MAXI-BEAM Power Blocks and Wiring Base

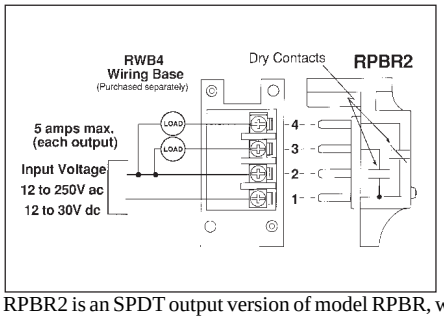
AC Models — Connections — Functional Schematic

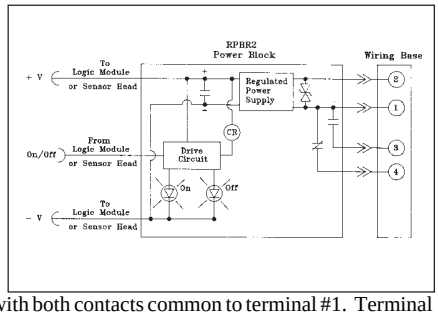
RPBR2

INPUT: 12 to 30V dc, 40mA, exclusive of load current (at 30V dc); or 12 to 250V ac, 50/60Hz.

OUTPUT: SPDT electromechanical relay contacts. Contact rating: 250V ac max., 30V dc max., 5 amps max. (resistive load); install MOV across contact if switching inductive load. Contact response: 20ms open and close (NOTE: add to sensor head response). Mechanical life: 10,000,000 operations.

OPERATING TEMPERATURE: -40 to +50 degrees C (-40 to +122 degrees F).





RPBR2 is an SPDT output version of model RPBR, with both contacts common to terminal #1. Terminal #3 is normally open; terminal #4 is normally closed. **See application caution, page 9.**

3- and 4-wire operation

RPBA

UL LISTED CSA CERTIFIED

INPUT: 105 to 130V ac, 50/60Hz; 2 watts exclusive of load.

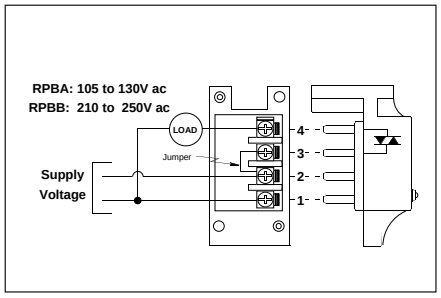
RPBB

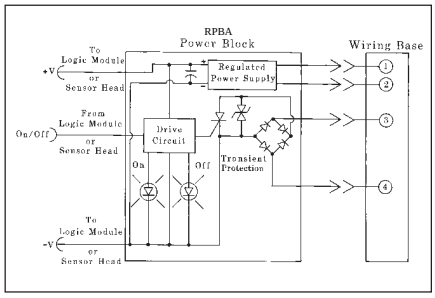
UL LISTED CSA CERTIFIED

INPUT: 210 to 250V ac, 50/60Hz; 2 watts exclusive of load.

OUTPUT: SPST solid-state switch for ac, 3/4 amp maximum (derated to 1/2 amp at 70 degrees C). Maximum inrush 10 amps for one second or 30 amps for one ac cycle (non-repeating). On-state voltage drop of less than 2.5V ac at full load. Off-state leakage current less than 100 microamps.

NOTE: ac loads require up to 8.3 milliseconds to turn OFF in addition to the response time of the sensor head and delay logic (if any).





Power block models RPBA and RPBB are the most commonly used for ac MAXI-BEAM operation. As the typical hookup shows, they are intended to switch the same ac voltage as is used to power the MAXI-BEAM. However, both can switch any ac voltage that is lower than the supply voltage, as long as both ac circuits share a common neutral. Observe local codes whenever mixing ac voltages in a common wiring chamber.

These blocks are designed to handle the inrush current of ac inductive loads like motor starters and solenoids. There is no mimimum load requirement, and they will interface directly to inputs of all ac programmable logic controllers (PLCs). Special order models **RPBAT** (120V ac) and **RPBBT** (240V ac) are available for interfacing to *dc loads* of up to 100 milliamps.

RPBA-1

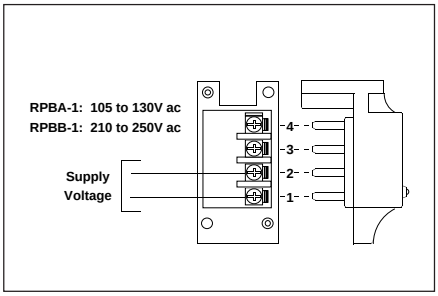
UL LISTED CSA CERTIFIED

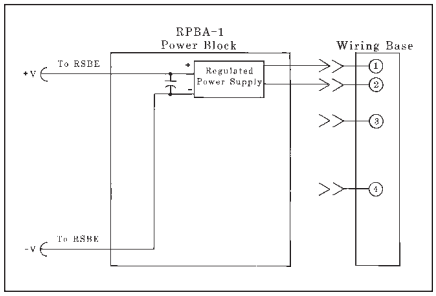
For RSBE, RSBESR, and RSBEF emitters
INPUT: 105 to 130V ac, 50/60Hz; 2 watts.

RPBB-1

UL LISTED CSA CERTIFIED

For RSBE, RSBESR, and RSBEF emitters
INPUT: 210 to 250V ac, 50/60Hz; 2 watts.





2-wire operation

R2PBA

UL LISTED CSA CERTIFIED

INPUT: 105 to 130V ac, 50/60Hz; 2 watts exclusive of load

R2PBB

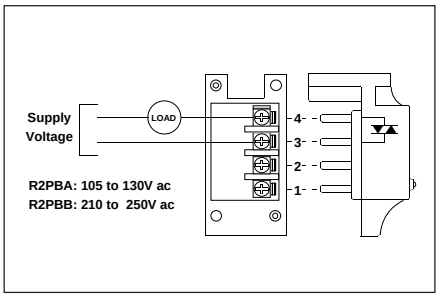
UL LISTED CSA CERTIFIED

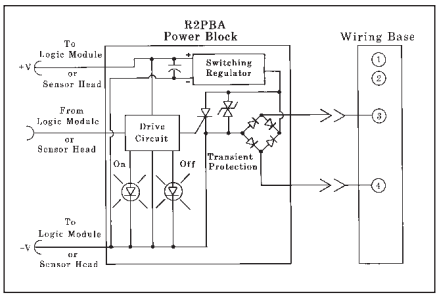
INPUT: 210 to 250V ac, 50/60Hz; 2 watts exclusive of load.

OUTPUT: SPST solid-state switch for ac, 3/4 amp maximum (derated to 1/2 amp at 70 degrees C). Maximum inrush 10 amps for one second (non-repeating).

On-state voltage drop: 5.2V rms at a 1/2 amp load; 14V rms at a load of 10 milliamps.

Off-state leakage current less than 1.7 milliamp (resistive or inductive load).





Power block models R2PBA and R2PBB both offer the simplicity of wiring which is associated with 2-wire sensor design. They wire directly in series with an ac load, exactly like a limit switch. Use of a 2-wire power block requires programming of the sensor head to the "2W" (2-wire) operating mode. As a result, MAXI-BEAM sensing response time is fixed at 10 milliseconds for 2-wire operation. There are some hookup considerations which are unique to 2-wire interfaces. See hookup information on page 12 for details.