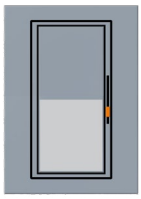
LIGHTING RELAY GUIDE

CONTROL PROTECT POWER

Whether you are designing your lighting or outlet controller for 120v, 277, 347, or 480v, TE Connectivity (TE) has extensive capabilities in the design and manufacture of relays for the task.

Meeting the inrush current requirements of National Electrical Manufacturers Association (NEMA) 410 and complying with standardized PCB footprints, TE lighting relays portfolio covers 1A, single fixture control all the way up to 20A branch circuit ratings.

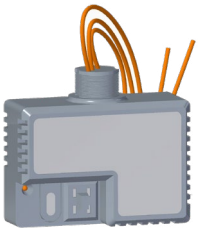
Through agency approved test labs, we ensure that our relays are tested to meet the expectations of the lighting industry.



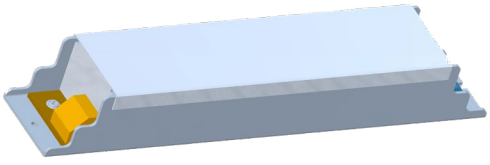
Wall Switch / Dimmer

Occupancy Sensor

Outdoor Controller

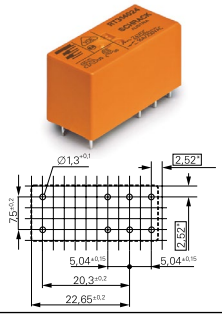
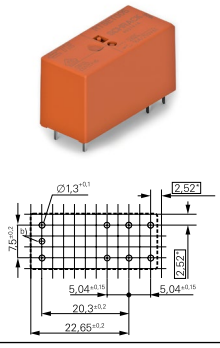
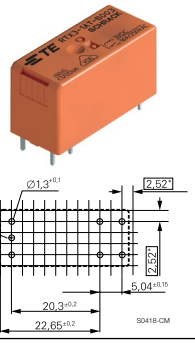


Power Pack



Electronic Ballast / LED Driver

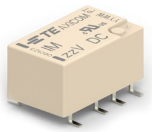
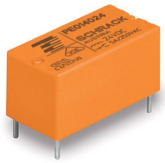
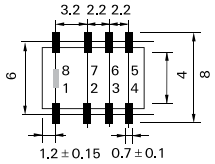
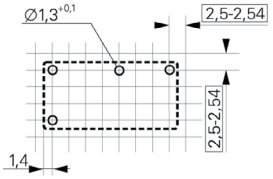
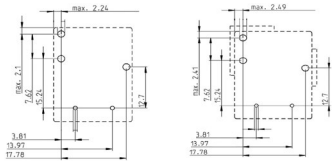
Controlled Outlet

	SCHRACK RT	SCHRACK RT INRUSH	SCHRACK RTX
Key Features	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	For inrush peak currents up to 80A Mono-or bistable coil Reinforced insulation WG type available (IEC 60335-1)	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 2) see footnote below			
Applications	HVAC, Home automation, Machine control, Energy control Switching cabinet, Interface modules	Lighting applications, Movement detectors, Motors control, Domestic appliances	Lighting control systems Motion sensors Home automation applications
Contact Data			
Contact arrangement	1. form C (CO), 1 form A (NO) 2 form C (CO), 2 form A (NO)	1 form C (CO) 1 form A (NO)	1 form A (NO)
Rated voltage	250VAC	250VAC	250VAC
Rated current	2X8/16A	16A	16A
Switching power / Max. break	2X2000/4000VA	4000VA	4000VA
Contact material	AgNi90/10, $AgSnO_2$	AgNi90/10, $AgSnO_2$	W (pre-make contact) + $AgSnO_2$
Min. recommended contact load	1) see footnote below	1) see footnote below	1) see footnote below
Coil Data			
Magnetic system	DC, AC, bistable	DC, bistable	Bistable
Rated coil voltage	5 to 110VDC/24 to 230VAC	5 to 11VDC	5 to 48VDC
Rated coil power	400mW/0.75VA	400mW	650mW/665mW
Dielectric Strength			
Initial dielectric strength			
between open contacts	1000Vrms	1000Vrms	1250Vrms
between contact and coil	5000Vrms	5000Vrms	5000Vrms
between adjacent contacts	2500Vrms		
Clearance/creepage			
between contact and coil	>10/10mm	>10/10mm	min. 6/6mm
Other Data			
Ambient temperature (max.)	+75°C (AC type) +85°C	+85°C	+70°C
Category of environmental protection IEC61810	RTII, RTIII	RTII	RTII
Terminal type	THT, THR (DC and AC type)	THT	THT
Mounting	PCB or on socket	PCB or socket	PCB
Dimensions (lwh)	29x12.7x15.7mm	29x12.7x15.7mm	29.1x12.7x16mm
Accessories	PCB and DIN rail sockets		
Link to datasheet	SCHRACK RT	SCHRACK RT INRUSH	SCHRACK RTX

1) Recommended minimum load indication for contact material: AU and gold plated: 1mA at 6VDC; AgNi0.15 and AgNi90/10: 10mA at 12VDC: AgCdO and $AgSnO_2$: 100mA at 12VDC. Please contact technical support for detailed technical data.

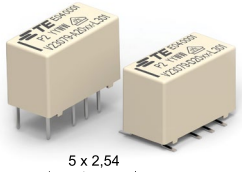
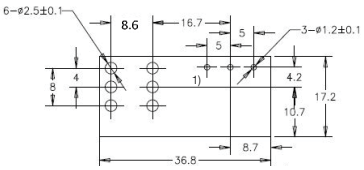
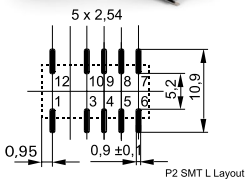
2) Footprint images are representative. For a complete selection, refer to the TE data sheet via the link above.

Lighting Relay Guide

	Axicom IM	SCHRACK PE	Potter & Brumfield T9G
Key Features	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 Bifurcated contacts + single contact	Low height 10.0mm Sensitive 200mW coil Mono-or bistable coil WG type available (IEC 60335-1)	High breaking capacity PCB and quick connect connections 4kV/8mm coil-contact Minimum board space (29mm x 21.5mm) UL-class F as standard
			
Footprint 2) see footnote below			
Applications	Telecommunication, access and transmission equipment Thermostat controls, fire and security equipment Measurement and test equipment, Industrial controls, medical equipment	Industrial electronics White goods Measurement and control	HVAC, Appliances Industrial control Energy management
Contact Data			
Contact arrangement	2 form C, 2 CO Single contact + Bifurcated contacts	1 form C (CO)	1 form C (1 CO) 1 form B (1 NC) 1 form A (1 NO)
Rated voltage	250VAC/220VDC	250VAC	250VAC
Rated current	2/5A	5A (CO) 6A (NO)	30A
Switching power / Max. break	60W/62.5VA	1250VA	
Contact Material		AgNi 90/10, $AgSnO_2$	$AgSnO_2$
Min. recommended contact load	100µV/1µA	1) see footnote below	1A at 12VAC/VDC
Initial contact resistance	<50mΩ at 10mA/30mV I: < 100mΩ		
Coil Data			
Magnetic system	Polarized	DC, bistable	DC
Rated coil voltage	1.5 to 24VDC	3 to 48VDC	5 to 110VDC
Rated coil power **DC coil / bistable 1 coil/2 coils**	50 to 200mW-/-	200mW	900mW
Dielectric Strength			
Initial dielectric strength			
between open contacts	750 to 1500Vrms	1000Vrms	1500Vrms
between contact and coil	1500 to 1800Vrms	4000Vrms	4000Vrms
between adjacent contacts	750 to 1800Vrms		
Initial surge withstand voltage			
between open contacts	1000 to 2500V		
between contact and coil	2000 to 2500V		
between adjacent contacts	1000 to 2500V		
Isolation 100/900MHz	37.0/18.8dB		
Insertion loss 100/900MHz	0.03/0.33dB		
Volt. standing wave ratio 100/900MHz	1.06/1.49		
Capacitance between open contacts	max. 1pF	3.2/4mm	6.4mm / 9.5mm (UL) 8mm / 8mm (IEC)
Other Data			
Ambient temperature (max.)	-40 to +85°C	+ 85°C	+105°C
Category of environmental protection	IP67/RTV	RTII, RTIII	RTII, RTIII
Terminal type	THT, SMT	THT	THT/Quick connect
Mounting		PCB	PCB
Dimension (lwh)	10x6x5.65mm	20x10x10mm	29x21.5x15.7mm
Link to datasheet	AXICOM IM	SCHRACK PE	POTTER & BRUMFIELD T9G

1) Recommended minimum load indication for contact material: AU and gold plated: 1mA at 6VDC; AgNi0.15 and AgNi90/10: 10mA at 12VDC: AgCdO and $AgSnO_2$: 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	Axicom P2 LIGHTING
Key Features	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	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		
Applications	Lighting control, bus actuator, power distribution, circuit protection, inverter	LED tubes Office equipment Security systems, set top boxes
Contact Data		
Contact arrangement	1 form A (1 NO)	2 form C, 2 CO Bifurcated contacts
Rated voltage	440VAC	250VAC/220VDC
Rated current	60A	2A
Switching power / Max. break	15000VA	60W/62.5VA
Contact material	$AgSnO_2$	
Min. recommended contact load	Visit TE.com for more information	100µV/1µA
Initial Contact resistance		<50mΩ at 10mA/20mV
Coil Data		
Magnetic system	Bistable	Polarized
Rated coil voltage	5 to 24VDC	3 to 12VDC
Rated coil power	1.5W/3W	140mW - 1 coil version
Dielectric Strength		
Initial dielectric strength		
between open contacts	1500Vrms	1500Vrms
between contact and coil	4000Vrms	3000Vrms
between adjacent contacts		1500Vrms
Clearance/creepage		
between contact and coil	≥6/9mm	
Initial surge withstand voltage		
between contact and coil		6000Vrms
Other Data		
Ambient temperature (max.)	+70°C	-40 to +85°C
Category of environmental protection IEC61810	RTI	RTIII
Terminal type	PCB	THT, SMT
Mounting	PCB	
Dimensions (lwh)	36.8×17.2x30.4mm	14.5x7.2x9.9mm, ovrmld
Accessories		
Link to datasheet	EW60	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 $AgSnO_2$: 100mA at 12VDC. Please contact technical support for detailed technical data.

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

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