

ELECTROMECHANICAL RELAYS • SOLID STATE RELAYS • RELAY SOCKETS

PICKER®

C O M P O N E N T S

PickerComponents.com

Making The Connection

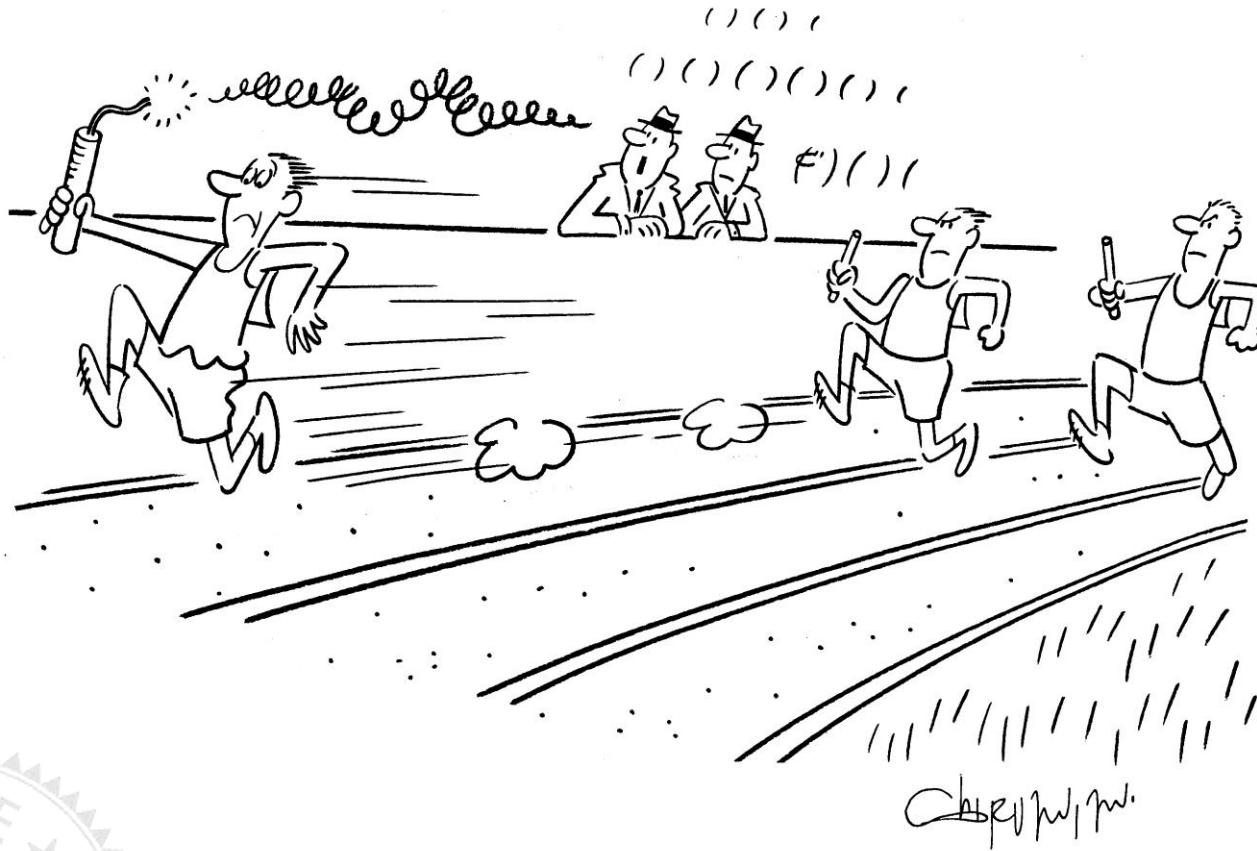


Focus on Applications September 2016



2011 & Beyond!

Making the Connection



"We may see some records broken today."



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Overview



- Picker Components was founded in 1983
- **Getting the heat away from the contacts is the key to Higher Reliability** and thus our **Continued Commitment to Quality in Design and Manufacturing includes superior materials and often more costly designs focused on lower internal resistance and less heat.** This is proven by OEMs requiring the highest performance characteristics
- Our production lines are **>75% Automated** and our quality assurance process includes 100% testing during the manufacturing process.
- The critical conduction points of a relay are the contacts. We believe we are **the only major relay factory in China that does not use Chinese made contacts.** The actual formulation of Picker's contacts is highly proprietary
- Where applicable, all of Picker Components relays are UL recognized and certified for Canada.
- Our manufacturing facilities are ISO9001-2000 and ISO14001:2004 certified and have been issued an ISO/TS16949:2002 certificate by TUV SUD.



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A Look At:

- Picker is Unique in Automotive Relays
- PC796 for Dynamic Braking Applications
- The Mobility Market – Applications for Relays
- Picker's PC520, 20 Amp Sugar Cube Relay
- Power Relay Applications
- Solid State Relays





Picker is Unique in Automotive Relays

- Micro ISO, ISO280, Mini ISO standard automotive footprints **plus** 10 thru 60 Amp versions of PCB relays
- Picker lead times are good and our prices are competitive
- Picker **construction is the original Bosch design, with braided copper strap carrying the power, which is superior to some other constructions being offered**
- 80 Amp PC795 (P&B VF7) in a form C Tyco (P&B makes only form A)
- **150 Amp PC7150**



PC795



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Presenting our Automotive Relays to the Market

Picker Components PC796, 80/60 AMP automotive relay

- Designed for Motor Drive Applications – NC Contacts used for Dynamic Braking
- **Contact Material, Coil Power & Contact Gaps Optimized**
 - Resulting in significantly reduced NC contact bounce
- **Contact Max Switching Capacity up to 240A**
- **80Amps @ 14VDC Continuous Carry Current**
- **Up to 125°C Operating Temperature**
- **Plain Case, Bracket or PC Options**



Applications

- Anywhere “*instantaneous*” stop is required
- Boat Outboard Drive Control
- Motor Control up to 2HP
- Boat Lifts
- Truck Mounted Drilling Rigs
- “Man” Lifts
- Electric Awnings

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Mobility – Anything Powered by a Battery



- Automotive Aftermarket uses Relays
- Heated Seats,
 - 12V Plug Switch,
 - Lighting,
 - Day Time Running Lights
- Breathalyzers,
 - Anti-Theft Devices,
 - Alarms,



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Mobility – Anything Powered by a Battery



- Motors and Controls,
- Man Lifts



Mobility – Anything Powered by a Battery

Marine

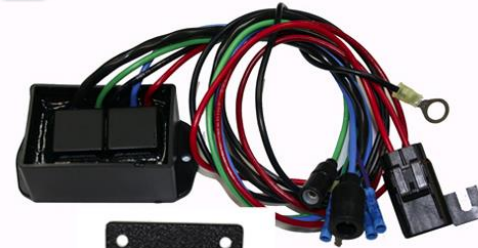
➤ Tilt Motors,

➤ Lighting,

➤ Fuse Panel,

➤ Motor Controls,

➤ Boat Lifts



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Mobility – Anything Powered by a Battery



Recreational Vehicles

- Golf Carts,
- RV Customization,



- 4 Wheelers,
- Snowmobiles



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Mobility – Anything Powered by a Battery

Solar Powered Devices

- Gate Openers,
- Deer Feeders,
- Electric Fences,
- Metering (Utility, Remote Location, etc.),
- Timing Devices



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Mobility – Anything Powered by a Battery



Trucks, Buses, Snow Plows, Tractors, Heavy Equipment

- Fuse Box,
- Refrigeration,
- Lift Gates,

- Controls for Motors on the Trailer,
- Energy Management,
- Battery Disconnection,

- Loading Ramps,
- Preheating Systems for Diesel



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Presenting our Power Relays to the Market

Picker Components PC520 series relays have been called the **“Miracle Relay”** by one of our major lighting control customers. The PC520 uses the most popular footprint in the relay industry but it is unlike the garden variety 10 and 15 amp sugar cube relays that share the footprint. The PC520 is **UL rated at 20 amps** 125 VAC and 16 amps 277 VAC general purpose. **It is rated 1 HP and TV8**. Several of our customers have tested the PC520 at loads far exceeding these ratings. The **proprietary inverted armature construction** allows this relay to accomplish it at only a modest premium over the low cost 10 amp relays.





Power Relay Applications I



Appliances

- Coffee Makers,
- Blenders,
- Dishwashers,
- Refrigeration Units,
- Oven Controls,
- Electric Heating



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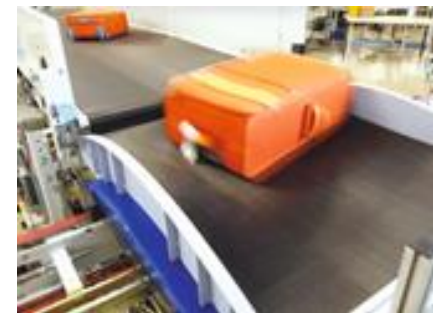
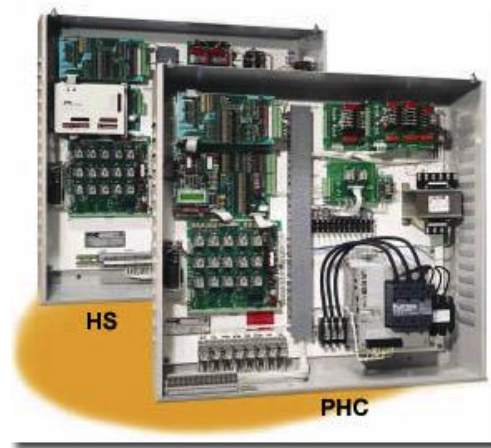
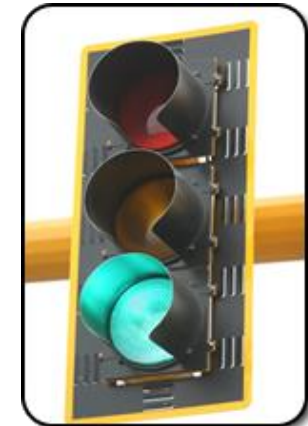


Power Relay Applications II



Automation and Industrial Control

- Motor Controls,
- Occupancy Sensors
- Motion Sensors,
- Elevator Controls,
- Vending,
- Commercial Sewing,
- Robotics,
- Traffic Controls,
- PLC's,
- Power Supplies,
- Baggage Handling,
- Battery Chargers

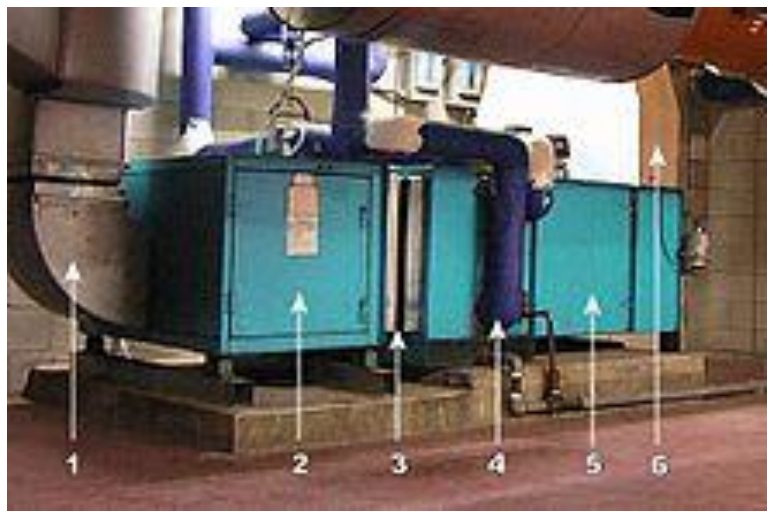


Power Relay Applications III



Appliances HVAC and Refrigeration

- Fans,
- Compressors,
- Evaporation Coils,
- Heating Coils,
- Timers,
- Lighting,
- Electric Water Heaters,
- Electric Tankless Water Heaters



Power Relay Applications IV

Lighting and Home Automation

- Dimmer Switches,
- PIR (passive infrared sensors) Movement Sensors,
- Fuse Panels in place of Circuit Breakers,
- Remote Switching,
- Electronic Ballast,
- Power Distribution Strips,
- Controls



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Power Relay Applications V



Medical

- Motor Control,
- Motion Control,
- Dryers,
- Centrifuges,
- Hospital Beds,
- Power Distribution (Non Life Sustaining Applications),
- Autoclaves



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Power Relay Applications VI



Others

- Safety Relays,
- Air Hockey Tables,
- Audio Equipment,
- Battery Chargers,
- Coin Changers,
- Green Houses,
- Power Supplies,
- Toll – Coin Counters,

- Ultrasonic Test Equipment,
- Welding,
- Solar – Inverters

Motor Controls up to 2 HP

- On/Off,
- Dynamic Braking



Solid State Relays – Hockey Puck Packages (1 of 2)

PCS15 – AC or DC Output

- Hockey Puck Package
- 3-32VDC Input Voltage
- Triac Controlled AC Outputs 110VAC, 220VAC or DC Output 24VDC
- Load Currents of 10-40 Amps

PCS28 – Dual Output

- Hockey Puck Package
- 4-15 & 15-32VDC Input Voltages
- Triac Controlled AC Outputs of 240 & 380VAC
- Load Currents of 25, 40 & 50 Amps



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(Solid State Relays – Hockey Puck Packages (2 of 2))

PCS33 – Mosfet Output, Non UL

- Hockey Puck Package
- 3-32VDC Input Voltage
- **30 – 500VDC (7 Selections) Mosfet Output Voltages**
- Load Currents of 7 - 100 Amps (8 Selections)

PCS34 – SCR Output, AC or DC Control Voltage

- Hockey Puck Package
- 3-32VDC or 90-280 VAC Input Voltage
- SCR Controlled AC Outputs of 240, 380, 480 and 600VAC
- **Load Currents of 25-80 Amps**
- **Optional Varistor Protection Across the Output**

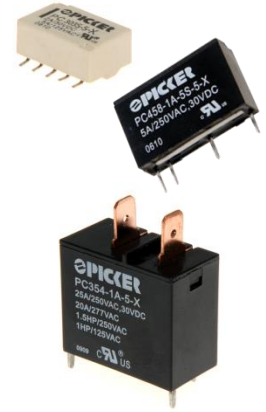


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Application Necessities

The Questions to Ask Engineers

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Application Information For Relay Recommendation



Nominal coil voltage: _____ AC or DC?

If Automotive: Snubber Resistor or Diode across Coil? _____

Load voltage _____ AC or DC?

Load current: Steady State: _____, Surge _____ Amps, Duration: _____ msec

Type of load _____ (resistive, inductive, incandescent lamp, etc.)

Number of contacts _____ Normally open (NO) _____ normally closed (NC) _____

Type of mounting PCB, Plug-in, Din Rail, Mounting Tabs, etc: _____

Sealed - Yes _____ No _____

Approvals? UL (US and Canada) _____ European _____

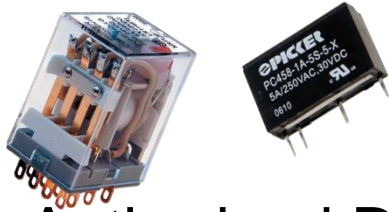
Describe application. Please include any unique situation or issues with current relay.

The Question to Ask Buyers:

Part Numbers to Cross and Target Pricing



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Authorized Distributor Design Registration Program

Purpose

Provide our Authorized Distributors with a means to record opportunities as a 'design-in" of Picker Components products.

Pricing Policy

- Design Registration request will be granted a cost differential.
- This preferential price will be granted for at least 2 years.

Products

Any Product may qualify for Design Registration

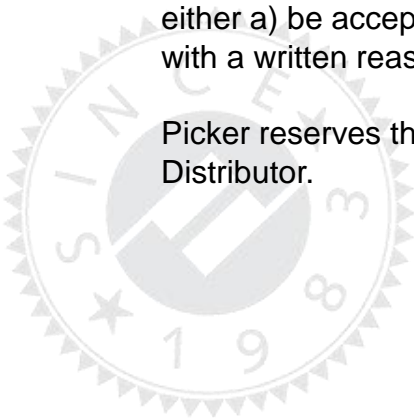
Procedure

A Design Registration form must be submitted by the Distributor. After review the Registration will either a) be accepted by Picker and an approval number will be issued or b) be rejected by Picker, with a written reason for the rejection.

Picker reserves the right to modify or terminate this program on thirty days notice to the Distributor.



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Picker Components Summary



- Reliability via Getting the Heat Out of the Relay is the Driving Force for our Design and Material Selection
- We Stamp our Contacts from Metal Sheets Alloyed in Japan using our Proprietary Formulations.
- Our Factory is 75+% Automated
- Relay Family Crosses are in the Catalog and on the Website
- Contact the Factory with Questions

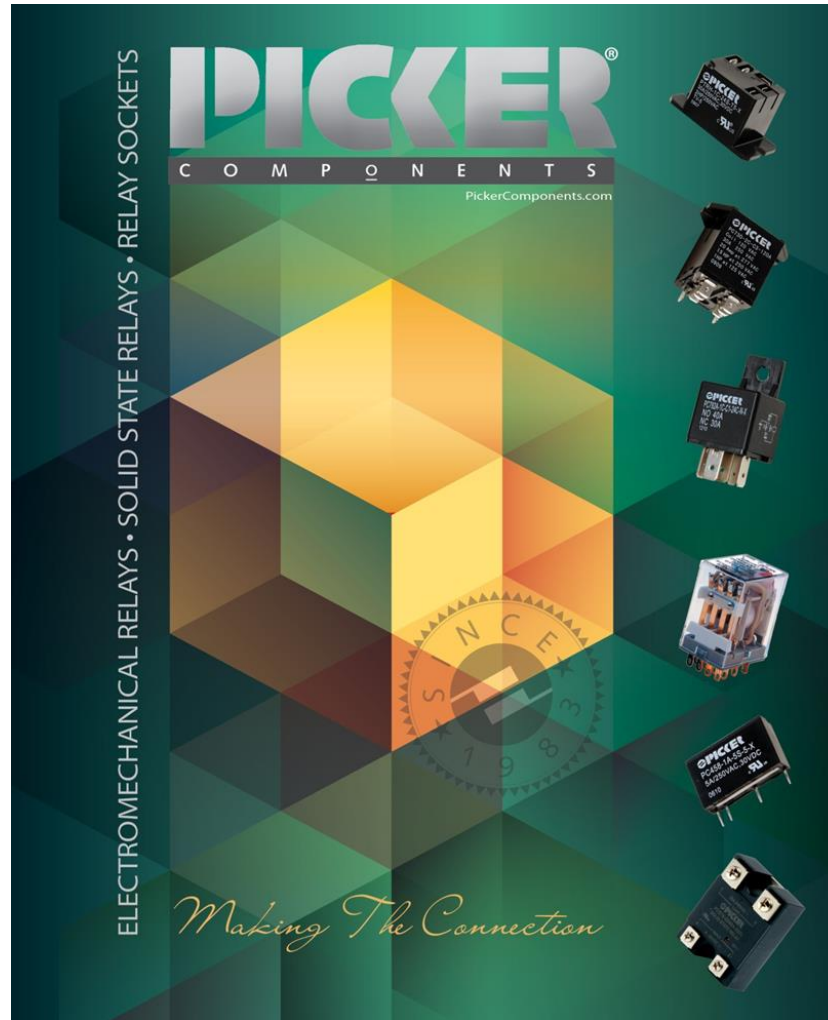
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Picker Components Summary



Our New Catalog

