ERECTA SWITCH

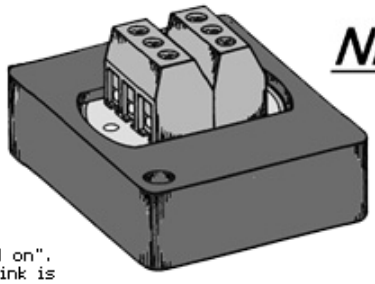
Solid State Relays, Latchers, Heat Sinks and Accessories.

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 then it can do by itself.

NistorPacs 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".

NistorPacs 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. Erurostyle® 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.



NistorPacs 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 NistorPacs from over heating.

05-03-01

® Product of Beau Interconnect Systems.

NistorPac MODES OF OPERATION

Two common applications can be efficiently handled by NistorPac. 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 NistorPac'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 NistorPac is connected in tandem with a NistorPac Latch. 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 NistorPac 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 ferrles 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

NistorPac	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		
VDC BASE ISOLATION	1000		

* RESISTIVE LOAD.

NistorPac LATCH	W/AC5		
MIN LOAD AMPS	.200		
MIN CYCLE TIME SEC	4		

HEAT SINK CONSIDERATIONS

NistorPacs dissipate .92 watts per AMP switched. If this energy is allowed to raise the temperature of the NistorPac beyond a safe level, the ability of the NistorPac to properly turn "off", may be compromised. The bottom of NistorPac 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.

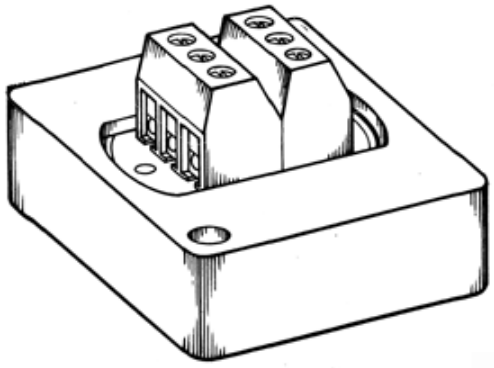
APPLICATION ENVIRONMENT

NistorPacs 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.

04-14-06

NISTORPAC

50-BP-□F-AC5



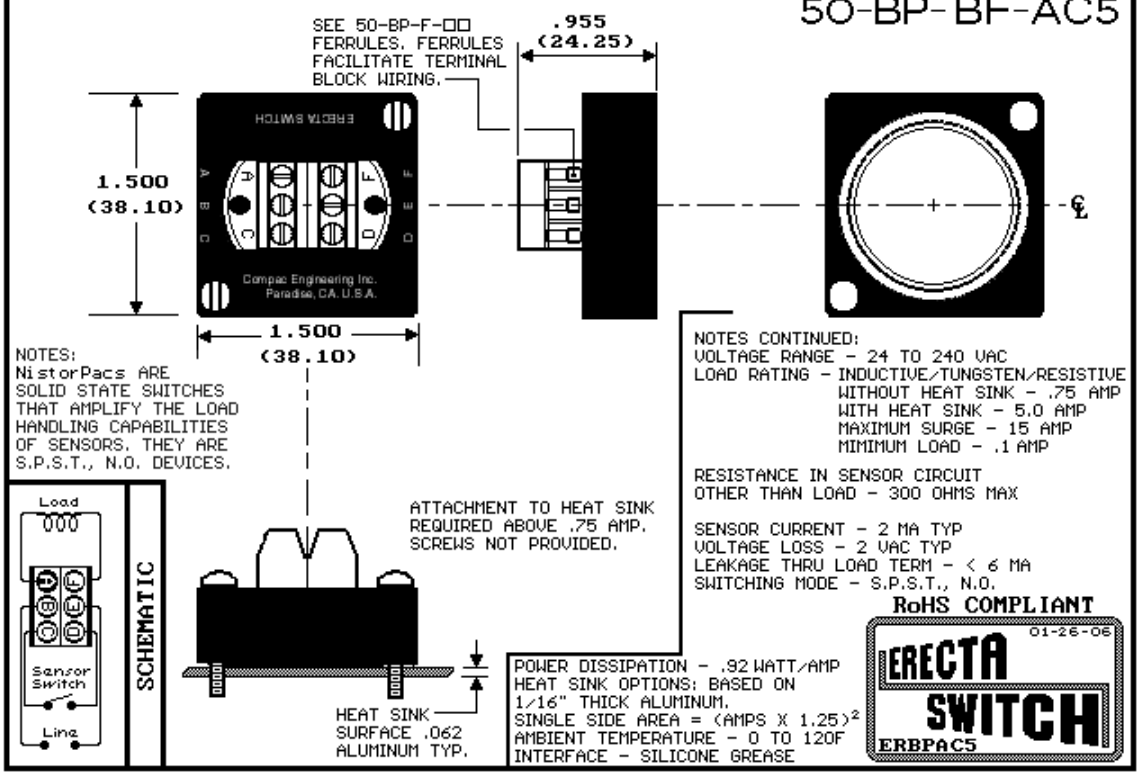
ORDER

FAX CLUMP # 502

ERECTA SWITCH
BRBPAC5

NISTORPAC

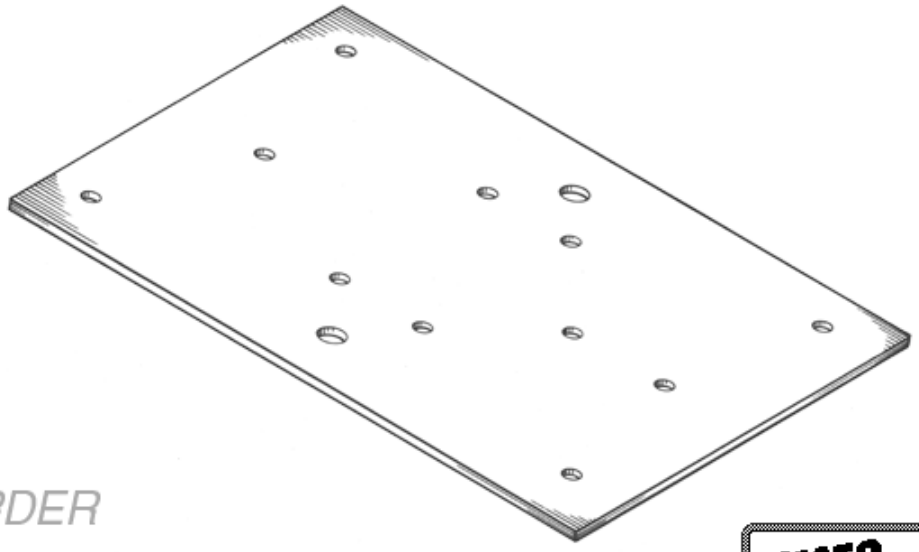
50-BP-BF-AC5



PAGE 503

HEAT SINK MTG PLATE

50-HSP-L



ORDER

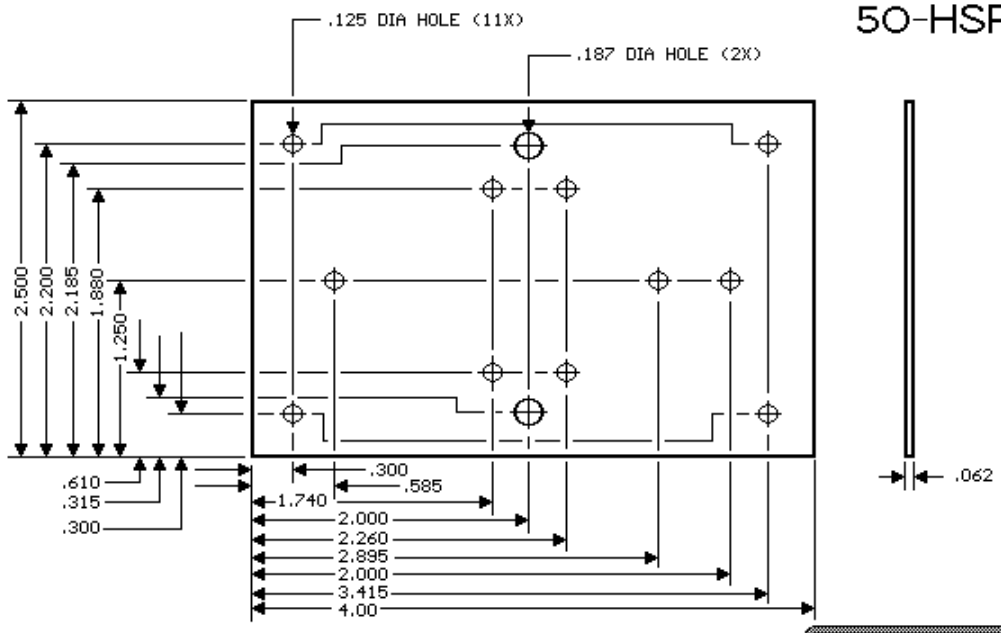
FAX CLUMP # 503

ERECTA SWITCH
BBPHSPL

PAGE 503A

HEAT SINK MTG PLATE

50-HSP-L



02-24-99

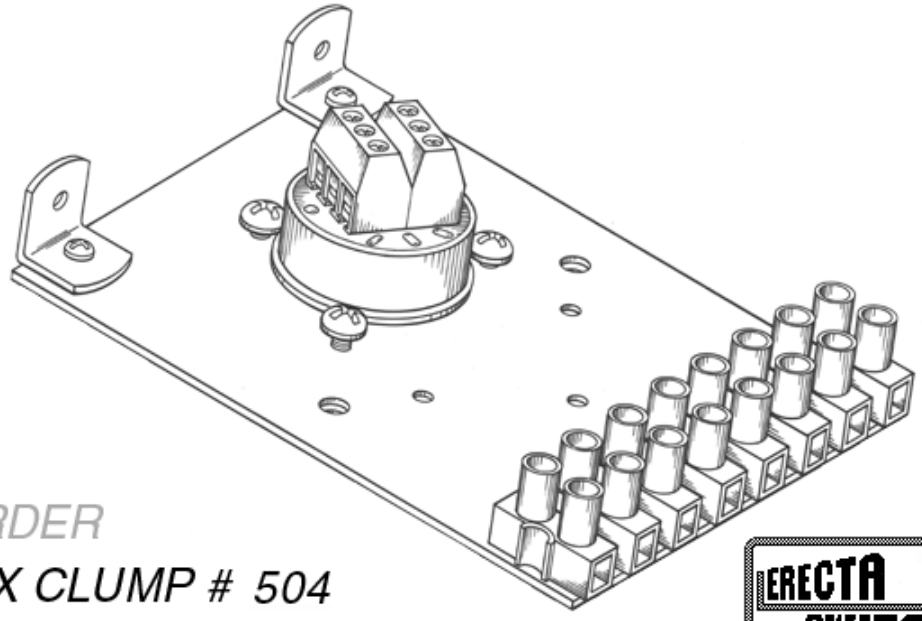
ERECTA SWITCH
EBPHSPL

MATERIAL: 6061T6 ALUMINUM

PAGE 504

1 AMP HEAT SINK/SS RELAY MTG SET

50-HS-1L



ORDER

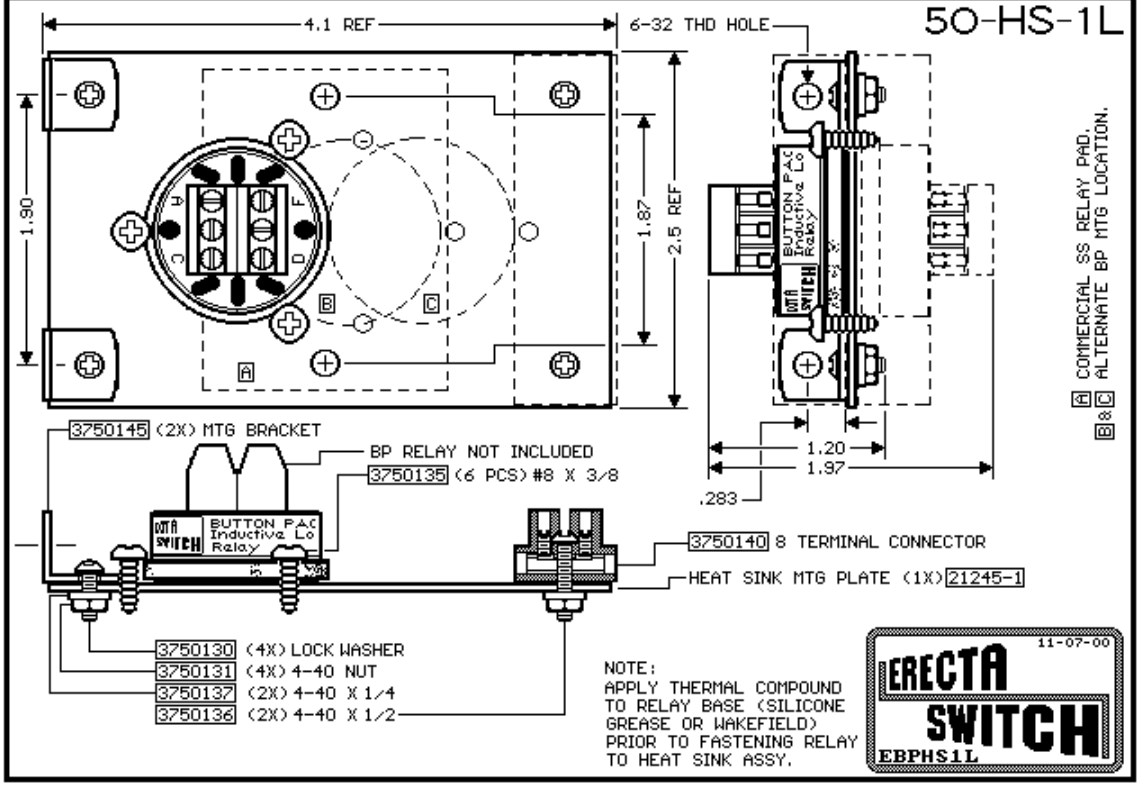
FAX CLUMP # 504

ERECTA SWITCH
BBPHS1L

PAGE 504A

1 AMP HEAT SINK/SS RELAY MTG SET

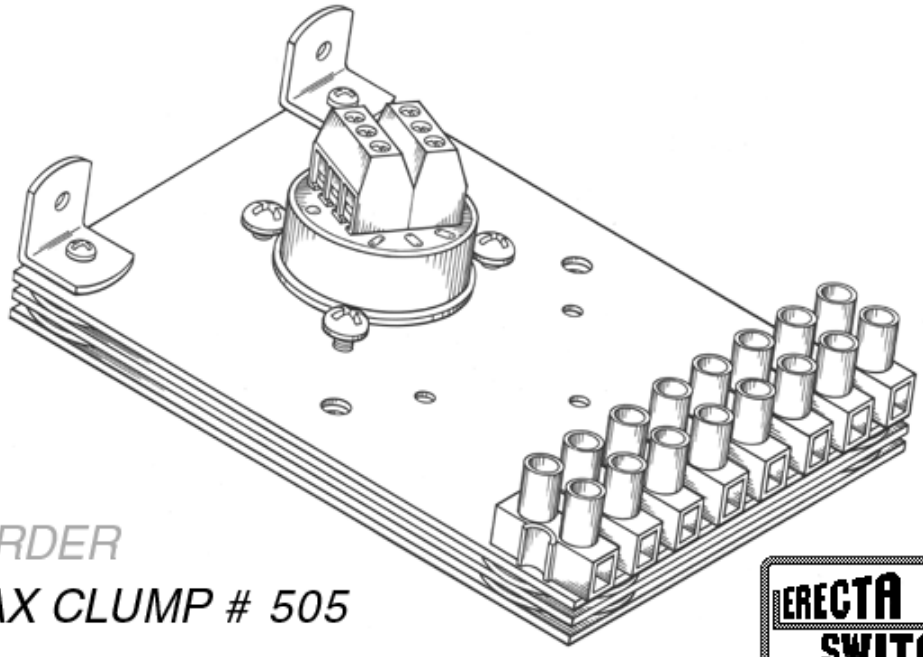
50-HS-1L



ERECTA SWITCH
EBPHS1L

5 AMP HEAT SINK/SS RELAY MTG SET

50-HS-5L



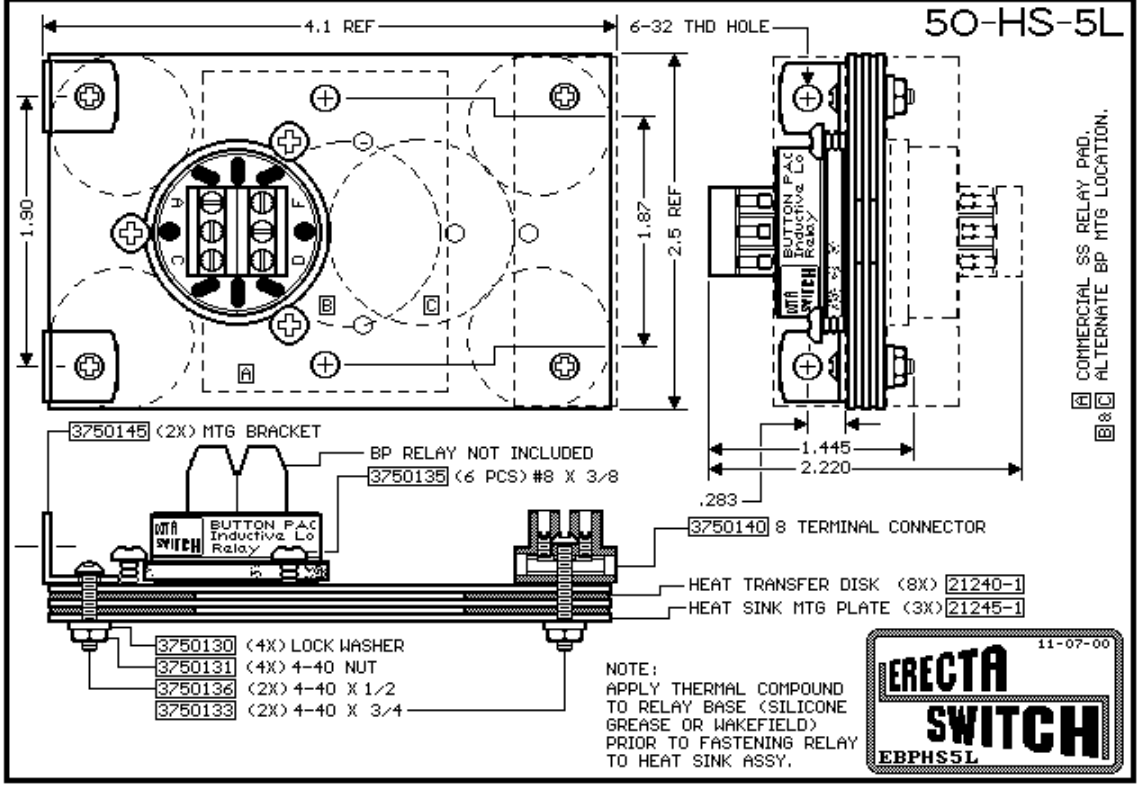
ORDER

FAX CLUMP # 505

ERECTA SWITCH
BBPHS5L

5 AMP HEAT SINK/SS RELAY MTG SET

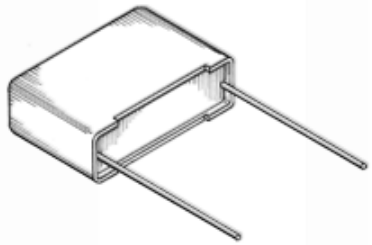
50-HS-5L



ERECTA SWITCH
EBPHS5L

ARC SUPPRESSOR

55-XE1201



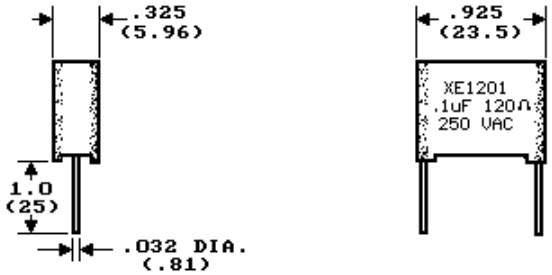
ORDER

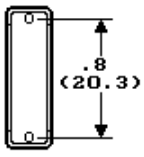
FAX CLUMP # 506

ERECTA SWITCH
BXE1201

ARC SUPPRESSOR

55-XE1201

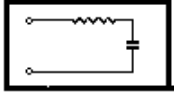




PULSE CONDITIONS MAX - WIDTH 50MSEC
PEAK TO PEAK 800V
REP FREQUENCY 120 Hz

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

SCHEMATIC

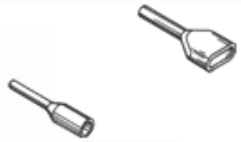


05-11-98

ERECTA SWITCH
EXE1201

SCREW CLAMP TERMINAL BLOCK WIRE FERRULE

50-BP-F-□□



ORDER

FAX CLUMP # 507

ERECTA SWITCH BBPF

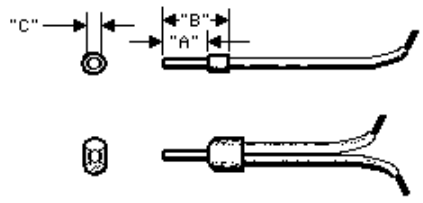
SCREW CLAMP TERMINAL BLOCK WIRE FERRULE

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 TERMIBNAL BLOCK CLAMP AND SIMPLIFY JUMPING BETWEEN TERMINALS.

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

CRIMP WITH ALTECH PZU6 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

11-07-00

ERECTA SWITCH EBPF