

# **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.







**Controlled Outlet** 

#### **Lighting Relay Guide**

## **Key Features**

#### **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)

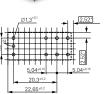
#### **SCHRACK RTX**

Inrush peak currents up to 370A Bistable coil Reinforced insulation

16A rated fluorescent load acc. EN60669-1

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





#### **Footprint**

2) see footnote below

**Applications** 

HVAC, Home automation, Machine control, Energy control Lighting applications, Movement detectors, Motors control,

1) see footnote below

Lighting control systems Motion sensors Home automation applications

1) see footnote below

Switching cabinet, Interface modules Domestic appliances

**Contact Data** 

Contact arrangement 1. form C (CO), 1 form A (NO) 2 form C (CO), 2 form A (NO) Rated voltage 250VAC Rated current 2X8/16A Switching power / Max. break 2X2000/4000VA Contact material Min. recommended

AgNi90/10, AgSnO<sub>2</sub> 1) see footnote below 1 form C (CO) 1 form A (NO) 1 form A (NO) 250VAC 250VAC 16A 16A 4000VA W (pre-make contact) + AgSnO<sub>2</sub> AgNi90/10, AgSnO<sub>2</sub>

#### Coil Data

contact load

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				
o tillor Data				
Ambient temperature (max.)	+75°C (AC type) +85°C	+85°C	+70°C	
-		+85°C	+70°C	
Ambient temperature (max.)  Category of environmental	+85°C			

29x12.7x15.7mm

#### Accessories

Dimensions (lwh)

Link to datasheet **SCHRACK RT** SCHRACK RT INRUSH **SCHRACK RTX** 

29x12.7x15.7mm

PCB and DIN rail sockets

29.1x12.7x16mm



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

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

#### **Lighting Relay Guide**

#### **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 up to 5 A High contact stability version

#### **SCHRACK PE**

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

#### **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

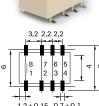


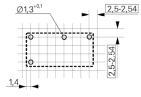




## Footprint

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

HVAC, Appliances Industrial control Measurement and control Energy management

#### **Contact Data**

Contact arrangement 2 form C, 2 CO 1 form C (CO) 1 form C (1 CO) Single contact + Bifurcated contacts 1 form B (1 NC) 1 form A (1 NO) Rated voltage 250VAC/220VDC 250VAC 250VAC 30A Rated current 2/5A 5A (CO) 6A (NO) Switching power / Max. break 60W/62.5VA 1250VA AgSnO. **Contact Material** AgNi 90/10, AgSnO<sub>2</sub> 1A at 12VAC/VDC 100μV/1μΑ Min. recommended contact load 1) see footnote below Initial contact resistance  $<50m\Omega$  at 10mA/30mV I:  $<100m\Omega$ 

#### Coil Data

Magnetic system Polarized DC, bistable 3 to 48VDC Rated coil voltage 1.5 to 24VDC 5 to 110VDC Rated coil power DC coil / bistable 1 coil/2 coils 50 to 200mW-/-200mW 900mW

#### **Dielectric Strength**

Ambient temperature (max.)	-40 to +85°C	+ 85°C	+105°C
Other Data			
Capacitance between open contacts	max. 1pF	3.2/4mm	6.4mm / 9.5mm (UL) 8mm / 8mm (IEC)
Volt. standing wave ratio 100/900MHz	1.06/1.49		
Insertion loss 100/900MHz	0.03/0.33dB		
Isolation 100/900MHz	37.0/18.8dB		
between adjacent contacts	1000 to 2500V		
between contact and coil	2000 to 2500V		
between open contacts	1000 to 2500V		
Initial surge withstand voltage			
between adjacent contacts	750 to 1800Vrms		
between contact and coil	1500 to 1800Vrms	4000Vrms	4000Vrms
between open contacts	750 to 1500Vrms	1000Vrms	1500Vrms
Initial dielectric strength			

Link to datasheet	AXICOM IM	SCHRACK PE	POTTER & BRUMFIELD T9G
Dimension (lwh)	10x6x5.65mm	20x10x10mm	29x21.5x15.7mm
Mounting		PCB	PCB
Terminal type	THT, SMT	THT	THT/Quick connect
Category of environmental protection	IP67/RTV	RTII, RTIII	RTII, RTIII
Ambient temperature (max.)	-40 to +85°C	+ 85°C	+105°C

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

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#### **Lighting Relay Guide**

#### **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

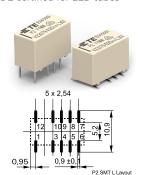
480A inrush, 2.1m sec



# 6-\$2.5±0.1 8.6 16.7 5 5 3-\$1.2±0.1

#### **Axicom P2 LIGHTING**

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



#### **Footprint**

2) see footnote below

**Applications** 

Lighting control, bus actuator,

power distribution, circuit protection, inverter

LED tubes
Office equipment
Security systems, set top boxes

140mW - 1 coil version

6000Vrms

#### **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 <sub>2</sub>	
Min. recommended contact load	Visit <b>TE.com</b> for more information	100μV/1μΑ
Initial Contact resistance		$<$ 50m $\Omega$ at 10mA/20mV
Coil Data		
Magnetic system	Bistable	Polarized
Rated coil voltage	5 to 24VDC	3 to 12VDC

#### **Dielectric Strength**

between contact and coil

Rated coil power

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		

1.5W/3W

#### 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)	36.8×17.2×30.4mm	14.5x7.2x9.9mm, ovrmld

#### Accessories

Link to datasheet	<u>EW60</u>	AXICOM P2 LIGHTING
1) Recommended minimum load indication for contact material: AU and gold plated: 1mA at 6VDC; AgNi0.15 and AgNi90/10:		2) Footprint images are representative. For a complete selection, refer to the TE

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

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

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