



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.



CONTENTS

RELAYS, CONTACTORS & CIRCUIT BREAKERS

Power PCB Relays up to 16A	4
Power PCB Relays up to 50A+	1
Force Guided Relays	14
Panel Plug-In Relays	16
Signal Relays	22
High Frequency Relays	2 7
Solid State Relays	28
Circuit Breakers	3
Transformers	36

MOTION CONTROL



WHAT'S INSIDE



SCHRACK PE

Low height 10.0mm Sensitive 200mW coil Mono-or bistable coil WG type available (IEC 60335-1)

SCHRACK RE/REL

Miniature 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

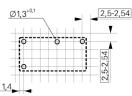




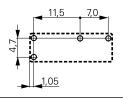


Footprint

2) see footnote below







Applications

Industrial electronics White goods

1) see footnote below

Measurement and control

PLC; Timers; I/O cards Temperature control White goods

1) see footnote below

Ø1,3^{+0,}

Home applications

HVAC

Contact Data

1 form C (CO) Contact arrangement Rated voltage 250VAC Rated current 5A (CO) 6A (NO) Switching power / Max. break 1250VA AgNi 90/10, AgSnO

Contact material Min. recommended contact load

1 form A (NO) 1 form A (NO) 250VAC 250VAC 6/5A 3A/5A (WG type)

1500/1250VA AgNi 0.15, AgNi 90/10 AaNi

750VA/1250VA (WG type)

100mA at 5VDC

Coil Data

Magnetic system DC, bistable DC DC Rated coil voltage 3 to 48VDC 5 to 48VDC 5 to 24VDC Rated coil power 200/360mW 200mW 200mW

Dielectric Strength Initial dielectric strength

between open contacts 1000Vrms 1000Vrms 750Vrms between contact and coil 4000Vrms 4000/3000Vrms 4000Vrms between adjacent contacts Clearance/creepage 3.2/4mm 4/4mm 8/>8mm between contact and coil

Other Data

Ambient temperature (max.) + 85°C +70°C (RE)/ + 85°C (REL) + 85/ +105°C (WG type) Category of environmental RTIII(RE), RTII(REL) RTII, RTIII RTII, RTIII protection IEC61810 Terminal type THT THT THT Mounting **PCB** PCB 20x10x10mm Dimensions 20x10x10.6mm/20.7x10.7x12mm 20.4x7x15mm Accessories Link to datasheet **SCHRACK PE SCHRACK RE PCJ SCHRACK REL**

²⁾ Footprint images are representative. For a complete selection, refer to the TE data sheet via the link above.



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,; 100mA at 12VDC. Please contact technical support for detailed technical data.

Relays, Contactors & Circuit Breakers

Key Features

PCH

Compact size

WG type available (IEC 60335-1) TV-3 ratings for NO contact

OJ/OJE/T77

Miniature size

Sensitive coil 200mW 4kV coil-contacts (OJ/OJT)

Meet UL TV-5 ratings (OJT)

PCN/PCNH

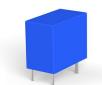
1 pole 3A/5A Only 5mm wide

Allows high function/packaging density

RoHS compliant (Directive 2002/95/EC)



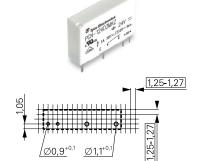






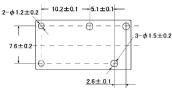
.300 ± .004 (7.6 ± .1)

.100 ± .004 (2.54 ± .1)



Footprint

2) see footnote below



Appliances HVAC

Refrigerators, microwave ovens

100mA at 5VDC

Appliances HVAC Industrial control

.500 ± .004 (12.7 ± .1)

PLC Temperature control I/O modules

Contact Data

Contact material

Min. recommended

Applications

1 form C (CO), 1 form A (NO) Contact arrangement 1 form A (NO) 1 form A (NO) 277VAC/30VDC 250VAC/28VDC Rated voltage 250VAC Rated current 3/5/10A 3/5/8/10A 3A/5A Switching power / Max. break

1400VA/150W (NO) 720 to 2500VA/ 750VA /1250VA

850VA/90W (NC) 90 to 240W AgSnO₂

Ag, AgCdO, AgSnO, AgNi gold plated 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 protection IEC61810	RTII, RTIII	RTII, RTIII	RTIII
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>



Recommended minimum load indication for contact material: AU and gold plated: 1mA at 6VDC; AgNi0.15 and AgNi90/10: 10mA at 12VDC: AgCdO and AgSnO₃: 100mA at 12VDC. Please contact technical support for detailed technical data.

Footprint images are representative. For a complete selection, refer to the TE data sheet via the link above.

SCHRACK SNR

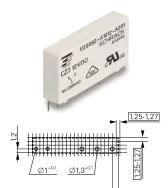
5mm wide slim outline Strong coil pins for DIN-rail socket Allows high function/ packaging density

SCHRACK RYII

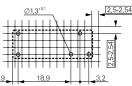
Reflow solderable version Low height 12.3mm Reinforced insulation Pinnings 3.2mm and 5mm

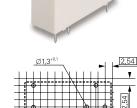
SCHRACK MSR/T75

High inrush currents with AgSnO contacts 4kV/8mm coil-contact Reinforced insulation









Applications

Footprint
2) see footnote below

Interface technology
PLC, timers, Heating control

Interface technology HVAC, PLC, Power supplies Domestic appliances Interface technology HVAC, PLC, Power supplies Domestic appliances

Contact Data

Mounting

Dimensions (lwh)

Link to datasheet

Accessories

Contact Data			
Contact arrangement	1 form C (CO), 1 form A (NO)	1 form C (CO), 1 form A (NO), 1 from B (NC)	1 form C (CO) 1 form A (NO)
Rated voltage	250VAC	250VAC	250VAC
Rated current	6A	8A	8/10A
Switching power / Max. break	1500VA	2000VA	2000VA
Contact material	AgSnO ₂ , AgSnO ₂ gold plated	AgNi0.15, AgSnO ₂ , AgNi 0.15 gold plated	AgNi90/10, AgSnO ₂
Min. recommended contact load	100mA at 12VDC	1) see footnote below	1) see footnote below
Coil Data			
Magnetic system	DC	DC	DC
Rated coil voltage	5 to 48VDC	5 to 60VDC	3 to 60VDC
Rated coil power	170/217mW	(223 - 257)mW	(212-262)mW
Dielectric Strength			
Initial dielectric strength			
between open contacts	1000Vrms	1000Vrms	1000Vrms
between contact and coil	4000Vrms	5000Vrms	4000Vrms
between adjacent contacts			
Clearance/creepage			
between contact and coil	6/8mm	8/8mm	8/8mm
Other Data			
Ambient temperature (max.)	+85°C	+70°C	+85°C
Category of environmental protection IEC61810	RTIII	RTII, RTIII	RTII, RTIII
Terminal type	THT	THT, THR	THT

PCB or on socket

28.5x10.1x12.3mm

PCB sockets

SCHRACK RYII

PCB or on socket

DIN rail sockets

SCHRACK SNR

28x5x15mm

PCB

28.6x10x15mm

SCHRACK MSR



Recommended minimum load indication for contact material: AU and gold plated: 1mA at 6VDC; AgNi0.15 and AgNi90/10: 10mA at 12VDC: AgCdO and AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

²⁾ Footprint images are representative. For a complete selection, refer to the TE data sheet via the link above.

Relays, Contactors & Circuit Breakers

Key Features

SCHRACK RZ

High performance version available Reinforced insulation

High ambient temperature version (105°C)

WG type available (IEC 60335-1) AgNi and AgSnO contact versions

THR (reflow) version

SCHRACK RT

DC and AC coil

Mono-or bistable coil Reinforced insulation

WG type available (IEC 60335-1)

High ambient temperature version

(105°C)

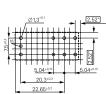
THR (reflow) version Sensitive version

Bifurcated contacts

SCHRACK RT INRUSH

For inrush peak currents up to 80A Mono-or bistable coil Reinforced insulation WG type available (IEC 60335-1)





Footprint

2) see footnote below

Household appliances

HVAC, Home automation, Machine control, Energy control

Lighting applications, Movement detectors, Motors control, Domestic appliances

Applications

Machine control, Energy control

AgNi90/10, AgSnO

1) see footnote below

Contact Data

Rated voltage

Contact arrangement 1 form C (CO) 1 form A (NO) 250VAC

Rated current 16A Switching power / Max. break 4000VA

Contact material

Min. recommended contact load

HVAC, Home automation

Switching cabinet, Interface modules

1 form C (CO), 1 from A (NO) 2 form C (CO), 2 form A (NO) 250VAC 250VAC

2X8/16A 2X2000/4000VA AgNi90/10, AgSnO 1) see footnote below 1 form C (CO) 1 from A (NO) 16A 4000VA

AgNi90/10, AgSnO 1) see footnote below

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 400mW/0.75VA Rated coil power 400mW 400mW

Dielectric Strength

Initial dielectric strength between open contacts 1000Vrms 1000Vrms 1000Vrms between contact and coil 5000Vrms 5000Vrms between adjacent contacts 2500Vrms

Clearance/creepage

Category of environmental

protection IEC61810

>10/10mm between contact and coil

5000Vrms

Other Data

Terminal type

Dimensions (lwh)

Link to datasheet

Mounting

+75°C (AC type) Ambient temperature (max.) +85°C +85°C +85°C

+105°C (HOT type)

+70°C (transparent cover type)

RTII, RTIII

THT РСВ

29x12.7x15.7mm

RTII, RTIII

>10/10mm

THT, THR (DC and AC type) PCB or on socket

29x12.7x15.7mm

RTII

>10/10mm

PCB or socket

29x12.7x15.7mm

Accessories PCB and DIN rail sockets

> SCHRACK RT SCHRACK RT INRUSH

SCHRACK RZ



Recommended minimum load indication for contact material: AU and gold plated: 1mA at 6VDC; AgNi0.15 and AgNi9.0/10: 10mA at 12VDC: AgCdO and AgSnO.; 100mA at 12VDC. Please contact technical support for detailed technical data.

²⁾ Footprint images are representative. For a complete selection, refer to the TE data sheet via the link above.

SCHRACK RTX

Inrush peak currents up to 370A Bistable coil

Reinforced insulation

16A rated fluorescent load acc. EN60669-1

8A electronic ballast acc. UL508 11/2 HP motor load acc. UL508

SCHRACK RT iPOWER

High Inrush peak currents up to 165A (20ms) and 800A (200µs)

Mono-or bistable coil

RTS3T: 5A Electronic ballast acc. UL508 RTSET: 8A Electronic ballast acc. UL508 Test tab (manual operator) optional for

RTT3T bistable versions

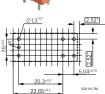
SCHRACK RP3SL

Inrush peak currents up to 120A (20ms)

Mono-or bistable coil Sealed version available













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2,4))))			5,0	•	+		2,5-2,54

Applications

2) see footnote below

Footprint

Lighting control systems

Motion sensors

Home automation applications

LED lighting systems, Lighting control, Movement detectors Filament and incandescent lamp

Motor control

Lighting control 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 / Max. break 4000VA 4000VA 4000VA Contact material W (pre-make contact) + AgSnO₂ W (pre-make contact) + AgSnO₂ AgSnO₂

AgSnO₂

1) see footnote below

Min. recommended 1) see footnote below 100mA at 12VDC contact load

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 RTII RTII RTII, RTIII protection IEC61810 THT THT THT Terminal type PCB РСВ РСВ Mounting Dimensions (lwh) 29.1x12.7x16mm 29x12.7x15.7mm (RTS3T), 29x12.6x25.5mm 29x12.7x16.0mm (RTS3L)

Accessories

Link to datasheet **SCHRACK RTX SCHRACK RT IPOWER** SCHRACK RP3SL

²⁾ Footprint images are representative. For a complete selection, refer to the TE data sheet via the link above.



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,; 100mA at 12VDC. Please contact technical support for detailed technical data.

Relays, Contactors & Circuit Breakers

Key Features

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

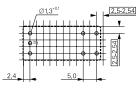






Footprint

2) see footnote below



5,0 6,25

1.236 ± .004 (6.0 ± .1) 1.236 ± .004 (6.0 ± .1) .079 ± .004 (2.0 ± .1) .079 ± .004 (1.2) .079 ± .004

licati	

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
Category of environmental protection IEC61810	RTII, RTIII	RTII	RTII, RTIII
Ambient temperature (max.)	+40°C	+85°C/+105°C	+85°C
Other Data			
between contact and coil	7/8mm	3/4mm / 4/5mm	3.2mm
Clearance/creepage			
between adjacent contacts	300Vrms		
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
Magnetic system Rated coil voltage	DC 5 to 110VDC	DC 5 to 48VDC	DC 5 to 24VDC
Coil Data			
contact load			
Min. recommended	100mA at 12VDC	1) see footnote below	100mA at 5VDC
Contact material	AgSnO ₂	AgNi90/10, AgSnO	AgZnO, AgNi
Switching power / Max. break	2000VA	2500VA	2770VA/360W
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)
Contact arrangement	2 form A 2 NO	1 form C(CO)	1 form C(CO)

SCHRACK PBH



Recommended minimum load indication for contact material: AU and gold plated: 1mA at 6VDC; AgNi0.15 and AgNi90/10: 10mA at 12VDC: AgCdO and AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

Footprint images are representative. For a complete selection, refer to the TE data sheet via the link above.

Potter & Brumfield T9G

High breaking capacity PCB and quick connect connections 4kV/8mm coil-contact Minimum board space (29mm x 21.5mm) UL-class F as standard

Potter & Brumfield T9A

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

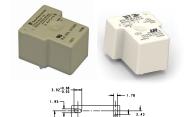
Potter & Brumfield T9S/T9V

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)









Footprint

2) see footnote below





HVAC Appliances

Photovoltaic inverter Electrical vehicle loading stations Electrical vehicle

1 form A (1NO)

Applications

HVAC, Appliances Industrial control Energy management

Industrial controls

Contact Data

1 form C (1 CO) Contact arrangement 1 form C (1 CO) 1 form B (1 NC) 1 form B (1 NC) 1 form A (1 NO) 1 form A (1 NO)

Rated voltage 250VAC 250VAC 277VAC (1.5mm gap), 250VAC (1.8mm gap)

30A Rated current 30A 35A (T9S), 40A (T9V)

Switching power / Max. break 7500VA 9695VA (T9S), 10000VA (T9V) Contact material AgSnO₂ AgCdO, AgSnInO AgNi

1A at 5VDC or 12VAC 1A at 5VDC/12VAC Min. recommended

1A at 12VAC/VDC contact load

Coil Data

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

Dielectric Strength

Initial dielectric strength between open contacts 1500Vrms 1500Vrms 2500Vrms between contact and coil 4000Vrms 2500Vrms 4000Vrms

between adjacent contacts Clearance/creepage 6.4mm / 9.5mm (UL)

between contact and coil 8mm / 8mm (IEC) 3.1/6.3mm 3/4mm

Other Data

+105°C +85°C Ambient temperature (max.) +85°C Category of environmental RTO, RTI, RTII, RTIII RTII, RTIII RTII/RTIII protection IEC61810

THT/Quick connect PCB Terminal type THT/Quick connect PCB PCB PCB, panel mount Mounting 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

²⁾ Footprint images are representative. For a complete selection, refer to the TE data sheet via the link above.



Recommended minimum load indication for contact material: AU and gold plated: 1mA at 6VDC; AgNi0.15 and AgNi90/10: 10mA at 12VDC: AgCdO and AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

Potter & Brumfield T92

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

or chassis mount

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 solar Contact gap 1.5mm/1.8mm min. 200mW hold power





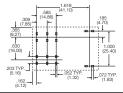
1.09 ± .008

10.2) .472 ± .00 1.228 (12.0 ± .2) (5.8)

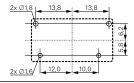


Footprint

2) see footnote below



HVAC



Applications

HVAC

Residential/commercial appliances

Industrial controls

Applicances

Office machines

Photovoltaic Inverter

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 / Max. break 6370VA 7200VA 7500VAC Contact material AgCdO, AgSnInO Visit **TE.com** for more information AgSnO₂ Min. recommended 500mA (NO)/100mA (NC) 100mA at 5VDC 100mA at 5VDC contact load at 12VAC

Coil Data

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

Terminal type THT/Quick connect THT/Quick connect (#250) PCB-THT PCB Panel mount, PCB Dimensions (lwh) 52.3x34.6x30.8mm 30.4x16x26.5mm 30.4x16x26.5mm

Accessories

PCFN SOLAR Link to datasheet Potter & Brumfield T92 <u>PCF</u>



Recommended minimum load indication for contact material: AU and gold plated: 1mA at 6VDC; AgNi0.15 and AgNi90/10: 10mA at 12VDC: AgCdO and AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

²⁾ Footprint images are representative. For a complete selection, refer to the TE data sheet via the link above.

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

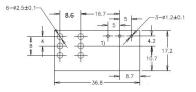
1 pole 120A, 1 form A (NO) contact Polarized bistable with two coils latching 4KV/8mm coil - contact Reinforced insulation





Footprint

2) see footnote below



Visit **TE.com** for more information

Applications Lighting control, bus actuator,

power distribution, circuit protection, inverter

Energy counter, prepaid power meter

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 / Max. break	15000VA	30000VA
Contact material	AgSnO ₂	AgSnO ₂
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		
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)	36.8×17.2×30.4mm	36.8x21.8x41.9mm
Accessories		
Link to datasheet	EW60	EW100/120



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

IHV

Hermetically sealed - intrinsically safe Designed accordance to AIAG QS9000 No position sensitive RoHS compliance



PCB mount not applicable. Visit <u>TE.com</u> for more information

Potter & Brumfield PRD

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



PCB mount not applicable. Visit <u>TE.com</u> for more information

Applications	DC charging, Solar inverter, Energy store station BMS, Electrical forklift, AGV, Rail transit Circuit protection and Safety in Industrial Machinery	Industrial controls Lighting
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 / Max. break		12000VA
Contact material		Ag, AgCdO
Min. recommended contact load	Visit <u>TE.com</u> 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 <u>TE.com</u> 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 <u>TE.com</u> 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 <u>TE.com</u> for more information	85.7X63.8X63.5mm
Accessories		Dust cover
Link to datasheet		Potter & Brumfield PRD

Recommended minimum load indication for contact material: AU and gold plated: 1mA at 6VDC; AgNi0.15 and AgNi90/10: 10mA at 12VDC: AgCdO and AgSnO₂: 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

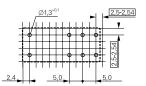
4 pole relay with force guided contacts according to EN50205

Compact design, space efficient



Footprint

2) see footnote below





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

	Elevator and Escalator control	Elevator and Escalator control
Contact Data		
Contact arrangement	1 form A + 1 from B (1 NO + 1 NC) 2 form C (2 CO)	3 form A + 1 form B (3 NO + 1 NC) 2 form A + 2 form B (2 NO + 2 NC)
Rated voltage	250VAC	250VAC
Rated current	6A	8A
Switching power / Max. break	1500VA	2000VA
Contact material	AgNi	AgSnO ₂
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		
Initial dielectric strength		
between open contacts	1500Vrms	1500Vrms
between contact and coil	4000Vrms	4000Vrms
between adjacent contacts	3000Vrms	2500Vrms
Clearance/creepage		
between contact and coil	8/8mm	10/10mm
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



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

SCHRACK SR6

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

Reinforced insulation between all contacts depending on version

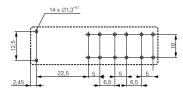
SCHRACK SRL7

7 pole relay with force guided contacts according to EN50205



Footprint

2) see footnote below



			Н	Н	Н	1		
7	18					37	5.4	16.75
9.6	7.4	7.4	7.4	7.4	8.4	1		
	5.3	5.3 9.6 14.2 7.4	5.3 9.6 14.2 7.4 7.4	5.3 9.6 7.4 7.4 7.4	5.3 9.6 14.2 7.4 7.4 7.4 7.4	5.3 9.6 7.4 7.4 7.4 8.4	48 53 95 42 74 74 74 74 84	48 m 8 95 42 74 74 74 74 84

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

	Elevator and escalator control	Elevator and escalator control
Contact 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 / Max. break	2000VA	1500VA
Contact material	AgSnO ₂	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		
between contact and coil	5.5/5.5mm, 15/15mm	≥3/4mm and ≥5.5/5.5mm
Other Data		
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
Accessories		
Link to datasheet	SCHRACK SR6	SCHRACK SRL7



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

SCHRACK SLIM INTERFACE SCHRACK INTERFACE

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

RELAY RT

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

SCHRACK INTERFACE RELAY XT

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

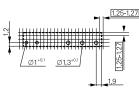


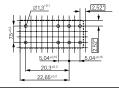


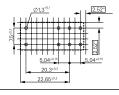


Footprint

2) see footnote below







Applications Interface technology

Panel board

Mechanical engineering

Panel board Mechanical engineering Machine Industry

Panel boards Mechanical engineering

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	250VAC	240VAC	240VAC
Rated current	6A	8/16A	8/16A
Switching power / Max. break	1500VA	2000/4000VA	2000/4000VA
Contact material	AgSnO ₂ , AgSnO ₂ Au plated	AgSnO ₂ , AgNi90/10 AgNi90/10 Au plated	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

Accessories

Link to datasheet

Magnetic system Rated coil voltage	DC 5 to 60VDC	DC, AC 5 to 110VDC/24 to 230VAC	DC, AC 12 to 110VDC/24 to 230VAC
Rated coil power	170mW	400mW/0.75VA	400mW/0.75VA
Dielectric Strength			
Initial dielectric strength			
between open contacts	1000Vrms	1000Vrms	1000Vrms
between contact and coil	4000Vrms	4000/5000Vrms	4000/5000Vrms
between adjacent contacts		2500Vrms	2500Vrms
Clearance/creepage			
between contact and coil	≥6/8mm	≥8/8mm	≥8/8mm
Other Data			
Ambient temperature (max.)	Relay +85°C, in socket +55°C	+70/+85°C	+70/+85°C
Category of environmental protection IEC61810	RTIII	RTII	RTII
Terminal type	Plug-in	Plug-in	Plug-in
Mounting	Socket	Socket	Socket
Dimensions (lwh)	28x5x15mm	29x13x15.7mm	29x13x26.7mm

DIN rail and PCB sockets,

SCHRACK INTERFACE RELAY RT

DIN rail sockets, jumper bars

SCHRACK SLIM INTERFACE SNR

jumper bars

clips, marking tags, modules, jumper clips, marking tags, modules,

DIN rail and PCB sockets,

SCHRACK INTERFACE RELAY XT



Recommended minimum load indication for contact material: AU and gold plated: 1mA at 6VDC; AgNi0.15 and AgNi90/10: 10mA at 12VDC: AgCdO and AgSnO₃: 100mA at 12VDC. Please contact technical support for detailed technical data.

²⁾ Footprint images are representative. For a complete selection, refer to the TE data sheet via the link above.

Potter & Brumfield R10

Broad range of coil options provide sensitivity ranging from 25 to 750mW Various contacts switch from dry circuit to 7.5A

Many mounting and termination options

SCHRACK PT/ Potter & Brumfield KH

Sensitive coil

Low height 29/33mm Manual test tab, optionally lockable Mechanical indicator

Optional LED, protection diode



Potter & Brumfield K10

Mounting options include socket, PCB, top flange DC and AC coils

LED versions available



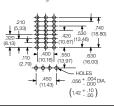






Footprint

2) see footnote below



Coin changers Audio equipment

Ag, AgCdO, Ag w/ Au overlay

Dry circuit to 300mA at 12VDC

Ultrasonic test equipment

Machine industry Elevator industry **Building management**

Industrial controls Motor controls Industrial timers

Contact Data

Rated voltage

Rated current

Contact material

Min. recommended

Applications

1, 2, 3, 4, 6, 8 form C (CO) Contact arrangement 2 form C (2 CO)

115VAC, 115VDC

0.5/2/3/7.5A

862VA max.

3 form C (3 CO) 4 form C (4 CO)

240VAC 1/2/5/6/10/12A

1500/2500/3000VA AgNi90/10, AgNi90/10 Au plated 1) Bifurcated contacts for dry

120/240VAC 10/15A

2 form C (2 CO)

1800/2500VA AgCdO, AgNi90/10 1) see footnote below

contact load Coil Data

Magnetic system DC, AC

Rated coil voltage 3 to 115VDC/6 to 115VAC Rated coil power 36mW to 1.6W/1.5VA

DC, AC 6 to 220VDC/6 to 240VAC 750 to 900mW/1 to 1.2VA

circuit available on KH

6 to 220VDC/6 to 240VAC 750 to 900mW/1 to 1.2VA

Dielectric Strength

Initial dielectric strength

between open contacts between contact and coil between adjacent contacts

Switching power / Max. break

Clearance/creepage between contact and coil 500/1000Vrms 1000Vrms 1000Vrms

+75°C

1200Vrms 2500Vrms 2000/2500Vrms

≥4/4mm

1200/1000Vrms 2500/1500Vrms 2500/1500Vrms

≥3.1/3.1mm

+70°C

DC, AC

Other Data

Ambient temperature (max.) Category of environmental protection IEC61810

Terminal type Mounting

Dimensions (lwh) Accessories

Link to datasheet Potter & Brumfield R10

+70°C RTL RTIII RTII

Solder/plug-in and PCB Socket, panel mount and PCB 29.6x18.7x30.2mm

Solder/PCB sockets, clips,

hold down strap, mounting strip

Visit **TE.com** for more information

DIN rail and PCB sockets, clips,

SCHRACK PT

Socket, PCB

THT, plug-in, Quick connect

28x22.5x29/30/36mm

marking tags, modules, jumper bars Potter & Brumfield KHA

28x22.5x29/34.9mm Screw, solder and PCB sockets

Quick connect, solder, PCB

Socket and bracket mount

and clips Potter & Brumfield K10



Recommended minimum load indication for contact material: AU and gold plated: 1mA at 6VDC; AgNi0.15 and AgNi9.0/10: 10mA at 12VDC: AgCdO and AgSnO.; 100mA at 12VDC. Please contact technical support for detailed technical data.

²⁾ Footprint images are representative. For a complete selection, refer to the TE data sheet via the link above.

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

Class B coil insulation

lamps

Potter & Brumfield KUP/ KUMP/KUIP

Wide selection of termination and mounting styles

Broad range of contact forms PC terminals available

Push to test button and indicator lamps Class B coil insulation







Footprint

2) see footnote below

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

Mechanical engineering Elevator control, Plant control

Power supplies Baggage handling

Elevator control

HVAC Pump motor controls

Hospital beds

Contact Data

Rated voltage

Rated current

Contact material

Applications

2 form C (2 CO) 3 form C (3 CO) 1 form C (1 CO) (KRPA) Contact arrangement 1, 2, 3, 4 form C (CO) 2 form C (2 CO) 3 form C (3 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) 240VAC 400VAC 240VAC 10/15A 10/16A 4/10A

500/2400/2500VA 3800/6000VA 2400/4155VA AgCdO, AgNi90/10, AgNi90/10 Au AgCdO, AgNi90/10 in preparation

Ag, AgCdO, AgSnOInO plated

100mA at 12VDC(Ag) 300mA at 12VDC (AgCdO, AnSnOlnO) Min. recommended 100mA at 12VDC 1) see footnote below contact load

Coil Data

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

Dielectric Strength

Switching power / Max. break

Initial dielectric strength between open contacts 1000/1500Vrms 1500Vrms 1200Vrms between contact and coil 1000/2500Vrms 2500Vrms 2200/3750Vrms between adjacent contacts 1000/2500Vrms 2500Vrms 2200Vrms Clearance/creepage

between contact and coil

≥2.8/4mm ≥4/14.9mm Visit **TE.com** for more information

Other Data

Ambient temperature (max.) DC +60/+70°C +50/+70°C DC +50/+70/+95°C AC +50/+55°C AC +45/+55/+70°C Category of environmental RTI protection IEC61810 Terminal type Plua-in THT, Plug-in, solder, Quick connect THT, Plug-in, solder, Quick connect Mounting Socket Socket, PCB, bracket, flange mount Socket, PCB, bracket, flange, stud and and DIN-snap-on tapped core Dimensions (lwh) 35.7x35.7x50.8/57mm 38.5x35.5x48.5mm 38.9x35.7x48.4mm DIN rail and PCB sockets, clips, Accessories DIN rail and PCB sockets, clips DIN rail, panel and PCB marking tags, modules sockets, clips Link to datasheet Potter & Brumfield KRPA SCHRACK RM2/3/7 Potter & Brumfield KUIP KUGP KUM KUMP KUP SCHRACK MT

²⁾ Footprint images are representative. For a complete selection, refer to the TE data sheet via the link above.



Recommended minimum load indication for contact material: AU and gold plated: 1mA at 6VDC; AgNi0.15 and AgNi90/10: 10mA at 12VDC: AgCdO and AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

Footprint 2) see footnote below

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

SCHRACK RM8C/D

SCHRACK RM 8







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Applications	Cleaning equipment	Baggage handling motors	Power supplies
	Heating equipment	Industrial pumps	Pump control
	Cooling equipment	Commercial ovens	
Contact Data			
Contact arrangement	1 form C (1 CO) 2 form C (2 CO) 1 form Z contact (1 NO + 1 NC) 1 form X contact (1 NO)	1 form C (1 CO) 2 form C (2 CO)	2 form A (2 NO) 3 form A (3NO)
Rated voltage	400VAC	240VAC, 50/60Hz; 28VDC	240/400VAC
Rated current	25/30/32A	20/30A	10/16A
Switching power / Max. break	6000/7500VA	4800/7200VA	3800/6000VA
Contact material	AgCdO, AgNi90/10	AgCdO, AgSnOInO	AgCdO, AgNi90/10 in preparation
Min. recommended contact load	100mA at 12VDC	300mA at 12VDC	100mA at 12VDC
Coil Data			
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	C 6 to 220VDC/6 to 400VAC
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 Clearance/creepage	4000Vrms	3750Vrms	2500Vrms
between contact and coil	≥4/14.9mm	Visit <u>TE.com</u> for more information	≥4/14.9mm
Other Data			
Ambient temperature (max.)	DC +60/+65°C	DC +45°C	+50/+60°C
	AC +40°C	AC +75°C	
Category of environmental protection IEC61810	RTI	RTI, RTO	RTI
Terminal type	Solder/Quick connect	Solder/PCB THT/Quick connect	Plug-in, solder, Quick connect, PCB THT
Mounting	Bracket, top flange panel mount and DIN snap-on	Bracket and top flange panel mount	Socket, PCB, bracket, flange mount and DIN-snap-on
Dimensions (lwh)	38.5x35.5x48.5mm	38.9x35.7x48.4mm	38.5x35.5x48.5mm
Accessories	No sockets	No sockets	DIN rail and PCB sockets, clips

Recommended minimum load indication for contact material: AU and gold plated: 1mA at 6VDC; AgNi0.15 and AgNi90/10: 10mA at 12VDC: AgCdO and AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data. 2) Footprint images are representative. For a complete selection, refer to the TE data sheet via the link above.

Potter & Brumfield KUHP



Link to datasheet

SCHRACK RM5/6/B 3MM

Potter & Brumfield KUGP

3mm contact gap DC or AC coil

Plug-in version, PCB terminals or chassis mount

Potter & Brumfield KUL

Magnetic latching Single and dual coils Panel mounting

Potter & Brumfield KUEP

10A relay with various contact arrangements

Magnetic blowout for 150VDC load switching

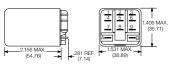
Indicator lamp option



Footprint

2) see footnote below







	(22.23)		(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)	1 form C (1 CO)	1 form X (NO-DM)
	2 form A (2 NO)	2 form C (2 CO)	2 form A (2 NO)
	2 form C (2 CO)	3 form C (3 CO)	2 form C (2 CO)
	3 form C (3 CO)		
Rated voltage	240/400VAC	28/240VAC	150VDC/240VAC
Rated current	10A	10A	10A
Switching power / Max. break	2400VA		1500W/2400VA
Contact material	Ag, AgCdO	Ag, AgCdO	AgCdO, AgSnOInO
Min. recommended contact load	100mA at 12VDC (Ag) 300mA at 12VDC (AgCdO)	100mA at 12VDC (Ag) 300mA at 12VDC (AgCdO)	300mA at 12VDC
Coil Data			
Magnetic system	DC, AC	DC, AC	DC, AC
Rated coil voltage	6-110VDC/6-240VAC	12 to 48VDC/24 to 120/240VAC	5 to 110VDC/6 to 240VAC
Rated coil power	1.8W/2.7VA	1.6W dual coil/1.2W single coil	1.2W to 1.8W/2 to 2.7VA
Dielectric Strength			
Initial dielectric strength			
between open contacts	3500Vrms	500Vrms	1200Vrms
between contact and coil	2200Vrms	1500Vrms	2200Vrms
between adjacent contacts	2200Vrms	1500Vrms	2200Vrms
Clearance/creepage			
between contact and coil	>8mm	Visit $\underline{TE.com}$ for more information	Visit <u>TE.com</u> for more information
Other Data			
Ambient temperature (max.)	DC +75°C	DC +70°C	AC +55/+70°C
	AC +70°C	AC +50/+70°C	DC +50/+70°C
Category of environmental protection IEC61810	RTI	RTI	RTI
Terminal type	THT, Plug-in, solder, Quick connect, PCB	.187 Quick connect, solder	Quick connect, solder and PCB
Mounting	Socket, PCB, bracket, flange mount	Socket, bracket	Socket, PCB, bracket and top flange
Dimensions (lwh)	38.9x35.7x48.4mm	38.9x35.7x54.8mm	mount 38.9x35.7x48.4mm
Accessories	DIN rail and PCB sockets, clips	Screw, solder, PCB and Quick	DIN rail, track mount, chassis

connect sockets and clips

Potter & Brumfield KUL

Potter & Brumfield KUGP

mount, and snap-in sockets, clips

Potter & Brumfield KUEP



Link to datasheet

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

ACCESSORIES

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

SETS

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



Applications

Contact Data		
Contact arrangement	1 form C (1 CO)	1 form C (1 CO)
	2 form C (2 CO)	2 form C (2 CO)
	3 form C (3 CO)	3 form C (3 CO)
	4 form C (4 CO)	4 form C (4 CO)
Rated voltage	240/250VAC	240/250VAC
Rated current	6 to 16A	6 to 16A
Switching power / Max. break		1500 to 4000VA
Min. recommended contact load		1) see footnote below
Coil Data		
Magnetic system		DC, AC
Rated coil voltage		6 to 220VDC/6 to 230VAC
Rated coil power		170 to 700mW/0.4 to 1VA
Dielectric Strength		
Initial dielectric strength		
between open contacts		
between contact and coil		
between adjacent contacts		
Clearance/creepage		
between contact and coil		
Other Data		
Ambient temperature (max.)		
Category of environmental protection IEC61810	IP20	
Terminal type	Screw, screwless, plate mount, PCB	Screw, screwless
Mounting		
Dimensions (lwh)		
Accessories	PCB, panel mount and DIN rail	DIN, panel mount
Link to datasheet	ACCESSORIES SLIM INTERFACE RELAY SNR	RELAY PACKAGE RT
	ACCESSORIES INDUSTRIAL POWER RELAY RT	RELAY PACKAGE PT
	ACCESSORIES MINIATURE RELAY PT	RELAY PACKAGE SNR
	ACCESSORIES INTERFACE PLUG-IN RELAY XT	ACCESSORIES MULTIMODE RELAY MT

Recommended minimum load indication for contact material: AU and gold plated: 1mA at 6VDC; AgNi0.15 and AgNi90/10: 10mA at 12VDC: AgCdO and AgSnO₂: 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 up to 5 A High contact stability version

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

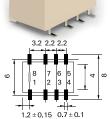
Axicom IMC

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 up to 4 A Bifurcated contacts

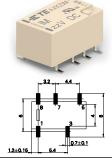


Footprint

2) see footnote below



8 6 w 1 3 12±0.15 0.7±0.1



Applications

Telecommunication, access and transmission equipment

Thermostat controls, fire and security equipment

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 Telecommunication, access and transmission equipment

Thermostat controls, fire and security equipment

Measurement and test equipment, Industrial controls, medical equipment

Contact Data

1 form A, 1 NO
Bifurcated contacts
250VAC/220VDC
2A
60W/62.5VA
100µV/1µA
<100mΩ at 10mA/30mV

1 form C, 1 CO
Bifurcated contacts
250VAC/220VDC
2/4A
60W/62.5VA
100μV/1μA
<50mΩ at 10mA/ 30mV

Coil Data

Magnetic systemPolarizedPolarizedPolarizedRated coil voltage1.5 to 24VDC1.5 to 24VDC1.5 to 24VDCRated coil power
DC coil / bistable 1 coil/2 coils50 to 200mW-/-
50 to 200mW-/-140mW/-/-140mW/-/-

Dielectric Strength

Initial dielectric strength between open contacts 750 to 1500Vrms 2500Vrms 1000 to 1600 Vrms between contact and coil 1500 to 1800Vrms 3500Vrms 1800 to 2200Vrms between adjacent contacts 750 to 1800Vrms Initial surge withstand voltage 1000 to 2500V 3500V 1500 to 2200V between open contacts between contact and coil 2000 to 2500V 4900V 2500 to 3000V between adjacent contacts 1000 to 2500V Isolation 100/900MHz 37.0/18.8dB 37.0/18.8dB 37.0/18.8dB Insertion loss 100/900MHz 0.03/0.33dB 0.03/0.33dB 0.03/0.33dB 1.06/1.49 Volt. standing wave ratio 1.06/1.49 1.06/1.49 100/900MHz Capacitance max. 1pF max. 1pF max. 1pF between open contacts Other Data

Ambient temperature (max.) -40 to +85°C -40 to +85°C -40 to +85°C IP67/RTV Category of environmental IP67/RTV IP67/RTV protection Terminal type THT. SMT THT. SMT THT. SMT Dimension (lwh) 10x6x5.65mm 10x6x5.65mm 10x6x5.65mm Link to datasheet Axicom IM Axicom IMB Axicom IMC



²⁾ Footprint images are representative. For a complete selection, refer to the TE data sheet via the link above.



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. requirements

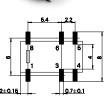
Axicom P2 LIGHTING

Small signal relay Slim line 15x7.5mm Switching current max. 5A High dielectric strength 3kV VDE certified for LED tubes



Footprint

2) see footnote below



P2 SMT L Layout

Telecommunication, access and **Applications**

transmission equipment, fire and security equipment

Thermostat controls

Measurement and test equipment, Industrial controls, medical equipment

Security systems, consumer electronics, thermostats Home automation systems, communication systems Set top boxes, office equipment LED tubes 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 / Max, break Min. recommended contact load

100μV/1μΑ <50m Ω at 10mA/20mV Initial contact resistance

Bifurcated contacts

2Δ 60W/62.5VA 60W/62.5VA 100μV/1μΑ <50m Ω at 10mA/20mV

2 form C, 2 CO 2 form C, 2 CO Bifurcated contacts

250VAC/220VDC 250VAC/220VDC 2Δ 60W/62.5VA

> 100μV/1μΑ <50m Ω at 10mA/20mV

Coil Data

Magnetic system Polarized Polarized Polarized Rated coil voltage 1.5 to 24VDC 2.4 to 24VDC 3 to 12VDC Rated coil power 140mW/-/-140mW/70mW/140mW 140mW - 1 coil version 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 between adjacent contacts Isolation 100/900MHz Insertion loss 100/900MHz Volt. standing wave ratio

100/900MHz Capacitance

between open contacts

1000Vrms 1800Vrms 1500Vrms

1000Vrms 1500V 2500V

1500V 37.0/18.8dB 0.03/0.33dB 1.6/1.49

max. 1pF

1000 to 1500Vrms 1000 to 1500Vrms

2000 to 2500Vrms 2500V

2500V

1500Vrms 3000Vrms 1500Vrms

6000Vrms

Other Data

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

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

-40 to +85°C RTIII THT, SMT

14.5x7.2x10.4mm, stnd 14.5x7.2x9.9mm, ovrmld -40 to +85°C RTIII THT, SMT

14.5x7.2x9.9mm, ovrmld Axicom P2 LIGHTING

Link to datasheet Axicom IMD/IME

Axicom P2 / P2 HIGH **DIELECTRIC VERSION**



Recommended minimum load indication for contact material: AU and gold plated: 1mA at 6VDC; AgNi0.15 and AgNi90/10: 10mA at 12VDC: AgCdO and AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

²⁾ Footprint images are representative. For a complete selection, refer to the TE data sheet via the link above.

Axicom FP2

Slim line 14x9mm 2 form C bifurcated contacts High mechanical shock resistance, up to 1500g survival

Axicom D2N V23105

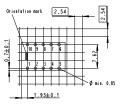
2G telecom/signal relay 4 coil sensitivities 3A UL rating





Footprint

2) see footnote below



Communication equipment

Office equipment

ø1.0 + 0.1

Measurement and control equipment

Appli	cations
-------	---------

Communication equipment

Keyless entry

Speaker switch, consumer electronics

Contact Data

 Contact arrangement
 1 form C (CO)

 Rated voltage
 220VDC/250VAC

 Rated current
 2A

 Switching power / Max. break
 60W/62.5VA

 $\begin{array}{ll} \mbox{Min. recommended contact load} & \mbox{100} \mbox{μV} \\ \mbox{Initial contact resistance} & \mbox{<50} \mbox{Ω} \mbox{α} \mbox{at 10} \mbox{m} \mbox{M} \\ \mbox{M} \mbox{$M$$

2 form C, 2 CO

250VAC/220VDC 3A

5A 60W/125VA 100μV/10μA <100mΩ

Single Contacts

Coil Data

Magnetic systemPolarizedNon polarizedRated coil voltage2 to 24VDC3 to 48VDCRated coil power80mW (high sensitive), 140mW150 to 700mW/-/-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

between adjacent contacts Isolation/Cross talk at 100MHz/900MHz Insertion loss 100/900MHz

Volt. standing wave ratio 100/900MHz
Capacitance

between open contacts

750Vrms 1000Vrms 1000Vrms

1100V 1500V 1500V Cross talk -40.2/-22.3dB 0.03dB/0.25dB 750Vrms 1500V 1500V 1500V

750Vrms

1000Vrms

Isolation -39.0/-20.7dB -0.02/-0.27dB

1.04/1.40 max. 2pF

Other Data

 Ambient temperature (max.)
 -40 to +85°C
 -25 to +85°C

 Category of environmental protection
 IP67/RTIII
 IP67/RTIII

 Terminal type
 THT
 THT

 Dimension (lwh)
 14x9x5mm
 20.2x10x11.4mm

1.01/1.07

Link to datasheet Axicom FP2 Axicom D2N V23105

²⁾ Footprint images are representative. For a complete selection, refer to the TE data sheet via the link above.



Recommended minimum load indication for contact material: AU and gold plated: 1mA at 6VDC; AgNi0.15 and AgNi90/10: 10mA at 12VDC: AgCdO and AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

Axicom MT2

2G telecom/signal relay 5 coil sensitivities 2A UL rating

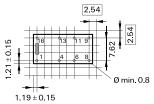
Axicom P1 V23026

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) see footnote below



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	19 ± 0 15	Ø min. 0.8

Applications	Communication equipment	Automotive equipment	
rr · · · · ·	Linecard application	CAN bus	
	Measurement and control equipment	Imobilizer	
Contact Data			
Contact arrangement	2 form C, 2 CO	1 form C, 1 CO	
	Bifurcated contacts	Bifurcated contacts	
Rated voltage	250VAC/220VDC	150VAC/125VDC	
Rated current	2A	1A	
Switching power / Max. break	60W/62.5VA	30W/60VA	
Min. recommended contact load	100μV/1μΑ	100μV/1μΑ	
Initial contact resistance	<70mΩ	<50mΩ	
Coil Data			

Ma	agr	neti	c syst	em
_				

Non polarized Polarized Rated coil voltage 3 to 48VDC 3 to 24VDC 150 to 550mW/-/-65 to 130mW/30 to Rated coil power DC coil/bistable 1 coil/2 coils 130mW/70 to 200mW

Dielectric Strength Initial dielectric strength

Volt. standing wave ratio 100/900MHz

between open contacts	750Vrms	500Vrms
between contact and coil	1000Vrms	1500Vrms
between adjacent contacts	750Vrms	
Initial surge withstand voltage		
between open contacts	1500V	
between contact and coil	1500V	2500V
between adjacent contacts	1500V	
Isolation 100/900MHz	-31.8/-14.2dB	-30.0/-18.0dB
Insertion loss 100/900MHz	-0.02/-0.97dB	-0.12/-1.90dB

1.03/1.31 1.06/1.75 max. 2pF max. 5pF

Other Data

Capacitance between open contacts

Link to datasheet	Axicom MT2	Axicom P1 V23026
Dimension (lwh)	20.2x10x11mm	13x7.6x6.9mm
Terminal type	THT	THT, SMT
Ambient temperature (max.) Category of environmental protection	-55 to +85°C IP67/RTIII	-40 to +85°C IP67/RTIII



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

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 compatibility

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

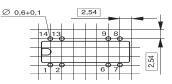


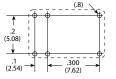




Footprint

2) see footnote below





6 – 0.31 DIA

Applications 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 1 form C, 1 CO 1 form C, 1 CO 2 form A, 2 NO 1 form A, 1 NO 1 from C, 1 CO Reed contacts 120VAC/24VDC

175 to 200VAC/VDC Rated voltage Rated current 0.25 to 0.5A Switching power / Max. break 3 to 10W Min. recommended contact load

10μV/1μΑ $<150 m\Omega$

120VAC, 30VDC 1A 120VA, 24W 1mA at 1VDC 50mΩ at 100mA, 6VDC

1A 120VA, 30W 1mA at 1VDC

Coil Data

Magnetic system DC, sensitive DC, sensitive Non polarized Rated coil voltage 5 to 24VDC 3 to 24VDC 5 to 24VDC Rated coil power 50 to 300mW/-/-150, 300mW 200, 450mW DC coil/bistable 1 coil/2 coils

Dielectric Strength

Initial contact resistance

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

500vdc 500vdc

max. 1pF

140 to 175Vrms

400Vrms 1000Vrms 500Vrms 1000Vrms

1500Vp (10/160μs)

1500Vp (10/160µs)

Capacitance between open contacts Other Data

100/900MHz

Ambient temperature (max.) -20 to +70°C 40 to +80°C -40 to +60°C (standard) Category of environmental RTIII/IP67 IP67/RTIII RTII RTIII protection THT THT

Terminal type 19.3x5.7x7.5mm/19.8x5.1x8mm 12.5x7.5x10mm 15.4x10.4x11.2mm Dimension (lwh)

Link to datasheet Axicom REED DIP/SIL **TSC** OUAZ/T81

²⁾ Footprint images are representative. For a complete selection, refer to the TE data sheet via the link above.



Recommended minimum load indication for contact material: AU and gold plated: 1mA at 6VDC; AgNi0.15 and AgNi90/10: 10mA at 12VDC: AgCdO and AgSnO₃: 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 Ω version Very small design

Axicom HF3S

High performance RF relay/switch for up to 3GHz

Low power consumption ≤70/140mW 50 and 75 Ω version RF power 100W at 2GHz

Very small design

Axicom HF6

High performance RF relay/switch for up to 6GHz

Low power consumption ≤70/140mW 50Ω version Very small design









Footprint

2) see footnote below

Cable modems and linecards/CATV

Satellite/audio/video tuners

1 form C, 1 CO

100μV/1μΑ

<100mΩ

Bridge contacts

250VAC/220VDC

Cable modems and linecards/CATV Measurement and test equipment

Satellite/audio/video tuners

Measurement and test equipment

Wireless base stations and antennas

Wireless infrastructure

Applications

Contact Data Contact arrangement

Rated voltage

Rated current

Switching power / Max. break

Initial contact resistance

Min. recommended contact load

Measurement and test equipment ATE

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

1 form C, 1 CO

Bridge contacts 250VAC/220VDC

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

100μV/1μΑ <100m Ω

1 form C, 1 CO Bridge contacts

250VAC/220VDC

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

100μV/1μΑ <100mΩ

Coil Data

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

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

SMT

15x7.6x10.6mm

Axicom HF3S



14.6x7.2x10mm

Axicom HF3

15x7.6x10.6mm

Axicom HF6

SMT



protection

Terminal type

Dimension (lwh) Link to datasheet

²⁾ Footprint images are representative. For a complete selection, refer to the TE data sheet via the link above.

Potter & Brumfield SSR

Standard "hockey puck" package Inverse parallel SCR output 240VAC & 480VAC output types Zero voltage and random voltage turn-on versions 4,000Vrms optical isolation Cover design with anti-rotation

1 Form A (SPST-NO)

barriers

Potter & Brumfield SSRD

Two independent AC output solid state relays

Standard "hockey puck" package Inverse parallel SCR output 4000Vrms optical isolation Quick connect style termination 2 Form A (2 SPST-NO)

Potter & Brumfield SSRT

Standard "hockey puck" package TRIAC Output 4,000Vrms optical isolation Cover design with anti-rotation barriers 1 Form A (SPST-NO)



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

Typical Applications	Industrial machinery	Industrial machinery	Industrial machinery
	HVAC	HVAC	HVAC
	Building controls	Building controls	Building controls

	Building controls	Building controls	Building controls
Output Data			
Load Voltage	24 - 280VAC/48 - 660VAC	24 - 280VAC	24 - 280VAC
Repetitive Blocking Voltage	600VAC/1200VAC	600VAC	600VAC
Load Current Range	25A/50A/125A	25A/40A	10A/25A
Leakage Current (Off-State)	5mA	5mA	5mA
On-State Voltage Drop (Max.)	1.8V	1.8V	1.6V
Load Power Factor Rating	0.5 - 1.0	0.5 - 1.0	0.5 - 1.0
Thermal Resistance, Junction to Case (ROJ-C) (Max.)	2.35/0.55/0.35	2.35/0.86	2.4/1.7
Input Data (AC/DC)			
Control Voltage Range VIN	90 - 280VAC/3 - 32VDC	4 - 15VDC	90 - 280VAC/3 - 32VDC
Must Operate Voltage VIN(OP) (Min.)	90VAC/3VDC	4VDC	90VAC/3VDC
Must release Voltage VIN(REL) (Min.)	10VAC/1VDC	1VDC	10VAC/1VDC
Input Current	2 - 26mA / 3 - 30mA	15mA @ 8VDC	25mA/20mA
Dielectric Strength			
Isolation:	4000Vrms	4000Vrms	4000Vrms
Other Data			
Dimensions	46.5x57.8x43.4mm	44.5x57.8x30.15mm	45x57.5x36.5mm
Operating Temperature	-30 to +80°C	-30 to +80°C	-30 to +80°C
Mounting	Panel	Panel	Panel
UL File No	E29244	E29244	E29244
Link to datasheet	Potter & Brumfield SSR	Potter & Brumfield SSRD	Potter & Brumfield SSRT



Recommended minimum load indication for contact material: AU and gold plated: 1mA at 6VDC; AgNi0.15 and AgNi90/10: 10mA at 12VDC: AgCdO and AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

Potter & Brumfield SSRDC

Standard "hockey puck" package 200VDC FET output 12A, 25A and 40A load current options 1500VDC 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 & 600VAC output types 4,000Vrms 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 600VAC output type 4,000Vrms optical isolation 1 Form A (SPST-NO)



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

Typic		

Material handling Trains

Construction equipment

Industrial machinery **HVAC Building controls**

HVAC

Building controls

Industrial machinery

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 12mA 2.83VDC NA 0.7/0.7/0.5

24 - 280VAC/48 - 660VAC 600VAC/1200VAC 10A/20A/30A 5mA 1.8V/1.6V 0.5 - 1.0

90 - 280VAC/3 - 32VDC

7.5mA - 16mA/18 - 30mA

48 - 660VAC 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 - 32VDC 3.5VDC 1VDC

30mA

1500VDC

10VAC/1VDC

90VAC/3VDC

10VAC/1VDC

15mA/14 - 30mA

Dielectric Strength

Other	Data

Isolation:

Dimensions Operating Temperature Mounting UL File No Link to datasheet

45x57.8x43.4mm -30 to +80°C

Panel E29244 Potter & Brumfield SSRDC 4000Vrms

90VAC/3VDC

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

E29244 Potter & Brumfield SSRK 90 - 140VAC/4 - 32VDC

4000Vrms

22.5x76.2x109.2mm

-40 to +80°C Din Rail E29244

Potter & Brumfield SSRM

Recommended minimum load indication for contact material: AU and gold plated: 1mA at 6VDC; AgNi0.15 and AgNi90/10: 10mA at 12VDC: AgCdO and AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.



Potter & Brumfield SSRA

2A Miniature, SIP Solid State Relay Inverse parallel SCR output 2500Vrms optical isolation 240VAC output 1 Form A (SPST-NO)

Potter & Brumfield SSRC

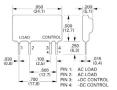
5A SIP Solid State Relay Inverse parallel SCR output 4000Vrms optical isolation 1 Form A (SPST-NO)





Footprint

2) see footnote below



Typical Applications	Industrial machinery	Industrial machinery
ZP PP	HVAC	HVAC
	Building controls	Building controls
Output Data		
Load Voltage	12 - 280VAC	12 - 280VAC/48 - 660VAC
Repetitive Blocking Voltage	600VAC	600VAC/1200VAC
Load Current Range	2A	5A
Leakage Current (Off-State)	0.1mA	0.1mA
On-State Voltage Drop (Max.)	1.5V	1.4V
Load Power Factor Rating	0.5 - 1.0	0.5 - 1.0
Thermal Resistance, Junction to Case (ROJ-C) (M	ax.) -	-
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
Mounting	PCB	PCB
UL File No	E29244	E29244
Link to datasheet	Potter & Brumfield SSRA	Potter & Brumfield SSRC



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

Potter & Brumfield SSRF

25A SIP Solid State Relay with integrated heat sink

Inverse parallel SCR output 4000Vrms optical isolation 1 Form A (SPST-NO)

Potter & Brumfield IACM

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









Footprint	
2) see footnote	belov

Typical Applications	Industrial machinery	Industrial machinery
	HVAC	HVAC
	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)	0.1mA	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	1-5mA
Dielectric Strength		
Isolation:	4000Vrms	4000Vrms
Other Data		
Dimensions	43.1x22.8x34.3mm	43.5x10.3x25.5mm
Operating Temperature	-30 to + 80°C	-30 to 100°C
Mounting	PCB	PCB
UL File No	E29244	E29244

Potter & Brumfield SSRF

Potter & Brumfield IACM



Link to datasheet

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

Potter & Brumfield OACM

Slim Solid State AC Output Module Color coded by function - black 4000Vrms optical isolation Compatible with 210 series mounting boards 1 Form A (SPST-NO)

Potter & Brumfield IDCM

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









Footprint

2) see footnote below

Typical Applications

Link to datasheet

(10.16)	.10 +(2.54)
	0.3 (7.62) 0.7 1.2
9	(30.5) 1.4 (35.6) 1.6 (40.6)
0	

Industrial machinery

Industrial machinery

Industrial machinery

	HVAC	HVAC	HVAC
	Building controls	Building controls	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	43.5x10.3x25.5mm	43.5x10.3x25.5mm	43.5x10.3x25.5mm
Operating Temperature	-30 to 100°C	-30 to 100°C	-30 to 100°C
Mounting	PCB	PCB	PCB
UL File No	E29244	E29244	E29244

Potter & Brumfield IDCM

Potter & Brumfield OACM

Potter & Brumfield ODCM



Recommended minimum load indication for contact material: AU and gold plated: 1mA at 6VDC; AgNi0.15 and AgNi90/10: 10mA at 12VDC: AgCdO and AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

²⁾ Footprint images are representative. For a complete selection, refer to the TE data sheet via the link above.

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







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

Operational Data

Thermal	Thermal
1	1
Series trip	Series trip
-20 to +60 °C	-20 to +65°C
Standard quick connect .250in x .032in	#8-32 screw
Snap-in	Thru-hole 3/8"-24 threaded bushing
Push-to-reset	Push/pull W23 and toggle W31
39.0 x 15.9 x 13.7mm	40.6x17.5x35.2mm
	Series trip -20 to +60 °C Standard quick connect .250in x .032in Snap-in Push-to-reset

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	Ton times rated current

Resetable Overload Capacity

Reset Time

Six times rated current for 0.25 through 2 amp models. Ten times rated current for 3 through 20 amp models.

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

Ten times rated current.

Protective boot, push-on lockwasher Hex nut, lockwasher, knurl nut

Link to datasheet Potter & Brumfield W28

Potter & Brumfield W23/W31



Recommended minimum load indication for contact material: AU and gold plated: 1mA at 6VDC; AgNi0.15 and AgNi90/10: 10mA at 12VDC: AgCdO and AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

²⁾ Footprint images are representative. For a complete selection, refer to the TE data sheet via the link above.

Potter & Brumfield W33

Thermal overload/trip free Operation Thermal overload/trip free operation Optional indicator lamp Optional auxiliary switch Combines on/off switching and circuit Optional indicator lamp protection in a single unit UL 1077, CSA

Potter & Brumfield W51

Rocker actuated with switch overload sensing

Combines power switching and circuit protection in a single unit

Compact design PCB termination options UL1077, cUL, VDE, CCC

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



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



PCB mount not applicable. Visit $\underline{\text{TE.com}}$ 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

Туре	Thermal	Thermal	Thermal
Number of Poles	1-2	1	1
Circuit function	Series trip both poles; series trip 1 pole/switch only 1 pole; switch only 2 poles	Series trip	Series trip
Ambient temperature (max.)	-20 to +65 °C	0°C to + 60 °C for 10-20A models 0°C to + 50 °C for 5-8A models	0 to 60 °C
Terminal type	Standard quick connect 250in x .032in and solder option	Standard quick connect 250inx.032in/solder option/PCB	Standard quick connect 250inx.032in and #8-32 screw
Mounting	Snap-in	Snap-in, PCB	3/8"-24, M11-1.0, M12-1.0 threaded bushing
Manual operation Actuator	Rocker	Rocker	Push-to-reset
Dimension L*W*H	43.8 x 24.9 x 48.0mm	21.8 x 15.2 x 32.0mm	31.0 x 14.6 x 35.0mm (W54) 22.6 x 14.6 x 29.2mm (W57)

Accessories

Link to datasheet

Electrical Data			
Dielectric strength	2000Vrms	1500VAC	1500VAC
Insulation Resistance		100M Ω	100ΜΩ
Max Operating Voltages	50VDC 250VAC	50VDC 125/250VAC (model dependent)	50VDC 250VAC
Rated current	2A to 20A	5A to 20A	5A to 40A
Interrupt capacity	1000A at 50VDC, 250VAC/60Hz and 125/250VAC 400Hz; 1500A at 25/250VAC/60Hz	1,000 amps in accordance with UL standard 1077	1,000 amps in accordance with UL standard 1077
Calibration	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	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	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
Resetable OverloadCapacity	Ten times rated current	Ten times rated current. Switch Endurance Cycling: Typically 6,000 operations at 100% of rating	Ten times rated current.
Reset Time		60 Seconds	60 Seconds

Potter & Brumfield W51

Potter & Brumfield W33



Protective boot, knurl nut, hex nut, lockwasher, nameplate Potter & Brumfield W54

Recommended minimum load indication for contact material: AU and gold plated: 1mA at 6VDC; AgNi0.15 and AgNi90/10: 10mA at 12VDC: AgCdO and AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

Potter & Brumfield W57

(3A.4A.20A no VDE)

Thermal overload/trip free operation Push to reset Compact design Cannot be manually tripped PCB termination options UL 1077, UL 1500, cUL, VDE, CCC.

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



PCB mount not applicable.
Visit <u>TE.com</u> for more information

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 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

1 Series trip O 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

Thermal

Push-to-reset 31.0 x 14.6 x 35.0mm (W54) 22.6 x 14.6 x 29.2mm (W57) Thermal Magnetic/hydraulic

1 1-4

Series trip Series trip

-25 to 65°C -40 to +85 °C

Standard quick connect W6-Standard Quick
.250in x .032in and #8-32 screw .250in x .032in and

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

34.9 x 16.8 x 34.9mm

-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

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

Potter & Brumfield W6/W9

Electrical Data

Dimension L*W*H

Dielectric strength 1500VAC 1500Vrms 50/60 Hz, 1,500V: DC, 1100V Insulation Resistance 100 megohms at 500VDC 50VDC, 250VAC Max Operating Voltages 50VDC, 250VAC 50/60 Hz 65VDC, 277VAC, 480VAC - 3Ø wye Rated current 3A to 20A 0.5A to 30A 0.20A to 50A 1000 amps in accordance with 2000 amps at 50VDC (0.5 - 30 up to 5000A with UL 1077, CSA, Interrupt capacity UL standard 1077 amp models) 1000 amps at VDE. Up to 3000A for UL 1500 250VAC (0.5 - 30amp models). Note: 30 amp model not UI or CSA Calibration Will continuously carry 100% of Breaker will continuously carry Breakers will hold 100% rated rating. May trip between 101% and 100% of rated load. It may trip current. May trip between 101% and 134%, but must trip at 135% of between 101% and 145% of rated 124% rated load (134% for AC/DC rating within one hour at +25°C load, but must trip at 145% units) Must trip at 125% rated load at 25°C (135% for AC/DC units) Resetable Overload Capacity Ten times rated current Ten times rated current Ten times rated current Reset Time 60 Seconds 60 Seconds Protective boot, knurl nut, hex nut, Protective boot, knurl nut, hex nut, Toggle guard (W6 only) Accessories

lockwasher

Potter & Brumfield W58

lockwasher, nameplate

Potter & Brumfield W57



Link to datasheet

Recommended minimum load indication for contact material: AU and gold plated: 1mA at 6VDC; AgNi0.15 and AgNi90/10: 10mA at 12VDC: AgCdO and AgSnO₃: 100mA at 12VDC. Please contact technical support for detailed technical data.

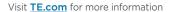
4000 SERIES WIRE LEAD CLASS II CONTROL TRANSFORMERS

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 Quick connect terminals Custom specification/design available







Visit **TE.com** for more information

Typical Applications	HVAC	HVAC
21	Industrial and residential	Industrial and residential
	Motor control	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 energy limited	Internal fuse or integral circuit breaker 75VA standard models come with integral
		circuit breaker
Shielding	Internal fuse or integral circuit breaker	enedic breaker
Dielectric Strength	75VA standard models come with integral	
	circuit breaker	
Link to datasheet	4000 SERIES	4000 SERIES
	WIRE LEAD CLASS II	QUICK CONNECT CLASS II
	CONTROL TRANSFORMERS	CONTROL TRANSFORMERS



Recommended minimum load indication for contact material: AU and gold plated: 1mA at 6VDC; AgNi0.15 and AgNi90/10: 10mA at 12VDC: AgCdO and AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

4700 SERIES GENERAL PURPOSE POWER TRANSFORMERS

60VA to 150VA UL 5085-1,-2 formerly UL 50 Non-fused Wire leads or quick connects Custom specification/design available



Visit $\underline{\text{TE.com}}$ for more information

4900 SERIES PRINTED CIRCUIT MOUNT POWER TRANSFORMERS

1.1VA to 36VA
UL 5085-1,-2 formerly UL 506
Drop in replacement
Split bobbin design
Signal or dual primary voltage
Custom specification/design available



Visit **TE.com** for more information

Applications	HVAC	Industrial controls, garage door openers
	Industrial	small power supplies, control boards
	Motor control	lighting/monitoring controls, vending machines
Specifications		
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 Parallel 6-60VAC
Insulation Class	UL Class B (130°C)	UL Class B (130°C)
Wire Size	Standard 18 AWG stranded, 12in	N/A
QC size	Standard .250in x .032in	N/A
Terminations	Type BB same side Type AB opposite side	PCB through hole design
Frequency	50/60 Hz	50/60 Hz
Mounting Options	Type K foot mount	PCB through hole design
Other Data		
Secondary Fusing Requirement		
Shielding		Electrostatic shielding not required due to split bobbin
Dielectric Strength		1500Vrms
Link to datasheet	4700 SERIES GENERAL PURPOSE POWER TRANSFORMERS	4900 SERIES PRINTED CIRCUIT MOUNT POWER TRANSFORMERS

Recommended minimum load indication for contact material: AU and gold plated: 1mA at 6VDC; AgNi0.15 and AgNi90/10: 10mA at 12VDC: AgCdO and AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.



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