NEW TERMINAL BLOCK RELAYS

series TBR

c3controls Terminal Block Relays are designed to meet your control and automation system requirements, which need reliable, safe connections as well as isolation between electronic controls and process I/O. Due to their unmatched size, flexibility, and various other features, terminal block relays can help you save money and premium panel space. Just look and see what Series TBR has to offer!

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PROVEN

Conformity to Standards:
Socket
UL 508
CSA 22.2 No. 14
IEC 60947-1, 60947-5-1

Certifications:

UL File #: E236196 (Guide SWIV2, SWIV8)

CE Marked (per EU Low Voltage Directive 2014/35/EU and RoHS Directive EU 2015/863)

Visit www.c3controls.com to download product certifications.

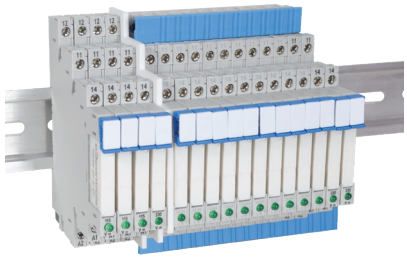
NEW TERMINAL BLOCK RELAYS

c3controls line of Terminal Block Relays were designed and manufactured to meet the needs of the machine builder. We promise durable products at a price that gives you an edge. Check out all the features of our Series TBR Terminal Block Relays below!

DELIVERING SUPERIOR PRODUCT QUALITY AND MANUFACTURING EXCELLENCE

✓ **Proven**	Our Terminal Block Relays are UL Recognized and CE marked, meeting global standards requirements.
✓ **Ultra Compact Size**	Only 6.2mm width for a Single-Pole, Double-Throw relay, allowing you to control more devices and use less space.
✓ **Flexibility**	Pluggable relay attached on the socket can be replaced in case of malfunction, providing flexibility for repair or maintenance work.
✓ **Secure Installation**	Quick and simple snap-on installation on a 35mm DIN Rail.
✓ **Clear Visibility**	LED indication allows you to see the contact status of the relay, making it very helpful in troubleshooting.
✓ **Visible Certifications**	Our product certifications and electrical ratings are clearly marked on the side of the device for easy reference during installation.
✓ **Added Safety**	Terminals are IP20 rated, guarding against accidental contact with live parts. The pluggable relay is also IP67 rated making it reliable in extreme conditions.
✓ **Limited Lifetime Warranty***	Every product is backed by our limited lifetime warranty—unmatched in the industry—bringing you quality components that perform in the most demanding applications.
✓ **Guaranteed Same-Day Shipping***	Product availability reduces inventory, and improves cash-flow—saving you money. With c3controls any order for standard catalog items received by 6:00pm ET is guaranteed to ship same-day.
✓ **Advantage Pricing**	Our approach to product development, manufacturing, and focus on servicing the OEM and Electrical Equipment Builder reduces cost. The result—the best value in the industry.

*See c3controls Terms & Conditions

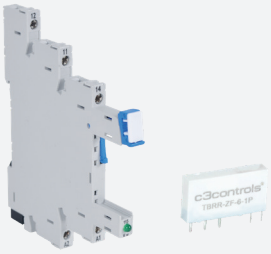


UNIQUE PRODUCT LINE FEATURES

SUPER BRIGHT LED

Highly visible LED on each unit gives indication of the relay's operating state.

PLUGGABLE RELAY

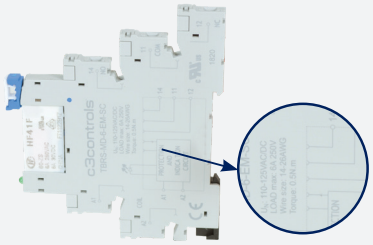


The marker base functions as a lever for installing or replacing the relay in case of troubleshooting or malfunction.

ADDED RELIABILITY & SAFETY

IP20 rated captive screw terminals provide reliability, ease of wiring, and much needed protection against accidental contact with live parts.

EASY REFERENCE

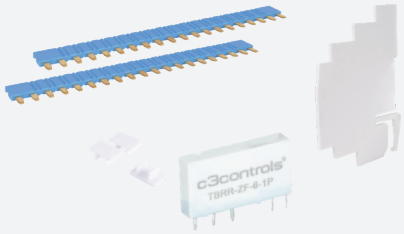


All necessary installation markings including wire size and torque are available on the side of each terminal block relay.

QUICK IDENTIFICATION

Marking system allows for fast and easy circuit identification. A marking strip is pre-supplied on each unit.

ACCESSORIES



Apart from the replacement relay, marker and separator, Series TBR consists of a jumper accessory to eliminate labor intensive wiring work.

FIND IT FAST

Terminal Block Relays

- Certifications
- Specifications
- Dimension Drawings
- Installation Instructions
- Easy To Buy

www.c3controls.com

IT'S EASY TO BUILD YOUR OWN TERMINAL BLOCK RELAY

Simply pick the code number from each of the sections below and combine them to build your part number.

Terminal Block Relays

TBR – ____ – 6 – 1P – SC

I II III IV V

NEW

Example: To build one of our most popular Terminal Block Relays, the part number would be **TBR + II + 6 + 1P + SC** or **TBR-MC-6-1P-SC**

I. PRODUCT TYPE

CODE	DESCRIPTION
TBR	Terminal Block Relay

II. COIL VOLTAGE

CODE	DESCRIPTION	LIST
MB	12V AC/DC	$21.10
MC	24V AC/DC	$21.10
MD	110-125V AC/DC	$21.10
MF	220-240V AC/DC	$25.30

III. RATED CURRENT

CODE	DESCRIPTION
6	6 Amp

IV. CONTACT TYPE

CODE	DESCRIPTION
1P	Single Pole Double Throw

V. CONNECTION TYPE

CODE	DESCRIPTION
SC	Screw Terminal

DISCOUNT SCHEDULE E

TERMINAL BLOCK RELAY ASSEMBLIES*

TERMINAL BLOCK RELAY ASSEMBLY PART NUMBER	SOCKET PART NUMBER	RELAY PART NUMBER
TBR-MB-6-1P-SC	TBRS-MC-6-EM-SC	TBRR-ZB-6-1P
TBR-MC-6-1P-SC	TBRS-MC-6-EM-SC	TBRR-ZC-6-1P
TBR-MD-6-1P-SC	TBRS-MD-6-EM-SC	TBRR-ZF-6-1P
TBR-MF-6-1P-SC	TBRS-MF-6-EM-SC	TBRR-ZF-6-1P

*Note: Each Terminal Block Relay is an assembly of a socket and a pluggable relay. This table provides the part numbers for the socket and relay for each assembly.

Some of Our Popular Configurations:

TERMINAL BLOCK RELAYS

CATALOG NUMBER	DESCRIPTION	LIST
TBR-MC-6-1P-SC	Terminal Block Relay, Electromechanical, 6A, SPDT, Screw Terminal, 24V AC/DC	$21.10
TBR-MD-6-1P-SC	Terminal Block Relay, Electromechanical, 6A, SPDT, Screw Terminal, 110-125V AC/DC	$21.10
TBR-MF-6-1P-SC	Terminal Block Relay, Electromechanical, 6A, SPDT, Screw Terminal, 220-240V AC/DC	$25.30

Terminal Block Relays

c3controls Series TBR Terminal Block Relays are designed to meet your control and automation system requirements for a reliable, safe connection as well as isolation between electronic controls and process I/O. Due to their unmatched size, flexibility and various other features, terminal block relays can help you save money and a premium panel space. cRUus and CE Markings make them suitable for use anywhere in the world. Just look and see what the Series TBR has to offer.

Product features include:

- Compact size – Just 6.2mm wide for a Single-Pole, Double-Throw relay rated for a 6A load.
- Standard range of AC and DC operating coils for control circuit applications: 12V, 24V, 110-125V, 220-240V
- LED indication of energized relay for fast and easy troubleshooting.
- Coil surge protection for securing internal circuitry against sudden shut-downs.
- Built-in leakage current suppression circuit to avoid nuisance coil turn-on.
- The marker base functions as a lever for installing or replacing the relay in case of troubleshooting or malfunction.
- Quick and simple installation on a 35mm DIN Rail.
- IP20 rated captive screw terminals provide reliability, ease of wiring, and much needed protection against accidental contact with live parts.
- Highly visible markings for ease of installation, troubleshooting, and maintenance.
- Pre-supplied marking strip on each unit for easy circuit identification.
- Environmentally friendly non-metallic materials are asbestos, halogen, and cadmium free.

IT'S EASY TO BUILD YOUR OWN REPLACEMENT RELAY

Simply pick the code number from each of the sections below and combine them to build your part number.

Replacement Relays

TBRR – ____ – 6 – 1P

I II III IV

NEW

Example: To build one of our most popular Replacement Relays, the part number would be **TBRR + II + 6 + 1P** or **TBRR-ZF-6-1P**

I. PRODUCT TYPE

CODE	DESCRIPTION
TBRR	Terminal Block Replacement Relay

III. RATED CURRENT

CODE	DESCRIPTION
6	6 Amp

II. COIL VOLTAGE

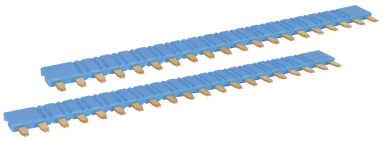
CODE	DESCRIPTION	LIST
ZB	12V	$10.80
ZC	24V	$10.35
ZF	110 - 240V	$13.15

IV. CONTACT TYPE

CODE	DESCRIPTION
1P	Single Pole Double Throw

DISCOUNT SCHEDULE E

20 WAY JUMPER LINK



Wire up to 20 relays in no time! The jumper accessory plugs directly into the socket terminals, eliminating labor intensive wiring tasks.

CODE	DESCRIPTION	PCS./PKG.	LIST/PC.
TBR-J-20	20 Way Jumper Link	4	$ 8.90

REPLACEMENT MARKERS

Replacement markers are available if the pre-supplied marker is misplaced or no longer useful.

CODE	DESCRIPTION	LIST
TBR-M6	Replacement Markers (plate of 64 markers)	$ 5.75

SPACER

Spacers offer a quick and easy way to differentiate between circuits in a control panel. Spacer dimensions match exactly with the geometry of a complete relay and socket assembly.

CODE	DESCRIPTION	PCS./PKG.	LIST/PC.
TBR-S	2mm Wide Spacer	5	$ 2.20

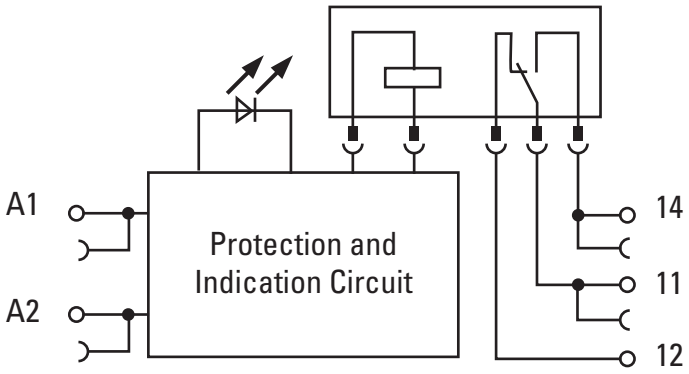
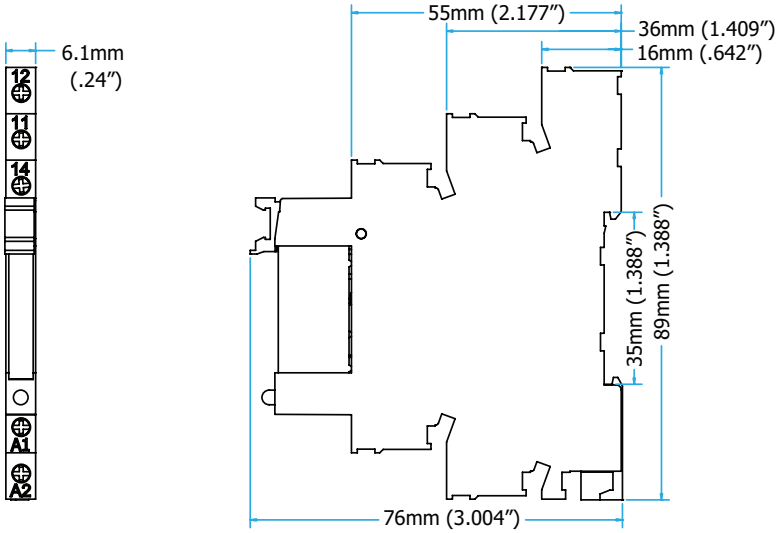
NEW

DISCOUNT SCHEDULE E

SPECIFICATIONS:

TERMINAL BLOCK RELAY SPECIFICATIONS					
INPUT DATA					
	UNITS				
Rated Voltage	VAC/VDC	12	24	110~125	220~240
Typical Response Time	ms	≤8			
Typical Release Time	ms	≤4			
Pickup Voltage	%	90			
Dropout Voltage	%	10			
Maximum Allowable Voltage	VAC/VDC	14	28	132	264
Coil Consumption	W	0.17		0.21	
CONTACT RATINGS					
Contact Configuration		SPDT			
Contact Material		AgNi			
Rated Load		6A, 250VAC / 30VDC			
Maximum Switching Voltage	VAC/VDC	400/125			
Minimum Switching Voltage	V	5			
Minimum Switching Current	mA	100			
GENERAL					
Mechanical Service Life		1×10^7 cycles			
ELECTRICAL LIFE					
NO Operations		3×10^4 cycles			
NC Operations		1×10^4 cycles			
DIELECTRIC STRENGTH					
Between Contact and Coil	VAC	4,000 for 1 minute			
Between Pole	VAC	1,000 for 1 minute			
Vibration Resistance		10 to 55Hz, double amplitude 1.0 mm			
SHOCK RESISTANCE					
Functional	m/s^2	49			
Destructive	m/s^2	980			
Ambient Temperature Range	°C/°F	-40 to 55 / -40 to 131			
Storage Temperature	°C/°F	-40 to 85 / -40 to 185			
Operating Humidity	%	5 to 85 (no condensation)			
Altitude	m	0 - 2,000			
Pollution Degree		2			
Maximum Wire Size	AWG	14			
Torque	Nm	0.5			
Degree of Protection		IP20			
ROHS COMPLIANCE		For RoHS compliance documentation by product, refer to www.c3controls.com			

WIRING DIAGRAM



DIMENSIONS