

# Panel Plug-In Relays

Relays, Contactors & Circuit Breakers

## Key Features

### SCHRACK SLIM INTERFACE SNR

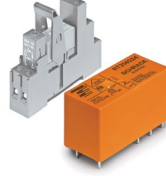
Strong coil pins for DIN-rail socket  
LED and protection circuit standard  
4kV coil-contact, 6/8mm clearance/  
creepage  
System width only 6.2mm

### SCHRACK INTERFACE RELAY RT

Strengthened pins designed to plug  
into DIN-rail-sockets  
Cadmium-free contacts  
Complete interface solutions available  
Modular concept socket/relay/module

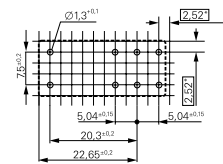
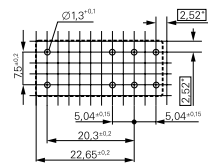
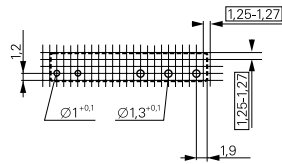
### SCHRACK INTERFACE RELAY XT

Manual test tab, optionally lockable  
Mechanical and electrical indicator  
Reinforced insulation  
4kV/8mm dielectric strength between  
coil and contact



## Footprint

2) see footnote below



Applications	Interface technology Panel board Mechanical engineering	Panel board Mechanical engineering Machine Industry	Panel boards Mechanical engineering
<b>Contact Data</b>			
Contact arrangement	1 form C, (CO)	1 form C, (1 CO) 2 form C, (2 CO)	1 form C, (1 CO) 2 form C, (2 CO)
Rated voltage	250VAC	240VAC	240VAC
Rated current	6A	8/16A	8/16A
Switching power / Max. break	1500VA	2000/4000VA	2000/4000VA
Contact material	AgSnO <sub>2</sub> , AgSnO <sub>2</sub> Au plated	AgSnO <sub>2</sub> , AgNi90/10 AgNi90/10 Au plated	AgNi90/10
Min. recommended contact load	1) see footnote below	1) see footnote below	10mA at 12VDC
<b>Coil Data</b>			
Magnetic system	DC	DC, AC	DC, AC
Rated coil voltage	5 to 60VDC	5 to 110VDC/24 to 230VAC	12 to 110VDC/24 to 230VAC
Rated coil power	170mW	400mW/0.75VA	400mW/0.75VA
<b>Dielectric Strength</b>			
<b>Initial dielectric strength</b>			
between open contacts	1000Vrms	1000Vrms	1000Vrms
between contact and coil	4000Vrms	4000/5000Vrms	4000/5000Vrms
between adjacent contacts		2500Vrms	2500Vrms
<b>Clearance/creepage</b>			
between contact and coil	≥6/8mm	≥8/8mm	≥8/8mm
<b>Other Data</b>			
Ambient temperature (max.)	Relay +85°C, in socket +55°C	+70/+85°C	+70/+85°C
Category of environmental protection IEC61810	RTIII	RTII	RTII
Terminal type	Plug-in	Plug-in	Plug-in
Mounting	Socket	Socket	Socket
Dimensions (lwh)	28x5x15mm	29x13x15.7mm	29x13x26.7mm
<b>Accessories</b>			
	DIN rail sockets, jumper bars	DIN rail and PCB sockets, clips, marking tags, modules, jumper bars	DIN rail and PCB sockets, clips, marking tags, modules, jumper bars
<b>Link to datasheet</b>	<a href="#">SCHRACK SLIM INTERFACE SNR</a>	<a href="#">SCHRACK INTERFACE RELAY RT</a>	<a href="#">SCHRACK INTERFACE RELAY XT</a>

1) Recommended minimum load indication for contact material: AU and gold plated: 1mA at 6VDC; AgNi015 and AgNi90/10: 10mA at 12VDC; AgCdO and AgSnO<sub>2</sub>: 100mA at 12VDC. Please contact technical support for detailed technical data. 2) Footprint images are representative. For a complete selection, refer to the TE data sheet via the link above.

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Relays, Contactors & Circuit Breakers

## Key Features

**Potter & Brumfield R10**  
 Broad range of coil options provide sensitivity ranging from 25 to 750mW  
 Various contacts switch from dry circuit to 7.5A  
 Many mounting and termination options

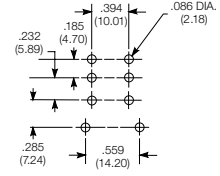
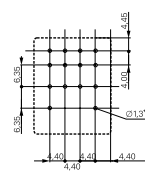
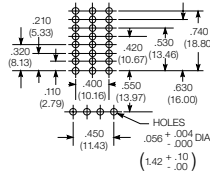
**SCHRACK PT/  
 Potter & Brumfield KH**  
 Sensitive coil  
 Low height 29/33mm  
 Manual test tab, optionally lockable  
 Mechanical indicator  
 Optional LED, protection diode

**Potter & Brumfield K10**  
 Mounting options include socket, PCB, top flange  
 DC and AC coils  
 LED versions available



## Footprint

2) see footnote below



Applications	Coin changers Audio equipment Ultrasonic test equipment	Machine industry Elevator industry Building management	Industrial controls Motor controls Industrial timers
<b>Contact Data</b>			
Contact arrangement	1, 2, 3, 4, 6, 8 form C (CO)	2 form C (2 CO) 3 form C (3 CO) 4 form C (4 CO)	2 form C (2 CO)
Rated voltage	115VAC, 115VDC	240VAC	120/240VAC
Rated current	0.5/2/3/7.5A	1/2/5/6/10/12A	10/15A
Switching power / Max. break	862VA max.	1500/2500/3000VA	1800/2500VA
Contact material	Ag, AgCdO, Ag w/ Au overlay	AgNi90/10, AgNi90/10 Au plated	AgCdO, AgNi90/10
Min. recommended contact load	Dry circuit to 300mA at 12VDC	1) Bifurcated contacts for dry circuit available on KH	1) see footnote below
<b>Coil Data</b>			
Magnetic system	DC, AC	DC, AC	DC, AC
Rated coil voltage	3 to 115VDC/6 to 115VAC	6 to 220VDC/6 to 240VAC	6 to 220VDC/6 to 240VAC
Rated coil power	36mW to 1.6W/1.5VA	750 to 900mW/1 to 1.2VA	750 to 900mW/1 to 1.2VA
<b>Dielectric Strength</b>			
<b>Initial dielectric strength</b>			
between open contacts	500/1000Vrms	1200Vrms	1200/1000Vrms
between contact and coil	1000Vrms	2500Vrms	2500/1500Vrms
between adjacent contacts	1000Vrms	2000/2500Vrms	2500/1500Vrms
<b>Clearance/creepage</b>			
between contact and coil	Visit <a href="http://TE.com">TE.com</a> for more information	≥4/4mm	≥3.1/3.1mm
<b>Other Data</b>			
Ambient temperature (max.)	+75°C	+70°C	+70°C
Category of environmental protection IEC61810	RTI, RTIII	RTII	RTII
Terminal type	Solder/plug-in and PCB	THT, plug-in, Quick connect	Quick connect, solder, PCB
Mounting	Socket, panel mount and PCB	Socket, PCB	Socket and bracket mount
Dimensions (lwh)	29.6x18.7x30.2mm	28x22.5x29/30/36mm	28x22.5x29/34.9mm
<b>Accessories</b>			
	Solder/PCB sockets, clips, hold down strap, mounting strip	DIN rail and PCB sockets, clips, marking tags, modules, jumper bars	Screw, solder and PCB sockets and clips
<b>Link to datasheet</b>			
	<a href="#">Potter &amp; Brumfield R10</a>	<a href="#">Potter &amp; Brumfield KHA SCHRACK PT</a>	<a href="#">Potter &amp; Brumfield K10</a>

1) Recommended minimum load indication for contact material: AU and gold plated: 1mA at 6VDC; AgNi015 and AgNi90/10: 10mA at 12VDC; AgCdO and AgSnO<sub>2</sub>: 100mA at 12VDC. Please contact technical support for detailed technical data. 2) Footprint images are representative. For a complete selection, refer to the TE data sheet via the link above.

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Relays, Contactors & Circuit Breakers

## Key Features

### Potter & Brumfield KRPA/MT

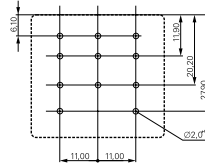
Industry standard octal/undecal type termination for quick installation  
DC and AC coils  
Mechanical indicator, indicator lamp and push-to-test options



PCB mount not applicable. Visit [TE.com](http://TE.com) for more information

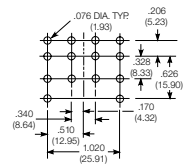
### SCHRACK RM2/3/7

Wide selection of termination and mounting styles  
PC terminals available  
Push to test button and indicator lamps  
Class B coil insulation



### Potter & Brumfield KUP/KUMP/KUIP

Wide selection of termination and mounting styles  
Broad range of contact forms  
PC terminals available  
Push to test button and indicator lamps  
Class B coil insulation



## Footprint

2) see footnote below

## Applications

Mechanical engineering  
Elevator control, Plant control  
Baggage handling

Elevator control  
Power supplies

HVAC  
Pump motor controls  
Hospital beds

## Contact Data

Contact arrangement	1 form C (1 CO) (KRPA) 2 form C (2 CO) 3 form C (3 CO)	2 form C (2 CO) 3 form C (3 CO)	1, 2, 3, 4 form C (CO) 1, 2, 3 form A (NO) 2, 3 form B (NC) 1 form X (NO-DM) 1 form Y (NC-DB) 1 form Z (CO-DM/DB)
Rated voltage	240VAC	400VAC	240VAC
Rated current	4/10A	10/16A	10/15A
Switching power / Max. break	500/2400/2500VA	3800/6000VA	2400/4155VA
Contact material	AgCdO, AgNi90/10, AgNi90/10 Au plated	AgCdO, AgNi90/10 in preparation	Ag, AgCdO, AgSnOInO
Min. recommended contact load	1) see footnote below	100mA at 12VDC	100mA at 12VDC(Ag) 300mA at 12VDC (AgCdO, AnSnOInO)

## Coil Data

Magnetic system	DC, AC	DC, AC	DC, AC
Rated coil voltage	6 to 220VDC/6 to 240VAC	6 to 220VDC/6 to 400VAC	5 to 110VDC/6 to 240VAC
Rated coil power	760mW to 1.3W/0.74 to 2.3VA	1.2 to 1.8W/2 to 2.8VA	1.2 to 1.8W/2 to 2.7VA

## Dielectric Strength

Initial dielectric strength			
between open contacts	1000/1500Vrms	1500Vrms	1200Vrms
between contact and coil	1000/2500Vrms	2500Vrms	2200/3750Vrms
between adjacent contacts	1000/2500Vrms	2500Vrms	2200Vrms
Clearance/creepage			
between contact and coil	≥2.8/4mm	≥4/14.9mm	Visit <a href="http://TE.com">TE.com</a> for more information

## Other Data

Ambient temperature (max.)	DC +60/+70°C AC +50/+55°C	+50/+70°C	DC +50/+70/+95°C AC +45/+55/+70°C
Category of environmental protection IEC61810	RTI	RTI	RTI
Terminal type	Plug-in	THT, Plug-in, solder, Quick connect	THT, Plug-in, solder, Quick connect
Mounting	Socket	Socket, PCB, bracket, flange mount and DIN-snap-on	Socket, PCB, bracket, flange, stud and tapped core
Dimensions (lwh)	35.7x35.7x50.8/57mm	38.5x35.5x48.5mm	38.9x35.7x48.4mm

## Accessories

DIN rail and PCB sockets, clips, marking tags, modules

## Link to datasheet

[Potter & Brumfield KRPA](#)  
[SCHRACK MT](#)

[SCHRACK RM2/3/7](#)

[Potter & Brumfield KUP KUGP](#)  
[KUM KUMP KUP](#)

1) Recommended minimum load indication for contact material: AU and gold plated: 1mA at 6VDC; AgNi015 and AgNi90/10: 10mA at 12VDC; AgCdO and AgSnO<sub>2</sub>: 100mA at 12VDC. Please contact technical support for detailed technical data. 2) Footprint images are representative. For a complete selection, refer to the TE data sheet via the link above.



# Panel Plug-In Relays

## Relays, Contactors & Circuit Breakers

### Key Features

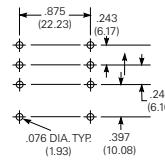
#### SCHRACK RM8/C/D

Power relay with push-on and solder terminals  
 Various mounting options  
 Indicator lamps and mechanical indicator  
 Optional push to test button



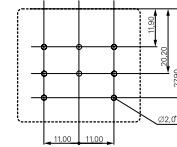
#### Potter & Brumfield KUHP

Power relay with push-on and solder terminals  
 Various mounting options  
 Designed to meet VDE space requirements  
 Class B coil insulation



#### SCHRACK RM5/6/B 3MM

3mm contact gap  
 DC or AC coil  
 Push-to-test button  
 Plug-in version, PCB terminals or chassis or DIN-rail mount



### Footprint

2) see footnote below

PCB mount not applicable.  
 Visit [TE.com](http://TE.com) for more information

Applications	Cleaning equipment Heating equipment Cooling equipment	Baggage handling motors Industrial pumps Commercial ovens	Power supplies Pump control
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Contact Data	SCHRACK RM8/C/D	Potter & Brumfield KUHP	SCHRACK RM5/6/B 3MM
Contact arrangement	1 form C (1 CO) 2 form C (2 CO) 1 form Z contact (1 NO + 1 NC) 1 form X contact (1 NO)	1 form C (1 CO) 2 form C (2 CO)	2 form A (2 NO) 3 form A (3NO)
Rated voltage	400VAC	240VAC, 50/60Hz; 28VDC	240/400VAC
Rated current	25/30/32A	20/30A	10/16A
Switching power / Max. break	6000/7500VA	4800/7200VA	3800/6000VA
Contact material	AgCdO, AgNi90/10	AgCdO, AgSnOInO	AgCdO, AgNi90/10 in preparation
Min. recommended contact load	100mA at 12VDC	300mA at 12VDC	100mA at 12VDC

Coil Data	SCHRACK RM8/C/D	Potter & Brumfield KUHP	SCHRACK RM5/6/B 3MM
Magnetic system	DC, AC	DC, AC	DC, AC
Rated coil voltage	6 to 220VDC/6 to 400VAC	6 to 110VDC 50/60Hz. 6 to 277VAC	6 to 220VDC/6 to 400VAC
Rated coil power	1.2W/2.7VA	1.2W/2.7VA	1.2W/2.7VA

Dielectric Strength	SCHRACK RM8/C/D	Potter & Brumfield KUHP	SCHRACK RM5/6/B 3MM
Initial dielectric strength			
between open contacts	1500/2000Vrms	1200Vrms	2500Vrms
between contact and coil	2500Vrms	3750Vrms	2500Vrms
between adjacent contacts	4000Vrms	3750Vrms	2500Vrms
Clearance/creepage			
between contact and coil	≥4/14.9mm	Visit <a href="http://TE.com">TE.com</a> for more information	≥4/14.9mm

Other Data	SCHRACK RM8/C/D	Potter & Brumfield KUHP	SCHRACK RM5/6/B 3MM
Ambient temperature (max.)	DC +60/+65°C AC +40°C	DC +45°C AC +75°C	+50/+60°C
Category of environmental protection IEC61810	RTI	RTI, RTO	RTI
Terminal type	Solder/Quick connect	Solder/PCB THT/Quick connect	Plug-in, solder, Quick connect, PCB THT
Mounting	Bracket, top flange panel mount and DIN snap-on	Bracket and top flange panel mount	Socket, PCB, bracket, flange mount and DIN-snap-on
Dimensions (lwh)	38.5x35.5x48.5mm	38.9x35.7x48.4mm	38.5x35.5x48.5mm
Accessories	No sockets	No sockets	DIN rail and PCB sockets, clips

Link to datasheet	<a href="#">SCHRACK RM8C/D</a> <a href="#">SCHRACK RM 8</a>	<a href="#">Potter &amp; Brumfield KUHP</a>	<a href="#">SCHRACK RM5/6/B 3MM</a>
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1) Recommended minimum load indication for contact material: AU and gold plated: 1mA at 6VDC; AgNi015 and AgNi90/10: 10mA at 12VDC; AgCdO and AgSnO<sub>2</sub>: 100mA at 12VDC. Please contact technical support for detailed technical data. 2) Footprint images are representative. For a complete selection, refer to the TE data sheet via the link above.

# Panel Plug-In Relays

Relays, Contactors & Circuit Breakers

## Key Features

### Potter & Brumfield KUGP

3mm contact gap  
DC or AC coil  
Plug-in version, PCB terminals or chassis mount

### Potter & Brumfield KUL

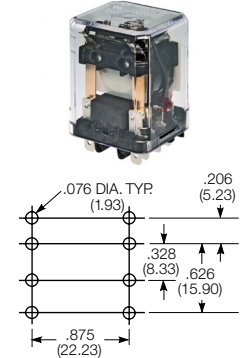
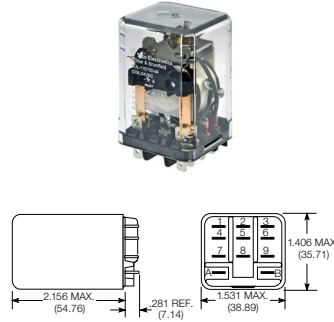
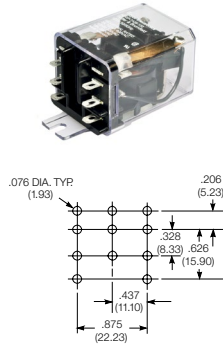
Magnetic latching  
Single and dual coils  
Panel mounting

### Potter & Brumfield KUEP

10A relay with various contact arrangements  
Magnetic blowout for 150VDC load switching  
Indicator lamp option

## Footprint

2) see footnote below



## Applications

Voltage control units

Alarm systems  
Machine tools  
Battery chargers

DC load switching in industrial controls

## Contact Data

Contact arrangement	1 form C (1 CO) 2 form A (2 NO) 2 form C (2 CO) 3 form C (3 CO)	1 form C (1 CO) 2 form C (2 CO) 3 form C (3 CO)	1 form X (NO-DM) 2 form A (2 NO) 2 form C (2 CO)
Rated voltage	240/400VAC	28/240VAC	150VDC/240VAC
Rated current	10A	10A	10A
Switching power / Max. break	2400VA		1500W/2400VA
Contact material	Ag, AgCdO	Ag, AgCdO	AgCdO, AgSnOInO
Min. recommended contact load	100mA at 12VDC (Ag) 300mA at 12VDC (AgCdO)	100mA at 12VDC (Ag) 300mA at 12VDC (AgCdO)	300mA at 12VDC

## Coil Data

Magnetic system	DC, AC	DC, AC	DC, AC
Rated coil voltage	6-110VDC/6-240VAC	12 to 48VDC/24 to 120/240VAC	5 to 110VDC/6 to 240VAC
Rated coil power	1.8W/2.7VA	1.6W dual coil/1.2W single coil	1.2W to 1.8W/2 to 2.7VA

## Dielectric Strength

Initial dielectric strength			
between open contacts	3500Vrms	500Vrms	1200Vrms
between contact and coil	2200Vrms	1500Vrms	2200Vrms
between adjacent contacts	2200Vrms	1500Vrms	2200Vrms
Clearance/creepage			
between contact and coil	>8mm	Visit <a href="http://TE.com">TE.com</a> for more information	Visit <a href="http://TE.com">TE.com</a> for more information

## Other Data

Ambient temperature (max.)	DC +75°C AC +70°C	DC +70°C AC +50/+70°C	AC +55/+70°C DC +50/+70°C
Category of environmental protection IEC61810	RTI	RTI	RTI
Terminal type	THT, Plug-in, solder, Quick connect, PCB	.187 Quick connect, solder	Quick connect, solder and PCB
Mounting	Socket, PCB, bracket, flange mount	Socket, bracket	Socket, PCB, bracket and top flange mount
Dimensions (lwh)	38.9x35.7x48.4mm	38.9x35.7x54.8mm	38.9x35.7x48.4mm

## Accessories

DIN rail and PCB sockets, clips

Screw, solder, PCB and Quick connect sockets and clips

DIN rail, track mount, chassis mount, and snap-in sockets, clips

## Link to datasheet

[Potter & Brumfield KUGP](#)

[Potter & Brumfield KUL](#)

[Potter & Brumfield KUEP](#)

1) Recommended minimum load indication for contact material: AU and gold plated: 1mA at 6VDC; AgNi0.15 and AgNi90/10: 10mA at 12VDC; AgCdO and AgSnO<sub>2</sub>: 100mA at 12VDC. Please contact technical support for detailed technical data. 2) Footprint images are representative. For a complete selection, refer to the TE data sheet via the link above.

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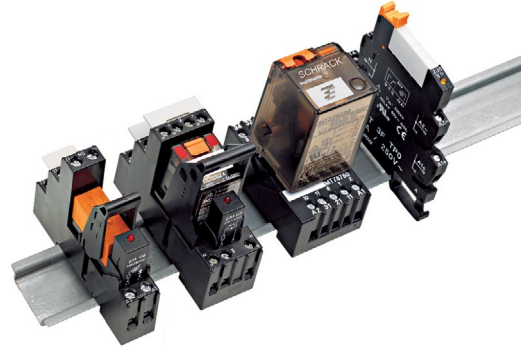
## Key Features

### ACCESSORIES

DIN rail and PCB sockets  
Screw and screwless fingersafe terminals  
Retaining and ejection clips  
Marking tags, jumper bars, jumper links  
LED and protection modules

### SETS

Relay package consisting of relay, DIN rail socket, plastic retaining clip, marking tag and module



## Applications

### Contact Data

Contact arrangement	1 form C (1 CO) 2 form C (2 CO) 3 form C (3 CO) 4 form C (4 CO)	1 form C (1 CO) 2 form C (2 CO) 3 form C (3 CO) 4 form C (4 CO)
Rated voltage	240/250VAC	240/250VAC
Rated current	6 to 16A	6 to 16A
Switching power / Max. break		1500 to 4000VA
Min. recommended contact load		1) see footnote below

### Coil Data

Magnetic system	DC, AC
Rated coil voltage	6 to 220VDC/6 to 230VAC
Rated coil power	170 to 700mW/0.4 to 1VA

### Dielectric Strength

Initial dielectric strength	
between open contacts	
between contact and coil	
between adjacent contacts	
Clearance/creepage	
between contact and coil	

### Other Data

Ambient temperature (max.)		
Category of environmental protection IEC61810	IP20	
Terminal type	Screw, screwless, plate mount, PCB	Screw, screwless
Mounting		
Dimensions (lwh)		

Accessories	PCB, panel mount and DIN rail	DIN, panel mount
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Link to datasheet	<a href="#">ACCESSORIES SLIM INTERFACE RELAY SNR</a>	<a href="#">RELAY PACKAGE RT</a>
	<a href="#">ACCESSORIES INDUSTRIAL POWER RELAY RT</a>	<a href="#">RELAY PACKAGE PT</a>
	<a href="#">ACCESSORIES MINIATURE RELAY PT</a>	<a href="#">RELAY PACKAGE SNR</a>
	<a href="#">ACCESSORIES INTERFACE PLUG-IN RELAY XT</a>	<a href="#">ACCESSORIES MULTIMODE RELAY XT</a>

1) Recommended minimum load indication for contact material: AU and gold plated: 1mA at 6VDC; AgNi0.15 and AgNi90/10: 10mA at 12VDC; AgCdO and AgSnO<sub>2</sub>: 100mA at 12VDC. Please contact technical support for detailed technical data.