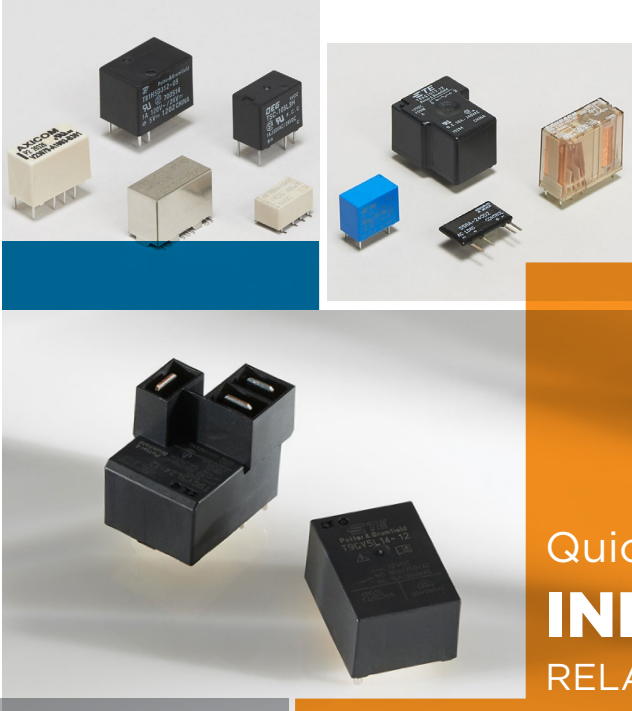




Quick Reference Guide

INDUSTRIAL RELAYS

RELAYS, CONTACTORS & CIRCUIT BREAKERS

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+	11
Force Guided Relays	14
Panel Plug-In Relays	16
Signal Relays	22
High Frequency Relays	27
Solid State Relays	28
Circuit Breakers	33
Transformers	36

MOTION CONTROL



WHAT'S INSIDE

Power PCB Relays up to 16A

Relays, Contactors & Circuit Breakers

Key Features

SCHRACK PE

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



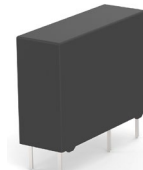
SCHRACK RE/REL

Miniature PCB relays
PCB area 200mm²
Wash tight

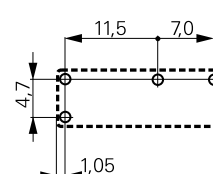
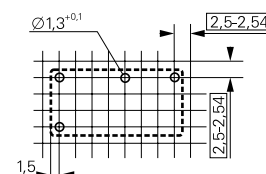
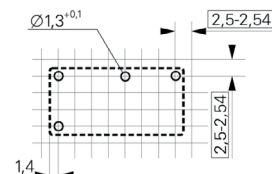


PCJ

Slim outline
Sensitive coil 200mW
WG type available (IEC 60335-1)
Ambient temperature up to 105°C



Footprint



Applications

Industrial electronics
White goods
Measurement and control

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

Home applications
HVAC

Contact Data

Contact arrangement	1 form C (CO)	1 form A (NO)	1 form A (NO)
Rated voltage	250VAC	250VAC	250VAC
Rated current	5A (CO) 6A (NO)	6/5A	3A/5A (WG type)
Switching power	1250VA	1500/1250VA	750VA/1250VA (WG type)
Contact material	AgNi 90/10, AgSnO ₂	AgNi 0.15, AgNi 90/10	AgNi
Min. recommended contact load	1) see footnote below	1) see footnote below	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	200mW	200/360mW	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			
between contact and coil	3.2/4mm	4/4mm	8/>8 mm

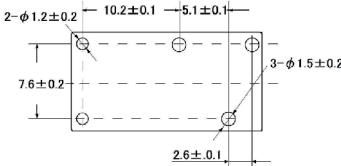
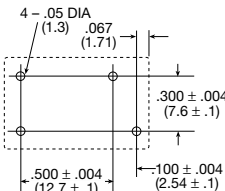
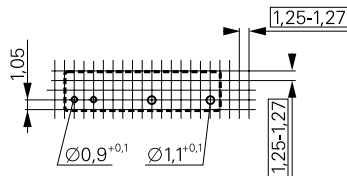
Other Data

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

Accessories

Link to datasheet	SCHRACK PE	SCHRACK RE SCHRACK REL	PCJ
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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 AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

Key Features	PCH	OJ/OJE/T77	PCN/PCNH
	Compact size WG type available (IEC 60335-1) TV-3 ratings for NO contact	Miniature size Sensitive coil 200mW 4kV coil-contacts (OJ/OJT) Meet UL TV-5 ratings (OJT)	1 pole 3A/5A Only 5mm wide Allows high function/ packaging density RoHS compliant (Directive 2002/95/EC)
Footprint			
			
Applications	Appliances HVAC Refrigerators, microwave ovens	Appliances HVAC Industrial control	PLC Temperature control I/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 ₂	Ag, AgCdO, AgSnO ₂	AgNi gold plated
Min. recommended contact load	100mA at 5VDC	1) see footnote below	100mA at 5VDC
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 T77	PCN

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 AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

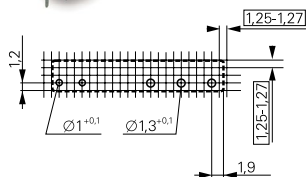
Key Features

SCHRACK SNR

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

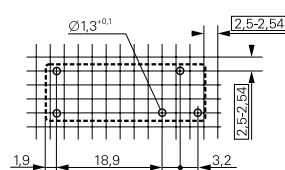
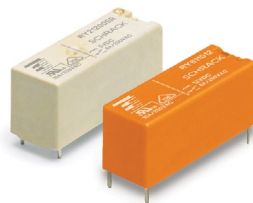


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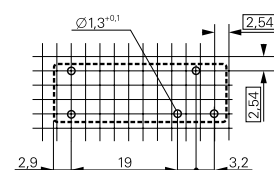
SCHRACK RYII

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



SCHRACK MSR/T75

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



Applications

Interface technology
PLC; Timers
Heating control

Interface technology
HVAC, PLC, power supplies
Domestic appliances

Interface technology
HVAC, PLC, power supplies
Domestic appliances

Contact Data

Contact arrangement	1 form C (CO), 1 form A (NO)
Rated voltage	250VAC
Rated current	6A
Switching power	1500VA
Contact material	AgSnO ₂ , AgSnO ₂ gold plated
Min. recommended contact load	100mA at 12VDC

1 form C (CO), 1 form A (NO),
1 from B (NC)
250VAC
8A
2000VA
AgNi_{0.15}, AgSnO₂
1) see footnote below

1 form C (CO)
1 form A (NO)
250VAC
8/10A
2000VA
AgNi90/10, AgSnO₂
1) see footnote below

Coil Data

Magnetic system	DC
Rated coil voltage	5 to 48VDC
Rated coil power	170mW

DC
5 to 60VDC
220mW

DC
3 to 60VDC
220mW

Dielectric Strength

Initial dielectric strength	
between open contacts	1000Vrms
between contact and coil	4000Vrms
between adjacent contacts	

1000Vrms
5000Vrms

1000Vrms
4000Vrms

Clearance/creepage
between contact and coil 6/8mm

8/8mm

8/8mm

Other Data

Ambient temperature (max.)	+85°C
Category of environmental protection IEC61810	RTIII
Terminal type	THT
Mounting	PCB or on socket
Dimensions (lwh)	28x5x15mm

+70°C
RTII, RTIII
THT, THR
PCB or on socket
28.5x10.1x12.3mm

+85°C
RTII, RTIII

THT
PCB
28.6x10x15mm

Accessories

DIN rail sockets

PCB sockets

Link to datasheet

SCHRACK SNR

SCHRACK RYII

SCHRACK MSR

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 AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

Power PCB Relays up to 16A

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

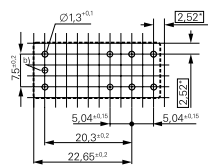
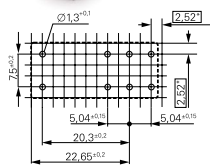
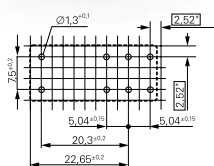


SCHRACK RT INRUSH

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



Footprint



Applications

Household appliances
HVAC, Home automation
Machine control, Energy control

HVAC, Home automation,
Machine control, Energy control
Switching cabinet, Interface modules

Lighting applications, Movement detectors
Motors control
Domestic appliances

Contact Data

Contact arrangement	1 form C (CO) 1 form A (NO)	1 form C (CO), 1 form A (NO) 2 form C (CO), 2 form A (NO)	1 form C (CO) 1 form A (NO)
Rated voltage	250VAC	250VAC	250VAC
Rated current	16A	2X8/16A	16A
Switching power	4000VA	2X2000/4000VA	4000VA
Contact material	AgNi90/10, AgSnO ₂	AgNi90/10, AgSnO ₂	AgNi90/10, AgSnO ₂
Min. recommended contact load	1) see footnote below	1) see footnote below	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
Rated coil power	400mW	400mW/0.75VA	400mW

Dielectric Strength

Initial dielectric strength			
between open contacts	1000Vrms	1000Vrms	1000Vrms
between contact and coil	5000Vrms	5000Vrms	5000Vrms
between adjacent contacts		2500Vrms	
Clearance/creepage			
between contact and coil	>10/10mm	>10/10mm	>10/10mm

Other Data

Ambient temperature (max.)	+85°C +105°C (HOT type) +70°C (transparent cover type)	+75°C (AC type) +85°C	+85°C
Category of environmental protection IEC61810	RTII, RTIII	RTII, RTIII	RTII
Terminal type	THT	THT, THR (DC and AC type)	THT
Mounting	PCB	PCB or on socket	PCB or socket
Dimensions (lwh)	29x12.7x15.7mm	29x12.7x15.7mm	29x12.7x15.7mm

Accessories

PCB and DIN rail sockets

Link to datasheet

[SCHRACK RZ](#)

[SCHRACK RT](#)

[SCHRACK RT INRUSH](#)

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 AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

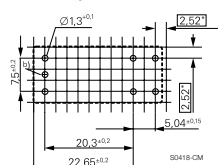
Key Features

SCHRACK RTX

Inrush peak currents up to 370A
Bistable coil
Reinforced insulation
16A rated fluorescent load acc.
EN60669-1
8A electronic ballast acc. UL508
1 1/2 HP motor load acc. UL508

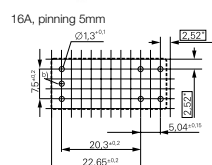


Footprint



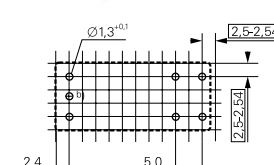
SCHRACK RT iPOWER

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



Applications

- 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	4000VA	4000VA	4000VA
Contact material	W (pre-make contact) + AgSnO ₂	W (pre-make contact) + AgSnO ₂ , AgSnO ₂	AgSnO ₂
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

Link to datasheet	SCHRACK RTX	SCHRACK RT IPOWER	SCHRACK RP3SL
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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 AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

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

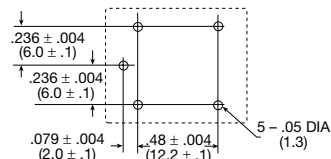
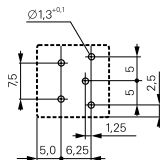
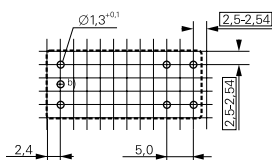


SCHRACK ORWH

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



Footprint



Applications

Domestic appliances
UPS
Solar Inverter

White goods
Small home appliances
Heating temperature controllers

Appliances
HVAC
emergency lighting

Contact Data

Contact arrangement	2 form A, 2 NO
Rated voltage	250VAC
Rated current	8A
Switching power	2000VA
Contact material	AgSnO ₂
Min. recommended contact load	100mA at 12VDC

1 form C (CO)
1 form A (NO)
250VAC
10A
2500VA
AgNi90/10, AgSnO
1) see footnote below

1 form C (CO)
1 form A (NO)
277VAC/28VDC
10A
2770VA/360W
AgZnO, AgNi
100mA at 5VDC

Coil Data

Magnetic system	DC
Rated coil voltage	5 to 110VDC
Rated coil power	780mW

DC
5 to 48VDC
360mW/500mW

DC
5 to 24VDC
360mW

Dielectric Strength

Initial dielectric strength	
between open contacts	25000Vrms
between contact and coil	5000Vrms
between adjacent contacts	300Vrms

1000Vrms
2500Vrms

750Vrms
1500Vrms

Clearance/creepage
between contact and coil 7/8mm

3/4mm / 4/5mm

3.2mm

Other Data

Ambient temperature (max.)	+40°C
Category of environmental protection IEC61810	RTII, RTIII
Terminal type	THT
Mounting	PCB
Dimensions (lwh)	29x12.6x25.5mm

+85°C/+105°C
RTII
THT
PCB
15x15x20mm

+85°C
RTII, RTIII

THT
PCB
19.0x15.5x15.8mm

Accessories

Link to datasheet [SCHRACK RP-2POLE 1.5MM](#)

SCHRACK PB
SCHRACK PBH

SCHRACK ORWH

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 AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

Power PCB Relays up to 50A+

Relays, Contactors & Circuit Breakers

Key Features

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

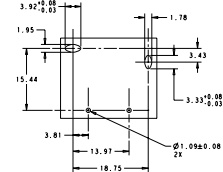
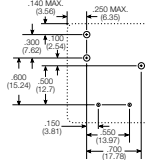
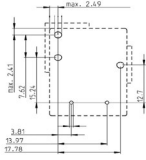
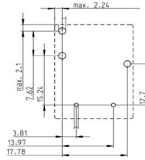
High breaking capacity
PCB and Quick connect connections
and chassis mount version
UL-class F as standard
Open version available

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)



Footprint



Applications	HVAC, Appliances Industrial control Energy Management	HVAC Appliances Industrial Controls	Photovoltaic inverter Electrical vehicle loading stations Electrical vehicle
Contact Data			
Contact arrangement	1 form C (1 CO) 1 form B (1 NC) 1 form A (1 NO)	1 form C (1 CO) 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)
Rated current	30A	30A	35A (T9S), 40A (T9V)
Switching power		7500VA	9695VA (T9S), 10000VA (T9V)
Contact material	AgSnO ₂	AgCdO, AgSnInO	AgNi
Min. recommended contact load	1A at 12VAC/VDC	1A at 5VDC or 12VAC	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			
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			
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

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 AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

Power PCB Relays up to 50A+

Relays, Contactors & Circuit Breakers

Key Features

Potter & Brumfield T92

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

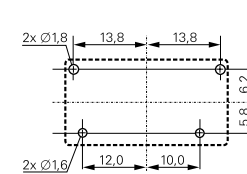
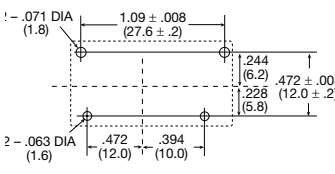
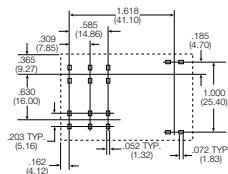


PCFN SOLAR

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



Footprint



Applications	HVAC Residential/ commercial appliances Industrial controls	Appliances HVAC Office machines	Photovoltaic Inverter
Contact Data			
Contact arrangement	2 form C (2 CO) 2 form A (2 NO)	1 form A (1 NO)	1 form A (1 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 ₂
Min. recommended contact load	500mA (NO)/ 100mA (NC) at 12VAC	100mA at 5VDC	100mA at 5VDC
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
Mounting	Panel mount, PCB	PCB	PCB
Dimensions (lwh)	52.3x34.6x30.8mm	30.4x16x26.5mm	30.4x16x26.5mm
Accessories			
Link to datasheet	Potter & Brumfield T92	PCF	PCFN SOLAR

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 AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

Key Features

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

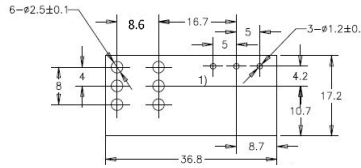


EW100/120

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



Footprint



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	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)	36.8x17.2x30.4mm	36.8x21.8x41.9mm

Accessories

Link to datasheet	EW60	EW100/120
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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 AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

Power PCB Relays up to 50A+

Relays, Contactors & Circuit Breakers

Key Features

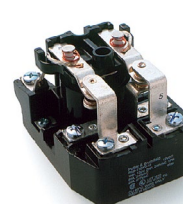
IHV

Hermetically sealed - intrinsically safe
Designed accordance to AIAQ 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 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) 600VAC, 28/125VDC
Rated voltage	450VDC / 750VDC	50A
Rated current	50A/100A/150A/200A/250A/350A	12000VA
Switching power		Ag, AgCdO
Contact material		1A at 12VDC/VAC
Min. recommended contact load	Visit TE.com for more information	

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](#)

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 AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

Force Guided Relays

Relays, Contactors & Circuit Breakers

Key Features

SCHRACK SR2M

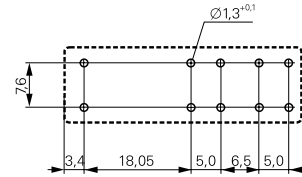
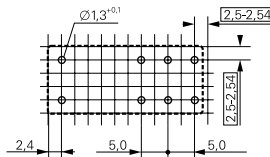
2 pole relay with force guided contacts according to EN50205
Reinforced insulation between poles

SCHRACK SR4 D/M

4 pole relay with force guided contacts according to EN50205
Compact design, space efficient



Footprint



Applications

Safety modules
Process technology
Elevator and Escalator control

Safety modules
Process technology
Elevator and Escalator control

Contact Data

Contact arrangement	1 form A + 1 form 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	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: 10mA at 12VDC; AgCdO and AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

Relays, Contactors & Circuit Breakers

- Safety modules
- Process technology
- Elevator and Escalator control

10mA at 5VDC

700mW

≥3/4mm and ≥5.5/5.5mm

55.5x33.8x10.8mm

SCHRACK SRL7

PAGE 15

Panel Plug-In Relays

Relays, Contactors & Circuit Breakers

Key Features

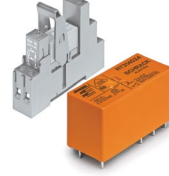
SCHRACK SLIM INTERFACE SNR

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

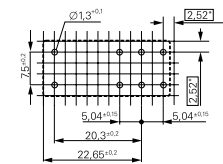
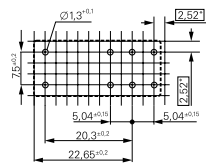
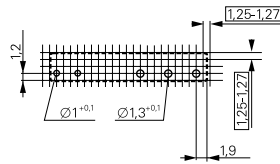


SCHRACK INTERFACE RELAY XT

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



Footprint



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	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
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	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
Accessories	DIN rail sockets, jumper bars	DIN rail and PCB sockets, clips, marking tags, modules, jumper bars	DIN rail and PCB sockets, clips, marking tags, modules, jumper bars
Link to datasheet	SCHRACK SLIM INTERFACE SNR	SCHRACK INTERFACE RELAY RT	SCHRACK INTERFACE RELAY XT

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 AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

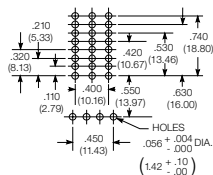
Panel Plug-In Relays

Relays, Contactors & Circuit Breakers

Key Features

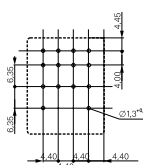
Potter & Brumfield R10

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



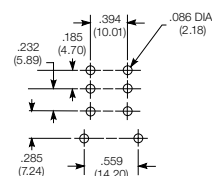
SCHRACK PT/ Potter & Brumfield KH

Sensitive coil
Low height 29/33mm
Manual test tab, optionally lockable
Mechanical indicator
optional LED, protection diode



Potter & Brumfield K10

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



Footprint

Applications

Coin changers
Audio equipment
Ultrasonic test equipment

Machine industry
Elevator industry
Building management

Industrial controls
Motor controls
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	1) Bifurcated contacts for dry circuit available on KH	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
between adjacent contacts	1000Vrms	2000/2500Vrms	2500/1500Vrms
Clearance/creepage			
between contact and coil	Visit TE.com for more information	≥4/4mm	≥3.1/3.1mm

Other Data

Ambient temperature (max.)	+75°C	+70°C	+70°C
Category of environmental protection IEC61810	RTI, RTIII	RTII	RTII
Terminal type	Solder/plug-in and PCB	THT, plug-in, Quick connect	Quick connect, solder, PCB
Mounting	Socket, panel mount and PCB	Socket, PCB	Socket and bracket mount
Dimensions (lwh)	29.6x18.7x30.2mm	28x22.5x29/30/36mm	28x22.5x29/34.9mm

Accessories

Solder/PCB sockets, clips, hold down strap, mounting strip
DIN rail and PCB sockets, clips, marking tags, modules, jumper bars
Screw, solder and PCB sockets and clips

Link to datasheet

[Potter & Brumfield R10](#)

[Potter & Brumfield KHA
SCHRACK PT](#)

[Potter & Brumfield K10](#)

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 AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

Panel Plug-In Relays

Relays, Contactors & Circuit Breakers

Key Features

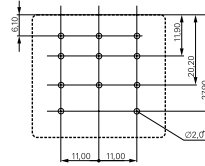
Potter & Brumfield KRPA/MT

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



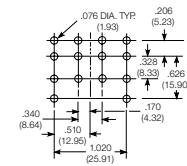
SCHRACK RM2/3/7

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



Potter & Brumfield KUP/ KUMP/KUIP

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



Footprint

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

Applications

Mechanical engineering
Elevator control, Plant control
Baggage handling

Elevator control
Power supplies

HVAC
Pump motor controls
Hospital beds

Contact Data

Contact arrangement	1 form C (1 CO) (KRPA) 2 form C (2 CO) 3 form C (3 CO)	2 form C (2 CO) 3 form C (3 CO)	1, 2, 3, 4 form C (CO) 1, 2, 3 form A (NO) 2, 3 form B (NC) 1 form X (NO-DM) 1 form Y (NC-DB) 1 form Z (CO-DM/DB)
Rated voltage	240VAC	400VAC	240VAC
Rated current	4/10A	10/16A	10/15A
Switching power	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, AgSnOInO)

Coil Data

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

Dielectric Strength

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

Other Data

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

Accessories

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

DIN rail and PCB sockets, clips

DIN rail, panel and PCB sockets, clips

Link to datasheet

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

[SCHRACK RM2/3/7](#)

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

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 AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

Panel Plug-In Relays

Relays, Contactors & Circuit Breakers

Key Features

SCHRACK RM8/C/D

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



Potter & Brumfield KUHP

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



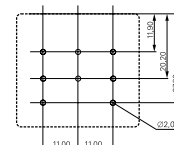
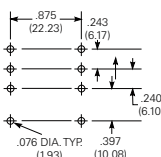
SCHRACK RM5/6/B 3MM

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



Footprint

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



Applications

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) 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	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	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	4000Vrms	3750Vrms	2500Vrms
Clearance/creepage			
between contact and coil	≥4/14.9mm	Visit TE.com for more information	≥4/14.9mm

Other Data

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

Link to datasheet

[SCHRACK RM8C/D](#)
[SCHRACK RM 8](#)

[Potter & Brumfield KUHP](#)

[SCHRACK RM5/6/B 3MM](#)

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 AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

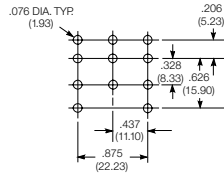
Panel Plug-In Relays

Relays, Contactors & Circuit Breakers

Key Features

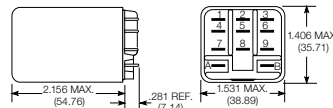
Potter & Brumfield KUGP

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



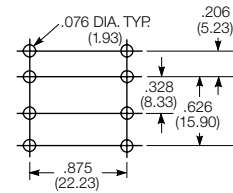
Potter & Brumfield KUL

Magnetic latching
Single and dual coils
Panel mounting



Potter & Brumfield KUEP

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



Footprint

Applications

Voltage control units

Alarm systems
Machine tools
Battery chargers

DC load switching in industrial
controls

Contact Data

Contact arrangement	1 form C (1 CO) 2 form A (2 NO) 2 form C (2 CO) 3 form C (3 CO)	1 form C (1 CO) 2 form C (2 CO) 3 form C (3 CO)	1 form X (NO-DM) 2 form A (2 NO) 2 form C (2 CO)
Rated voltage	240/400VAC	28/240VAC	150VDC/240VAC
Rated current	10A	10A	10A
Switching power	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 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	Socket, PCB, bracket, flange mount	Socket, bracket	Socket, PCB, bracket and top flange mount
Dimensions (lwh)	38.9x35.7x48.4mm	38.9x35.7x54.8mm	38.9x35.7x48.4mm

Accessories

DIN rail and PCB sockets, clips

Screw, solder, PCB and Quick connect sockets and clips

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

Link to datasheet

[Potter & Brumfield KUGP](#)

[Potter & Brumfield KUL](#)

[Potter & Brumfield KUEP](#)

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

Panel Plug-In Relays

Relays, Contactors & Circuit Breakers

Key Features

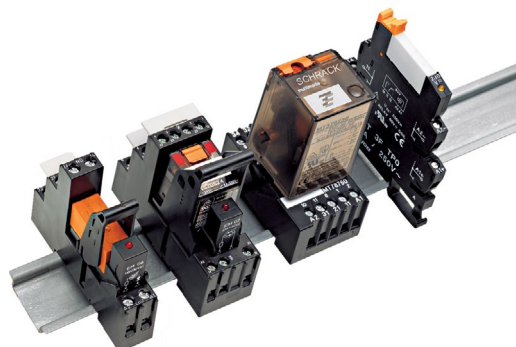
ACCESSORIES

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

SETS

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

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	6 to 16A	6 to 16A
Switching power		1500 to 4000VA
Contact material		
Min. recommended contact load		1) see footnote below

Coil Data

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

Dielectric Strength

Initial dielectric strength
between open contacts
between contact and coil
between adjacent contacts

Clearance/creepage
between contact and coil

Other Data

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

Accessories	PCB, panel mount and DIN rail	DIN, panel mount
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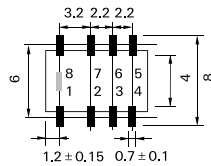
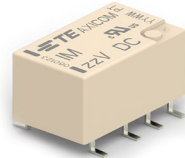
Link to datasheet	ACCESSORIES SLIM INTERFACE RELAY SNR ACCESSORIES INDUSTRIAL POWER RELAY RT ACCESSORIES MINIATURE RELAY PT ACCESSORIES INTERFACE PLUG-IN RELAY XT	RELAY PACKAGE RT RELAY PACKAGE PT RELAY PACKAGE SNR ACCESSORIES MULTIMODE RELAY MT
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1) Recommended minimum load indication for contact material: AU and gold plated: 1mA at 6VDC; AgNi0.15 and AgNi90/10: 10mA at 12VDC; AgCdO and AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

Key Features

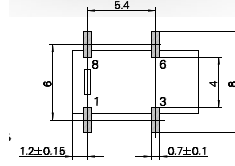
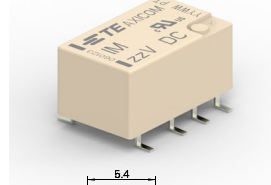
Axicom IM

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



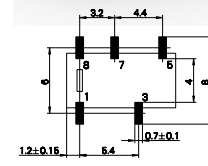
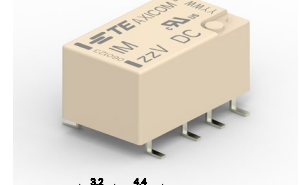
Axicom IMB

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 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

Contact arrangement	2 form C, 2CO Single contact + Bifurcated contacts	1 form A, 1 NO Bifurcated contacts	1 form C, 1 CO Bifurcated contacts
Rated voltage	250VAC/220VDC	250VAC/220VDC	250VAC/220VDC
Rated current	2/5A	2A	2/4A
Switching power	60W/62.5VA	60W/62.5VA	60W/62.5VA
Contact material	100μV/1μA	100μV/1μA	100μV/1μA
Min. recommended contact load	<50mΩ at 10mA/30mV I: < 100mΩ	<100mΩ at 10mA/30mV	<50mΩ at 10mA/ 30mV

Coil Data

Magnetic system	Polarized	Polarized	Polarized
Rated coil voltage	1.5 to 24VDC	1.5 to 24VDC	1.5 to 24VDC
Rated coil power	50 to 200mW/-	140mW/-/-	140mW/-/-
DC coil/bistable 1 coil/2 coils			

Dielectric Strength

Initial dielectric strength			
between open contacts	750 to 1500Vrms	2500Vrms	1000 to 1600Vrms
between contact and coil	1500 to 1800Vrms	3500Vrms	1800 to 2200Vrms
between adjacent contacts	750 to 1800Vrms		
Initial surge withstand voltage			
between open contacts	1000 to 2500Vp	3500V	1500 to 2200Vp
between contact and coil	2000 to 2500Vp	4900V	2500 to 3000Vp
between adjacent contacts	1000 to 2500Vp		
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
Volt. standing wave ratio 100/900MHz	1.06/1.49	1.06/1.49	1.06/1.49
Capacitance between open contacts	max. 1pF	max. 1pF	max. 1pF

Other Data

Ambient temperature (max.)	-40 to +85°C	-40 to +85°C	-40 to +85°C
Category of environmental protection	IP67/RTV	IP67/RTV	IP67/RTV
Terminal type	THT, SMT	THT, SMT	THT, SMT
Dimension LWH	10x6x5.65mm	10x6x5.65mm	10x6x5.65mm

Link to datasheet

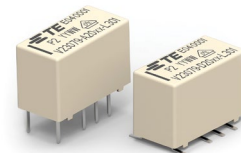
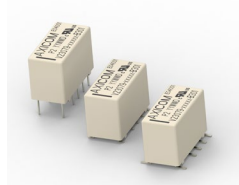
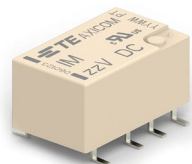
[Axicom IM](#)

[Axicom IMB](#)

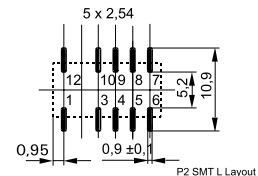
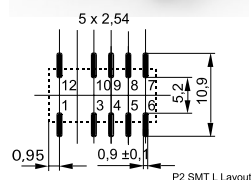
[Axicom IMC](#)

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 AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

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



Technical drawing of a rectangular plate with dimensions and labels. The plate has a total width of 54 and a total height of 6. The drawing shows a central rectangular area with a width of 22 and a height of 4. The central area is divided into four quadrants by a vertical line and a horizontal line. The quadrants are labeled 1, 2, 3, and 4. The dimensions are given as follows: 54 (total width), 22 (central width), 6 (total height), 4 (central height), 8 (left side margin), 6 (right side margin), 1.2 ± 0.15 (bottom left margin), and 0.7 ± 0.1 (bottom right margin).



LED Tubes
Office Equipment
Security systems, Set top boxes

Contact arrangement	2 form B, 2 NC 2 form A, 2 NO Bifurcated contacts	2 form C, 2 CO Bifurcated contacts	2 form C, 2 CO Bifurcated contacts
Rated voltage	250VAC/220VDC	250VAC/220VDC	250VAC/220VDC
Rated current	2A	2A	2A
Switching power	60W/62.5VA	60W/62.5VA	60W/62.5VA
Contact material	100μV/1μA	100μV/1μA	100μV/1μA
Min. recommended contact load	<50mΩ at 10mA/20mV	<50mΩ	<50mΩ

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			

Initial dielectric strength			
between open contacts	1000Vrms	1000 to 1500Vrms	1500Vrms
between contact and coil	1800Vrms	1500Vrms	3000Vrms
between adjacent contacts	1000Vrms	1000 to 1500Vrms	1500Vrms
Initial surge withstand voltage			
between open contacts	1500Vp	2500Vp	
between contact and coil	2500Vp	2500Vp	6000Vrms
between adjacent contacts	1500Vp	2500Vp	
Isolation 100/900MHz			
Insertion loss 100/900MHz	-37.0/-18.8dB	-39.0/-20.7dB	-39.0/-20.7dB
Volt. standing wave ratio	-0.03/-0.33dB	-0.02/-0.27dB	-0.02/-0.27dB
100/900MHz	1.6/1.49	1.4/1.40	1.4/1.40
Capacitance			
between open contacts	max. 1pF	max. 1pF	max. 1pF

Ambient temperature (max.)	-40 to +85°C	-40 to +85°C	-40 to +85°C
Category of environmental protection	IP67/RTV	IP67/RTIII	IP67/RTIII
Terminal type	THT, SMT	THT, SMT	THT, SMT
Dimension LWH	10x6x5.65mm	14.5x7.2x10.4mm, stand. 14.5x7.2x9.9mm, overm.	14.5x7.2x9.9mm, overm.

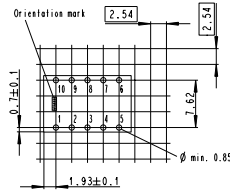
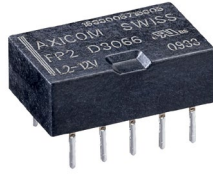
Axicom P2 LIGHTING

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 AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

Key Features

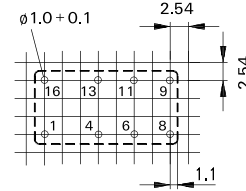
Axicom FP2

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

Applications

Communication equipment
keyless entry
Speaker switch, consumer electronics

- Communication equipment
- Office equipment
- Measurement and control equipment

Contact Data

Contact arrangement	1 form C (CO)	2 form C, 2 CO Single Contacts
Rated voltage	220VDC/250VAC	250VAC/220VDC
Rated current	2A	3A
Switching power	60W/62.5VA	60W/125VA
Contact material	100ΩV	100μV/10μA
Min. recommended contact load	<50mΩ at 10mA	<100mΩ

Coil Data

Magnetic system	Polarized	Non polarized
Rated coil voltage	2 to 24VDC	3 to 48VDC
Rated coil power	80mW (high sensitive), 140mW	150 to 700mW/-/-
DC coil/bistable 1 coil/2 coils		

Dielectric Strength

Initial dielectric strength		
between open contacts	750Vrms	750Vrms
between contact and coil	1000Vrms	1000Vrms
between adjacent contacts	1000Vrms	750Vrms
Initial surge withstand voltage		
between open contacts	1100Vp	1500Vp
between contact and coil	1500Vp	1500Vp
between adjacent contacts	1500Vp	1500Vp
Isolation 100/900MHz	-40.2/-22.3dB	-39.0/-20.7dB
Insertion loss 100/900MHz	0.03dB/0.25dB	-0.02/-0.27dB
Volt. standing wave ratio 100/900MHz	1.01/1.07	1.04/1.40
Capacitance		
between open contacts	max. 1pF	max. 2pF

Other Data

Ambient temperature (max.)	-40 to +85°C	-25 to +85°C
Category of environmental protection	RTIII	IP67/RTIII
Terminal type	THT	THT
Dimension LWH	14x9x5mm	20.2x10x11.4mm

Link to datasheet

Axicom FP2

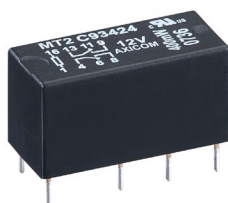
Axicom D2N V23105

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 AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

Key Features

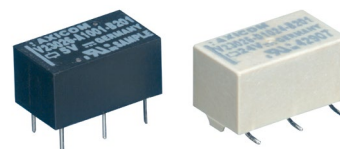
Axicom MT2

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

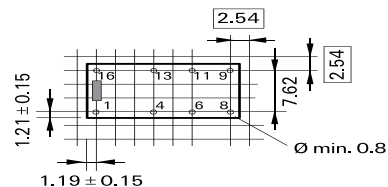
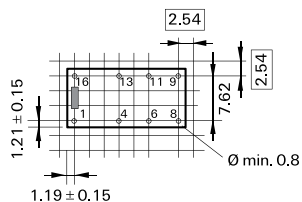


Axicom P1 V23026

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



Applications

Communication equipment
Linecard application
Measurement and control equipment

Automotive equipment
CAN bus
Immobilizer

Contact Data

Contact arrangement

2 form C, 2 CO
Bifurcated contacts
250VAC/220VDC

1 form C, 1 CO
Bifurcated contacts
150VAC/125VDC

Rated voltage

Rated current

Switching power

Contact material

Min. recommended contact load

2A
60W/62.5VA
100μV/1μA
<70mΩ

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

750Vrms
1000Vrms
750Vrms

500Vrms
1500Vrms

Initial surge withstand voltage

between open contacts

between contact and coil

between adjacent contacts

1500Vp
1500Vp
1500Vp

2500Vp

Isolation 100/900MHz

Insertion loss 100/900MHz

Volt. standing wave ratio 100/900MHz

Capacitance

between open contacts

-31.8/-14.2dB
-0.02/-0.97dB
1.03/1.31
max. 2pF

-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](#)

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 AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

Key Features

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

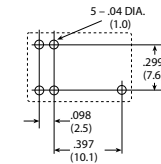
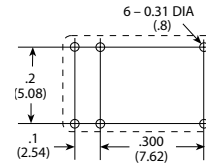
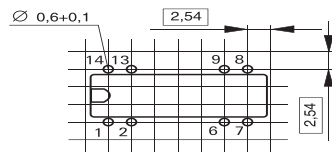


OUAZ/T81

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



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 2 form A, 2 NO 1 form C, 1 CO Reed contacts	1 form C, 1 CO	1 form C, 1 CO 1 form A, 1 NO
Rated voltage	175 to 200VAC/VDC	120VAC, 30VDC	120VAC/24VDC
Rated current	0.25 to 0.5A	1A	1A
Switching power	3 to 10W	120VA, 24W	120VA, 30W
Contact material	10μV/1μA	1mA at 1VDC	1mA at 1VDC
Min. recommended contact load	<150mΩ	50mΩ at 100mA, 6VDC	

Coil Data

Magnetic system	Non polarized	DC, sensitive	DC, sensitive
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 dielectric strength			
between open contacts	140 to 175Vrms	400Vrms	500Vrms
between contact and coil	500vdc	1000Vrms	1000Vrms
between adjacent contacts	500vdc		
Initial surge withstand voltage			
between open contacts			
between contact and coil		1500Vp (10/160μs)	1500Vp (10/160μs)
between adjacent contacts			
Isolation 100/900MHz			
Insertion loss 100/900MHz			
Volt. standing wave ratio 100/900MHz			
Capacitance between open contacts	max. 1pF		

Other Data

Ambient temperature (max.)	-20 to +70°C	40 to +80°C	-40 to +60°C (standard)
Category of environmental protection	IP67/RTIII	RTIII/IP67	RTII, RTIII
Terminal type	THT	THT	THT
Dimension LWH	19.3x5.7x7.5mm/19.8x5.1x8mm	12.5x7.5x10mm	15.4x10.4x11.2mm

Link to datasheet

[Axicom REED DIP/SIL](#)

[TSC](#)

[OUAZ/T81](#)

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 AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

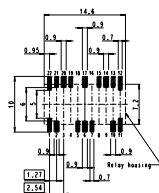
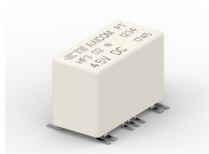
High Frequency Relays

Relays, Contactors & Circuit Breakers

Key Features

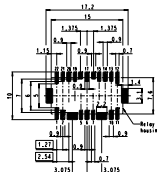
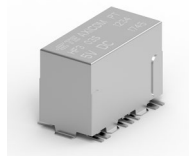
Axicom HF3

High performance RF relay/ switch for up to 3GHz
Low power consumption $\leq 70/140$ mW
50 and 75 Ω version
Very small design



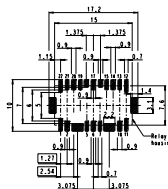
Axicom HF3S

High performance RF relay/ switch for up to 3GHz
Low power consumption $\leq 70/140$ mW
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 $\leq 70/140$ mW
50 Ω version
Very small design



Footprint

Applications

Cable modems and linecards/CATV
Measurement and test equipment
ATE
Satellite/audio/video tuners

Cable modems and linecards/CATV
Measurement and test equipment
ATE
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	1 form C, 1 CO Bridge contacts	1 form C, 1 CO Bridge contacts
Rated voltage	250VAC/220VDC	250VAC/220VDC	250VAC/220VDC
Rated current	2A	2A	2A
Switching power	60W/62.5VA/50W (2.5GHz)	60W/62.5VA/50W (2.5GHz)	60W/62.5VA/50W (2.5GHz)
Min. recommended contact load	100 μ V/1 μ A	100 μ V/1 μ A	100 μ V/1 μ A
Initial contact resistance	<100m Ω	<100m Ω	<100m Ω

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			
between open contacts	600Vrms	600Vrms	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

RF Data

	0.1/0.9/3GHz	0.1/0.9/3GHz	0.9/3/6GHz
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 (VSWR)	1.05/1.15/1.20	1.05/1.10/1.25	1.05/1.10/1.40

Other Data

Ambient temperature (max.)	-55 to +85°C	-55 to +85°C	-55 to +85°C
Category of environmental protection	IP67/RTIII	IP67/RTIII	IP67/RTIII
Terminal type	SMT	SMT	SMT
Dimension lwh	14.6x7.2x10mm	15x7.6x10.6mm	15x7.6x10.6mm

Link to datasheet

[Axicom HF3](#)

[Axicom HF3S](#)

[Axicom HF6](#)

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 AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

Solid State Relays

Relays, Contactors & Circuit Breakers

Key Features	Potter & Brumfield SSR	Potter & Brumfield SSRD	Potter & Brumfield SSRT
	Standard "hockey puck" package Inverse parallel SCR output 240VAC & 480VAC output types Zero voltage and random voltage turn-on versions 4,000V rms optical isolation Cover design with anti-rotation barriers 1 Form A (SPST-NO)	Two independent AC output solid state relays Standard "hockey puck" package Inverse parallel SCR output 4000V rms optical isolation Quick connect style termination 2 Form A (2 SPST-NO)	Standard "hockey puck" package TRIAC Output 4,000V rms optical isolation Cover design with anti-rotation barriers 1 Form A (SPST-NO)
			
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
Typical Applications	Industrial Machinery HVAC Building Controls	Industrial Machinery HVAC Building Controls	Industrial Machinery HVAC 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	10 A/25 A
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 (R0J-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	4 VDC	90VAC/3VDC
Must release Voltage VIN(REL) (Min.)	10VAC/1VDC	1VDC	10 VAC/1VDC
Input Current	2 - 26 mA / 3 - 30 mA	15mA @ 8VDC	25 mA/20 mA
Dielectric Strength			
Isolation:	4000Vrms	4000Vrms	4000Vrms
Other Data			
Dimensions	46.5x57.8x43.4 mm	44.5x57.8x30.15 mm	45x57.5x36.5 mm
Operating Temperature	-30 to +80°C	-30 to +80°C	-30 to +80°C
Mounting	Panel	Panel	Panel
UI File No	E29244	E29244	E29244
Link to datasheet	Potter & Brumfield SSR	Potter & Brumfield SSRD	Potter & Brumfield SSRT

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 AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

Solid State Relays

Relays, Contactors & Circuit Breakers

Key Features	Potter & Brumfield SSRDC	Potter & Brumfield SSRK	Potter & Brumfield SSRM
	Standard "hockey puck" package 200V DC FET Output 12A, 25A and 40A load current options 1500V DC optical isolation Cover design with anti-rotation barriers 1 Form A (SPST-NO)	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)	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 1 Form A (SPST-NO)
			
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
Typical Applications	Material Handling Tranes Construction Equipment	Industrial Machinery HVAC Building Controls	Industrial Machinery HVAC Building Controls
Output Data			
Load Voltage	200VDC	24 - 280VAC/48 - 660VAC	48 - 660VAC
Repetitive Blocking Voltage	NA	600VAC/1200VAC	1200VAC
Load Current Range	10 A/25 A/40 A	10A/20A/30A	45A/55A/65A
Leakage Current (Off-State)	12 mA	5mA	1mA
On-State Voltage Drop (Max.)	2.83 VDC	1.8V/1.6V	1.7V
Load Power Factor Rating	NA	0.5 - 1.0	0.5 - 1.0
Thermal Resistance, Junction to Case (R _{θJC}) (Max.)	0.7/0.7/0.5	-	-
Input Data (AC/DC)			
Control Voltage Range VIN	3 - 32 VDC	90 - 280VAC/3 - 32VDC	90 - 140VAC/4 - 32VDC
Must Operate Voltage VIN(OP) (Min.)	3.5 VDC	90VAC/3VDC	90VAC/3VDC
Must release Voltage VIN(REL) (Min.)	1 VDC	10VAC/1VDC	10VAC/1VDC
Input Current	30 mA	7.5mA - 16 mA/18 - 30 mA	15 mA/14 - 30 mA
Dielectric Strength			
Isolation:	1500 VDC	4000Vrms	4000Vrms
Other Data			
Dimensions	45x57.8x43.4 mm	22.5x82.3x111.5 mm	22.5x76.2x109.2 mm
Operating Temperature	-30 to +80°C	-30 to +80°C	-40 to +80°C
Mounting	Panel	Din Rail	Din Rail
UI File No	E29244	E29244	E29244
Link to datasheet	Potter & Brumfield SSRDC	Potter & Brumfield SSRK	Potter & Brumfield SSRM

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 AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

Relays, Contactors & Circuit Breakers

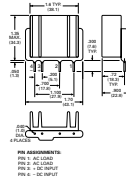
Solid State Relays

Relays, Contactors & Circuit Breakers

Key Features

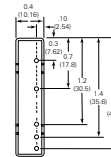
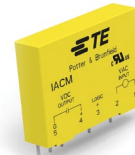
Potter & Brumfield SSRF

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

Industrial Machinery
HVAC
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 (R _{θJ-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
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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](#)

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 AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

Solid State Relays

Relays, Contactors & Circuit Breakers

Key Features

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)

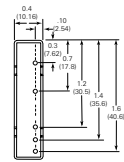
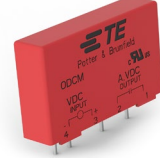
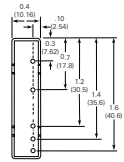
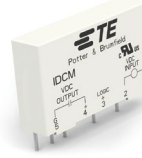
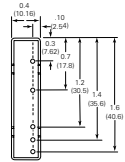
Potter & Brumfield IDCM

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)

Footprint



Typical Applications

Industrial Machinery
HVAC
Building Controls

Industrial Machinery
HVAC
Building Controls

Industrial Machinery
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 (R0J-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
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Other Data

Dimensions	43.5x10.3x25.5 mm	43.5x10.3x25.5 mm	43.5x10.3x25.5 mm
Operating Temperature	-30 to 100°C	-30 to 100°C	-30 to 100°C
Mounting	PCB	PCB	PCB
UI File No	E29244	E29244	E29244

Link to datasheet

[Potter & Brumfield OACM](#)

[Potter & Brumfield IDCM](#)

[Potter & Brumfield ODCM](#)

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 AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

Circuit Breakers

Relays, Contactors & Circuit Breakers

Key Features

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

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

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. 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.

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.

Resettable 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

Link to datasheet

[Potter & Brumfield W28](#)

[Potter & Brumfield W23/W31](#)

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 AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

Circuit Breakers

Relays, Contactors & Circuit Breakers

Key Features

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



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)



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

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

Type	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 250in x .032in/Solder option/PCB	Standard Quick Connect 250in x .032in and #8-32 screw 3/8"-24, M11-1.0, M12-1.0 threaded bushing
Mounting	Snap-in	Snap-in, PCB	
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)

Electrical Data

Dielectric strength	2000Vrms	1500VAC	1500VAC
Insulation Resistance		100M Ω	100MΩ
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.
Resettable 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

Accessories

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

Link to datasheet

[Potter & Brumfield W33](#)

[Potter & Brumfield W51](#)

[Potter & Brumfield W54](#)

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 AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

Circuit Breakers

Relays, Contactors & Circuit Breakers

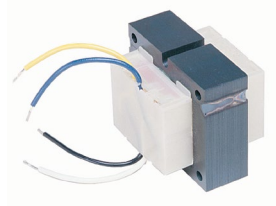
	Potter & Brumfield W57	Potter & Brumfield W58	Potter & Brumfield W6/W9
Key Features	Thermal Overload / Trip Free Operation Push to Reset Compact Design Cannot be manually tripped PCB termination options UL 1077, UL 1500, cUL, VDE, CCC. (3A,4A,20A no VDE)	Thermal Overload / Trip Free Operation Push to Reset Cannot be manually tripped Visual Trip Indication UL 1077, UL 1500, CSA. (30A not UL or CSA)	Magnetic Hydraulic actuation / Trip-free operation Several delay curve options Fungus and Moisture resistant UL 1077, UL 1500, CSA, VDE
			
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
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	Thermal	Thermal	Magnetic/Hydraulic
Number of Poles	1	1	1-4
Circuit function	Series trip	Series trip	Series trip
Ambient temperature (max.)	0 to 60°C	-25 to 65°C	-40 to +85 °C
Terminal type	Standard Quick Connect .250in x .032in and #8-32 screw and PCB option	Standard Quick Connect .250in x .032in and #8-32 screw	W6-Standard Quick Connect .250in x .032in and #8-32 or #10/32 screw. W9- #10/32 stud terminations
Mounting	3/8"-24, M11-1.0, M12-1.0 threaded bushing	7/16"-28, 15/32"-32, 3/8"-24 threaded bushing"	6-32, M3 tapped holes
Manual operation Actuator	Push-to-reset	Push-to-reset	Toggle
Dimension L*W*H	31.0 x 14.6 x 35.0mm (W54) 22.6 x 14.6 x 29.2mm (W57)	34.9 x 16.8 x 34.9mm	41.7 x 19.0 x 50.8mm (W6 per pole) 46.9 x 19.0 x 63.5mm (W9 per pole)
Electrical Data			
Dielectric strength	1500VAC	1500Vrms	50/60 Hz, 1,500V: DC, 1100V
Insulation Resistance			100 megohms at 500VDC
Max Operating Voltages	50VDC, 250VAC 50/60 Hz	50VDC, 250VAC	65VDC, 277VAC, 480VAC - 3Ø wye
Rated current	3A to 20A	0.5A to 30A	0.20A to 50A
Interrupt capacity	1,000 amps in accordance with UL standard 1077.	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 UL or CSA.	up to 5000A with UL 1077, CSA, VDE. Up to 3000A for UL 1500
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.	Breaker will continuously carry 100% of rated load. It may trip between 101% and 145% of rated load, but must trip at 145% at 25°C.	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)
Resettable Overload Capacity	Ten times rated current.	Ten times rated current.	Ten times rated current.
Reset Time	60 Seconds		60 Seconds
Accessories	Protective boot, knurl nut, hex nut, lockwasher, nameplate	Protective boot, knurl nut, hex nut, lockwasher	Toggle guard (W6 only)
Link to datasheet	Potter & Brumfield W57	Potter & Brumfield W58	Potter & Brumfield W6/W9

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 AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

Key Features

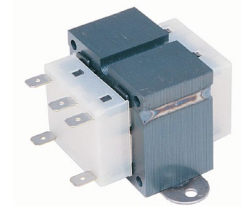
4000 SERIES WIRE LEAD CLASS II CONTROL TRANSFORMERS

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



Footprint

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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 G Panel Mount Plate Mount	Type K Foot Mount Type G Panel 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	
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](#)

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 AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

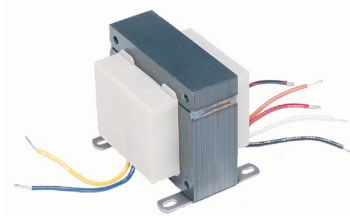
Transformers

Relays, Contactors & Circuit Breakers

Key Features

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



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Applications

Heating and Air Conditioning
Industrial
Motor Control

Industrial Controls, Garage door openers
Small power supplies, Control Boards
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](#)

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 AgSnO₂: 100mA at 12VDC. Please contact technical support for detailed technical data.

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