FLEX I/O Terminal Base Units

1794-TB2, -TB3, -TB3K, -TB3S, -TB32, -TB32S, -TB3G, -TB3GK, -TB3GS, -TB3T, -TB3TS, -TBN, -TBNK, -TBNF, -TBNFK, -TBKD, -TB3SK, -TB3GSK, -TB3TK, -TB3TSK

(Modules with a K in the last position of the catalog number are conformally coated to meet noxious gas requirements of ISA/ANSI-71.040 1985 Class G3 Environment.)

Important User Information

Solid state equipment has operational characteristics differing from those of electromechanical equipment. Safety Guidelines for the Application, Installation and Maintenance of Solid State Controls (Publication SGI-1.1 available from your local Rockwell Automation sales office or online at http://www.literature.rockwellautomation.com) describes some important differences between solid state equipment and hard-wired electromechanical devices. Because of this difference, and also because of the wide variety of uses for solid state equipment, all persons responsible for applying this equipment must satisfy themselves that each intended application of this equipment is acceptable.

In no event will Rockwell Automation, Inc. be responsible or liable for indirect or consequential damages resulting from the use or application of this equipment.

The examples and diagrams in this manual are included solely for illustrative purposes. Because of the many variables and requirements associated with any particular installation, Rockwell Automation, Inc. cannot assume responsibility or liability for actual use based on the examples and diagrams.

No patent liability is assumed by Rockwell Automation, Inc. with respect to use of information, circuits, equipment, or software described in this manual.

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Throughout this manual we use notes to make you aware of safety considerations.

WARNING	Identifies information about practices or circumstances that can cause an explosion in a hazardous environment, which may lead to personal injury or death, property damage, or economic loss.
IMPORTANT	Identifies information that is critical for successful application and understanding of the product.
ATTENTION	Identifies information about practices or circumstances that can lead to personal injury or death, property damage, or economic loss. Attentions help you identify a hazard, avoid a hazard, or recognize the consequence

ATTENTION

Environment and Enclosure

This equipment is intended for use in a Pollution Degree 2 industrial environment, in overvoltage Category II applications (as defined in IEC 60664-1), at altitudes up to 2000 m (6562 ft) without derating.
This equipment is considered Group 1, Class A industrial equipment according to IEC/CISPR 11. Without appropriate precautions, there may be difficulties with electromagnetic compatibility in residential and other environments due to conducted and radiated disturbances.
This equipment is supplied as open-type equipment. It must be mounted within an enclosure that is suitably designed for those specific environmental conditions that will be present and appropriately designed to prevent personal injury resulting from accessibility to live parts. The enclosure must have suitable flame-retardant properties to prevent or minimize the spread of flame, complying with a flame spread rating of 5VA, V2, V1, V0 (or equivalent) if non-metallic. The interior of the enclosure must be accessible only by the use of a tool. Subsequent sections of this publication may contain additional information regarding specific enclosure type ratings that are required to comply with certain product safety certifications.
In addition to this publication, see:

- Industrial Automation Wiring and Grounding Guidelines, Rockwell Automation publication 1770-4.1, for additional installation requirements.
- NEMA Standards 250 and IEC 60529, as applicable, for explanations of the degrees of protection provided by different types of enclosure.

WARNING

When you insert or remove the module while backplane power is on, an electrical arc can occur. This could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.

WARNING

If you connect or disconnect wiring while the field-side power is on, an electrical arc can occur. This could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.

ATTENTION

FLEX I/O systems are grounded through the DIN rail to chassis ground. Use zinc plated yellow-chromate steel DIN rail to assure proper grounding. The use of other DIN rail materials (for example, aluminum or plastic) that can corrode, oxidize, or are poor conductors, can result in improper or intermittent grounding. Secure DIN rail to mounting surface approximately every 200 mm (7.8 in.) and use end-anchors appropriately.

ATTENTION

Prevent Electrostatic Discharge

This equipment is sensitive to electrostatic discharge, which can cause internal damage and affect normal operation. Follow these guidelines when you handle this equipment:

- Touch a grounded object to discharge potential static.
- Wear an approved grounding wriststrap.
- Do not touch connectors or pins on component boards.
- Do not touch circuit components inside the equipment.
- Use a static-safe workstation, if available.
- Store the equipment in appropriate static-safe packaging when not in use.

ATTENTION

Do not remove or replace a Terminal Base unit while power is applied. Interruption of the backplane can result in unintentional operation or machine motion.

ATTENTION

Do not wire more than 1 conductor on any single terminal.

ATTENTION

Personnel responsible for the application of safety-related Programmable Electronic Systems (PES) shall be aware of the safety requirements in the application of the system and shall be trained in using the system.

North American Hazardous Location Approval

The following terminal bases are Hazardous Location approved: 1794-TBN, -TBNK, -TB2, -TB3, -TB3K, -TB3S, - TB3SK, -TB3G, TB3GK, -TB3GS, -TB3GSK, -TB3T, -TB3TK, -TB3TS, -TB3TSK, -TB32S, -TB32.

The following information applies when operating this equipment in hazardous locations:	**Informations sur l'utilisation de cet équipement en environnements dangereux :**
Products marked "CL I, DIV 2, GP A, B, C, D" are suitable for use in Class I Division 2 Groups A, B, C, D, Hazardous Locations and nonhazardous locations only. Each product is supplied with markings on the rating nameplate indicating the hazardous location temperature code. When combining products within a system, the most adverse temperature code (lowest "T" number) may be used to help determine the overall temperature code of the system. Combinations of equipment in your system are subject to investigation by the local Authority Having Jurisdiction at the time of installation.	Les produits marqués "CL I, DIV 2, GP A, B, C, D" ne conviennent qu'à une utilisation en environnements de Classe I Division 2 Groupes A, B, C, D dangereux et non dangereux. Chaque produit est livré avec des marquages sur sa plaque d'identification qui indiquent le code de température pour les environnements dangereux. Lorsque plusieurs produits sont combinés dans un système, le code de température le plus défavorable (code de température le plus faible) peut être utilisé pour déterminer le code de température global du système. Les combinaisons d'équipements dans le système sont sujettes à inspection par les autorités locales qualifiées au moment de l'installation.
WARNING **EXPLOSION HAZARD** • Do not disconnect equipment unless power has been removed or the area is known to be nonhazardous. • Do not disconnect connections to this equipment unless power has been removed or the area is known to be nonhazardous. Secure any external connections that mate to this equipment by using screws, sliding latches, threaded connectors, or other means provided with this product. • Substitution of components may impair suitability for Class I, Division 2. • If this product contains batteries, they must only be changed in an area known to be nonhazardous.	**AVERTISSEMENT** **RISQUE D'EXPLOSION** • Couper le courant ou s'assurer que l'environnement est classé non dangereux avant de débrancher l'équipement. • Couper le courant ou s'assurer que l'environnement est classé non dangereux avant de débrancher les connecteurs. Fixer tous les connecteurs externes reliés à cet équipement à l'aide de vis, loquets coulissants, connecteurs filetés ou autres moyens fournis avec ce produit. • La substitution de composants peut rendre cet équipement inadapté à une utilisation en environnement de Classe I, Division 2. • S'assurer que l'environnement est classé non dangereux avant de changer les piles.

European Hazardous Location Approval

The following adapters are European Zone 2 approved: 1794-TBN, -TBNK, -TB2, -TB3, -TB3K, -TB3S, - TB3SK, -TB3G, TB3GK, -TB3GS, -TB3GSK, -TB3T, -TB3TK, -TB3TS, -TB3TSK.

European Zone 2 Certification (The following applies when the product bears the Ex or EEx Marking)

This equipment is intended for use in potentially explosive atmospheres as defined by European Union Directive 94/9/EC and has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of Category 3 equipment intended for use in potentially explosive atmospheres, given in Annex II to this Directive.
Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 60079-15 and EN 60079-0.

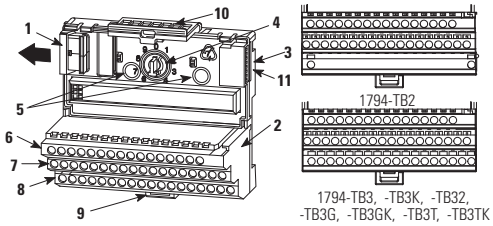
WARNING

Observe the following additional Zone 2 certification requirements.

- This equipment is not resistant to sunlight or other sources of UV radiation.
- This equipment must be installed in an enclosure providing at least IP54 protection when applied in Zone 2 environments.
- This equipment shall be used within its specified ratings defined by Allen-Bradley.
- Provision shall be made to prevent the rated voltage from being exceeded by transient disturbances of more than 40% when applied in Zone 2 environments.
- Secure any external connections that mate to this equipment by using screws, sliding latches, threaded connectors, or other means provided with this product.
- Do not disconnect equipment unless power has been removed or the area is known to be nonhazardous.

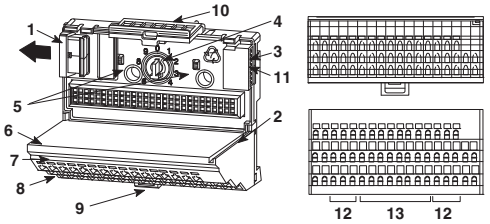
FLEX I/O Cage-clamp Terminal Base Units

Cat. No. 1794-TB2, -TB3, -TB3K, -TB32, -TB3G, -TB3GK, -TB3T, -TB3TK



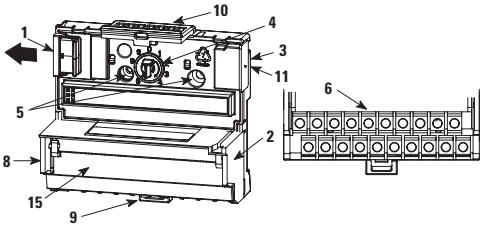
FLEX I/O Spring-clamp Terminal Base Units

Cat. No. 1794-TB3S, -TB3SK, -TB32S, -TB3GS, -TB3GSK, -TB3TS, -TB3TSK



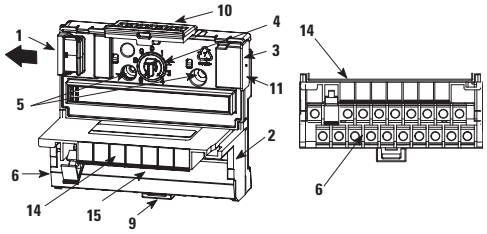
FLEX I/O Terminal Base Units

Cat. No. 1794-TBN, -TBNK



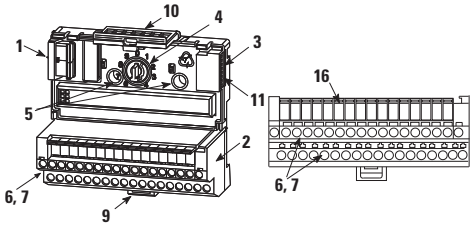
FLEX I/O Fused Terminal Base Units

Cat. No. 1794-TBNF, -TBNFK



FLEX I/O Knifeswitch Terminal Base Unit

Cat. No 1794-TBKD



	Description
1	Female flexbus connector
2	Terminal base unit
3	Male flexbus connector
4	Keyswitch - set to the position required for the installed module
5	Mounting holes for panel mounting
6, 7, 8	Input/output terminal strips for connecting inputs/output wiring, commons, power connections, customer power supplies, chassis grounds
9	Locking tab
10	Module locking latch
11	Cover plug for male flexbus connector
12	Cold-junction compensation terminals (1794-TB3T, -TB3TS, -TB3TK, -TB3TSK only)
13	Chassis ground terminations (1794-TB3T, -TB3TS, -TB3TK, -TB3TSK, -TB3G, -TB3GS, -TB3GSK only)
14	Fuses - eight 5x20 mm (1794-TBNF, -TBNFK only)
15	Terminal strip cover (1794-TBN, -TBNK -TBNF, -TBNFK only)
16	Knife switches (1794-TBKD only)

Mount the Terminal Base Unit on a DIN Rail

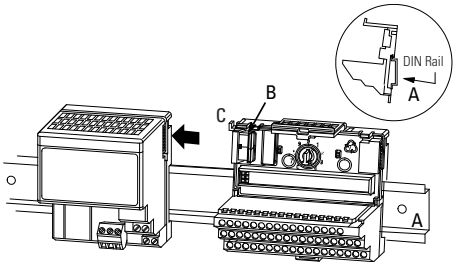
ATTENTION

During mounting of all devices, be sure that all debris (such as metal chips or wire strands) is kept from falling into the module. Debris that falls into the module could cause damage upon application of power.

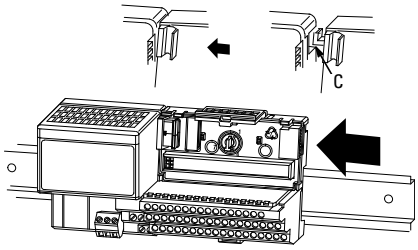
1. Remove the cover plug (if used) in the male connector of the unit to which you are connecting this terminal base unit.
2. Check to make sure the 16 pins in the male connector on the adjacent device are straight and in line so that the mating female connector on this terminal base unit will mate correctly.
3. Make certain the female connector **(B) is fully retracted.**
4. Position the terminal base unit on the 35 x 7.5 DIN rail (A) (A-B pt no. 199-DR1).

ATTENTION

Do not force the terminal base into the adjacent base/adapter. Forcing the units together can bend or break the hook and allow the units to separate and break communication over the backplane.

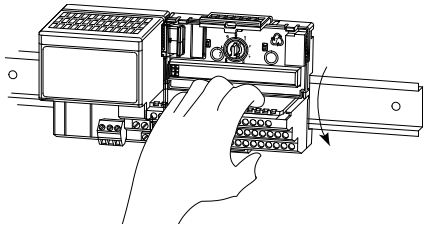


Position the terminal base at a slight angle and hook it over the top of the DIN rail.

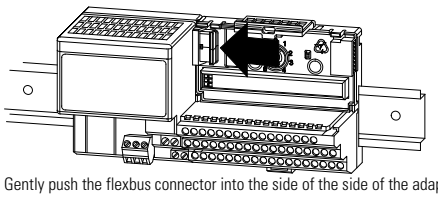


Make sure the hook (C) on the terminal base slides under the edge of the adapter and the flexbus connector is fully retracted. Slide the terminal base over, tight against the adapter.

5. Rotate the terminal base onto the DIN rail with the top of the rail hooked under the lip on the rear of the terminal base. **Use caution to make sure that the female flexbus connector does not strike any of the pins in the mating connector.**



Press down on the terminal base to lock it on the DIN rail. If the terminal base does not lock into place, use a screwdriver or similar device to open the locking tab, press down on the base, and release the locking lever to lock the base in place.



Gently push the flexbus connector into the side of the side of the adapter to complete the backplane connection.

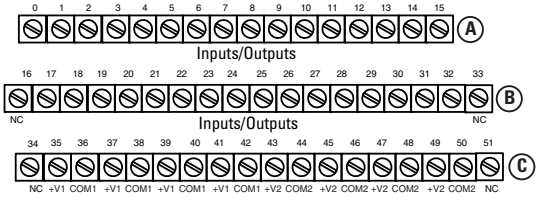
6. Refer to the installation instructions for specific wiring information for the module you are installing in this terminal base.
7. Repeat the above steps to install the next terminal base.

ATTENTION

When using FLEX I/O modules in a high-vibration installation, especially when mounting the DIN rail vertically, use DIN-rail locks (A-B part number 1492-EA35) to prevent accidental separation of the terminal block units.

Wire Connections for the Terminal Base Units

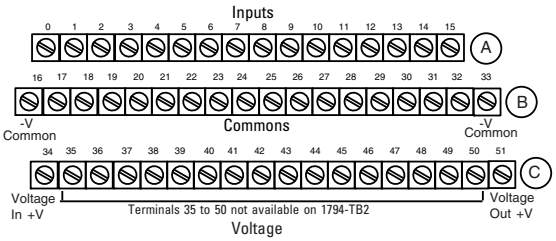
Wiring Connections for the 1794-TB32, -TB32S



+V1 = Terminals 35, 37, 39, 41
+V2 = Terminals 43, 45, 47, 49
COM1 = Terminals 36, 38, 40, 42
COM2 = Terminals 44, 46, 48, 50
NC = No connections (terminals 16, 33, 34, 51)

(1794-TB32 shown)

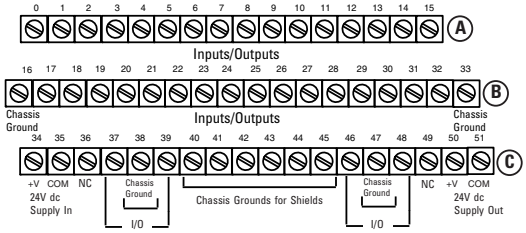
Wiring Connections for the 1794-TB2, -TB3, -TB3K, -TB3S, TB3SK



-V (Common) = Terminals B-16 and B-33
+V (Voltage In) = Terminals C-34 and C-51
For daisy-chaining: Supply in - C-34 (+) and B-16 (-)
Supply out - C-51 (+) and B-33 (-)

(1794-TB3 shown)

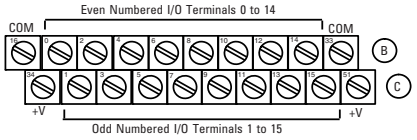
Wiring Connections for the 1794-TB3G, -TB3GK, -TB3GS, -TB3GSK



+24V dc = Terminals C-34, C-50
COM = C-35, C-51
Chassis Ground = Terminals B-16, B-33, C-38, C-40 through 45, C-47
NC = No connection
For daisy-chaining: Supply in - C-34 (+), C-35 (-)
Supply out - C-50 (+), C-51 (-)

(1794-TB3G shown)

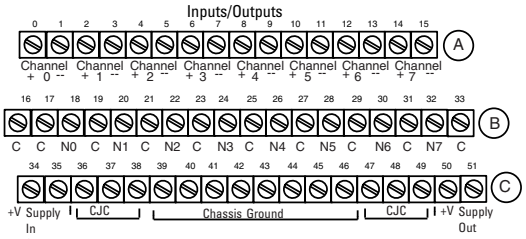
Wiring Connections for the 1794-TBN, 1794-TBNK, 1794-TBNF, 1794-TBNFK



+V = Terminals C-34, C-51
COM (-V) = Terminals B-16, B-33

(1794-TBN shown)

Wiring Connections for the 1794-TB3T, - TB3TK, -TB3TS, -TB3TSK

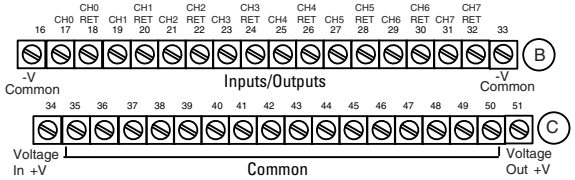


+V) = 24V dc Supply In - Terminals C-34, C-35
-V = 24V dc Common Terminal B-16

(1794-TB3T shown)

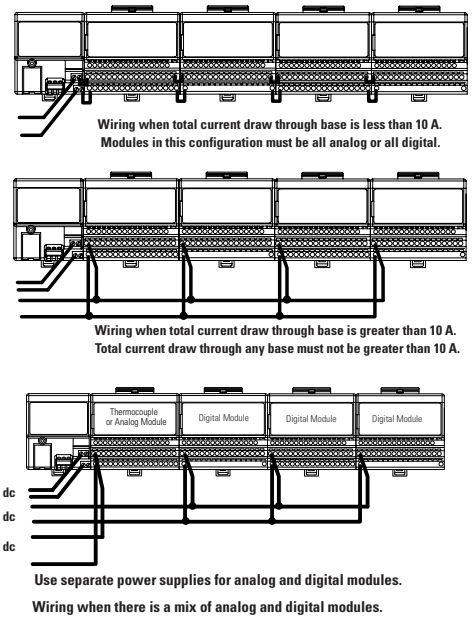
+V = Supply Out - Terminals C-50, C-51
-V = Terminal B-33
C = -V dc common

Wiring Connections for the 1794-TBKD



+V (Voltage In) = Terminals C-34, C-51
-V (Common) = Terminals B-16, B-33, C-35 through C-50
For daisy-chaining: Supply in - C-34 (+), B-16 (-)
Supply out - C-51 (+), B-33 (-)

Typical Wiring Guidelines



Wiring when total current draw through base is less than 10 A. Modules in this configuration must be all analog or all digital.

Wiring when total current draw through base is greater than 10 A. Total current draw through any base must not be greater than 10 A.

Use separate power supplies for analog and digital modules.

Wiring when there is a mix of analog and digital modules.

Terminal base units are rated at 10 A.

For Spring-clamp Terminal Base Units: 1794-TB3S, -TB3TS, -TB3GS, -TB32S, -TB3SK, -TB3TSK, -TB3GSK

″ Insert a 2.54…3.05 mm (0.10…0.12 in.) wide-bladed screwdriver into the slot and lift up. Insert wire, and remove screwdriver.For Cage-clamp Terminal Base Units: 1794-TB2, -TB3, -TB3K, -TB3T,-TB3TK, -TB3G, -TB3GK, -TB32

″ Tighten screws to 0.8 Nm (7 lb-in).

For Knifeswitch Cage-clamp Terminal Base Unit: 1794-TBKD

″ Tighten screws to 0.53 Nm (6 lb-in).

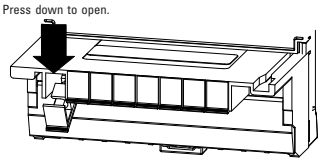
For NEMA Screw-clamp Terminal Base Units: 1794-TBN, -TBNK, -TBNF, -TBNFK

″ Tighten screws to 1.02 Nm (9 lb-in).

Install or Change a Fuse in the 1794-TBNF or 1794-TBNFK Terminal Base Unit

This terminal base unit has fuse holders for 5x20 mm fuses on each of the eight even-numbered I/O terminals (0 through 14 - row B). To install or change a fuse:

1. Press the fuse holder down toward the terminal strip.

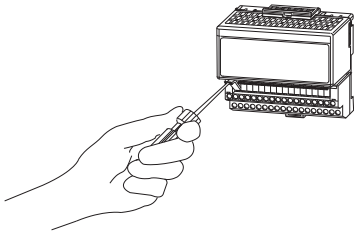


2. Remove the fuse from the fuse holder.
3. Insert a known good 5x20 mm fuse into the fuse holder.
4. Rotate the fuse holder back to vertical until it snaps into the locked position.

The 1794-TBNF and 1794-TBNFK terminal base units are shipped with eight 5x20 mm, 1.6 A, 250V AC slow-blow fuses, one for each even-numbered terminal (0 through 14 on row B). These fuses are suitable for use with the 1794-OA8 AC output module. Refer to the specific installation instructions for fusing recommendations for your particular module.

Use the Knifeswitch Terminal Base

The knifeswitch terminal base has 16 individual mechanical-knifeswitch circuit breakers (two for each channel). Each switch opens or closes one side (input/output and return) for a channel.



1. Place a small-bladed screwdriver into the slot of the knifeswitch of the I/O point circuit that you wish to break.
2. Rotate downward to open the circuit.
   This opens the path of an individual circuit.
3. To reestablish the circuit, rotate the knifeswitch back into the terminal base unit until it snaps into place.

General

Attribute	Value
Terminal screw torque	0.56...0.79 Nm (5...7 lb-in) (1794-TB3TK, -TB3G, -TB3GK, -TB2, -TB32, -TB3, -TB3K, -TB3T) 0.3...0.6 Nm (2.6...5.3 lb-in) (1794-TBKD) 1.4 Nm (12 lb-in) (1794-TBN, -TBNF, -TBNFK, -TBNK)
Supply voltage range (max)	FLEXBUS: 5V DC, 640 mA I/O Terminals: 2A max V/COM Terminals: 125V DC/AC, 50/60Hz, 10A (1794-TB3SK, -TB3TK,-TB2, -TB3, -TB3K, -TB3S, -TB3TK, -TB3TS) V/COM Terminals: 31.2V DC/AC, 50/60Hz, 10A (1794-TB3GSK, -TB3G, -TB3GS, -TB3GK, -TB32, -TB32S V/COM Terminals: 250V DC/AC, 50/60Hz, 10A (1794-TBN, -TBNF, -TBNFK, -TBNK) 1794-TBKD only FLEXBUS: 5V DC, 640 mA Terminal Block: 120V AC, 50/60Hz, 10A Disconnecting Switch: 3A, 20mΩ ATTENTION A disconnecting switch does not shut off the current. Make or break a circuit only under no-load conditions.
Isolation voltage	Capable of 250V (continuous) maximum, Basic Insulation Type, Field Wiring Terminals to FLEXBUS, or the lesser of the installed module. (1794-TBN, -TBNF, -TBNFK, -TBNK) Capable of 125V (continuous) maximum, Basic Insulation Type, Field Wiring Terminals to FLEXBUS, or the lesser of the installed module (1794-TB3SK, -TB3TK, -TB3TK, -TB3TSK, -TB2, -TB3, -TB3K, -TB3S, -TB3TS) Capable of 50V (continuous) maximum, Basic Insulation Type, Field Wiring Terminals to FLEXBUS, or the lesser of the installed module. (1794-TB3G, -TB3GS, -TB3GK, -TB3GSK, -TB32, -TB32S) 2500V DC/sec, Field Wiring Terminals to FLEXBUS. 220V DC/sec, Field Wiring Terminals to Functional Ground. (1794-TBKD)
Voltage rating	See Working Voltage and Isolation Voltage Ratings for nominal values
Enclosure type rating	None (open-style)

Working Voltage and Isolation Voltage Ratings

Terminal Base 1794-	24V	120V	230V	Isolation Voltage
TBN, TBNK, TBNF, TBNFK	AC/DC	AC/DC	AC/DC	Dependent upon installed module - refer to individual installation instructions for your specific module.
TB2, TB3, TB3K, TB3S, TB3SK	AC/DC	AC/DC		
TB3T, TB3TS, TB3TK, TB3TSK	AC/DC	AC/DC		
TB3G, TB3GK, TB3GS, TB3GSK	AC/DC			
TB32, TB32S	AC/DC			
TBKD	DC	AC		

General

Attribute	Value
Wire size	0.34... 3.3 mm² (22…12 AWG) solid or stranded copper wire rated at 75 °C (167 °F) or greater, 1.2 mm (3/64 in.) insulation max. Strip Length: 5-6 mm (0.20...0.24 in.) (1794-TB3SK, -TB3GSK, -TB3TSK, -TB3GK, -TB3GS, -TB32S, -TB3, -TB3K, -TB3S, -TB3TS, -TBN, -TBNF, -TBNFK, -TBNK) 0.34…2.1 mm² (22...14 AWG) solid or stranded copper wire rated at 75 °C (167 °F) or greater, 1.2 mm (3/64 in.) insulation max (1794-TBKD) 0.21... 1.3 mm² (24…16 AWG) stranded copper wire rated at 75 °C (167 °F) or greater, 1.2 mm (3/64 in.) insulation max (1794-TB3TK, -TB3G, -TB2, -TB32)
Wiring category[1]	Established by installed module

General

North American temp code	T4A (1794-TB3G, -TB3GS, -TB3GSK, -TB3GK, -TB3, -TB3K, -TB3T, -TB3TK, -TB3S,-TB3SK, -TB3TS, -TB3TSK, -TBN, -TBNK, -TB32, -TB32S) T6 (1794-TB2)
IEC temp code	T4 (1794-TB3G, -TB3GS, -TB3GSK, -TB3GK, -TB3, -TB3K, -TB3T, -TB3TK, -TB3S, -TB3SK, -TB3TS, -TB3TSK, -TBN, -TBNK) T6 (1794-TB2)
Dimensions, approx.	94 x 94 x 69 mm (HxWxD) (3.7 x 3.7 x 2.7 in.) (with module installed in terminal base)

(1) Use this Conductor Category information for planning conductor routing. Refer to Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1.

Environmental

Attribute	Value
Operating temperature	IEC 60068-2-1 (Test Ad, Operating Cold), IEC 60068-2-2 (Test Bd, Operating Dry Heat), IEC 60068-2-14 (Test Nb, Operating Thermal Shock): -20…70 °C (-4…158 °F) (1794-TB3G, -TB3GS, -TB3GSK, -TB3GK, -TB3, -TB3K, -TB3T, -TB3TK, -TB3S, -TB3SK, -TB3TS, -TB3TSK, TB32, -TB32S, -TBN, -TBNK) 0…55 °C (32…131 °F) (1794-TBKD) -20…55 °C (-4…131 °F) (1794-TBNF, -TBNFK, -TB2)
Non-operating temperature	IEC 60068-2-1 (Test Ab, Unpackaged Non-operating Cold), IEC 60068-2-2 (Test Bb, Unpackaged Non-operating Dry Heat), IEC 60068-2-14 (Test Na, Unpackaged Non-operating Thermal Shock): -40…85 °C (-40…185 °F) -20…85 °C (-4…185 °F) (1794-TBKD)
Relative humidity	IEC 60068-2-30 (Test Db, Unpackaged Damp Heat): 5…95% noncondensing
Vibration	IEC 60068-2-6 (Test Fc, Operating): 5 g @ 10…500 Hz
Operating shock	IEC 60068-2-27 (Test Ea, Unpackaged Shock): 30 g (Except for 1794-TBKD)
Non-operating shock	IEC 60068-2-27 (Test Ea, Unpackaged Shock): 50 g (Except for 1794-TBKD)

Certifications (when product is marked)[1]

Attribute	Value
UL	(1794-TB2) UL Listed Industrial Control Equipment. See UL File E65584.
c-UL-us	(1794-TB3G, -TB3GS, -TB3GSK, -TB3GK, -TB3, -TB3K, -TB3T, -TB3TK, -TB3S, -TB3TS, -TB3SK, -TB3TSK, -TBN, -TBNK, -TB32, -TB32S) UL Listed Industrial Control Equipment, certified for US and Canada. See UL File E65584. UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810. (1794 -TBKD, -TBNF, -TBNFK) UL Listed Industrial Control Equipment, certified for US and Canada. See UL File E65584.
CSA	(1794-TB2, -TB3, -TB3K, -TB3T, -TB3S, -TB3TS, -TB3TK, -TB3SK, -TB3TSK, -TBN, -TBNK, -TB3G, -TB3GK, -TB3GS, -TB3GSK) CSA Certified Process Control Equipment. See CSA File LR54689C. CSA Certified Process Control Equipment for Class I, Division 2 Group A,B,C,D Hazardous Locations. See CSA File LR69960C. (1794-TBNF, -TBNFK) CSA Certified Process Control Equipment. See CSA File LR54689C.
CE	European Union 2004/108/EC EMC Directive, compliant with: EN 61326-1; Meas./Control/Lab., Industrial Requirements EN 61000-6-2; Industrial Immunity EN 61000-6-4; Industrial Emissions EN 61131-2; Programmable Controllers (Clause 8, Zone A & B) European Union 2006/95/EC LVD, compliant with: EN 61131-2; Programmable Controllers (Clause 11)

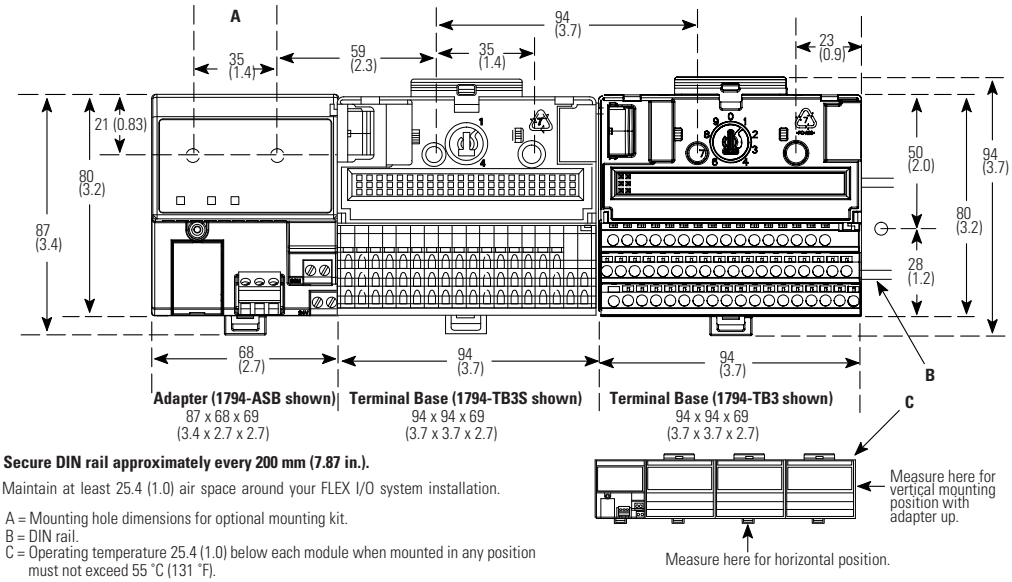
Certifications (when product is marked)[1]

C-Tick	Australian Radiocommunications Act, compliant with: AS/NZS CISPR 11; Industrial Emissions
Ex	(1794-TB3G, -TB3GS, -TB3GSK, -TB3GK, -TB3, -TB3K, -TB3T, -TB3S, -TB3TS, TB3TK, -TB3SK, -TB3TSK, -TBN, -TBNK) European Union 94/9/EC ATEX Directive, compliant with: EN 60079-15; Potentially Explosive Atmospheres, Protection "n" (II 3 G Ex nA IIC T4 X) EN 60079-0; General Requirements (Zone 2) (1794-TB2) European Union 94/9/EC ATEX Directive, compliant with: EN 60079-15; Potentially Explosive Atmospheres, Protection "n" (II 3 G Ex nA IIC T6 X) EN 60079-0; General Requirements (Zone 2)
TÜV	(1794-TB3G, -TB3GS, -TB3GSK, -TB3GK, -TB3, -TB3K, -TB3T, -TB3S, -TB3TS, -TB3TK, -TB3SK, -TB3TSK, -TBNF, -TBNFK) TÜV Certified for Functional Safety: Capable of SIL 2

[1] See the Product Certification link at http://www.ab.com for Declaration of Conformity, Certificates, and other certification details.

Mounting Dimensions

mm
(in.)



Secure DIN rail approximately every 200 mm (7.87 in.).

Maintain at least 25.4 (1.0) air space around your FLEX I/O system installation.

A = Mounting hole dimensions for optional mounting kit.
B = DIN rail.
C = Operating temperature 25.4 (1.0) below each module when mounted in any position must not exceed 55 °C (131 °F).

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