66		20-XX	81.24			
	50-BP-L FIVEPACK NET PRICES			55-XE1201 NET PRICES				
	QTY			QTY				
	1-2	108.68		1-49	3.80			
	3-4	104.19		50-99	3.27			
	5-9	97.81		100-XX	2.17			
	10-14	86.94						
	15-19	76.07						
	20-XX	70.64						
	50-BP-L ONEPACK NET PRICES			50-BP-F-□ TENPACK NET PRICES				
	QTY			QTY	01	02	03	04
	1-2	27.17		1-XX	1.09	1.35	1.63	2.01
	3-4	26.08						
	5-9	24.45						
	10-14	21.74						
	15-19	19.02						
	20-XX	17.66						

Effective 10-01-05 **PSER50-1**