



TE Connectivity (TE) has extensive capabilities in the design and manufacture of relays and a broad portfolio of switching solutions for demanding, high performance applications. These relay products are remotely actuated to control electrical power flow by either interrupting or completing an electrical circuit.

Complying with standardized PCB footprints, TE offers a wide range of inrush current capabilities and addresses the complete spectrum of requirements for production lines, robotics, elevators, control panels, CNC machines, motion control systems, lighting, building systems, solar, HVAC, and an array of safety-critical applications. Through agency approved test labs, we ensure that our relays are tested to meet the expectations of the industry. Whether you are designing for harsh or indoor applications, TE delivers high quality relays from state-of-the-art production lines.



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# RELAYS, CONTACTORS & CIRCUIT BREAKERS

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#### MOTION CONTROL



# WHAT'S INSIDE



Key Features	SCHRACK PE Low height 10.0mm Sensitive 200mW coil Mono-or bistable coil WG type available (IEC 60335-1)	SCHRACK RE/REL Miniture PCB relays PCB area 200mm² Wash tight	PCJ Slim outline Sensitive coil 200mW WG type available (IEC 60335-1) Ambient temperature up to 105°C
Footprint	Ø1,3 <sup>40,1</sup> 2,5-2,54  2,5-2,54	Ø1,3*01	11,5 7,0
Applications	Industrial electronics White goods Measurement and control	PLC; Timers; I/O cards Temperature control White goods	Home applications HVAC
Contact Data			
Contact arrangement Rated voltage Rated current	1 form C (CO) 250VAC 5A (CO)	1 form A (NO) 250VAC 6/5A	1 form A (NO) 250VAC 3A/5A (WG type)
Switching power Contact material Min. recommended contact load	6A (NO) 1250VA AgNi 90/10, AgSnO <sub>2</sub> 1) see footnote below	1500/1250VA AgNi 0.15, AgNi 90/10 1) see footnote below	750VA/1250VA (WG type) AgNi 100mA at 5VDC
Coil Data			
Magnetic system Rated coil voltage Rated coil power	DC, bistable 3 to 48VDC 200mW	DC 5 to 48VDC 200/360mW	DC 5 to 24VDC 200mW
Dielectric Strength			
Initial dielectric strength between open contacts between contact and coil between adjacent contacts	1000Vrms 4000Vrms	1000Vrms 4000/3000Vrms	750Vrms 4000Vrms
Clearance/creepage between contact and coil	3.2/4mm	4/4mm	8/>8 mm
Other Data			
Ambient temperature (max.) Category of environmental protection IEC61810	+ 85°C RTII, RTIII	+70°C(RE)/ + 85°C (REL) RTIII(RE), RTII(REL)	+ 85/ +105°C (WG type) RTII, RTIII
Terminal type Mounting Dimensions (lwh)	THT PCB 20x10x10mm	THT PCB 20x10x10.6mm/20.7x10.7x12mm	THT PCB 20.4x7x15mm
Accessories			
Link to datasheet	SCHRACK PE	SCHRACK RE SCHRACK REL	PCJ

<sup>1)</sup> 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.



	PCH	OJ/OJE/T77	PCN/PCNH
Key Features	Compact size	Miniature size	1 pole 3A/5A
ney i catares	WG type available	Sensitive coil 200mW	Only 5mm wide
	(IEC 60335-1)	4kV coil-contacts (OJ/OJT)	Allows high function/
	TV-3 ratings for NO contact		packaging density
	1 V-3 ratings for NO contact	Meet UL TV-5 ratings (OJT)	RoHS compliant (Directive
			2002/95/EC)
			2002/33/20)
			4
			# 1500 240 Miles 24V Sec.
			PCM at 3 man 2 m
	- 1		Good 1
	L. sancar Jacobs	$ \begin{array}{ccc} 405 \text{ DIA} \\  & \begin{array}{ccc}  & .067 \\  & (1.71) \end{array} \longrightarrow \left  \begin{array}{c}  & \leftarrow \end{array} \right. $	1
Footprint	2-φ1.2±0.2 - 10.2±0.1 - 5.1±0.1 -	(1.71)	1,25-1,27
	$\bigcirc \bigcirc \bigcirc - \bigcirc \bigcirc$	300 ± .004	S T T T T T T T T T T T T T T T T T T T
	7.6±0.2 +	(7.6 ± .1)	
	<u>+  </u>		<del>                                      </del>
	2.6±.0.1	.500 ± .004 (12.7 ± .1) →   (100 ± .004 (2.54 ± .1)	Ø0,9*0.1 Ø1,1*0.1
A	Appliance		PLC
Applications	Appliances HVAC	Appliances HVAC	Temperature control
	Refrigerators, microwave ovens	Industrial control	I/O modules
	remigerators, microwave ovens	maastrar control	ly o modules
Contact Data			
Contact arrangement	1 form C (CO), 1 form A (NO)	1 form A (NO)	1 form A (NO)
Rated voltage	277VAC/30VDC	250VAC/28VDC	250VAC
Rated current	3/5/10A	3/5/8/10A	3A/5A
Switching power	1400VA/150W (NO) 850VA/90W (NC)	720 to 2500VA/ 90 to 240W	750VA /1250VA
Contact material	AgSnO <sub>2</sub>	Ag, AgCdO, AgSnO <sub>2</sub>	AgNi gold plated
Min. recommended	100mA at 5VDC	1) see footnote below	100mA at 5VDC
contact load			
Coil Data			
Magnetic system	DC, sensitive	DC, sensitive	DC
Rated coil voltage	3 to 48VDC	3 to 48VDC	3 to 24VDC
Rated coil power	200/400mW	200/250/450mW	100mW/120mW
Dielectric Strength			
Initial dielectric strength			
between open contacts	750Vrms	750/1000Vrms	750Vrms
between contact and coil	4000Vrms	3000/4000Vrms	3000Vrms
between adjacent contacts			
Clearance/creepage			
between contact and coil	1.6/3.2mm	1.6/3.2mm and 3.2/6.4mm	3.5mm
Other Data			
Ambient temperature (max.)	+70°C (standard)/+85°C (WG type)	up to 85°C	+85°C
Category of environmental	RTII, RTIII	RTII, RTIII	RTIII
protection IEC61810	•	•	
Terminal type	THT	THT	THT
Mounting	PCB	PCB	PCB
Dimensions (lwh)	20x10x15.2mm	18.2x10.2x14.7mm	20x5x12.5mm
Accessories			
Link to datasheet	PCH	OJ/OJE	PCN
		<u>T77</u>	

<sup>1)</sup> 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.



#### **SCHRACK SNR SCHRACK RYII SCHRACK MSR/T75** 5mm wide slim outline Reflow solderable version High inrush currents with **Key Features** AgSnO contacts Strong coil pins for Low height 12.3mm DIN-rail socket 4kV/8mm coil-contact Reinforced insulation Allows high function/ Reinforced insulation Pinnings 3.2 and 5mm packaging density **Footprint Applications** Interface technology Interface technology Interface technology PLC; Timers HVAC, PLC, power supplies HVAC, PLC, power supplies Heating control Domestic appliances Domestic appliances **Contact Data** Contact arrangement 1 form C (CO), 1 form A (NO) 1 form C (CO), 1 form A (NO), 1 form C (CO) 1 from B (NC) 1 form A (NO) Rated voltage 250VAC 250VAC 250VAC Rated current 6A 8A 8/10A Switching power 2000VA 2000VA 1500VA Contact material AgNi0.15, AgSnO<sub>2</sub> AgNi90/10, AgSnO<sub>2</sub> AgSnO<sub>2</sub>, AgSnO<sub>2</sub> gold plated Min. recommended 1) see footnote below 1) see footnote below 100mA at 12VDC contact load Coil Data Magnetic system DC DC DC Rated coil voltage 5 to 48VDC 5 to 60VDC 3 to 60VDC Rated coil power 170mW 220mW 220mW **Dielectric Strength** Initial dielectric strength between open contacts 1000Vrms 1000Vrms 1000Vrms between contact and coil 4000Vrms 5000Vrms 4000Vrms between adjacent contacts Clearance/creepage 8/8mm between contact and coil 6/8mm 8/8mm Other Data Ambient temperature (max.) +85°C +70°C +85°C Category of environmental RTIII RTII, RTIII RTII. RTIII protection IEC61810 THT Terminal type THT, THR THT Mounting PCB or on socket PCB PCB or on socket Dimensions (lwh) 28x5x15mm 28.5x10.1x12.3mm 28.6x10x15mm Accessories DIN rail sockets PCB sockets Link to datasheet **SCHRACK SNR SCHRACK RYII SCHRACK MSR**



<sup>1)</sup> Recommended minimum load indication for contact material: AU and gold plated: ImA 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.

#### **SCHRACK RZ SCHRACK RT SCHRACK RT INRUSH** DC and AC coil High performance version available For inrush peak currents up to 80A **Key Features** Mono-or bistable coil Mon-or bistable coil Reinforced insulation High ambient temperature version Reinforced insulation Reinforced insulation WG type available (IEC 60335-1) WG type available (IEC 60335-1) WG type available (IEC 60335-1) High ambient temperature AgNi and AgSnO contact versions version (105°C) THR (reflow) version THR (reflow) version Sensitive version Bifurcated contacts **Footprint** HVAC, Home automation, **Applications** Household appliances Ligting applications, Movement HVAC, Home automation Machine control, Energy control detectors Swichting cabinet, Interface modules Motors control Machine control, Energy control Domestic appliances **Contact Data** Contact arrangement 1 form C (CO) 1 form C (CO), 1 from A (NO) 1 form C (CO) 1 form A (NO) 2 form C (CO), 2 form A (NO) 1 from A (NO) Rated voltage 250VAC 250VAC 250VAC Rated current 2X8/16A 4000VA 2X2000/4000VA 4000VA Switching power Contact material AgNi90/10, AgSnO<sub>2</sub> AgNi90/10, AgSnO, AgNi90/10, AgSnO<sub>2</sub> Min. recommended 1) see footnote below 1) see footnote below 1) see footnote below contact load **Coil Data** Magnetic system DC DC, AC, bistable DC, bistable Rated coil voltage 5 to 48VDC 5 to 110VDC/24 to 230VAC 5 to 11VDC Rated coil power 400mW 400mW/0.75VA 400mW **Dielectric Strength** Initial dielectric strength 1000Vrms 1000Vrms 1000Vrms between open contacts 5000Vrms 5000Vrms 5000Vrms between contact and coil 2500Vrms between adjacent contacts Clearance/creepage between contact and coil >10/10mm >10/10mm >10/10mm Other Data +85°C +75°C (AC type) +85°C Ambient temperature (max.) +85°C +105°C (HOT type) +70°C (transparent cover type) RTII, RTIII RTII, RTIII RTII Category of environmental protection IEC61810 Terminal type THT THT, THR (DC and AC type) THT

PCB or on socket

PCB and DIN rail sockets

29x12.7x15.7mm

**SCHRACK RT** 

PCB

29x12.7x15.7mm

**SCHRACK RZ** 



Mounting

Dimensions (lwh)

Link to datasheet

Accessories

PCB or socket

29x12.7x15.7mm

SCHRACK RT INRUSH

<sup>1)</sup> Recommended minimum load indication for contact material: AU and gold plated: ImA 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.

Key Features	SCHRACK RTX Inrush peak currents up to 370A	SCHRACK RT IPOWER  High Inrush peak currents up to 165A	SCHRACK RP3SL Inrush peak currents up to
Rey reatures	Bistable coil	(20ms) and 800A (200µs)	120A (20ms)
	Reinforced insulation	Mono- or bistable coil	Mono- or bistable coil
	16A rated fluorescent load acc.	RTS3T: 5A Electronic ballast acc UL508	Sealed version available
	EN60669-1	RTSET: 8A Electronic ballast acc. UL508	
	8A electronic ballast acc. UL508	Test tab (manual operator) optional	
	1 1/2 HP motor load acc. UL508	for RTT3T bistable versions	
Footprint	Ø1,3* <sup>0,1</sup>	16A, pinning 5mm	Ø1,3 <sup>+0,1</sup> [2,5-2,54]
	20,3 <sup>-0.2</sup> 5,04 <sup>-0.1</sup>	30 3 d d d d d d d d d d d d d d d d d d	2.4
Applications	Lighting control systems	LED lighting systems, Lighting	Lighting control
	Motion sensors	control, Movement detectors	Motor control
	Home automation applications	Filament and incandescent lamp  Motor control	Building automation
Contact Data			
Contact arrangement	1 from A (NO)	1 from A (NO)	1 form A, 1 NO
Rated voltage	250VAC	250VAC	250VAC
Rated current	16A	16A	16A
Switching power	4000VA	4000VA	4000VA
Contact material	W (pre-make contact) + AgSnO <sub>2</sub>	W (pre-make contact) + AgSnO <sub>2</sub> , AgSnO <sub>2</sub>	AgSnO <sub>2</sub>
Min. recommended contact load	1) see footnote below	1) see footnote below	100mA at 12VDC
Coil Data			
Magnetic system	Bistable	DC, bistable	DC
Rated coil voltage	5 to 48VDC	5 to 11VDC	6 to 110VDC
Rated coil power	650mW/665mW	400mW	500mW
Dielectric Strength			
Initial dielectric strength			
between open contacts	1250Vrms	1250Vrms	2000Vrms
between contact and coil	5000Vrms	5000Vrms	4000Vrms
between adjacent contacts  Clearance/creepage			
between contact and coil	min. 6/6mm	10/10mm	8/8mm
Other Data			
Ambient temperature (max.)	+70°C	RTS3L/RTS3T +105°C, RTSET +85°C	+70°C
Category of environmental protection IEC61810	RTII	RTII	RTII, RTIII
Terminal type	THT	THT	THT
Mounting	PCB	PCB	PCB
Dimensions (lwh)	29.1x12.7x16mm	29x12.7x15.7mm(RTS3T), 29x12.7x16.0mm (RTS3L)	29x12.6x25.5mm
Accessories		(1.002)	
Link to datasheet	SCHRACK RTX	SCHRACK RT IPOWER	SCHRACK RP3SL
			•

<sup>1)</sup> 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.



#### SCHRACK RP-2POLE 1.5MM

2 pole 8A 1.5mm contact gap per pole

Creepage distance complies with IEC 60950

Sealed version available

#### SCHRACK PB/PBH

Compact and simple design gives high process security High ambient temperature version up to 105°C (PBH)

WG type acc. IEC 60335-1

#### **SCHRACK ORWH**

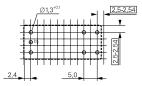
Compact relay with 1 form A and 1 form C contact arrangement 10A switching capacity



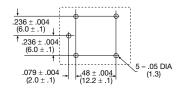




#### **Footprint**







**Applications** 

Domestic appliances

UPS

Solar Inverter

White goods

Small home appliances

Heating temperature controllers

**Appliances** HVAC

emergency lighting

#### **Contact Data**

Link to datasheet	SCHRACK RP-2POLE 1.5MM	SCHRACK PB	SCHRACK ORWH
Accessories			
Dimensions (lwh)	29x12.6x25.5mm	15x15x20mm	19.0x15.5x15.8mm
Mounting	PCB	PCB	PCB
Terminal type	THT	THT	THT
protection IEC61810	Л I II, Л I I I I	KIII	KIII, KIIII
Ambient temperature (max.) Category of environmental	+40°C RTII, RTIII	+85°C/+105°C RTII	+85°C RTII, RTIII
	. 1000	.0500/.10500	.0500
Other Data			
between contact and coil	7/8mm	3/4mm / 4/5mm	3.2mm
Clearance/creepage			
between adjacent contacts	300Vrms	2000 VIIII3	1300 411113
between open contacts between contact and coil	5000Vrms	2500Vrms	1500Vrms
Initial dielectric strength between open contacts	25000Vrms	1000Vrms	750Vrms
Dielectric Strength			
Rated coil power	780mW	360mW/500mW	360mW
Rated coil voltage	5 to 110VDC	5 to 48VDC	5 to 24VDC
Magnetic system	DC	DC	DC
Coil Data			
contact load			
Min. recommended	100mA at 12VDC	1) see footnote below	100mA at 5VDC
Contact material	AgSnO <sub>2</sub>	AgNi90/10, AgSnO	AgZnO, AgNi
Switching power	2000VA	2500VA	2770VA/360W
Rated voltage Rated current	8A	10A	10A
Rated voltage	250VAC	250VAC	277VAC/28VDC
Contact arrangement	2 form A, 2 NO	1 form C (CO) 1 form A (NO)	1 form C (CO) 1 form A (NO)

**SCHRACK PBH** 

<sup>1)</sup> 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.



#### **Potter & Brumfield T9G**

High breaking capacity PCB and Quick connect connections 4kV/8mm coil-contact Minimum Board space (29mm x 21.5mm)

#### **Potter & Brumfield T9A**

High breaking capacity PCB and Qucik connect connections and chassis mount version UL-class F as standard Open version available

#### Potter & Brumfield T9S/T9V

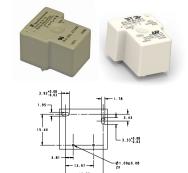
1 pole 35A (T9S) / 40A (T9V) Contact gap 1.5mm/1.8mm min. Ambient temperature up to 85°C at 35A Production in accordance to IEC 60335-1 RoHS compliant (Directive 2002/95/EC)



UL-class F as standard







#### **Footprint**

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HVAC, Appliances

Industrial control

**Energy Management** 



HVAC **Appliances** Industrial Controls

Photovoltaic inverter Electrical vehicle loading stations Electrical vehicle

## **Contact Data**

**Applications** 

Contact arrangement	1 form C (1 CO)
	1 form B (1 NC)
	1 form A (1 NO)
Rated voltage	250VAC
Date d accoment	704
Rated current	30A

Switching power Contact material Min. recommended

1A at 12VAC/VDC contact load

1 form C (1 CO) 1 form B (1 NC)

1 form A (1 NO) 250VAC

30A AgSnO<sub>2</sub>

7500VA AgCdO, AgSnInO 1A at 5VDC or 12VAC 1 form A (1NO)

(1.8mm gap)

35A (T9S), 40A (T9V) 9695VA (T9S), 10000VA (T9V)

277VAC (1.5mm gap), 250VAC

AgNi

1A at 5VDC/12VAC

### Coil Data

Magnetic system	DC	DC	Monostable
Rated coil voltage	5 to 110VDC	6 to 48VDC	12VDC
Rated coil power	900mW	1W/900mW	2.25W

#### **Dielectric Strength**

Other Data			
between contact and coil	8mm / 8mm (IEC)	3.1/6.3mm	3/4mm
Clearance/creepage	6.4mm / 9.5mm (UL)		
between adjacent contacts			
between contact and coil	4000Vrms	2500Vrms	4000Vrms
between open contacts	1500Vrms	1500Vrms	2500Vrms
Initial dielectric strength			

Ambient temperature (max.)	+105°C	+85°C	+85°C	
Category of environmental protection IEC61810	RTII, RTIII	RTO, RTI, RTII, RTIII	RTII/RTIII	
Terminal type	THT, Quick connect	THT, Quick connect	PCB	
Mounting	PCB	PCB, panel mount	PCB	
Dimensions (lwh)	29x21.5x15.7mm	32.3x27.4x20.4mm	32x27x20mm	

#### Accessories

Link to datasheet	Potter & Brumfield T9G	Potter & Brumfield T9A	Potter & Brumfield T9V
			Potter & Brumfield T9S

<sup>1)</sup> 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.



#### **Potter & Brumfield T92 Key Features**

Switching capacity 7500VA DC or AC coil 4kV/8mm coil-contact PCB or Qucik connect connections

#### **PCF**

Quick connect terminal for load (PCF only) Height 26.5mm

Meet 4kV dielectric voltage between coil and contact Ambient temperature 85°C

#### **PCFN SOLAR**

Specially designed to meet the requirements for the solar Contact gap 1.5mm/1.8mm min. 200mW hold power

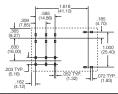


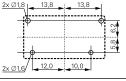
or chassis mount





#### **Footprint**





#### **Applications**

HVAC

Residential/ commercial appliances

Industrial controls

**Applicances** 

**HVAC** Office machines Photovoltaic Inverter

30.4x16x26.5mm

**PCFN SOLAR** 

Contact Data
--------------

Contact arrangement	2 form C (2 CO)	1 form A (1 NO)	1 form A (1 NO)
	2 form A (2 NO)		
Rated voltage	400VAC	250VAC	277VAC
Rated current	30A	25A	26A
Switching power	7500VAC	6370VA	7200VA
Contact material	AgCdO, AgSnInO	Visit TE.com for more information	AgSnO <sub>2</sub>
Min. recommended contact load	500mA (NO)/ 100mA (NC) at 12VAC	100mA at 5VDC	100mA at 5VDC
Coil Data			
Magnetic system	DC, AC	DC	DC

Magnetic system	DC, AC	DC	DC
Rated coil voltage	5 to 110VDC/12 to 240VAC	6 to 24VDC	12VDC and 24VDC
Rated coil power	1.7W/4.0VA	900mW	1.5W/200mW hold power
Dielectric Strength			
Initial dielectric strength			
between open contacts	1500Vrms	1000Vrms	2500Vrms
between contact and coil	4000Vrms	4000Vrms	4000Vrms
between adjacent contacts	2000Vrms		
Clearance/creepage			
between contact and coil	8/9.5mm	6.7/>8mm	6.1/6.1mm
Other Data			
Ambient temperature (max.)	DC Coil +85°C; AC Coil +65°C	+85°C	+85°C
Category of environmental protection IEC61810	RTI, RTII, RTIII	RTII	RTII
Terminal type	THT, Quick Connect	THT/Quick connect (#250)	PCB-THT
Mounting	Panel mount, PCB	PCB	PCB

30.4x16x26.5mm

**PCF** 

52.3x34.6x30.8mm

Potter & Brumfield T92

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.



Dimensions (lwh)

Accessories Link to datasheet

#### **EW60**

1 pole 60A, 1 form A (NO) contact Polarized bistable (latching) with 1 or 2 coils NEMA 410-2011, 16A, 277VAC, electronic ballast; 20A branch circuit 480A inrush, 2.1m sec

#### EW100/120

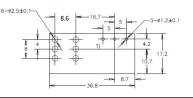
1 pole 120A, 1 form A (NO) contact Polarized bistable with two coils latching 4KV/ 8mm coil - contact Reinforced insulation





#### **Footprint**

Accessories
Link to datasheet



Visit TE.com for more information

Applications	Lightting control, bus actuator, power distribution, circuit protection, inverter	Energy counter, prepaid power meter
Contact Data	inverter	

Contact Data		
Contact arrangement	1 form A (1 NO)	1 form A (1 NO)
Rated voltage	440VAC	250VAC
Rated current	60A	100A/120A
Switching power	15000VA	30000VA
Contact material	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>
Min. recommended contact load	Visit TE.com for more information	Visit TE.com for more information
Coil Data		
Magnetic system	Bistable	Bistable
Rated coil voltage	5 to 24VDC	6 to 24VDC
Rated coil power	1.5W/3W	4.5W
Dielectric Strength		

Coil Data		
Magnetic system	Bistable	Bistable
Rated coil voltage	5 to 24VDC	6 to 24VDC
Rated coil power	1.5W/3W	4.5W
Dielectric Strength		
Initial dielectric strength		
between open contacts	1500Vrms	2000Vrms
between contact and coil	4000Vrms	4000Vrms
between adjacent contacts		
Clearance/creepage		
between contact and coil	≥6/9mm	≥10/10mm
Other Data		
Ambient temperature (max.)	+70°C	+70°C
Category of environmental protection IEC61810	RTI	RTII - flux proof
Terminal type	PCB	PCB, Copper
Mounting	PCB	Visit TE.com for more information
Dimensions (lwh)	36.8×17.2x30.4mm	36.8x21.8x41.9mm
Dimensions (lwh)	36.8×17.2×30.4mm	36.8x21.8x41.9mm

**EW60** 



EW100/120

<sup>1)</sup> 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.

#### **IHV**

Hermetically sealed - intrinsically safte Designed accordance to AIAG QS9000 No Position sensitive RoHS compliance

#### **Potter & Brumfield PRD**

Contact ratings to 50A Magnetic blowout available for switching DC loads SPDT auxiliary switch available Class B insulation system





Footprint PCB mount not applicable. Visit TE.com for more information

PCB mount not applicable. Visit TE.com for more information

Applications	DC charging, Solar Inverter, Energy Store Station BMS, Electrical Forklift, AGV, Rail Transit Circuit protection and Safety in Industrial	Industrial controls Lighting
	Machinery	
Contact Data		
Contact arrangement	1 form X	1 form A (1 NO)
		1 form C (1 CO)
		1 form X (NO-DM)
		2 form A (2 NO)
		2 form C (2 CO)
Rated voltage	450VDC / 750VDC	600VAC, 28/125VDC
Rated current	50A/100A/150A/200A/250A/350A	50A
Switching power		12000VA
Contact material		Ag, AgCdO
Min. recommended contact load	Visit TE.com for more information	1A at 12VDC/VAC
Coil Data		
Magnetic system	DC	DC, AC
Rated coil voltage	12VDC, 24VDC or PWM	6 to 110VDC/6 to 480VAC
Rated coil power	Visit TE.com for more information	2W/9.8VA
Dielectric Strength		
Initial dielectric strength		
between open contacts		2000Vrms
between contact and coil	2000Vrms	2000Vrms
between adjacent contacts		2000Vrms
Clearance/creepage		
between contact and coil	Visit TE.com for more information	>8mm
Other Data		
Ambient temperature (max.)	+85°C	DC +80°C
		AC +45°C
Category of environmental protection IEC61810	RTV	RT O/open
Terminal type	Screw	Screw, Quick connect
Mounting	Panel mount	Panel mount
Dimensions (lwh)	Visit TE.com for more information	85.7X63.8X63.5mm
Accessories		Dust cover
Link to datasheet		Potter & Brumfield PRD

<sup>1)</sup> 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.



#### **SCHRACK SR2M**

2 pole relay with force guided contacts according to EN50205

Reinforced insulation between poles

#### SCHRACK SR4 D/M

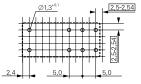
4 pole relay with force guided contacts according to EN50205

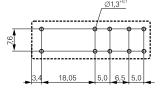
Compact design, space efficient





#### **Footprint**





**Applications** Safety modules Safety modules Process technology Process technology

Elevator and Escalator control Elevator and Escalator control

10/10mm

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Contact arrangement	1 form A + 1 from B (1 NO + 1 NC)	3 form A + 1 form B (3 NO + 1 NC)
	2 form C (2 CO)	2 form A + 2 form B (2 NO + 2 NC)
Rated voltage	250VAC	250VAC
Rated current	6A	8A
Switching power	1500VA	2000VA
Contact material	AgNi	AgSnO <sub>2</sub>
Min recommended contact load	10mA at 5VDC	10mA at 5VDC

Coil	Data

Magnetic system	DC	DC
Rated coil voltage	5 to 110VDC	5 to 110VDC
Rated coil power	700mW	800mW

#### **Dielectric Strength**

between contact and coil

initial dielectric strength		
between open contacts	1500Vrms	1500Vrms
between contact and coil	4000Vrms	4000Vrms
between adjacent contacts	3000Vrms	2500Vrms
Clearance/creepage		

8/8mm

## Other Data

Ambient temperature (max.)	+70°C	+70°C
Category of environmental protection IEC61810	RTIII	RTIII
Terminal type	THT / Plug-in	THT
Mounting	PCB / Socket	PCB
Dimensions (lwh)	29x12.6x25.5mm	40x13x16.5mm

Accessories Sockets and relay clips

Link to datasheet SCHRACK SR2M SCHRACK SR4 D/M



<sup>1)</sup> 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.

#### **SCHRACK SR6**

# 4/6pole relay with force guided contacts according to EN50205

Reinforced insulation between all contacts depending on version

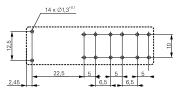
#### **SCHRACK SRL7**

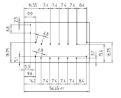
7 pole relay with force guided contacts according to EN50205





#### **Footprint**





≥3/4mm and ≥5.5/5.5mm

Applications	Safety modules	Safety modules
	Process technology	Process technology
	Elevator and Escalator control	Elevator and Escalator control

	: Data	

Contact arrangement	3 form A + 1 form B (3 NO + 1 NC) 2 form A + 2 form B (2 NO + 2 NC) 3 form A + 3 form B (3 NO + 3 NC) 4 form A + 2 form B (4 NO + 2 NC) 5 form A + 1 form B (5 NO + 1 NC)	2 form B + 5 form A (2 NC + 5 NO)
Rated voltage	250VAC	250VAC
Rated current	8A	6A
Switching power	2000VA	1500VA
Contact material	AgSnO <sub>2</sub>	Ag alloy
Min. recommended contact load	10mA at 5VDC	10mA at 5VDC
Coil Data		
Magnetic system	DC	DC
Rated coil voltage	5 to 110VDC	5 to 110VDC
Rated coil power	1200/800mW	700mW
Dielectric Strength		
Initial dielectric strength		
between open contacts	1500Vrms	1000Vrms
between contact and coil	4000Vrms	2500/4000Vrms
between adjacent contacts	3000/4000Vrms	2500/4000Vrms
Clearance/creepage		

#### Other Data

between contact and coil

Ambient temperature (max.)	+70°C	+85°C
Category of environmental protection IEC61810	RTIII	RTII
Terminal type	THT	THT
Mounting	PCB	PCB
Dimensions (lwh)	55x16.5x16.5mm	55.5x33.8x10.8mm

5.5/5.5mm, 15/15mm

#### **Accessories**

Link to datasheet SCHRACK SR6 SCHRACK SRL7

<sup>1)</sup> 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.



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 6.2 mm	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	01-01 Ø1,3-01 1.9	01.3°*10 01.3°*10 2.522 2.522 5.04*010 2.0.3°*10 5.04*010 2.0.3°*10 2.0.3°*10 2.0.3°*10 2.0.4*010	20.3°°.1 5.04°°.10 20.3°°.2 20.3°°.2 20.3°°.2 20.3°°.2
Applications	Interface technology Panel board Mechanical engineering	Panel board Mechanical engineering Machine Industry	Panel boards Mechanical engineering
Contact Data			
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 Rated current Switching power Contact material	250VAC 6A 1500VA AgSnO <sub>2</sub> , AgSnO <sub>2</sub> Au plated	240VAC 8/16A 2000/4000VA AgSnO <sub>2</sub> , AgNi90/10 AgNi90/10 Au plated	240VAC 8/16A 2000/4000VA AgNi90/10
Min. recommended contact load	1) see footnote below	1) see footnote below	10mA at 12VDC
Coil Data			
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
Dielectric Strength			
Initial dielectric strength between open contacts between contact and coil between adjacent contacts Clearance/creepage	1000Vrms 4000Vrms	1000Vrms 4000/5000Vrms 2500Vrms	1000Vrms 4000/5000Vrms 2500Vrms
between contact and coil	≥6/8mm	≥8/8mm	≥8/8mm
Other Data			
Ambient temperature (max.) Category of environmental protection IEC61810	relay +85°C, in socket +55°C RTIII	+70/+85°C RTII	+70/+85°C RTII
Terminal type	Plug-in	Plug-in	Plug-in
Mounting	Socket	Socket	Socket
Dimensions (lwh)	28x5x15mm	29x13x15.7mm	29x13x26.7mm
Accessories	DIN rail sockets, jumper bars	DIN rail and PCB sockets,	DIN rail and PCB sockets,

clips, marking tags, modules,

SCHRACK INTERFACE RELAY RT

jumper bars

SCHRACK SLIM INTERFACE SNR



clips, marking tags, modules,

SCHRACK INTERFACE RELAY XT

jumper bars

Link to datasheet

<sup>1)</sup> 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.

#### 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

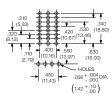


DC and AC coils LED versions available





#### **Footprint**



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Industrial controls	

Applications	Coin changers	Machine industry	Industrial controls
	Audio equipment	Elevator industry	Motor controls
	Ultrasonic test equipment	Building management	Industrial timers

	Audio equipment	Elevator industry	Motor controls	
	Ultrasonic test equipment	Building management	Industrial timers	
Contact Data				
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	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	<ol> <li>Bifurcated contacts for dry circuit available on KH</li> </ol>	1) see footnote below	
Coil Data				
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	
Dielectric Strength				
Initial dielectric strength				
between open contacts	500/1000Vrms	1200Vrms	1200/1000Vrms	
between contact and coil	1000Vrms	2500Vrms	2500/1500Vrms	

Link to datasheet	Potter & Brumfield R10	Potter & Brumfield KHA	Potter & Brumfield K10
Accessories	Solder/PCB sockets, clips, hold down strap, mounting strip	DIN rail and PCB sockets, clips, marking tags, modules, jumper bar	Screw, solder and PCB sockets and sclips
Dimensions (lwh)	29.6x18.7x30.2mm	28x22.5x29/30/36mm	28x22.5x29/34.9mm
Mounting	Socket, panel mount and PCB	Socket, PCB	Socket and bracket mount
Terminal type	Solder/plug-in and PCB	THT, plug-in, Quick connect	Quick connect, solder, PCB
Category of environmental protection IEC61810	RTI, RTIII	RTII	RTII
Ambient temperature (max.)	+75°C	+70°C	+70°C
Other Data			
Clearance/creepage between contact and coil	Visit TE.com for more information	≥4/4mm	≥3.1/3.1mm
between adjacent contacts	1000Vrms	2000/2500Vrms	2500/1500Vrms
between contact and coil	1000Vrms	2500Vrms	2500/1500Vrms
Initial dielectric strength between open contacts	500/1000Vrms	1200Vrms	1200/1000Vrms

**SCHRACK PT** 

<sup>1)</sup> 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.



**Footprint** 

Accessories

Link to datasheet

# 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

#### SCHRACK RM2/3/7

Wide selection of termination and mounting styles

PC terminals available

Push to test button and indicator lamps

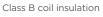
Class B coil insulation

#### Potter & Brumfield KUP/ KUMP/KUIP

Wide selection of termination and mounting styles

Broad range of contact forms PC terminals available

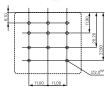
Push to test button and indicator lamps





PCB mount not applicable. Visit TE.com for more information







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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 from Z (CO-DM/DB)
Rated voltage	240VAC	400VAC	240VAC
Rated current	4/10A	10/16A	10/15A
Switching power	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 Rated coil voltage Rated coil power	DC, AC 6 to 220VDC/6 to 240VAC 760mW to 1.3W/0.74 to 2.3VA	DC, AC 6 to 220VDC/6 to 400VAC 1.2 to 1.8W/2 to 2.8VA	DC, AC 5 to 110VDC/6 to 240VAC 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 Clearance/creepage	1000/2500Vrms	2500Vrms	2200Vrms
between contact and coil	≥2.8/4mm	≥4/14.9mm	Visit TE.com 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

DIN rail and PCB sockets, clips

SCHRACK RM2/3/7

**SCHRACK MT** 

marking tags, modules

Potter & Brumfield KRPA

DIN rail and PCB sockets, clips,



DIN rail, panel and PCB

Potter & Brumfield KUIP KUGP

sockets, clips

KUM KUMP KUP

<sup>1)</sup> 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.

#### **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



PCB mount not applicable. Visit TE.com for more information







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Applic	cations
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**Footprint** 

Cleaning equipment Heating equipment Cooling equipment

Baggage handling motors Industrial pumps Commercial ovens

Power supplies Pump control

#### **Contact Data**

Contact arrangement	1 form C (1 CO)	1 form C (1 CO)	2 form A (2 NO)
	2 form C (2 CO)	2 form C (2 CO)	3 form A (3NO)

1 form Z contact (1 NO + 1 NC)

1 form X contact (1 NO)

240VAC, 50/60Hz; 28VDC 240/400VAC Rated voltage 400VAC 20/30A 10/16A Rated current 25/30/32A 3800/6000VA 4800/7200VA 6000/7500VA

Switching power AgCdO, AgSnOInO AgCdO, AgNi90/10 in preparation Contact material AgCdO, AgNi90/10

> 300mA at 12VDC 100mA at 12VDC 100mA at 12VDC

#### Coil Data

contact load

Min. recommended

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
	4.014./0.=1.44	4.0144/0.=144	4 01 1 1 /0 = 1 1 4

Rated coil power 1.2W/2.7VA 1.2W/2.7VA 1.2W/2.7VA

#### **Dielectric Strength** 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			

Accessories	No sockets	No sockets	DIN rail and PCB sockets, clips
Dimensions (lwh)	38.5x35.5x48.5mm	38.9x35.7x48.4mm	38.5x35.5x48.5mm
Mounting	Bracket, top flange panel mount and DIN snap-on	Bracket and top flange panel mour	ntSocket, PCB, bracket, flange mount and DIN-snap-on
Terminal type	Solder, Quick connect	Solder, PCB THT, Quick connect	Plug-in, solder, Quick connect, PCB THT
Category of environmental protection IEC61810	RTI	RTI, RTO	RTI
	AC +40°C	AC +75°C	
Ambient temperature (max.)	DC +60/+65°C	DC +45°C	+50/+60°C
Other Data			
between contact and coil	≥4/14.9mm	Visit TE.com for more information	≥4/14.9mm

<sup>1)</sup> 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.

**SCHRACK RM 8** 



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
			.206
Footprint	076 DIA.TYP (193) (5.23) (9.33) .626 (19.3) (9.33) .626 (19.35) (11.10	281 REF. (53.1 MAX. (38.89)	.875 (22.23)
Applications	Voltage control units	Alarm systems Machine tools Battery chargers	DC load switvhing 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 Rated current Switching power Contact material	240/400VAC 10A 2400VA Ag, AgCdO	28/240VAC 10A Ag, AgCdO	150VDC/240VAC 10A 1500W/2400VA 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 Rated coil voltage Rated coil power	DC, AC 6-110VDC/6-240VAC 1.8W/2.7VA	DC, AC 12 to 48VDC/24 to 120/240VAC 1.6W dual coil/1.2W single coil	DC, AC 5 to 110VDC/6 to 240VAC 1.2W to 1.8W/2 to 2.7VA
Dielectric Strength			
Initial dielectric strength between open contacts between contact and coil between adjacent contacts Clearance/creepage	3500Vrms 2200Vrms 2200Vrms	500Vrms 1500Vrms 1500Vrms	1200Vrms 2200Vrms 2200Vrms
between contact and coil	>8mm	Visit TE.com for more information	Visit TE.com 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 Dimensions (lwh)	Socket, PCB, bracket, flange mount 38.9x35.7x48.4mm	Socket, bracket 38.9x35.7x54.8mm	Socket, PCB, bracket and top flange mount 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
	B. U. O.B. C. LLIGUED	B. U. O.B. (C. 1.1.4.1)	B. U. O.B. C. LLIGUED

Potter & Brumfield KUL

Potter & Brumfield KUGP



Potter & Brumfield KUEP

Link to datasheet

<sup>1)</sup> 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.

#### **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



# Footprint Footprint

#### **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 Switching power	6 to 16A	6 to 16A 1500 to 4000VA
Contact material		
Min. recommended contact load		1) see footnote below
Coil Data		
Magnetic system Rated coil voltage Rated coil power		DC, AC 6 to 220VDC/6 to 230VAC 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 Terminal type Mounting Dimensions (lwh)	IP20 Screw, screwless, plate mount, PCB	Screw, screwless
Accessories	PCB, panel mount and DIN rail	DIN, panel mount
Link to datasheet	ACCESSORIES SLIM INTERFACE RELAY SNR	RELAY PACKAGE RT

ACCESSORIES MINIATURE RELAY PT

ACCESSORIES INTERFACE PLUG-IN RELAY XT

ACCESSORIES INDUSTRIAL POWER RELAY RT RELAY PACKAGE PT

**RELAY PACKAGE SNR** 

ACCESSORIES MULTIMODE RELAY MT

<sup>1)</sup> 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.





#### **Axicom IM**

4G telecom/signal relay/ switching relay Slim line 10x6mm, Low profile 5.65mm Switching power 60W/62.5VA Switching voltage 220VDC/250VAC Monostable + Bistable Low rated coil power High dielectric version High current version upto 5 A High contact stability version Bifurcated contacts + single contact

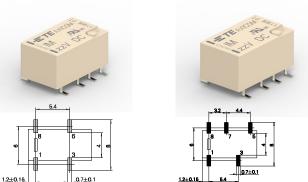
#### **Axicom IMB**

4G telecom/signal relay/ switching relay Slim line 10x6mm, Low profile 5.65mm Switching power 60W/62.5VA Switching voltage 220VDC/250VAC Monostable + Bistable

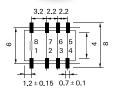
Very high dielectric version Bifurcated contacts

#### **Axicom IMC**

4G telecom/signal relay/ switching relay Slim line 10x6mm, Low profile 5.65mm Switching power 60W/62.5VA Switching voltage 220VDC/250VAC Monostable + Bistable High dielectric version High current version upto 4 A Bifurcated contacts



#### **Footprint**



**Applications** Telecommunication, access and

transmission equipment

Thermostat controls. Fire and security eauipment

Measurement and Test equipment, Industrial Controls, Medical equipment

Telecommunication, access and transmission equipment

Thermostat controls. Fire and security eauipment

Measurement and Test equipment, Industrial Controls, Medical equipment

Telecommunication, access and transmission equipment

Thermostat controls. Fire and security equipment

Measurement and Test equipment, Industrial Controls, Medical equipment

## **Contact Data**

Contact arrangement 2 form C, 2CO Single contact + Bifurcated contacts Rated voltage 250VAC/220VDC Rated current 2/5A Switching power 60W/62.5VA Contact material 100μV/1μΑ Min. recommended <50m $\Omega$  at 10mA/30mV I: < 100m $\Omega$ contact load

1 form A, 1 NO Bifurcated contacts 250VAC/220VDC 2A 60W/62.5VA 100μV/1μΑ <100m $\Omega$  at 10mA/30mV 1 form C, 1 CO Bifurcated contacts 250VAC/220VDC 2/4A 60W/62.5VA 100μV/1μΑ  $<50m\Omega$  at 10mA/30mV

#### Coil Data

Magnetic system

Rated coil voltage
Rated coil power
DC coil/bistable 1 coil/2 coils

1.5 to 24VDC 50 to 200mW-/-

Polarized

Polarized Polarized 1.5 to 24VDC 1.5 to 24VDC 140mW/-/-140mW/-/-

#### **Dielectric Strength**

Initial dielectric strength
between open contacts
between contact and coil
between adjacent contacts
Initial surge withstand voltage
between open contacts
between contact and coil
between adjacent contacts
Isolation 100/900MHz
Insertion loss 100/900MHz
Volt. standing wave ratio
100/900MHz

750 to 1500Vrms 1500 to 1800Vrms 750 to 1800Vrms

1000 to 2500Vp 2000 to 2500Vp 1000 to 2500Vp -37.0/-18.8dB -0.03/-0.33dB 1.06/1.49

2500Vrms 3500Vrms

3500V 4900V -37.0/-18.8dB

max. 1pF

-0.03/-0.33dB 1.06/1.49

1000 to 1600Vrms 1800 to 2200Vrms

1500 to 2200Vp 2500 to 3000Vp

-37.0/-18.8dB -0.03/-0.33dB 1.06/1.49

#### Other Data

Capacitance

Ambient temperature (max.) Category of environmental protection Terminal type **Dimension LWH** 

between open contacts

Link to datasheet

-40 to +85°C IP67/RTV

Axicom IM

max. 1pF

THT, SMT 10x6x5.65mm -40 to +85°C IP67/RTV

THT, SMT 10x6x5.65mm **Axicom IMB** 

max. 1pF

IP67/RTV

-40 to +85°C

THT, SMT 10x6x5.65mm

**Axicom IMC** 

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.



#### **Axicom IMD/IME**

4G telecom/signal relay/ switching relay Slim line 10x6mm, Low profile 5.65mm Switching power 60W/62.5VA Switching voltage 220VDC/250VAC

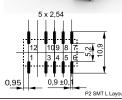
Monostable Bifurcated contacts

#### Axicom P2 / P2 HIGH **DIELECTRIC VERSION**

Small Signal Relay Slim line 15x7.5mm Switching current max. 5A

High dielectric version Meets Telcordia Technologies Inc.



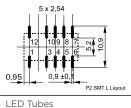


Security systems, Consumer Electronics, Thermostats Home Automation systems, Communication Systems Set top boxes, Office equipment

#### **Axicom P2 LIGHTING**

Small Signal Relay Slim line 15x7.5mm Switching current max. 5A High Dielectric Strength 3kV VDE certified for LED tubes





#### **Applications**

**Footprint** 

Telecommunication, access and transmission equipment, Fire and

security equipment Thermostat controls

Measurement and Test equipment, Industrial Controls, Medical equipment

Office Equipment Security systems, Set top boxes

# **Contact Data**

Contact arrangement 2 form B, 2 NC 2 form A, 2 NO Bifurcated contacts Rated voltage 250VAC/220VDC Rated current 2Δ Switching power

Contact material 100μV/1μΑ Min. recommended contact load

60W/62.5VA

<50m $\Omega$  at 10mA/20mV

2 form C, 2 CO

Bifurcated contacts

250VAC/220VDC

1000 to 1500Vrms

1000 to 1500Vrms

60W/62.5VA 100μV/1μΑ <50m $\Omega$ 

2 form C, 2 CO Bifurcated contacts

250VAC/220VDC

60W/62.5VA 100μV/1μΑ  $<50m\Omega$ 

#### **Coil Data**

Magnetic system Polarized Polarized Polarized Rated coil voltage 1.5 to 24VDC 2.4 to 24VDC 3 to 24VDC Rated coil power 140mW/-/-140mW/70mW/140mW 200mW/140mW DC coil/bistable 1 coil/2 coils

#### **Dielectric Strength**

Initial dielectric strength
between open contacts
between contact and coil
between adjacent contacts
Initial surge withstand voltage
between open contacts
between contact and coil
and the second s

between adjacent contacts Isolation 100/900MHz Insertion loss 100/900MHz Volt. standing wave ratio 100/900MHz

Capacitance between open contacts 1000Vrms 1800Vrms

1500Vp 2500Vp 1500Vp -37.0/-18.8dB -0.03/-0.33dB 1.6/1.49

1000Vrms

max. 1pF

1500Vrms

2500Vp

2500Vp

2500Vp

1.4/1.40

max. 1pF

-39.0/-20.7dB

-0.02/-0.27dB

1500Vrms 3000Vrms

6000Vrms

1500Vrms

-39.0/-20.7dB -0.02/-0.27dB 1.4/1.40 max. 1pF

#### Other Data

Ambient temperature (max.) Category of environmental protection Terminal type Dimension LWH

THT, SMT 10x6x5.65mm

Axicom IMD/IME

-40 to +85°C

IP67/RTV

-40 to +85°C IP67/RTIII THT, SMT

14.5x7.2x10.4mm, stand. 14.5x7.2x9.9mm, overm. Axicom P2 / P2 HIGH **DIELECTRIC VERSION**  -40 to +85°C IP67/RTIII THT, SMT

14.5x7.2x9.9mm, overm. **Axicom P2 LIGHTING** 

<sup>1)</sup> 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.



Link to datasheet

Key F	eatures
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#### **Axicom FP2**

Slim Line 14X9mm 2 form C bifurcated contacts

High mechanical shock resistance, up to 1500g survival

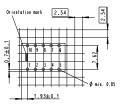


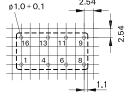
2G telecom/signal relay 4 coil sensitivities 3A UL rating





#### **Footprint**





Communication equipment **Applications** 

keyless entry

Speaker switch, consumer electronics

Communication equipment

Office equipment

Measurement and control equipment

### **Contact Data**

Rated current

Switching power Contact material

Min. recommended

Contact arrangement	1 form C (CO)
Rated voltage	220VDC/250V

220VDC/250VAC 2A

60W/62.5VA 100ΩV  $<50m\Omega$  at 10mA 250VAC/220VDC 3A 60W/125VA  $100\mu V/10\mu A$ 

<100m $\Omega$ 

2 form C, 2 CO Single Contacts

#### contact load Coil Data

Magnetic system
Rated coil voltage
Pated coil nower

Polarized 2 to 24VDC

80mW (high sensitive), 140mW

Non polarized 3 to 48VDC 150 to 700mW/-/-

#### **Dielectric Strength**

Initia	diel	ectric	strength
betv	veen	open	contacts

between contact and coil between adjacent contacts

DC coil/bistable 1 coil/2 coils

Initial surge withstand voltage between open contacts between contact and coil between adjacent contacts Isolation 100/900MHz

Insertion loss 100/900MHz Volt. standing wave ratio 100/900MHz

Capacitance between open contacts

7	50Vr	ms	
10	000V	'rms	
10	000V	′rms	

1100Vp 1500Vp 1500Vp -40.2/-22.3dB 0.03dB/0.25dB 1.01/1.07 max. 1pF

750Vrms 1000Vrms 750Vrms

1500Vp 1500Vp 1500Vp

-39.0/-20.7dB -0.02/-0.27dB 1.04/1.40 max. 2pF

#### Other Data

Ambient temperature (max.) Category of environmental protection Terminal type Dimension LWH

Axicom FP2

RTIII

THT

-25 to +85°C IP67/RTIII

20.2x10x11.4mm

Link to datasheet

14x9x5mm

-40 to +85°C

Axicom D2N V23105



<sup>1)</sup> 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.

Key Features	Axicom MT2  2G telecom/signal relay  5 coil sensitivities  2A UL rating	Axicom P1 V23026  Very high sensitive relay  Low profile  High vibration and shock resistance  Version: symmetric pin layout  Temperature range up to 85°C  1500Vrms across opened contacts
Footprint	2.54 2.54 2.54 2.54 2.54 2.52 2.54 2.52	2.54 1.19 ± 0.15
Applications	Communication equipment Linecard application Measurement and control equipment	Automotive equipment CAN bus Imobilizer
Contact Data		
Contact arrangement	2 form C, 2 CO	1 form C, 1 CO
Rated voltage Rated current Switching power Contact material Min. recommended contact load	Bifurcated contacts 250VAC/220VDC 2A 60W/62.5VA $100\mu V/1\mu A$ <70m $\Omega$	Bifurcated contacts 150VAC/125VDC 1A 30W/60VA 100μV/1μA <50mΩ
Coil Data		
Magnetic system Rated coil voltage Rated coil power DC coil/bistable 1 coil/2 coils	Non polarized 3 to 48VDC 150 to 550mW/-/-	Polarized 3 to 24VDC 65 to 130mW/30 to 130mW/70 to 200mW
Dielectric Strength		
Initial dielectric strength between open contacts between contact and coil between adjacent contacts Initial surge withstand voltage	750Vrms 1000Vrms 750Vrms	500Vrms 1500Vrms
between open contacts between contact and coil between adjacent contacts Isolation 100/900MHz Insertion loss 100/900MHz Volt. standing wave ratio 100/900MHz Capacitance between open contacts	1500Vp 1500Vp 1500Vp -31.8/-14.2dB -0.02/-0.97dB 1.03/1.31 max. 2pF	2500Vp -30.0/-18.0dB -0.12/-1.90dB 1.06/1.75 max. 5pF
Other Data		
Ambient temperature (max.) Category of environmental protection Terminal type Dimension LWH	-55 to +85°C IP67/RTIII THT 20.2x10x11mm	-40 to +85°C IP67/RTIII THT, SMT 13x7.6x6.9mm
Link to datasheet	Axicom MT2	Axicom P1 V23026

<sup>1)</sup> 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.



#### **Axicom REED DIP/SIL**

Direct driving with TTL signals
Ultrasonic cleanable
High switching speed
Clamping diode
Electrostatic shield

#### **TSC**

Designed for thermostat, modem Computer peripherals, video recording and security application Low coil power requirements IC compability

#### OUAZ/T81

Gold overlay silver palladium alloy contact suitable for low loads

High density available on PCB due to small size

2.54mm terminal pitch same as IC socket terminal pitch

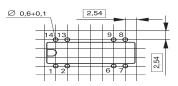
Sensitive and standard coils

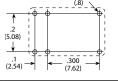






#### Footprint





6 – 0.31 DIA



	lications
[- [-	

Incircuit tester Measuring and control systems Alarm and security equipment Telecommunications Office machine Telecommunications Logic and process control Vending machines

### Contact Data

Contact arrangement 1 form A, 1 NO 2 form A, 2 NO 1 from C, 1 CO Reed contacts Rated voltage 175 to 200VAC/VDC Rated current 0.25 to 0.5A Switching power 3 to 10W  $10\mu V/1\mu A$ Contact material Min. recommended  $<150 m\Omega$ contact load

1 form C, 1 CO

120VAC, 30VDC 1A 120VA, 24W 1mA at 1VDC 50mΩ at 100mA, 6VDC 1 form C, 1 CO 1 form A, 1 NO

120VAC/24VDC 1A 120VA, 30W 1mA at 1VDC

#### Coil Data

Magnetic systemNon polarizedDC, sensitiveDC, sensitiveRated coil voltage5 to 24VDC3 to 24VDC5 to 24VDCRated coil power<br/>DC coil/bistable 1 coil/2 coils50 to 300mW/-/-<br/>50 to 300mW/-/-150, 300mW200, 450mW

#### **Dielectric Strength**

Initial dielectric strength
between open contacts
between contact and coil
between adjacent contacts
Initial surge withstand voltage
between open contacts
between contact and coil
between adjacent contacts
Isolation 100/900MHz

Insertion loss 100/900MHz Volt. standing wave ratio 140 to 175Vrms 500vdc 500vdc 400Vrms 1000Vrms 500Vrms 1000Vrms

1500Vp (10/160μs)

1500Vp (10/160μs)

# Capacitance between open contacts Other Data

**Dimension LWH** 

100/900MHz

Ambient temperature (max.) Category of environmental protection Terminal type -20 to +70°C IP67/RTIII THT

max. 1pF

THT 19.3x5.7x7.5mm/19.8x5.1x8mm 40 to +80°C RTIII/IP67 THT 12.5x7.5x10mm

-40 to +60°C (standard) RTII, RTIII THT

15.4x10.4x11.2mm

Link to datasheet Axicom REED DIP/SIL

<u>TSC</u>

OUAZ/T81



<sup>1)</sup> 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.

#### **Axicom HF3**

High performance RF relay/ switch for up to 3GHz

Low power consumption ≤70/140 mW

50 and 75 $\Omega$  version Very small design

#### **Axicom HF3S**

High performance RF relay/ switch for up to 3GHz

Low power consumption ≤70/140mW

50 and 75 $\Omega$  version RF power 100W at 2GHz

#### **Axicom HF6**

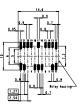
High performance RF relay/ switch for up to 6GHz

Low power consumption ≤70/140mW  $50\Omega$  version

Very small design



# **Footprint**





Very small design





lications

Cable modems and linecards/CATV

Measurement and test equipment

ATE

Satellite/audio/video tuners

Cable modems and linecards/CATV

Measurement and test equipment

Satellite/audio/video tuners

Measurement and test equipment

ATE

Wireless base stations and antennas

Wireless infrastructure

#### **Contact Data**

Contact arrangement 1 form C, 1 CO Bridge contacts 250VAC/220VDC Rated voltage Rated current

Switching power Min. recommended contact load

Initial contact resistance

60W/62.5VA/50W (2.5GHz)

100μV/1μΑ <100mΩ

1 form C, 1 CO Bridge contacts 250VAC/220VDC

60W/62.5VA/50W (2.5GHz) 100μV/1μΑ <100mΩ

1 form C, 1 CO Bridge contacts 250VAC/220VDC

60W/62.5VA/50W (2.5GHz)

100μV/1μΑ <100mΩ

SMT

15x7.6x10.6mm

**Axicom HF6** 

#### Coil Data

Polarized Magnetic system Polarized Polarized Rated coil voltage 3 to 24VDC 3 to 24VDC 3 to 24VDC Rated coil power DC coil/bistable 1 coil/2 coils 140mW/70mW/140mW 140mW/70mW/140mW 140mW/70mW/140mW

Dielectric Strength			
Initial dielectric strength between open contacts between contact and coil between adjacent contacts	600Vrms 1000Vrms	600Vrms 1000Vrms	600Vrms 1000Vrms
Initial surge withstand voltage between open contacts between contact and coil between adjacent contacts	1000Vp 1500Vp	1000Vp 1500Vp	1000Vp 1500Vp
Capacitance between open contacts	max. 1pF	max. 1pF	max. 1pF
RF Data	0.1/0.9/3GHz	0.1/0.9/3GHz	0.9/3/6GHz
Isolation Insertion loss Voltage standing wave ratio (VSWR)	-80/-72/-DB45 -0.03/0.12/-0.35dB 1.05/1.15/1.20	-95/-80/-55dB -0.03/-0.12/-0.30dB 1.05/1.10/1.25	-80/-60/-30dB -0.05/-0.15/-0.80dB 1.05/1.10/1.40
Other Data			
Ambient temperature (max.) Category of environmental protection	-55 to +85°C IP67/RTIII	-55 to +85°C IP67/RTIII	-55 to +85°C IP67/RTIII

SMT

15x7.6x10.6mm

**Axicom HF3S** 

14.6x7.2x10mm

**Axicom HF3** 

SMT



Terminal type

Dimension lwh Link to datasheet

<sup>1)</sup> 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.

**Potter & Brumfield SSR** 

Output Data  Load Voltage Repetitive Blocking Voltage Load Current Range Leakage Current (Off-State) On-State Voltage Drop (Max.) Load Power Factor Rating Thermal Resistance, Junction to Case (ROJ-C) (Max.) Input Data (AC/DC)  Control Voltage Range VIN Must Operate Voltage VIN(OP) (Min.) Must release Voltage VIN(REL) (Min.) Input Current Dielectric Strength Isolation: Other Data Dimensions Operating Temperature Mounting UI File No Link to datasheet	Building Controls  24 - 280VAC/48 - 660VAC 600VAC/1200VAC 25A/50A/125A 5mA 1.8V 0.5 - 1.0 2.35/0.55/0.35  90 - 280VAC/3 - 32VDC 90VAC/3VDC 10VAC/1VDC 2 - 26 mA / 3 - 30 mA  4000Vrms  46.5x57.8x43.4 mm -30 to +80°C Panel E29244  Potter & Brumfield SSR	Building Controls  24 - 280VAC 600VAC 25A/40A 5mA 1.8V 0.5 - 1.0 2.35/0.86  4 - 15VDC 4 VDC  1VDC  15mA @ 8VDC  4000Vrms  44.5x57.8x30.15 mm -30 to +80°C Panel E29244  Potter & Brumfield SSRD	Building Controls  24 - 280VAC 600VAC 10 A/25 A 5mA 1.6V 0.5 - 1.0 2.4/1.7  90 - 280VAC/3 - 32VDC 90VAC/3VDC 10 VAC/1VDC 25 mA/20 mA  4000Vrms  45x57.5x36.5 mm -30 to +80°C Panel E29244  Potter & Brumfield SSRT
Load Voltage Repetitive Blocking Voltage Load Current Range Leakage Current (Off-State) On-State Voltage Drop (Max.) Load Power Factor Rating Thermal Resistance, Junction to Case (ROJ-C) (Max.) Input Data (AC/DC) Control Voltage Range VIN Must Operate Voltage VIN(OP) (Min.) Must release Voltage VIN(REL) (Min.) Input Current Dielectric Strength Isolation: Other Data Dimensions Operating Temperature Mounting	24 - 280VAC/48 - 660VAC 600VAC/1200VAC 25A/50A/125A 5mA 1.8V 0.5 - 1.0 2.35/0.55/0.35  90 - 280VAC/3 - 32VDC 90VAC/3VDC 10VAC/1VDC 2 - 26 mA / 3 - 30 mA  4000Vrms  46.5x57.8x43.4 mm -30 to +80°C Panel	24 - 280VAC 600VAC 25A/40A 5mA 1.8V 0.5 - 1.0 2.35/0.86 4 - 15VDC 4 VDC 1VDC 15mA @ 8VDC 4000Vrms 44.5x57.8x30.15 mm -30 to +80°C Panel	24 - 280VAC 600VAC 10 A/25 A 5mA 1.6V 0.5 - 1.0 2.4/1.7 90 - 280VAC/3 - 32VDC 90VAC/3VDC 10 VAC/1VDC 25 mA/20 mA 4000Vrms 45x57.5x36.5 mm -30 to +80°C Panel
Load Voltage Repetitive Blocking Voltage Load Current Range Leakage Current (Off-State) On-State Voltage Drop (Max.) Load Power Factor Rating Thermal Resistance, Junction to Case (ROJ-C) (Max.) Input Data (AC/DC) Control Voltage Range VIN Must Operate Voltage VIN(OP) (Min.) Must release Voltage VIN(REL) (Min.) Input Current Dielectric Strength Isolation: Other Data Dimensions Operating Temperature	24 - 280VAC/48 - 660VAC 600VAC/1200VAC 25A/50A/125A 5mA 1.8V 0.5 - 1.0 2.35/0.55/0.35  90 - 280VAC/3 - 32VDC 90VAC/3VDC 10VAC/1VDC 2 - 26 mA / 3 - 30 mA  4000Vrms  46.5x57.8x43.4 mm -30 to +80°C	24 - 280VAC 600VAC 25A/40A 5mA 1.8V 0.5 - 1.0 2.35/0.86 4 - 15VDC 4 VDC 1VDC 15mA @ 8VDC 4000Vrms 44.5x57.8x30.15 mm -30 to +80°C	24 - 280VAC 600VAC 10 A/25 A 5mA 1.6V 0.5 - 1.0 2.4/1.7 90 - 280VAC/3 - 32VDC 90VAC/3VDC 10 VAC/1VDC 25 mA/20 mA 4000Vrms 45x57.5x36.5 mm -30 to +80°C
Load Voltage Repetitive Blocking Voltage Load Current Range Leakage Current (Off-State) On-State Voltage Drop (Max.) Load Power Factor Rating Thermal Resistance, Junction to Case (ROJ-C) (Max.) Input Data (AC/DC) Control Voltage Range VIN Must Operate Voltage VIN(OP) (Min.) Must release Voltage VIN(REL) (Min.) Input Current Dielectric Strength Isolation: Other Data Dimensions	24 - 280VAC/48 - 660VAC 600VAC/1200VAC 25A/50A/125A 5mA 1.8V 0.5 - 1.0 2.35/0.55/0.35 90 - 280VAC/3 - 32VDC 90VAC/3VDC 10VAC/1VDC 2 - 26 mA / 3 - 30 mA 4000Vrms	24 - 280VAC 600VAC 25A/40A 5mA 1.8V 0.5 - 1.0 2.35/0.86 4 - 15VDC 4 VDC 1VDC 15mA @ 8VDC 4000Vrms	24 - 280VAC 600VAC 10 A/25 A 5mA 1.6V 0.5 - 1.0 2.4/1.7 90 - 280VAC/3 - 32VDC 90VAC/3VDC 10 VAC/1VDC 25 mA/20 mA 4000Vrms
Load Voltage Repetitive Blocking Voltage Load Current Range Leakage Current (Off-State) On-State Voltage Drop (Max.) Load Power Factor Rating Thermal Resistance, Junction to Case (ROJ-C) (Max.) Input Data (AC/DC) Control Voltage Range VIN Must Operate Voltage VIN(OP) (Min.) Must release Voltage VIN(REL) (Min.) Input Current Dielectric Strength Isolation: Other Data	24 - 280VAC/48 - 660VAC 600VAC/1200VAC 25A/50A/125A 5mA 1.8V 0.5 - 1.0 2.35/0.55/0.35  90 - 280VAC/3 - 32VDC 90VAC/3VDC 10VAC/1VDC 2 - 26 mA / 3 - 30 mA	24 - 280VAC 600VAC 25A/40A 5mA 1.8V 0.5 - 1.0 2.35/0.86 4 - 15VDC 4 VDC 1VDC 15mA @ 8VDC	24 - 280VAC 600VAC 10 A/25 A 5mA 1.6V 0.5 - 1.0 2.4/1.7 90 - 280VAC/3 - 32VDC 90VAC/3VDC 10 VAC/1VDC 25 mA/20 mA
Load Voltage Repetitive Blocking Voltage Load Current Range Leakage Current (Off-State) On-State Voltage Drop (Max.) Load Power Factor Rating Thermal Resistance, Junction to Case (ROJ-C) (Max.) Input Data (AC/DC) Control Voltage Range VIN Must Operate Voltage VIN(OP) (Min.) Must release Voltage VIN(REL) (Min.) Input Current Dielectric Strength Isolation:	24 - 280VAC/48 - 660VAC 600VAC/1200VAC 25A/50A/125A 5mA 1.8V 0.5 - 1.0 2.35/0.55/0.35 90 - 280VAC/3 - 32VDC 90VAC/3VDC 10VAC/1VDC 2 - 26 mA / 3 - 30 mA	24 - 280VAC 600VAC 25A/40A 5mA 1.8V 0.5 - 1.0 2.35/0.86 4 - 15VDC 4 VDC 1VDC 15mA @ 8VDC	24 - 280VAC 600VAC 10 A/25 A 5mA 1.6V 0.5 - 1.0 2.4/1.7 90 - 280VAC/3 - 32VDC 90VAC/3VDC 10 VAC/1VDC 25 mA/20 mA
Load Voltage Repetitive Blocking Voltage Load Current Range Leakage Current (Off-State) On-State Voltage Drop (Max.) Load Power Factor Rating Thermal Resistance, Junction to Case (ROJ-C) (Max.) Input Data (AC/DC) Control Voltage Range VIN Must Operate Voltage VIN(OP) (Min.) Must release Voltage VIN(REL) (Min.) Input Current Dielectric Strength	24 - 280VAC/48 - 660VAC 600VAC/1200VAC 25A/50A/125A 5mA 1.8V 0.5 - 1.0 2.35/0.55/0.35 90 - 280VAC/3 - 32VDC 90VAC/3VDC 10VAC/1VDC 2 - 26 mA / 3 - 30 mA	24 - 280VAC 600VAC 25A/40A 5mA 1.8V 0.5 - 1.0 2.35/0.86 4 - 15VDC 4 VDC 1VDC 15mA @ 8VDC	24 - 280VAC 600VAC 10 A/25 A 5mA 1.6V 0.5 - 1.0 2.4/1.7 90 - 280VAC/3 - 32VDC 90VAC/3VDC 10 VAC/1VDC 25 mA/20 mA
Load Voltage Repetitive Blocking Voltage Load Current Range Leakage Current (Off-State) On-State Voltage Drop (Max.) Load Power Factor Rating Thermal Resistance, Junction to Case (ROJ-C) (Max.) Input Data (AC/DC) Control Voltage Range VIN Must Operate Voltage VIN(OP) (Min.) Must release Voltage VIN(REL) (Min.) Input Current	24 - 280VAC/48 - 660VAC 600VAC/1200VAC 25A/50A/125A 5mA 1.8V 0.5 - 1.0 2.35/0.55/0.35	24 - 280VAC 600VAC 25A/40A 5mA 1.8V 0.5 - 1.0 2.35/0.86 4 - 15VDC 4 VDC	24 - 280VAC 600VAC 10 A/25 A 5mA 1.6V 0.5 - 1.0 2.4/1.7 90 - 280VAC/3 - 32VDC 90VAC/3VDC
Load Voltage Repetitive Blocking Voltage Load Current Range Leakage Current (Off-State) On-State Voltage Drop (Max.) Load Power Factor Rating Thermal Resistance, Junction to Case (ROJ-C) (Max.) Input Data (AC/DC) Control Voltage Range VIN Must Operate Voltage VIN(OP) (Min.) Must release Voltage VIN(REL) (Min.)	24 - 280VAC/48 - 660VAC 600VAC/1200VAC 25A/50A/125A 5mA 1.8V 0.5 - 1.0 2.35/0.55/0.35	24 - 280VAC 600VAC 25A/40A 5mA 1.8V 0.5 - 1.0 2.35/0.86 4 - 15VDC 4 VDC	24 - 280VAC 600VAC 10 A/25 A 5mA 1.6V 0.5 - 1.0 2.4/1.7 90 - 280VAC/3 - 32VDC 90VAC/3VDC
Load Voltage Repetitive Blocking Voltage Load Current Range Leakage Current (Off-State) On-State Voltage Drop (Max.) Load Power Factor Rating Thermal Resistance, Junction to Case (ROJ-C) (Max.) Input Data (AC/DC) Control Voltage Range VIN Must Operate Voltage VIN(OP) (Min.)	24 - 280VAC/48 - 660VAC 600VAC/1200VAC 25A/50A/125A 5mA 1.8V 0.5 - 1.0 2.35/0.55/0.35	24 - 280VAC 600VAC 25A/40A 5mA 1.8V 0.5 - 1.0 2.35/0.86	24 - 280VAC 600VAC 10 A/25 A 5mA 1.6V 0.5 - 1.0 2.4/1.7
Load Voltage Repetitive Blocking Voltage Load Current Range Leakage Current (Off-State) On-State Voltage Drop (Max.) Load Power Factor Rating Thermal Resistance, Junction to Case (ROJ-C) (Max.) Input Data (AC/DC)	24 - 280VAC/48 - 660VAC 600VAC/1200VAC 25A/50A/125A 5mA 1.8V 0.5 - 1.0 2.35/0.55/0.35	24 - 280VAC 600VAC 25A/40A 5mA 1.8V 0.5 - 1.0 2.35/0.86	24 - 280VAC 600VAC 10 A/25 A 5mA 1.6V 0.5 - 1.0 2.4/1.7
Load Voltage Repetitive Blocking Voltage Load Current Range Leakage Current (Off-State) On-State Voltage Drop (Max.) Load Power Factor Rating Thermal Resistance, Junction to Case (ROJ-C) (Max.)	24 - 280VAC/48 - 660VAC 600VAC/1200VAC 25A/50A/125A 5mA 1.8V 0.5 - 1.0	24 - 280VAC 600VAC 25A/40A 5mA 1.8V 0.5 - 1.0	24 - 280VAC 600VAC 10 A/25 A 5mA 1.6V 0.5 - 1.0
Load Voltage Repetitive Blocking Voltage Load Current Range Leakage Current (Off-State) On-State Voltage Drop (Max.) Load Power Factor Rating Thermal Resistance, Junction	24 - 280VAC/48 - 660VAC 600VAC/1200VAC 25A/50A/125A 5mA 1.8V 0.5 - 1.0	24 - 280VAC 600VAC 25A/40A 5mA 1.8V 0.5 - 1.0	24 - 280VAC 600VAC 10 A/25 A 5mA 1.6V 0.5 - 1.0
Load Voltage Repetitive Blocking Voltage Load Current Range Leakage Current (Off-State) On-State Voltage Drop (Max.) Load Power Factor Rating	24 - 280VAC/48 - 660VAC 600VAC/1200VAC 25A/50A/125A 5mA 1.8V 0.5 - 1.0	24 - 280VAC 600VAC 25A/40A 5mA 1.8V 0.5 - 1.0	24 - 280VAC 600VAC 10 A/25 A 5mA 1.6V 0.5 - 1.0
Load Voltage Repetitive Blocking Voltage Load Current Range Leakage Current (Off-State) On-State Voltage Drop (Max.)	24 - 280VAC/48 - 660VAC 600VAC/1200VAC 25A/50A/125A 5mA 1.8V	24 - 280VAC 600VAC 25A/40A 5mA 1.8V	24 - 280VAC 600VAC 10 A/25 A 5mA 1.6V
Load Voltage Repetitive Blocking Voltage Load Current Range Leakage Current (Off-State)	24 - 280VAC/48 - 660VAC 600VAC/1200VAC 25A/50A/125A 5mA	24 - 280VAC 600VAC 25A/40A 5mA	24 - 280VAC 600VAC 10 A/25 A 5mA
Load Voltage Repetitive Blocking Voltage Load Current Range	24 - 280VAC/48 - 660VAC 600VAC/1200VAC 25A/50A/125A	24 - 280VAC 600VAC 25A/40A	24 - 280VAC 600VAC 10 A/25 A
Load Voltage Repetitive Blocking Voltage	24 - 280VAC/48 - 660VAC 600VAC/1200VAC	24 - 280VAC 600VAC	24 - 280VAC 600VAC
Load Voltage	24 - 280VAC/48 - 660VAC		
Output Data	Building Controls	Building Controls	Building Controls
	Building Controls	Building Controls	Building Controls
			Dividalinas Caraturala
	HVAC	HVAC	HVAC
Typical Applications	Industrial Machinery	Industrial Machinery	Industrial Machinery
Footprint	PCB mount not applicable. Visit TE.com for more information	PCB mount not applicable. Visit TE.com for more information	PCB mount not applicable. Visit TE.com for more information
	THE STATE OF THE S	A POINT IS NOT THE WORLD IN THE	THE STATE OF
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	barriers 1 Form A (SPST-NO)	2 Form A (2 SPST-NO)	
	Cover design with anti-rotation	Quick connect style termination	
	4,000V rms optical isolation	4000V rms optical isolation	1 Form A (SPST-NO)
	Zero voltage and random voltage turn-on versions	Inverse parallel SCR output	Cover design with anti-rotation barriers
	240VAC & 480VAC output types	Standard "hockey puck" package	4,000V rms optical isolation
	Inverse parallel SCR output	solid state relays	TRIAC Output
,	Standard "hockey puck" package	Two independent AC output	Standard "hockey puck" package

**Potter & Brumfield SSRD** 

**Potter & Brumfield SSRT** 



<sup>1)</sup> 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.

#### **Potter & Brumfield SSRDC**

Standard "hockey puck" package 200V DC FET Output 12A. 25A and 40A loac cureent

options

1500V DC optical isolation Cover design with anti-rotation barriers

1 Form A (SPST-NO)

#### **Potter & Brumfield SSRK**

10-30A DIN Mount Solid State Relay with integrated heat sink Narrow 22.5mm design Inverse parallel SCR output 240VAC & 600 VAC output types

4,000V rms optical isolation 1 Form A (SPST-NO)

#### **Potter & Brumfield SSRM**

45A-65A DIN Mount Solid State Relay with integrated heat sink 44.5mm design Inverse parallel SCR output 600 VAC output type 4,000V rms optical isolation



**Footprint** PCB mount not applicable. Visit TE.com for more information

PCB mount not applicable. Visit TE.com for more information

1 Form A (SPST-NO)

PCB mount not applicable. Visit TE.com for more information

**Typical Applications** 

Material Handling Tranes

Construction Equipment

Industrial Machinery **HVAC Building Controls** 

Industrial Machinery HVAC

**Building Controls** 

48 - 660VAC

#### **Output Data**

Load Voltage Repetitive Blocking Voltage **Load Current Range** Leakage Current (Off-State) On-State Voltage Drop (Max.) Load Power Factor Rating Thermal Resistance, Junction to Case (ROJ-C) (Max.)

200VDC 10 A/25 A/40 A 12 mA 2.83 VDC NA

24 - 280VAC/48 - 660VAC 600VAC/1200VAC 10A/20A/30A 5mA 1.8V/1.6V 0.5 - 1.00.7/0.7/0.5

1200VAC 45A/55A/65A 1mA 1.7V 0.5 - 1.0

#### Input Data (AC/DC)

Control Voltage Range VIN Must Operate Voltage VIN(OP) (Min.) Must release Voltage VIN(REL) (Min.) Input Current

3 - 32 VDC 3.5 VDC 1 VDC

30 mA

1500 VDC

90VAC/3VDC 10VAC/1VDC

7.5mA - 16 mA/18 - 30 mA

90 - 280VAC/3 - 32VDC

10VAC/1VDC

4000Vrms

**Dielectric Strength** 

Isolation: Other Data

Link to datasheet

**Dimensions Operating Temperature** Mounting Ul File No

45x57.8x43.4 mm -30 to +80°C Panel E29244

Potter & Brumfield SSRDC

4000Vrms

22.5x82.3x111.5 mm -30 to +80°C Din Rail E29244

Potter & Brumfield SSRK

90 - 140VAC/4 - 32VDC

90VAC/3VDC

15 mA/14 - 30 mA

22.5x76.2x109.2 mm

-40 to +80°C Din Rail E29244

Potter & Brumfield SSRM

<sup>1)</sup> 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.



#### **Potter & Brumfield SSRA Potter & Brumfield SSRC** 2A Miniature, SIP Solid State Relay 5A SIP Solid State Relay **Key Features** Inverse parallel SCR output Inverse parallel SCR output 2500V rms optical isolation 4000V rms optical isolation 240VAC output 1 Form A (SPST-NO) 1 Form A (SPST-NO) **Footprint Typical Applications** Industrial Machinery Industrial Machinery HVAC HVAC **Building Controls Building Controls Output Data** 12 - 280VAC 12 - 280VAC/48 - 660VAC Load Voltage 600VAC 600VAC/1200VAC Repetitive Blocking Voltage 2A 5A Load Current Range Leakage Current (Off-State) 0.1 mA 0.1 mA On-State Voltage Drop (Max.) 1.5V 1.4V Load Power Factor Rating 0.5 - 1.00.5 - 1.0Thermal Resistance, Junction to Case (ROJ-C) (Max.) Input Data (AC/DC) Control Voltage Range VIN 4-10VDC 3 - 15VDC Must Operate Voltage VIN(OP) (Min.) 4VDC 4VDC Must release Voltage VIN(REL) (Min.) 1VDC 1VDC Input Current 15mA 15mA **Dielectric Strength** Isolation: 2500Vrms 4000Vrms Other Data **Dimensions** 24.1x5.1x12.7mm 43.1x7.6x25.4mm **Operating Temperature** -30 to +80°C -30 to +80°C

PCB

E29244

Potter & Brumfield SSRA



PCB

E29244

Potter & Brumfield SSRC

Mounting

Ul File No

Link to datasheet

<sup>1)</sup> 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.

#### **Potter & Brumfield SSRF**

25A SIP Solid State Relay with integrated heat sink Inverse parallel SCR output 4000V rms optical isolation 1 Form A (SPST-NO)

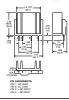
#### **Potter & Brumfield IACM**

Slim Solid State AC Input Module Color coded by function - Yellow 4000V rms optical isolation Compatible with 2IO series mounting boards

1 Form A (SPST-NO)



# Footprint



Typical Applications Industrial Machinery

HVAC
Building Controls

HVAC
Building Controls

Industrial Machinery

	Building Controls	Building Controls
Output Data		
Load Voltage	12 - 280VAC/48 - 660VAC	30VDC
Repetitive Blocking Voltage	600VAC/1200VAC	-
Load Current Range	10A (CC)/25A (FAC)	50mA
Leakage Current (Off-State)	0.1 mA	10uA
On-State Voltage Drop (Max.)	1.6V	0.2VDC
Load Power Factor Rating	0.5 - 1.0	-
Thermal Resistance, Junction to Case (ROJ-C) (Max.)	-	-
Input Data (AC/DC)		
Control Voltage Range VIN	3 - 15VDC	24VAC/120VAC/240VAC
Must Operate Voltage VIN(OP) (Min.)	4VDC	18VAC/90VAC/280VAC
Must release Voltage VIN(REL) (Min.)	1VDC	10VAC/60VAC/60VAC
Input Current	15mA	1-5 mA
Dielectric Strength		
Isolation:	4000Vrms	4000Vrms
Other Data		
Dimensions	43.1x22.8x34.3mm	43.5x10.3x25.5 mm
Operating Temperature	-30 to + 80°C	-30 to 100°C
Mounting	PCB	PCB
UI File No	E29244	E29244
Link to datasheet	Potter & Brumfield SSRF	Potter & Brumfield IACM

<sup>1)</sup> 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.



**Footprint** 

#### **Potter & Brumfield** OACM

Slim Solid State AC Output Module Color coded by function - Black 4000V rms optical isolation Compatible with 2IO series mounting boards 1 Form A (SPST-NO)

#### **Potter & Brumfield IDCM**

Slim Solid State DC Input Module Color coded by function - White 4000V rms optical isolation Compatible with 2IO series mounting boards 1 Form A (SPST-NO)

#### **Potter & Brumfield ODCM**

Slim Solid State AC Output Module Color coded by function - Red 4000V rms optical isolation Compatible with 2IO series mounting boards 1 Form A (SPST-NO)











(10.16)	.10 (2.54)
0	0.3 7(7.62) 0.7 1 (17.8) 1.2 1.2 1.2 (30.5) 1.4 (35.6) 1.6 (40.6)

Typical	Applications	

**Operating Temperature** 

Link to datasheet

Mounting

UI File No

Industrial Machinery

**Industrial Machinery** 

-30 to 100°C

Potter & Brumfield IDCM

PCB

E29244

**Industrial Machinery** 

-30 to 100°C

Potter & Brumfield ODCM

PCB

	HVAC Building Controls	HVAC Building Controls	HVAC Building Controls
Output Data			
Load Voltage	24 - 280VAC	30VDC	60VDC
Repetitive Blocking Voltage	600VAC	-	-
Load Current Range	3A/5A	50mA	3A
Leakage Current (Off-State)	5mA	10uA	0.5mA
On-State Voltage Drop (Max.)	1.6VAC	0.2VDC	1.5VDC
Load Power Factor Rating	-	-	-
Thermal Resistance, Junction to Case (ROJ-C) (Max.)	-	-	-
Input Data (AC/DC)			
Control Voltage Range VIN	3 - 8VDC / 3 - 15VDC	3 - 32VDC/10 - 60VDC	5VDC/15VDC/24VDC
Must Operate Voltage VIN(OP) (Min.)	3VDC	3VDC/10VDC	3VDC/9VDC/18VDC
Must release Voltage VIN(REL) (Min.)	1VDC	1VDC/1VDC	1VDC
Input Current	8mA	10mA	20mA
Dielectric Strength			
Isolation:	4000Vrms	4000Vrms	4000Vrms
Other Data			
Dimensions	43.5x10.3x25.5 mm	43.5x10.3x25.5 mm	43.5x10.3x25.5 mm

-30 to 100°C

Potter & Brumfield OACM

PCB

E29244



<sup>1)</sup> 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.

#### Potter & Brumfield W28

Thermal Overload / Trip Free Operation Replaces slow blow glass cartridge fuse and holder

Button provides visible trip indication

Push-to-reset Snap-in mounting

UL 1077, CSA, VDE, CCC (16A/20A not VDE)

#### Potter & Brumfield W23/W31

Thermal Overload / Trip Free Operation Toggle or Push/Pull Actuation Cannot be reset against overload On/Off switching option UL 1077, CSA





#### **Footprint**

PCB mount not applicable. Visit TE.com for

more information

PCB mount not applicable. Visit TE.com for more information

#### **Typical Applications**

HVAC (Transformers), General Aviation, Medical, Marine Power Supplies, Lighting, Surge Protection Audio, Pool and Spa, Appliances, Industrial Controls

Generators, General Aviation, Medical, Marine Power Supplies, Lighting, Surge Protection Audio, Pool and Spa, Appliances, **Industrial Controls** 

Potter & Brumfield W23/W31

#### **Operational Data**

Type	Thermal	Thermal
Number of Poles	1	1
Circuit function	Series trip	Series trip
Ambient temperature (max.)	-20 to +60 °C	-20 to +65°C
Terminal type	Standard Quick Connect .250in x .032in	#8-32 screw
Mounting	Snap-in	Thru-hole 3/8"-24 threaded bushing
Manual operation Actuator	Push-to-reset	Push/pull W23 and toggle W31
Dimension L*W*H	39.0 x 15.9 x 13.7mm	40.6x17.5x35.2mm

Terminal type	Standard Quick Connect .250in x .032in	#8-32 screw
Mounting	Snap-in	Thru-hole 3/8"-24 threaded bushing
Manual operation Actuator	Push-to-reset	Push/pull W23 and toggle W31
Dimension L*W*H	39.0 x 15.9 x 13.7mm	40.6x17.5x35.2mm
Electrical Data		
Dielectric strength	1500Vrms	1500Vrms
Insulation Resistance		
Max Operating Voltages	32VDC 250VAC, 50/60Hz	50VDC 240VAC to (400Hz)
Rated current	0.5A to 20A	1A to 50A
Interrupt capacity	1,000 amps at 250VAC, 50/60 Hz. and 32VDC in accordance with UL standard 1077.	With 4X Max. Series Fuse Protection 0.5-50 amp models — 1000 amps at 240VAC. 30-50 amp models — 1000 amps at 50VDC. Without 4X Max. Series Fuse Protection 0.5-25 amp models — 2000 amps at 50VDC.
Calibration	Will continuously carry 100% of rating. 3-20 amp models – may trip between 101% and 134%, but must trip at 135% of rating within one hour at +25°C. 0.25-2 amp models – may trip between 101% and 174%, but must trip at 175% of rating within one hour at +25°C.	10-20 amp models — 2000 amps at 120VAC Continuously carry 100% of rating, may trip between 101% and 134% of rating at 25°C. Must trip at 135% in one hour.
Resetable Overload Capacity	Six times rated current for 0.25 through 2 amp models. Ten times rated current for 3 through 20 amp models.	Ten times rated current.
Reset Time	180 seconds max. for 0.25 through 2 amp models. 5 to 30 seconds for 3 through 20 amp models.	
Accessories	Protective boot, push-on lockwasher	Hex nut, lockwasher, knurl nut

Potter & Brumfield W28



Link to datasheet

<sup>1)</sup> 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.

#### Potter & Brumfield W33

Thermal Overload / Trip Free Operation

Optional Indicator Lamp Optional auxiliary switch

Combines on/off switching and circuit protection in a single unit

UL 1077. CSA

#### **Potter & Brumfield W51**

Thermal Overload / Trip Free Operation Rocker actuated with switch overload sensing

Optional Indicator Lamp

Combines power switching and circuit protection in a single unit

Compact Design PCB Termination options UL1077, cUL, VDE, CCC



PCB mount not applicable. Visit

#### Potter & Brumfield W54

Thermal Overload / Trip Free Operation

Push to Reset

Visual Trip Indication

Multiple termination options UL 1077, UL 1500, cUL, VDE, CCC, CSA. (>30A not UL1500

or CSA) (>20A not VDE)



PCB mount not applicable. Visit TE.com for more information

#### **Footprint**

PCB mount not applicable. Visit TE.com for more information

TE.com for more information

#### Typical applications

Generators, General Aviation, Medical, Marine

Power Supplies, Lighting, Surge Protection

Audio, Pool and Spa, Appliances, **Industrial Controls** 

Generators, General Aviation, Medical, Marine

Power Supplies, Lighting,

Surge Protection

Audio, Pool and Spa, Appliances, **Industrial Controls** 

Generators, General Aviation,

Medical, Marine

Power Supplies, Lighting, Surge

Protection

Audio, Pool and Spa, Appliances, **Industrial Controls** 

**Operational Data** 

Ambient temperature (max.)

Thermal **Number of Poles** 1-2

Circuit function Series trip both poles; series trip 1 pole/switch only 1 pole; switch

only 2 poles

-20 to +65 °C

Standard Quick Connect 250in x

.032in and Solder option

43.8 x 24.9 x 48.0mm

Snap-in

Rocker

Thermal

Series trip

 $0^{\circ}$ C to + 60 °C for 10-20A models 0 to 60 °C

0°C to + 50 °C for 5-8A models Standard Quick Connect

250in x .032in/Solder option/PCB

Snap-in, PCB

Rocker 21.8 x 15.2 x 32.0mm Thermal

Series trip

1500VAC

100MQ 50VDC

250VAC

Standard Quick Connect

250in x .032in and #8-32 screw 3/8"-24, M11-1.0, M12-1.0 threaded bushing Push-to-reset

31.0 x 14.6 x 35.0mm (W54) 22.6 x 14.6 x 29.2mm (W57)

#### **Electrical Data**

Dimension L\*W\*H

Terminal type

Mounting

Dielectric strength Insulation Resistance

Max Operating Voltages

Manual operation Actuator

Rated current

Interrupt capacity

Calibration

Resetable OverloadCapacity

2000Vrms

50VDC 250VAC

> 2A to 20A 1000A at 50VDC, 250VAC/60Hz

and 125/250VAC 400Hz; 1500A at 25/250VAC/60Hz

Will continuously carry 100% of rating. May trip between 101% and 134%, but must trip at 135%\* of

rating within one hour at +25°C. \* 150% for 5-8A models Ten times rated current

1500VAC

100M Q 50VDC 125/250VAC (model dependent)

5A to 20A

1,000 amps in accordance with UL 1,000 amps in accordance with standard 1077.

Will continuously carry 100% of rating. May trip between 101% and 134%, but must trip at 135%\* of rating within one hour at +25°C. \*

150% for 5-8A models Ten times rated current. Switch

Endurance Cycling: Typically 6,000 operations at 100% of rating. 60 Seconds 60 Seconds

5A to 40A UL standard 1077.

Will continuously carry 100% of rating. May trip between 101% and 134%, but must trip at 135% of rating within one hour at +25°C.

Ten times rated current.

Reset Time Accessories

Link to datasheet Potter & Brumfield W33

Protective boot, knurl nut, hex nut, lockwasher, nameplate

Potter & Brumfield W51 Potter & Brumfield W54



<sup>1)</sup> 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.

#### Potter & Brumfield W57

Thermal Overload / Trip Free Operation Push to Reset

Compact Design

Cannot be manually tripped PCB termination options

UL 1077, UL 1500, cUL, VDE, CCC. (3A,4A,20A no VDE)

#### Potter & Brumfield W58

Thermal Overload / Trip Free Operation

Push to Reset

Cannot be manually tripped Visual Trip Indication

UL 1077, UL 1500, CSA. (30A not UL or CSA)

#### Potter & Brumfield W6/W9

Magnetic Hydraulic actuation / Trip-free operation Several delay curve options Fungus and Moisture resistant

UL 1077, UL 1500, CSA, VDE



PCB mount not applicable. Visit TE.com for more information



PCB mount not applicable. Visit TE.com for more information

Generators, General Aviation,



PCB mount not applicable. Visit TE.com for more information

## **Applications**

**Footprint** 

Generators, General Aviation,

Medical, Marine

Power Supplies, Lighting, Surge Protection

Audio, Pool and Spa, Appliances, Industrial Controls

Power Supplies, Lighting, Surge Protection Audio, Pool and Spa, Appliances, Industrial Controls

HVAC (Transformers), General Aviation, Medical, Marine Power Supplies, Lighting, Surge Protection

Audio, Pool and Spa, Appliances, **Industrial Controls** 

#### **Operational Data**

Type **Number of Poles** Circuit function Ambient temperature (max.)

Terminal type

Mounting

Manual operation Actuator

Dimension L\*W\*H

Thermal

Series trip 0 to 60°C Standard Quick Connect

.250in x .032in and #8-32 screw and PCB option

3/8"-24, M11-1.0,

M12-1.0 threaded bushing

Push-to-reset

31.0 x 14.6 x 35.0mm (W54) 22.6 x 14.6 x 29.2mm (W57)

Thermal

Medical, Marine

Series trip -25 to 65°C

Standard Quick Connect .250in x .032in and #8-32 screw

7/16"-28, 15/32"-32, 3/8"-24 threaded bushing"

Push-to-reset 34.9 x 16.8 x 34.9mm Magnetic/Hydraulic

1-4 Series trip -40 to +85 °C

W6-Standard Quick Connect .250in x .032in and #8-32 or #10/32 screw. W9- #10/32 stud terminations 6-32, M3 tapped holes

Togale

41.7 x 19.0 x 50.8mm (W6 per pole) 46.9 x 19.0 x 63.5mm (W9 per pole)

#### **Electrical Data**

Calibration

Accessories

Dielectric strength Insulation Resistance Max Operating Voltages Rated current Interrupt capacity

50VDC, 250VAC 50/60 Hz

1500VAC

3A to 20A

1,000 amps in accordance with UL standard 1077.

Will continuously carry 100% of

134%, but must trip at 135% of

rating within one hour at +25°C.

rating. May trip between 101% and

2,000 amps at 50VDC (0.5 - 30 amp models).1,000 amps at 250VAC (0.5 - 30 amp models). Note: 30 amp model not

UI or CSA

0.5A to 30A

1500Vrms

50VDC, 250VAC

Breaker will continuously carry 100% of rated load. It may trip between 101% and 145% of rated load, but must trip at145% at 25°C. up to 5000A with UL 1077, CSA, VDE. Up to 3000A for UL 1500

65VDC, 277VAC, 480VAC - 3Ø wye

50/60 Hz, 1,500V: DC, 1100V

100 megohms at 500VDC

Breakers will hold 100% rated current. May trip between 101% and 124% rated load (134% for AC/DC units). Must trip at 125% rated load

(135% for AC/DC units) Ten times rated current.

60 Seconds

0.20A to 50A

Resetable Overload Capacity Reset Time

Ten times rated current.

60 Seconds

Protective boot, knurl nut, hex nut, Protective boot, knurl nut, hex nut, Toggle guard (W6 only)

lockwasher

lockwasher, nameplate Potter & Brumfield W57 Link to datasheet

Potter & Brumfield W58

Ten times rated current.

Potter & Brumfield W6/W9

<sup>1)</sup> 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.



#### 4000 SERIES WIRE LEAD CLASS II CONTROL TRANSFORMERS

5VA to 75VA

UL 5085-3, formerly UL 1585

Inherently/Non-Inherently Energy limited

Wire Lead Terminations

Custom Specification/Design available

#### 4000 SERIES QUICK CONNECT CLASS II CONTROL TRANSFORMERS

5VA to 75VA

UL 5085-3, formerly UL 1585

Inherently/Non-Inherently Energy limited

Quik Connect Terminals

Custom Specification/Design available





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Typical Applications	Heating and Air Conditioning Industrial and Residential Motor Control	Heating and Air Conditioning Industrial and Residential Motor Control
Specifications		
Primary Voltage- AC	120, 208, 240, 277, 380, 415, 480, 575	120, 208, 240, 277, 380, 415, 480, 575
Secondary Voltage- DC	12 or 24	12 or 24
Insulation Class	UL Class B (130°C)	UL Class B (130°C)
Wire Size	Standard 18 AWG stranded, 12in	N/A
QC size	N/A	standard .250in x .032in
Terminations	Same side - Opposite side	Type BB Same side Type AB Opposite side

		Type AE Laydown
Frequency	50/60 Hz	50/60 Hz
Mounting Options	Type K Foot Mount	Type K Foot Mount
	Type G Panel Mount	Type G Panel Mount
	Plate Mount	Plate Mount

#### Other Data

Secondary Fusing Requirement	60VA-75VA Non-Inherently	Internal fuse or integral Circuit Breaker
	Energy Limited	75VA standard models come with integral
		circuit breaker
Shielding	Internal fuse or integral Circuit Breaker	

**Dielectric Strength**75VA standard models come with integral circuit breaker

Link to datasheet

4000 SERIES

WIRE LEAD CLASS II

CONTROL TRANSFORMERS

4000 SERIES

QUICK CONNECT CLASS II

CONTROL TRANSFORMERS



<sup>1)</sup> 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.

# 4700 SERIES GENERAL PURPOSE POWER TRANSFORMERS

60VA to 150VA UI 5085-1,-2 formaly UL 50 Non-Fused

Wire leads or Quick Connects Custom Specification/Design available

# 4900 SERIES PRINTED CIRCUIT MOUNT POWER TRANSFORMERS

1.1VA to 36VA UI 5085-1,-2 formaly UL 506 Drop in Replacement Split Bobbin Design Singal or Dual Primary Voltage Custom Specification/Design available





Footprint Visit TE.com for more information	Visit TE.com for more information
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Applications	Heating and Air Conditioning	Industrial Controls, Garage door openers
	Industrial	Small power supplies, Control Boards
	Motor Control	Lighting/Monitoring controls, Vending
		Machines

Primary Voltage- AC	120, 208, 240, 230, 277, 460, 480, 575	Single 115VAC, 6-pin Dual 115/230VAC, 8-pin
Secondary Voltage- DC	24	Series 10-120VCT
Insulation Class	III Class B (130°C)	Parallel 6-60VAC

Insulation ClassUL Class B (130°C)UL Class B (130°C)Wire SizeStandard 18 AWG stranded, 12inN/AQC sizestandard .250in x .032inN/ATerminationsType BB Same side<br/>Type AB Opposite sidePCB Through Hole Design

**Frequency** 50/60 Hz 50/60 Hz

 Mounting Options
 Type K Foot Mount
 PCB Through Hole Design

#### Other Data

**Dielectric Strength** 

**Specifications** 

**Secondary Fusing Requirement** 

Shielding Electrostatic shielding not required due to

split bobbin 1500Vrms

Link to datasheet 4700 SERIES 4900 SERIES

**GENERAL PURPOSE POWER TRANSFORMERS** 

PRINTED CIRCUIT MOUNT POWER TRANSFORMERS

<sup>1)</sup> 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.



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