

# RR20 Series Ready Relay

## Installation Instructions

Refer to the Building Automation and Controls [Knowledge Exchange](#) website for most up-to-date version of this document



### DANGER

#### **FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN DEATH OR OTHER SERIOUS INJURY**

- Follow ALL requirements in NFPA 70E for safe work practices and for Personal Protective Equipment (USA) and other applicable local codes when installing this product.
- Only qualified electrical personnel should install this product.
- Read, understand, and follow all instructions thoroughly.
- Install only on insulated conductors.
- Lock out and tag out all power sources prior to installation or working on equipment.
- Use properly rated voltage sensing instrument to determine no voltage is present.



Hazard of electrical shock, explosion, and arc flash



### WARNING

#### **IMPORTANT WARNINGS**

- Equipment monitored/operated by this device may start without warning. Keep clear of apparatus at all times
- Only qualified trade installers should install this product
- This product is not intended for life-safety applications
- Do not install in hazardous or classified locations
- The installer is responsible for all applicable codes
- This product must be installed in a suitable electrical enclosure



Automated equipment may start without warning

#### **PRODUCT APPLICATION LIMITATION:**

JCI products are not designed for life or safety applications. JCI products are not intended for use in critical applications such as nuclear facilities, human implantable device or life support. JCI is not liable, in whole or in part, for any claims or damages arising from such uses.



## INSTALLATION



Disconnect, lock out and tag out all power supplies during installation

1. This device shall be installed on an enclosure via a 1/2" NPT nipple.
2. Secure relay to enclosure by screwing the provided conduit nut to the 1/2" NPT threads.
3. Connect relay coil to control system by connecting the common (white and yellow conductor) to the control systems common or negative (-) terminal. Then choose either the High (white and black conductor, 120VAC) or Low (white and blue conductor, 24-30VDC/24VAC) depending on control system voltage being sent to the relay coil and connect to positive (+) terminal of the control system.
4. Connect relay contact wires to the application load being controlled by this relay. This will differ between SPDT and SPST contact arrangements. See wiring diagrams at the end of this guide.
5. For relays with status output (RR20YN and RR20YY), connect (gray conductors) to control system terminals that will be monitoring status of application load.
6. For relays with the Hand/Off/Auto (HOA) (RR20NY and RR20YY) switch, leave switch in AUTO to control application load from control system driving relay coil. Put HOA in HAND to bypass control system and turn on application load. Putting the switch in OFF will not allow application load to turn on.

# SPECIFICATIONS

General	Environmental Operating	-30 to 60°C (-22 to 140°F), 10-95% RH non-condensing
	Expected Relay Life	100,000 cycles electrical; 10,000,000 mechanical
	LED	ON when energized
	Device Wiring	16" minimum lead length; coil: 18AWG; contacts: 12AWG; HOA monitor wires: 12 AWG; status: 18AWG
	Field Wiring	Coil: 16AWG to 18AWG, Contacts: 12AWG to 14AWG
Dimensions	Certifications	UL1015, Plenum Rated (UL2043)
	Small Enclosure	1.75" x 3.0" x 1.75" with 0.5" NPT nipple
	Medium Enclosure	2.5" x 4.0" x 1.78" with 0.5" NPT nipple
Environmental	Ambient temp	60°C

## CONTACT RATINGS - RR20NN/RR20YN MODELS

20 Amp Resistive @ 277 VAC  
 1HP @ 120VAC  
 2HP @ 277VAC  
 20A @ 277VAC STANDARD BALLAST  
 1100VA Pilot Duty @ 277VAC  
*Not rated for electronic ballast*  
 10A @ 120VAC TUNGSTEN

## CONTACT RATINGS - RR20NY/RR20YY MODELS

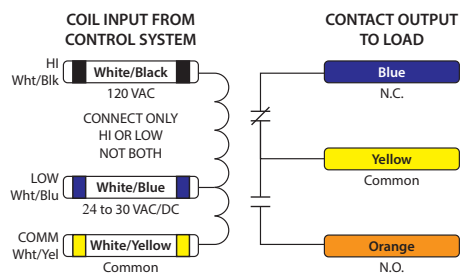
20 Amp Resistive @ 277 VAC  
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## COIL CURRENT/PERFORMANCE

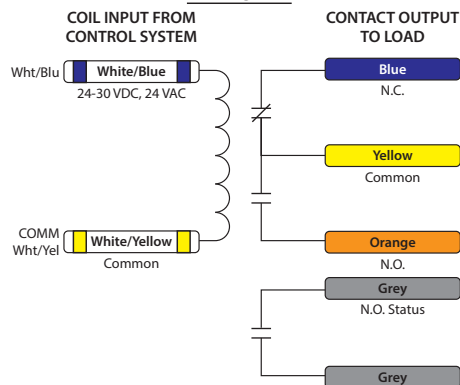
Voltage	AC	DC
24 V	59mA	32mA
26 V		35mA
28 V		37mA
30 V		40mA
120 V	43mA	
120V	23mA	
Pull-In Voltage	AC	DC
10 to 30V	8V	9V
120V	85V	
Dropout Voltage		
10 to 30V	3V	3V

MODEL	CONTACT	COIL INPUT	CONTACT	HOA	CURRENT RUN STATUS	ENCLOSURE	LED
RR20NN	SPDT	24-30VDC, 24VAC, 120VAC	20A			Small	●
RR20YN	SPDT	24-30VDC, 24VAC	20A		N.O. 1A @ 30VAC/DC, 0.3A TRIP	Small	●
RR20NY	SPST N.O.	24-30VDC, 24VAC, 120VAC	20A	●		Medium	●
RR20YY	SPST N.O.	24-30VDC, 24VAC, 120VAC	20A	●	N.O. 1A @ 30VAC/DC, 0.3A TRIP	Medium	●

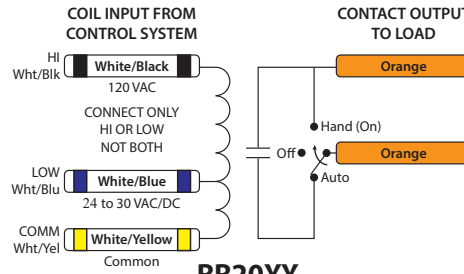
### RR20NN



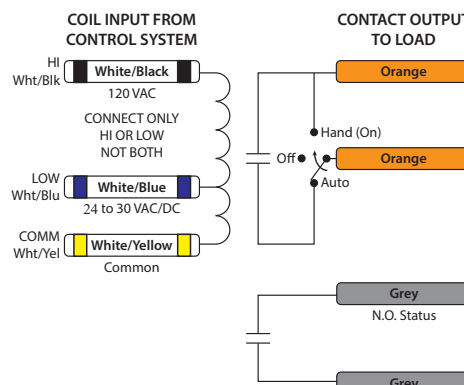
### RR20YN



### RR20NY



### RR20YY



Building Efficiency

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