

STANDARD TERMINAL BLOCK RELAYS

XRU1D Series



- Pluggable Relay Allows for Field Replacement
- Functional Plug-In Bridges
- Screw Connections
- LED Status Indication
- DIN Rail Mount
- Only 6.2 mm (0.24") Wide
- All Common Input Voltages Between 24 Vdc to 120 Vac
- NEMA 6 (IP67) Protection
- Environmentally Friendly, Cadmium-Free Contact
- Easy, Cost-Effective and Replacement Using Engagement Lever

The XR Series Terminal Block Relays are ideal for applications that require a high switching capacity and long electrical service life. The relays are plug-in interfaces that connect to basic terminal blocks. The XR Series utilizes screw technology, as well as offers quick system wiring, superior safety features, clear labeling and a high level of modularity.

Application Description

Used in automation systems, electromechanical relays guarantee a safe connection between process I/O and electronic controls. The following functions are covered by relay coupling elements:

- **Electrical isolation between the input and output circuits**
- **Independence of the type of switching current (AC and DC)**
- **High short-term overload resistance in the event of short circuits or voltage peaks**
- **Low switching losses**
- **Ease of operation**



XRU1D120U shown larger than actual size.

Accessories **Power Terminal Block**

The XRAPLCEK power terminal block has the same shape as the relay modules and is used to feed in the bridging potentials. The nominal current is 32 A. When the total current is less than or equal to 6 A, supply can take place directly at the connecting terminal blocks of one of the connected relays.

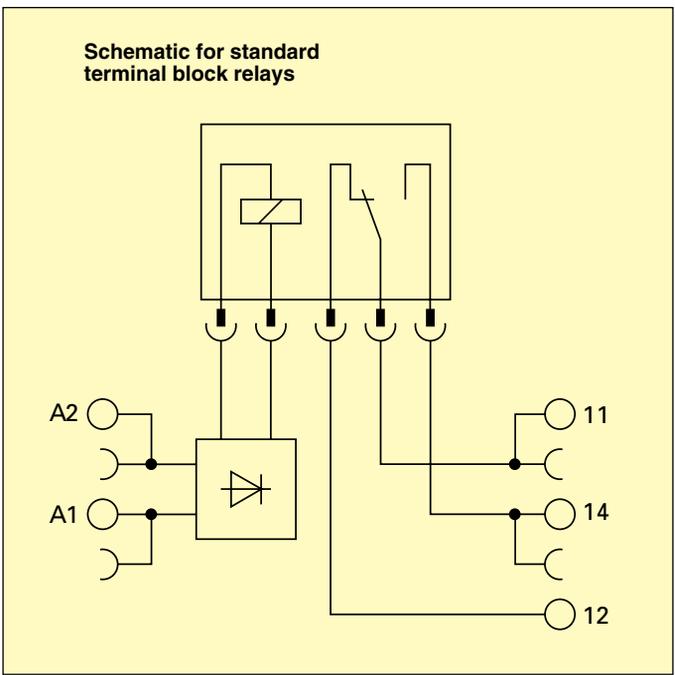
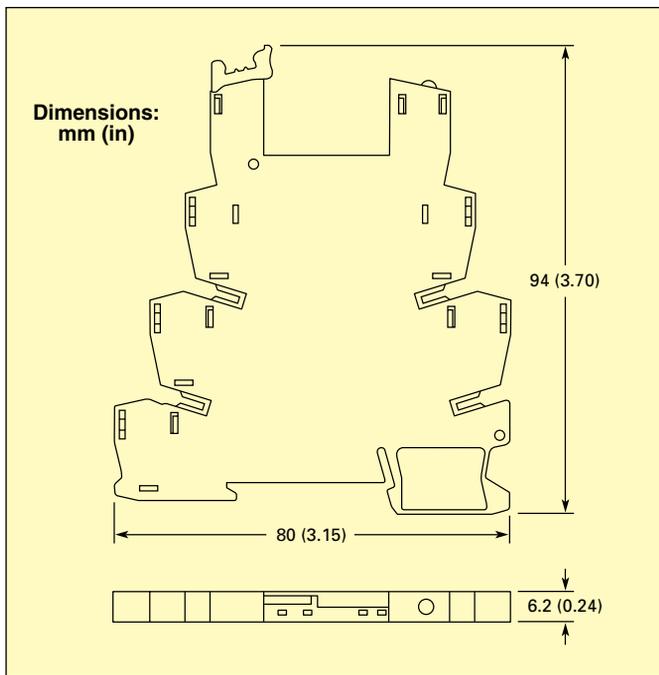
End Cover

The XRAATPBK end cover is required at the start and stop of a relay strip. It can also be used for visual separation of groups of relays as well as separating relays with voltages greater than 250V and separating neighboring bridges with different potentials. It is equipped with pre-scored break out points at the bridging positions so that individual bridges can be passed through as needed. It may also

be necessary to use the end cover between adjacent relays when three phases (L1, L2, L3) are used on the contact side of the relay.

Bridges

The XRAFBST colored, insulated plugin bridge system reduces wiring time by up to 70% compared to conventionally wired relays. The XRAFBST2, 2-position bridges, are suited for bridging a smaller number of relays and total currents <6 A. When a circuit is supplied from both sides, the circuit can be opened at any point, allowing all other modules to continue being supplied at the same time. The XRAFBST500 allow up to 80 modules to be bridged at one time. If bridges with different potentials meet in neighboring modules, the end cover XRAATPBK should be used. All bridges are equipped with a groove for removal with a standard screwdriver.



SPECIFICATIONS

Input Voltage:

XRU1D24: 24 Vdc
XRU1D24U: 24 Vac/Vdc
XRU1D120U: 120 Vac/110 Vdc

Typical Input Current:

XRU1D24: 9 mA
XRU1D24U: 11 mA (24 Vac),
 8.5 mA (24 Vdc)
XRU1D120U: 3.5 mA (120 Vac),
 3 mA (110 Vdc)

Connection Type:

Screw connection
Rigid Solid AWG (mm²): 26 to 14
 (0.14 to 2.5)

Flexible Stranded AWG (mm²):
 26 to 14 (0.14 to 2.5)

Typical Response Time:

XRU1D24: 5 mS
XRU1D24U and XRU1D120U: 6 mS

Typical Release Time:

XRU1D24: 8 mS
XRU1D24U and XRU1D120U: 15 mS

Input Protection:

XRU1D24: Polarity protection diode,
 free-wheeling diode
XRU1D24U and XRU1D120U:
 Bridge rectifier

Contact Type:

1 PDT

Contact Material:

AgSnO

Max Switching Voltage:

250 Vac/Vdc¹

Min Switching Voltage:

12 Vac/Vdc

Limiting Continuous Current:

6 A

Min Switching Current:

10 mA

Min Switching Power:

120 mW

Ambient Temp Range:

-20 to 60°C

(-4 to 140°F)

Rated Operating Mode:

100% operating factor

Inflammability Class:

V0, in accordance with UL 94

Mechanical Service Life:

2 x 10⁷ cycles

¹ The separating plate, XRAPLCEK, should

be installed for voltages greater than 250V

(L1, L2, L3) between identical terminal points

of adjacent modules. Potential bridging is

then possible with the XRAFBST bridge

system.

To Order

MODEL NO.	DESCRIPTION
XRU1D120U	1 PDT relay, 120 Vac/110 Vdc coil voltage
XRU1D24	1 PDT relay, 24 Vdc coil voltage
XRU1D24U	1 PDT relay, 24 Vac/Vdc coil voltage

Ordering Example: XRU1D120U, 1 PDT relay.

REPLACEMENT RELAYS AND ACCESSORIES

MODEL NO.	DESCRIPTION
XRR1D120U	Replacement relay for XRU1D120U
XRR1D24	Replacement relay for XRU1D24 and XRU1D24U
XRAPLCEK	Power terminal block
XRAATPBK	Black end cover
XRAFBST2RD	2-position red snap in jumper
XRAFBST2BU	2-position blue snap in jumper
XRAFBST2GY	2-position gray snap in jumper
XRAFBST500RD	80-position red snap in jumper
XRAFBST500BU	80-position blue snap in jumper
XRAFBST500GY	80-position gray snap in jumper