Product Information

Original Instructions

Allen-Bradley
by ROCKWELL AUTOMATION

Trusted 8000 Series: Processor, Digital or Analog I/O, Ancillaries, and Cables

Catalog Numbers T81*xx*, T82*xx*, T83*xx*, T84*xx*(Modules and Ancillaries), T88*xx*(Field Termination Assemblies), and TC-*xxx-xx*, TC-*xxx-xx-x*M*x*(Cables)

ATTENTION: Read this document and the documents listed in the Additional Resources section about installation, configuration and operation of this equipment before you install, configure, operate or maintain this product. Users are required to familiarize themselves with installation and wiring instructions in addition to requirements of all applicable codes, laws, and standards.
Activities including installation, adjustments, putting into service, use, assembly, disassembly, and maintenance are required to be carried out by suitably trained personnel in accordance with applicable code of practice. If this equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
注意：在安装、配置、操作和维护本产品前，请阅读本文档以及 “其他资源” 部分列出的有关设备安装、配置和操作的相应文档。除了所有适用规范、法律和标准的相关要求之外，用户还必须熟悉安装和接线说明。
安装、调整、投运、使用、组装、拆卸和维护等各项操作必须由经过适当训练的专业人员按照适用的操作规范实施。
如果未按照制造商指定的方式使用该设备，则可能会损害设备提供的保护。
ATENCIÓN: Antes de instalar, configurar, poner en funcionamiento o realizar el mantenimiento de este producto, lea este documento y los documentos listados en la sección Recursos adicionales acerca de la instalación, configuración y operación de este equipo. Los usuarios deben familiarizarse con las instrucciones de instalación y cableado y con los requisitos de todos los códigos, leyes y estándares vigentes.
El personal debidamente capacitado debe realizar las actividades relacionadas a la instalación, ajustes, puesta en servicio, uso, ensamblaje, desensamblaje y mantenimiento de conformidad con el código de práctica aplicable. Si este equipo se usa de una manera no especificada por el fabricante, la protección provista por el equipo puede resultar afectada.
ATENÇÃO: Leia este e os demais documentos sobre instalação, configuração e operação do equipamento que estão na seção Recursos adicionais antes de instalar, configurar, operar ou manter este produto. Os usuários devem se familiarizar com as instruções de instalação e fiação além das especificações para todos os códigos, leis e normas aplicáveis.
É necessário que as atividades, incluindo instalação, ajustes, colocação em serviço, utilização, montagem, desmontagem e manutenção sejam realizadas por pessoal qualificado e especializado, de acordo com o código de prática aplicável.
Caso este equipamento seja utilizado de maneira não estabelecida pelo fabricante, a proteção fornecida pelo equipamento pode ficar prejudicada.
ВНИМАНИЕ: Перед тем как устанавливать, настраивать, эксплуатировать или обслуживать данное оборудование, прочитайте этот документ и документы, перечисленные в разделе «Дополнительные ресурсы». В этих документах изложены сведения об установке, настройке и эксплуатации данного оборудования. Пользователи обязаны ознакомиться с инструкциями по установке и прокладке соединений, а также с требованиями всех применимых норм, законов и стандартов.
Все действия, включая установку, наладку, ввод в эксплуатацию, использование, сборку, разборку и техническое обслуживание, должны выполняться обученным персоналом в соответствии с применимыми нормами и правилами.
Если оборудование используется не предусмотренным производителем образом, защита оборудования может быть нарушена.
注意：本製品を設置、構成、稼動または保守する前に、本書および本機器の設置、設定、操作についての参考資料の該当箇所に記載されている文書に目を通してください。ユーザは、すべての該当する条例、法律、規格の要件に加えて、設置および配線の手順に習熟している必要があります。
設置調整、運転の開始、使用、組立て、解体、保守を含む諸作業は、該当する実施規則に従って訓練を受けた適切な作業員が実行する必要があります。
本機器が製造メーカにより指定されていない方法で使用されている場合、機器により提供されている保護が損なわれる恐れがあります。
ACHTUNG: Lesen Sie dieses Dokument und die im Abschnitt „Weitere Informationen“aufgeführten Dokumente, die Informationen zu Installation, Konfiguration und Bedienung dieses Produkts enthalten, bevor Sie dieses Produkt installieren, konfigurieren, bedienen oder warten. Anwender müssen sich neben den Bestimmungen aller anwendbaren Vorschriften, Gesetze und Normen zusätzlich mit den Installations- und Verdrahtungsanweisungen vertraut machen.
Arbeiten im Rahmen der Installation, Anpassung, Inbetriebnahme, Verwendung, Montage, Demontage oder Instandhaltung dürfen nur durch ausreichend geschulte Mitarbeiter und in Übereinstimmung mit den anwendbaren Ausführungsvorschriften vorgenommen werden.
Wenn das Gerät in einer Weise verwendet wird, die vom Hersteller nicht vorgesehen ist, kann die Schutzfunktion beeinträchtigt sein.
ATTENTION : Lisez ce document et les documents listés dans la section Ressources complémentaires relatifs à l’installation, la configuration et le fonctionnement de cet équipement avant d’installer, configurer, utiliser ou entretenir ce produit. Les utilisateurs doivent se familiariser avec les instructions d’installation et de câblage en plus des exigences relatives aux codes, lois et normes en vigueur.
Les activités relatives à l’installation, le réglage, la mise en service, l’utilisation, l’assemblage, le démontage et l’entretien doivent être réalisées par des personnes formées selon le code de pratique en vigueur.
Si cet équipement est utilisé d’une façon qui n’a pas été définie par le fabricant, la protection fournie par l’équipement peut être compromise.
주의: 본 제품 설치, 설정, 작동 또는 유지 보수하기 전에 본 문서를 포함하여 설치, 설정 및 작동에 관한 참고 자료 섹션의 문서들을 반드시 읽고 숙지하십시오. 사용자는 모든 관련 규정, 법규 및 표준에서 요구하는 사항에 대해 반드시 설치 및 배선 지침을 숙지해야 합니다 .
설치 , 조정 , 가동 , 사용 , 조립 , 분해 , 유지보수 등 모든 작업은 관련 규정에 따라 적절한 교육을 받은 사용자를 통해서만 수행해야 합니다 .
본 장비를 제조사가 명시하지 않은 방법으로 사용하면 장비의 보호 기능이 손상될 수 있습니다 .
ATTENZIONE Prima di installare, configurare ed utilizzare il prodotto, o effettuare interventi di manutenzione su di esso, leggere il presente documento ed i documenti elencati nella sezione “Altre risorse”, riguardanti l’installazione, la configurazione ed il funzionamento dell’apparecchiatura. Gli utenti devono leggere e comprendere le istruzioni di installazione e cablaggio, oltre ai requisiti previsti dalle leggi, codici e standard applicabili.
Le attività come installazione, regolazioni, utilizzo, assemblaggio, disassemblaggio e manutenzione devono essere svolte da personale adeguatamente addestrato, nel rispetto delle procedure previste.
Qualora l’apparecchio venga utilizzato con modalità diverse da quanto previsto dal produttore, la sua funzione di protezione potrebbe venire compromessa.
DİKKAT: Bu ürünün kurulumu, yapılandırılması, işletilmesi veya bakımı öncesinde bu dokümanı ve bu ekipmanın kurulumu, yapılandırılması ve işletimi ile ilgili İlave Kaynaklar bölümünde yer listelenmiş dokümanları okuyun. Kullanıcılar yürürlükteki tüm yönetmelikler, yasalar ve standartların gereksinimlerine ek olarak kurulum ve kablolama talimatlarını da öğrenmek zorundadır.
Kurulum, ayarlama, hizmete alma, kullanma, parçaları birleştirme, parçaları sökme ve bakım gibi aktiviteler sadece uygun eğitimleri almış kişiler tarafından yürürlükteki uygulama yönetmeliklerine uygun şekilde yapılabilir.
Bu ekipman üretici tarafından belirlenmiş amacın dışında kullanılırsa, ekipman tarafından sağlanan koruma bozulabilir.
注意事項：在安裝、設定、操作或維護本產品前，請先閱讀此文件以及列於 「其他資源」章節中有關安裝、設定與操作此設備的文件。使用者必須熟悉安裝和配線指示，並符合所有法規、法律和標準要求。
包括安装、調整、交付使用、使用、組裝、拆卸和維護等動作都必須交由已經過適當訓練的人員進行，以符合適用的實作法規。
如果將設備用於非製造商指定的用途時，可能會造成設備所提供的保護功能受損。
POZOR: Než začnete instalovat, konfigurovat či provozovat tento výrobek nebo provádět jeho údržbu, přečtěte si tento dokument a dokumenty uvedené v části Dodatečné zdroje ohledně instalace, konfigurace a provozu tohoto zařízení. Uživatelé se musejí vedle požadavků všech relevantních vyhlášek, zákonů a norem nutně seznámit také s pokyny pro instalaci a elektrické zapojení.
Činnosti zahrnující instalaci, nastavení, uvedení do provozu, užívání, montáž, demontáž a údržbu musí vykonávat vhodně proškolený personál v souladu s příslušnými prováděcími předpisy.
Pokud se toto zařízení používá způsobem neodpovídajícím specifikaci výrobce, může být narušena ochrana, kterou toto zařízení poskytuje.
UWAGA: Przed instalacją, konfiguracją, użytkowaniem lub konserwacją tego produktu należy przeczytać niniejszy dokument oraz wszystkie dokumenty wymienione w sekcji Dodatkowe źródła omawiające instalację, konfigurację i procedury użytkowania tego urządzenia. Użytkownicy mają obowiązek zapoznać się z instrukcjami dotyczącymi instalacji oraz oprzewodowania, jak również z obowiązującymi kodeksami, prawem i normami.
Działania obejmujące instalację, regulację, przekazanie do użytkowania, użytkowanie, montaż, demontaż oraz konserwację muszą być wykonywane przez odpowiednio przeszkolony personel zgodnie z obowiązującym kodeksem postępowania.
Jeśli urządzenie jest użytkowane w sposób inny niż określony przez producenta, zabezpieczenie zapewniane przez urządzenie może zostać ograniczone.
OBS! Läs detta dokument samt dokumentet, som står listat i avsnittet Övriga resurser, om installation, konfigurering och drift av denna utrustning innan du installerar, konfigurerar eller börjar använda eller utföra underhållsarbete på produkten. Användare måste bekanta sig med instruktioner för installation och kabeldragning, förutom krav enligt gällande koder, lagar och standarder.
Åtgärder som installation, justering, service, användning, montering, demontering och underhållsarbete måste utföras av personal med lämplig utbildning enligt lämpligt bruk.
Om denna utrustning används på ett sätt som inte anges av tillverkaren kan det hända att utrustningens skyddsanordningar försätts ur funktion.
LET OP: Lees dit document en de documenten die genoemd worden in de paragraaf Aanvullende informatie over de installatie, configuratie en bediening van deze apparatuur voordat u dit product installeert, configureert, bediend of onderhoudt. Gebruikers moeten zich vertrouwd maken met de installatie en de bedradingsinstructies, naast de vereisten van alle toepasselijke regels, wetten en normen.
Activiteiten zoals het installeren, afstellen, in gebruik stellen, gebruiken, monteren, demonteren en het uitvoeren van onderhoud mogen uitsluitend worden uitgevoerd door hiervoor opgeleid personeel en in overeenstemming met de geldende praktijkregels.
Indien de apparatuur wordt gebruikt op een wijze die niet is gespecificeerd door de fabrikant, dan bestaat het gevaar dat de beveiliging van de apparatuur niet goed werkt.

Summary of Changes

This publication contains the following new or updated information. This list includes substantive updates only and is not intended to reflect all changes.

Topic	Page
Updated European and United Kingdom Hazardous Location Approval.	3
Updated IEC Hazardous Location Approval.	3
Updated Field Wiring Connections	7

ATTENTION: Before installing, configuring, operating, or maintaining this product, read this document and the documents listed in the additional resources section for installing, configuring or operating equipment. Users should familiarize themselves with installation and wiring instructions in addition to requirements of all applicable codes, laws, and standards.
This equipment is certified for use only within the surrounding air temperature range of 0…60 °C (32…140 °F). The equipment must not be used outside of this range.
Installation, adjustments, putting into service, use, assembly, disassembly, and maintenance shall be carried out by suitably trained personnel in accordance with applicable code of practice.
In case of malfunction or damage, make no attempt at repair. Return the module to the manufacturer for repair. Do not dismantle the module.
Use only a soft dry anti-static cloth to wipe down equipment. Do not use any cleaning agents

IMPORTANT Any illustrations, charts, sample programs, and layout examples shown in this publication are intended solely for purposes of example. Since there are many variables and requirements associated with any particular installation, Rockwell Automation does not assume responsibility or liability for actual use based upon the examples shown in this publication

Environment and Enclosure

ATTENTION: 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 2000m (6562ft) without de-rating. This equipment is not intended for use in residential environments and may not provide adequate protection to radio communication services in such environments.
This equipment is supplied as open-type equipment for indoor use. It must be vertically 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 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 the following:

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

Prevent Electrostatic Discharge

ATTENTION: 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 wrist-strap.
- 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

Removal and Insertion Under Power (RIUP)

WARNING: When you insert or remove the module while backplane power is on, an electric arc can occur. This could cause an explosion in hazardous location installations. Be sure that power is removed or the area is non-hazardous before proceeding. Repeated electric arcing causes excessive wear to contacts on both the module and its mating connector. Worn contacts can create electrical resistance that can affect module operation.

FTA connections

WARNING: The following non-latched FTA connections shall not to be used in hazardous location installations:
T8800: JDH1; T8801: JDH1; T8802: SK1; T8830: JDH1; T8831: JDH1; T8832: SK1; T8842: SK1; T8850: JDH1.
Models may be followed by suffix C

Programming / Maintenance Connections

WARNING: The Programming/Monitoring PS2 connection on the T8151B and T8111 front fascia shall not be used in hazardous location installations.
T8111 may be followed by suffix C. T8151B is equivalent to T8151C

North American Hazardous Location approval

The following information applies when operating this equipment in hazardous locations:

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 non-hazardous 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.

WARNING: EXPLOSION HAZARD
- Do not disconnect equipment unless power has been removed or the area is known to be non-hazardous.
- Do not disconnect connections to this equipment unless power has been removed or the area is known to be non-hazardous. 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.
- The system shall be installed with T8270 fan trays.

Informations spur l'utilisation de cet équipement en environnements dangereux:

Les produits marqués "CL I, DIV 2, GP A, B, C, D" ne conviennent qu'á 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 combines dans un système, le code de température le plus défavorable (code de température le plus faible) peut être utilise pour determiner le code de température global du système. Les combinaisons d'équipements dans le système sont sujettes á inspection par les autorités locales qualifiées au moment de l'installation.

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 externs relies á l'aide de vis, loquets coulissants, connecteurs filetés ou autres moyens fournis avec ce produit.
- La substitution de composants peut render cet équipement inadapté á une utilisation en environnement de Classe I, Division 2.
- Le système doit être installé avec des ventilateurs T8270

European and United Kingdom Hazardous Location Approval

The following applies to products marked Ⓔx II 3 G.

- Such modules are Equipment Group II, Equipment Category 3, and comply with the Essential Health and Safety Requirements relating to the design and construction of such equipment given in Annex II to Directive 2014/34/EU. See the EC Declaration of Conformity at rok.auto/certifications for details.
- The type of protection is Ex nA IIC T4 GC according to EN 60079-15 for Series A and Series B modules.
- The type of protection is Ex ec IIC T4 GC according to EN 60079-7 for Series C modules.
- Operating temperature range is: 0°C < Ta < +60°C.
- Such modules comply with Standards EN 60079-0:2018 and EN 60079-7:2015 +A1:2018 or EN 60079-15:2019. Reference certificate number DEMK017ATEX1821X (Europe) and UL21UKEX2036X (United Kingdom).
- Are intended for use in areas in which explosive atmospheres caused by gases, vapours, mists, or air or dust mixtures are unlikely to occur, or are likely to occur only infrequently and for short periods. Such locations correspond to Zone 2 classification according to ATEX directive 2014/34/EU and UK directive 2016 No. 1107.

ATTENTION: Electrical Safety Considerations:
- Isolation from Mains power via an approved isolating transformer constructed with reinforced insulation, Basic plus supplementary or Basic with a protective screen.
- If multiple power sources are used, do not exceed the specified isolation voltage.

IEC Hazardous Location Approval

The following applies to products with IECEx certification.

- Such modules are intended for use in areas in which explosive atmospheres caused by gases, vapours, mists, or air or dust mixtures are unlikely to occur, or are likely to occur only infrequently and for short periods. Such locations correspond to Zone 2 classification according to IEC 60079-0.
- The type of protection is Ex nA IIC T4 GC according to IEC 60079-15 for Series A and Series B modules.
- The type of protection is Ex ec IIC T4 GC according to IEC 60079-7 for Series C modules.
- Operating temperature range is: 0°C < Ta < +60°C.
- Such modules comply with Standards: IEC 60079-0: 6th edition and IEC 60079-7: 5th Edition or IEC 60079-15: 4th edition. Reference certificate number: IECExULD17.0001X

WARNING: Special Conditions for Safe Use
- The system shall be installed with T8270 fan trays.
- The system shall be installed in an enclosure that provides a degree of protection not less than IP 54 in accordance with EN/IEC 60079-0.
- Enclosure is to be marked with the following: "Warning - Do not open when energized". After installation of subject devices into the enclosure, access to termination compartments shall be dimensioned so that conductors can be readily connected.
- The system shall only be used in an area of not more than pollution degree 2, as defined in EN/IEC 60664-1.
- The chassis T8100 and T8300 need to be installed in the vertical orientation only. Any unused slots shall be fitted with blanking plates: T8191 or T8193.
- Provision shall be made to prevent the rated voltage from being exceeded by transient disturbances of more than 140% of the peak rated voltage when applied in Zone 2 environments

Replaceable Fuses

WARNING: Do not remove or replace fuse when energised.
Applicable to models T8800, T8802, T8830, T8832, T8842, T8270
Models may be followed by suffix C

Waste Electrical and Electronic Equipment (WEEE) and Battery Disposal



At the end of its life, this equipment should be collected separately from any unsorted municipal waste.
Model T8151C contains a lithium button cell battery which is permanently connected and should only be removed by trained professionals. When the product reaches its end of life, the battery contained in this product should be collected separately and not disposed in any municipal waste.

Equipment Ratings

Model[1]	Description	Supply Ratings	Input/Output Ratings	Fuse	Certification
T8100	Processor Chassis	20 - 32Vdc		External: 20A advised	Ord/HazLoc/ATEX/IECEx
T8300	Expander Chassis	20 - 32Vdc		External: 20A advised	Ord/HazLoc/ATEX/IECEx
T8111	Main Processor	20 - 32 Vdc, 30W	Fault/fail relays 0.5 A / 24 V	-	Ord/HazLoc/ATEX/IECEx
T812x	Processor Interface Adaptor	N/A		-	Ord/HazLoc/ATEX/IECEx
T8131	ICS 2000 IRIG-B and Modbus Master	N/A		-	Ord/HazLoc/ATEX/IECEx
T8151B[2]	Communications Module	20 - 32 Vdc, 10 W		-	Ord/HazLoc/ATEX/IECEx
T8153	Comms Interface Adaptor	N/A		-	Ord/HazLoc/ATEX/IECEx
T8191	Trusted Shield Single Slot Width	N/A		-	Ord/HazLoc/ATEX/IECEx
T8193	Trusted Shield Three Slot Width	N/A		-	Ord/HazLoc/ATEX/IECEx
T8270	Trusted Fan Tray (chassis)	18 - 28 Vdc, 8 W		20mm 250mA A/S (qty 2)	Ord/HazLoc/ATEX/IECEx
T8271	Trusted Roof Fan Assembly	18 - 28 Vdc, 16 W		20mm 500mA A/S (qty 2)	-
T8290	Trusted Output Power Distribution Unit	18 - 140 Vdc	60A Max	-	Ord/HazLoc/ATEX/IECEx
T8292	Trusted Power Distribution Unit MCB 24Vdc	18 - 28 Vdc	60A Max.	-	OrdLoc
T8293	Power Distribution Unit (Fused)	20 - 32 Vdc or 34 - 60 Vd	23A Max	20mm 3.15 A T (qty 30)	Ord/Hazloc
T8297	Trusted Output Power Distribution Unit (DP)	18 - 140 Vdc	60 A studs; 6 A diodes	-	Ord/HazLoc/ATEX/IECEx
T8310	Expander Processor	20 - 32 Vdc, 45 W	-	-	Ord/HazLoc/ATEX/IECEx
T8310CX	Expander Processor, non-RoHS				Ord/HazLoc/IECEx
T8311	Expander Interface	20 - 32 Vdc, 54 W	-	-	Ord/HazLoc/ATEX/IECEx
T8311CX	Expander Interface, nin-RoHS				Ord/HazLoc/IECEx
T8312-x	Expander Interface Adaptor	N/A	-	-	Ord/HazLoc/ATEX/IECEx
T8314	Trusted Fibre Tx/Rx Unit	18 - 32Vdc, 1.7W	-	-	Ord/HazLoc/ATEX/IECEx
T8402	Digital Input Dual 60 channel	20 - 32 Vdc, 20W	0 – 40 Vdc	-	Ord/HazLoc/ATEX/IECEx
T8403	Digital Input TMR 40 channel	20 - 32 Vdc, 20 W	0 – 40 Vdc	-	Ord/HazLoc/ATEX/IECEx
T8403CX	Digital Input TMR 40 channel, non-RoHS				Ord/HazLoc/IECEx
T8423	Digital Input TMR 40 channel 120 Vdc	20 - 32 Vdc, 20 W	35 – 140 Vdc	-	Ordinary Locations
T8424	Digital Input TMR 40 channel 120 Vac	20 - 32 Vdc, 20 W	0 – 150 Vac	-	Ordinary Locations
T8425	Digital Input TMR 40 Channel 120Vdc	20 - 32 Vdc, 20 W	40Vdc (Attenuated on FTA from 150 Vdc)	-	Ordinary Locations
T8431	Analog Input TMR 40 channel	20 - 32 Vdc, 20 W	0 – 6 Vdc (0 – 22mA)	-	Ord/HazLoc/ATEX/IECEx
T8431CX	Analog Input TMR 40 channel, non-RoHS				Ord/HazLoc/IECEx
T8432	Analog Input Dual 60 channel	20 - 32 Vdc, 4-20 mA, 20W	0 – 6 Vdc (0 – 22mA)	-	Ord/HazLoc/ATEX/IECEx
T8433	Analog Input TMR – 20 channel, Isolated	20 - 32 Vdc, 21 W	0 – 2.5V sig (2 - 22 mA) 4.5 – 8V supply	-	Ord/HazLoc/ATEX/IECEx
T8442	Speed Monitor Module	20 - 32 Vdc, 22 W		-	-
T8448	Zone Interface Module	20 - 32 Vdc, 27 W	18 – 32 V dc; 2A/channel; 8A / power group (48 W)	-	Ord/HazLoc/ATEX/IECEx
T8449	Valve Monitor Module	20 - 32 Vdc, 27 W		-	Ord/HazLoc/ATEX/IECEx
T8451	Digital Output TMR 24 Vdc 40 channel	20 - 32 Vdc, 27 W		-	Ord/HazLoc/ATEX/IECEx
T8461	Digital Output TMR 48 Vdc 40 channel	20 - 32 Vdc, 27 W	18 – 58 V dc; 0.75 A / channel; 6A / power group (14 W)	-	Ord/HazLoc/ATEX/IECEx
T8461CX	Digital Output TMR 48 Vdc 40 channel, non-RoHS				Ord/HazLoc/IECEx
T8471	Digital Output TMR 120 Vdc 32 channel	20 - 32 Vdc, 24 W	90 – 140 Vdc; 0.5 A / channel; 2 A / power group (24 W)	-	Ordinary Locations
T8472	Digital Output TMR 120 Vdc 16 channel	20 - 32 Vdc, 20 W	90 – 140 Vac; 0.5 A / channel; 4 A / power group (8 W)	-	Ordinary Locations
T8480	Analog Output TMR 40 channel	20 - 32 Vdc, 20 W	18 – 32 V dc; 1 – 22 mA / channel (28 W)	-	Ord/HazLoc/ATEX/IECEx
T8800	Digital Input FTA 40 channel fused	18 – 32 Vdc, 0 W	6.4mA / channel	TR5, 50 mA (qty 40)	Ord/HazLoc/ATEX/IECEx
T8801	Digital Input FTA 40 channel. Non Incendive	18 - 32 Vdc, 0.5 W	6.1 mA / channel	-	Ord/HazLoc/ATEX/IECEx
T8802	Digital Input FTA 60 channel Fused	18 - 32 Vdc, 12 W	6.4 mA / channel	TE5, 50 mA (qty 61)	Ord/HazLoc/ATEX/IECEx
T8805	Digital Input FTA 60 channel. Non Incendive	18 - 32 Vdc; 12 W	6.1 mA / channel	-	Ord/HazLoc/ATEX/IECEx
T8821	Digital Input FTA, 40 Channel 120Vdc	35 - 140 Vdc	2 mA / channel	TR5, 50 mA (qty 40)	Ordinary Locations
T8824	Digital Input FTA, 40 Channel 120Vac	90 - 150 Vac; 26 W	6 mA / channel	TR5, 50 mA (qty 40)	Ordinary Locations
T8825	Digital Input FTA, 40 Channel 120Vdc	35-150 Vdc	3 mA / channel	TR5, 50 mA (qty 40)	Ordinary Locations
T8830	Analog Input FTA 40 channel fused	18 - 32 Vdc, 5 W	0 – 22 mA / channel	TR5, 50 mA (qty 40)	Ord/HazLoc/ATEX/IECEx
T8831	Analog Input FTA 40 channel. Non Incendive	18 - 32 Vdc; 7 W	0 – 22 mA / channel	-	Ord/HazLoc/ATEX/IECEx
T8832	Analog Input FTA 60 Channel	18 - 32 Vdc	0 – 22 mA / channel	TE5, 50 mA (qty 61)	Ord/HazLoc/ATEX/IECEx
T8833	Analog/Digital Input 20ch, Isolated	Field loop powered; 9 W	2 - 30mA / channel	-	Ord/HazLoc/ATEX/IECEx
T8835	Analog Input FTA 60 channel. Non Incendive	18 - 32 Vdc	0 – 22 mA / channel	-	Ord/HazLoc/ATEX/IECEx
T8842	Versatile FTA	18 - 28Vdc; <9W	2.52A Max per pwr group	TE5: 50 mA ; 315mA ; 2A (@ qty 40)	Ord/HazLoc/ATEX/IECEx
T8846	Speed Input Field Terminal Assy (SIFTA)	Vfield: 18-32Vdc 140mA/Ch	Sensor:100 mV - 10 V Fmax: 30 kHz Rin: 632 R	-	-
T8850	Analog/Digital Output FTA 40 channel	18 – 32 Vdc; 18 – 60 Vdc (see PD)	2A max per channel (40 A max)	-	Ord/HazLoc/ATEX/IECEx
T8870	Digital Output FTA, 32 Channel 120Vdc	90 – 140Vdc	0.5 A per Ch; 2A per pwr group	-	Ordinary Locations
T8871	Digital Output FTA, 16 Channel 120Vac	90 Vac – 150 Vac;	0.5A / channel; 4A/ pwr group	-	Ordinary Locations

Model[1]	Description	Supply Ratings	Input/Output Ratings	Fuse	Certification
T8891	Speed Output Field Terminal Assy (SOFTA)	N/A – supply from T8442	3A / 120Vac 2A / 30Vdc	-	-
TC-001-0x-xMx TC-002-0x-xMx	Trusted TC000 Power Cables	60V/20A max	-	-	Ord/HazLoc/ATEX/IECEx
TC-003-0x-xMx TC-004-0x-xMx		60V/5A max			Ordinary Locations
TC-006-0x-xMx		60V/5 A max			Ord/HazLoc/ATEX/IECEx
TC-011-0x-xMx		60V/20 A max			Ord/HazLoc/ATEX/IECEx
TC-201-02-xMx	Trusted I/O Companion Slot Cables	60 V/2A max per channel	-	-	HazLoc/ATEX/IECEx
TC-201-03-xMx		150 Vdc			Ordinary Locations
TC-202-02-xMx		60 V/2A max per channel			HazLoc/ATEX/IECEx
TC-202-03-xMx		150 Vdc			Ordinary Locations
TC-203-02-xMx		60 V/2A max per channel			HazLoc/ATEX/IECEx
TC-203-03-xMx		150 Vdc			Ordinary Locations
TC-204-02-xMx		60 V/2A max per channel			HazLoc/ATEX/IECEx
TC-204-03-xMx		150 Vdc			Ordinary Locations
TC-205-02-xMx		60 V/2A max per channel			HazLoc/ATEX/IECEx
TC-205-03-xMx		150 Vdc			Ordinary Locations
TC-206-02-xMx		60 V/2A max per channel			HazLoc/ATEX/IECEx
TC-206-03-xMx		150 Vdc			Ordinary Locations
TC-207-02-xMx		60 V/2A max per channel			HazLoc/ATEX/IECEx
TC-207-03-xMx		150 Vdc			Ordinary Locations
TC-208-02-xMx		60 V/2A max per channel			HazLoc/ATEX/IECEx
TC-208-03-xMx		150 Vdc			Ordinary Locations
TC-209-02-xMx		60 V/2A max per channel			HazLoc/ATEX/IECEx
TC-209-03-xMx		150 Vdc			Ordinary Locations
TC-210-02-xMx		60 V/2A max per channel			HazLoc/ATEX/IECEx
TC-210-03-xMx		150 Vdc			Ordinary Locations
TC-211-0x-xMx		150Vdc			Ordinary Locations
TC-212-02-xMx		60 V/2A max per channel			HazLoc/ATEX/IECEx
TC-212-03-xMx		150 Vdc			Ordinary Locations
TC-215-02-xMx		60 V/2A max per channel			HazLoc/ATEX/IECEx
TC-215-03-xMx		150 Vdc			Ordinary Locations
TC-216-02-xMx		60 V/2A max per channel			HazLoc/ATEX/IECEx
TC-216-03-xMx		150 Vdc			Ordinary Locations
TC-218-02-xMx		60 V/2A max per channel			HazLoc/ATEX/IECEx
TC-218-03-xMx		150 Vdc			Ordinary Locations
TC-221-02-xMx		60 V/2A max per channel			HazLoc/ATEX/IECEx
TC-221-03-xMx		150 Vdc			Ordinary Locations
TC-223-0x-xMx		150Vdc			Ordinary Locations
TC-301-0x-xMx TC-302-0x-xMx	Trusted Communications Cables	60V/2A max per channel	-	-	Ord/HazLoc/ATEX/IECEx
TC-303-0x-xMx TC-304-01		60V/2A max per channel			Ordinary Locations
TC-305-01		60V/2A max per channel			Ord/HazLoc/ATEX/IECEx
TC-306-02		60V/2A max per channel			HazLoc/ATEX/IECEx
TC-306-03		150Vdc			Ordinary Locations
TC-308-02		60V/2A max per channel			HazLoc/ATEX/IECEx
TC-308-03		150Vdc			Ordinary Locations
TC-310-0x		150 Vac/2A per channel			Ordinary Locations
TC-311-0x TC-312-0x TC-313-0x TC-314-0x-xMx		60V/2A max per channel			Ord/HazLoc/ATEX/IECEx

Model[1]	Description	Supply Ratings	Input/Output Ratings	Fuse	Certification
TC-501-02-xMx	Trusted TMR I/O SmartSlot Cables	60V/2A max per channel	-	-	HazLoc/ATEX/IECEx
TC-501-03-xMx		150 Vdc			Ordinary Locations
TC-502-02-xMx		60V/2A max per channel			HazLoc/ATEX/IECEx
TC-502-03-xMx		150 Vdc			Ordinary Locations
TC-503-02-xMx		60V/2A max per channel			HazLoc/ATEX/IECEx
TC-503-03-xMx		150 Vdc			Ordinary Locations
TC-504-02-xMx		60V/2A max per channel			HazLoc/ATEX/IECEx
TC-504-03-xMx		150 Vdc			Ordinary Locations
TC-506-0x-xMx TC-507-0x-xMx TC-508-0x-xMx TC-509-0x-xMx TC-510-0x-xMx TC-516-0x-xMx TC-517-0x-xMx TC-518-0x-xMx		60V/2A max per channel			Ord/HazLoc/ATEX/IECEx
TC-511-02-xMx		60V/2A max per channel			HazLoc/ATEX/IECEx
TC-511-03-xMx		150 Vdc			Ordinary Locations
TC-512-02-xMx		60V/2A max per channel			HazLoc/ATEX/IECEx
TC-512-03-xMx		150 Vdc			Ordinary Locations
TC-521-0x-xMx		150 Vdc/0.5A per channel			Ordinary Locations
TC-601-0x-xMx TC-602-0x-xMx TC-604-0x-xMx	Trusted Dual I/O SmartSlot Cables	60V/2A max per channel	-	-	Ord/HazLoc/ATEX/IECEx
TC-701-0x-xMx TC-702-0x-xMx TC-704-0x-xMx	Trusted Dual I/O Companion Slot Cables	60V/2A max per channel	-	-	Ord/HazLoc/ATEX/IECEx
TC-801-0x-xMx	Trusted Special I/O Cables	60V/2A max per channel	-	-	Ord/HazLoc/ATEX/IECEx

(1) Catalog numbers for T8xxx models may be followed by suffix C.

(2) T8151B is equivalent to T8151C.

Removable Terminal Blocks



WARNING: When you connect or disconnect the removable terminal block (RTB) with field-side power applied, an electric arc can occur. This could cause an explosion in hazardous location installations. Be sure that power is removed or the area is non-hazardous before proceeding.



ATTENTION: The Trusted® 8000 System has been agency certified using only the Trusted RTBs. Any application that requires agency certification of the Trusted System by using other wiring termination methods may require application-specific approval by the certifying agency.

Field Wiring Connections

Model Cat. #	RA part #	TB type	Torque and wire size	Number of cable terminations allowed per TB
T8800, T8801, T8821, T8825 T8830, T8831	3JX133	Screw clamp	0.5 N.m; 30...12 AWG (0.05...2.5 mm^2)	1
	3JX136	Screw clamp	0.5 N.m; 30...12 AWG (0.05...2.5 mm^2)	1
	3JX137	Screw clamp	0.5 N.m; 30...12 AWG (0.05...2.5 mm^2)	1
T8802, T8832, T8805, T8835	3JX142	Spring clamp	26...12 AWG (0.2...2.5 mm^2)	1
	3JX145	Spring clamp	26...12 AWG (0.2...2.5 mm^2)	1
	3JX139	Spring clamp	26...12 AWG (0.2...2.5 mm^2)	1
T8824, T8825	3AX185	Screw clamp	0.5 N.m; 30...12 AWG (0.05...2.5 mm^2)	1
	3AX194	Screw clamp	0.5 N.m; 30...12 AWG (0.05...2.5 mm^2)	1
T8833	3JX131	Screw clamp	0.5 N.m; 30...12 AWG (0.05...2.5 mm^2)	1
T8842 / VFTA cable assys	169024	Spring clamp	26...14 AWG (0.2...1.5 mm^2)	1
	169027	Spring clamp	26...14 AWG (0.2...1.5 mm^2)	1
	3JX145	Spring clamp	26...12 AWG (0.2...2.5 mm^2)	1
	170747	Screw clamp	26...12 AWG (0.2...2.5 mm^2)	1
T8850, T8870	3JX137	Screw clamp	0.5 N.m; 30...12 AWG (0.05...2.5 mm^2)	1
	3JX138	Screw clamp	0.5 N.m; 30...12 AWG (0.05...2.5 mm^2)	1
T8871	3AX196	Screw clamp	0.5 N.m; 30...12 AWG (0.05...2.5 mm^2)	1
	3AX197	Screw clamp	0.5 N.m; 30...12 AWG (0.05...2.5 mm^2)	1
T8292	3JX140	Screw clamp	1.2...1.5 N.m; 26...6 AWG (0.2...16 mm^2)	1
	3JX142	Spring clamp	26...12 AWG (0.2...2.5 mm^2)	1
T8293	3JX140	Screw clamp	1.2...1.5 N.m; 26...6 AWG (0.2...16 mm^2)	1
	3JX142	Spring clamp	26...12 AWG (0.2...2.5 mm^2)	1
	3JX145	Spring clamp	26...12 AWG (0.2...2.5 mm^2)	1
T8290, T8297	162306	Screw clamp	0.5 N.m; 26...12 AWG (0.2...2.5 mm^2)	1
T812x, T8131	3JX072	Spring clamp	28...20 AWG (0.14...0.5 mm^2)	1
	3JX073	Spring clamp	28...20 AWG (0.14...0.5 mm^2)	1
	3JX074	Spring clamp	28...20 AWG (0.14...0.5 mm^2)	1
	3JX075	Spring clamp	28...20 AWG (0.14...0.5 mm^2)	1
	3JX076	Spring clamp	28...20 AWG (0.14...0.5 mm^2)	1
T8153	3JX077	Spring clamp	28...20 AWG (0.14...0.5 mm^2)	1
	3JX076	Spring clamp	28...20 AWG (0.14...0.5 mm^2)	1
T8846	3AX184	Screw clamp	0.5/0.6 N.m; 30...12 AWG (0.05...2.5 mm^2)	1
T8891	3AX185	Screw clamp	0.5 N.m; 30...12 AWG (0.05...2.5 mm^2)	1

The minimum rated temperature of wiring used for field connection must be at least 75 °C (167 °F).

Additional Resources

These documents contain additional information concerning related products from Rockwell Automation.

Resource	Description
Trusted TMR System Safety Manual T8094, publication ICSTT-RM459	Describes methods which must be applied for safe installation of this product
PFH and PFDavg Data for Trusted TMR System 552762, publication ICSTT-TD002	Failure rate data
Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1	Provides general guidelines for installing a Rockwell Automation industrial system.
Product Certifications website, rok.auto/certifications.	Provides declarations of conformity, certificates, and other certification details.
Product Notices and Safety advisories, rok.auto/knowledgebase, Obtain Login and then access "Support" "Search KnowledgeBase" for "Trusted Product"	Provides information which may affect the safe operation of the equipment.

You can view or download publications at rok.auto/literature

Rockwell Automation Support

Use these resources to access support information.

Technical Support Center	Find help with how-to videos, FAQs, chat, user forums, and product notification updates.	rok.auto/support
Knowledgebase	Access Knowledgebase articles.	rok.auto/knowledgebase
Local Technical Support Phone Numbers	Locate the telephone number for your country.	rok.auto/phonesupport
Literature Library	Find installation instructions, manuals, brochures, and technical data publications.	rok.auto/literature
Product Compatibility and Download Center (PCDC)	Download firmware, associated files (such as AOP, EDS, and DTM), and access product release notes.	rok.auto/pcdc

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Waste Electrical and Electronic Equipment (WEEE)



At the end of life, this equipment should be collected separately from any unsorted municipal waste.

Rockwell Automation maintains current product environmental compliance information on its website at rok.auto/pec.

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