DE Kurzbetriebsanleitung

JBBS-…/EX

Weitere Unterlagen

Ergänzend zu diesem Dokument finden Sie im Internet unter www.turck.com folgende Unterlagen:
- Datenblatt
- Konformitätserklärungen (aktuelle Version)
- Zulassungen

Zu Ihrer Sicherheit

Bestimmungsgemäße Verwendung

Die 4-kanaligen Verteilerbausteine JBBS-…-…4…/EX und die 6-kanaligen Verteilerbausteine JBBS-…-…6…/EX dienen zur Verteilung von Energie und Daten für PROFIBUS PA oder FOUNDATION fieldbus. Der Einsatz der Geräte in Zone 1 oder 2 ist abhängig vom eigensicheren Stromkreis des separat zugelassenen Speisegeräts.
Das Gehäuse besteht aus Aluminium-Druckguss und verfügt über die Schutzart IP67.
Das Gerät darf nur wie in dieser Anleitung beschrieben verwendet werden. Jede andere Verwendung gilt als nicht bestimmungsgemäß. Für daraus resultierende Schäden übernimmt TURCK keine Haftung.

Allgemeine Sicherheitshinweise
- Nur fachlich geschultes Personal darf das Gerät montieren, installieren, betreiben, einstellen und instand halten.
- Das Gerät erfüllt die EMV-Anforderungen für den industriellen Bereich. Bei Einsatz in Wohnbereichen Maßnahmen treffen, um Funkstörungen zu vermeiden.
- Nur Geräte miteinander kombinieren, die durch ihre technischen Daten für den gemeinsamen Einsatz geeignet sind.
- Ausreichenden Potenzialausgleich in der Anlage sicherstellen. Gerät über den M5 × 1-Bolzen auf dem Gehäuse mit dem Potenzialausgleich verbinden.
- Gerät nur innerhalb der zulässigen Betriebs- und Umgebungsbedingungen einsetzen.
- Nicht benutzte Leitungseinführungen durch Verschlussstopfen verschließen.
- Nicht benutzte Steckverbinder mit Verschlussdeckel verschließen.
- Geräte vor Montage auf Beschädigungen prüfen.

Hinweise zum Ex-Schutz
- Nationale und internationale Vorschriften für den Explosionsschutz beachten.
- Bei Einsatz des Geräts in Ex-Kreisen muss der Anwender über Kenntnisse im Explosionsschutz (IEC/EN 60079-14 etc.) verfügen.
- Das Gerät nur innerhalb der zulässigen Betriebs- und Umgebungsbedingungen (siehe Zulassungsdaten und Auflagen durch die Ex-Zulassung) einsetzen.
- Bei Zusammenschaltung mehrerer Verteilerbausteine JBBS-… EX oder Verwendung von Abschlusswiderständen die Festlegungen der jeweiligen Feldbusspezifikation beachten (z. B. FISCO gemäß IEC/EN 60079-11).
- Gerät niemals an eigensichere Stromkreise anschließen, wenn es zuvor schon einmal an nicht eigensicheren Stromkreisen betrieben wurde.
- Leitungen und Klemmen mit eigensicheren Stromkreisen kennzeichnen. Bei farbiger Kennzeichnung hellblau verwenden. Leitungen und Klemmen von nicht eigensicheren Stromkreisen trennen oder entsprechend isolieren (IEC/EN 60079-14).
- Den Verteilerbaustein außerhalb des staubexplosionsgefährdeten Bereichs montieren. Abgehende Stromkreise nur dann in den staubexplosionsgefährdeten Bereich führen, wenn die speisenden Stromkreise dafür zugelassen sind. In Zone 20 bzw. 21 nur Geräte mit entsprechender Zulassung anschließen.

Produktbeschreibung

Geräteübersicht

Siehe Abb. 1: Geräteansicht (Beispiel JBBS-48SC-M613/EX),
Abb. 2: Abmessungen JBBS-…-T4…/EX
Abb. 3: Abmessungen JBBS-…-T6…/EX
Abb. 4: Abmessungen JBBS-…-M4…/EX
Abb. 5: Abmessungen JBBS-…-M6…/EX
Abb. 6: Abmessungen JBBS-…-E4…/EX
Abb. 7: Abmessungen JBBS-…-E6…/EX
Abb. 8: Anschlüsse und Schalter (Beispiel JBBS-…-T615B/EX)

Funktionen und Betriebsarten

Die Verteilerbausteine verfügen über einen zuschaltbaren Abschlusswiderstand für den Feldbus (siehe Blockschaltbild). Der Schalter für den Abschlusswiderstand befindet sich auf der Platine im Gehäuse.
Die Schirmung ist kapazitiv mit dem Gehäusepotenzial verbunden. Über einen Schalter kann die Schirmung direkt mit dem Gehäuse verbunden werden.
Ein Klimastutzen verhindert die Kondensatbildung im Gehäuse.
Die Verteiler JBBS-…SC…/EX sind mit einer einstellbaren Kurzschluss-Strombegrenzung ausgestattet. Als max. Strombegrenzung können über einen Drehcodierschalter für alle Kanäle 30, 35, 45 und 60 mA ausgewählt werden.

Montieren

- ▸ Gerät am vorgesehenen Einsatzort montieren.
- ▸ M5 × 1-Bolzen auf dem Gerät mit dem Potenzialausgleich verbinden.

Anschließen

Geräte mit Kabelverschraubung anschließen

! ACHTUNG

Niedrige Umgebungstemperaturen
Mögliche Geräteschäden
- ▸ Bei Temperaturen unter -25 °C keine Leitungen an den Federzugklemmen anschließen.

Zum Anschluss der Versorgungsspannung und der Feldgeräte verfügen die Verteilerbausteine
JBBS-…-T… über Kabelverschraubungen mit innen liegenden Federzugklemmen.
- ▸ Der Klemmbereich der Kabelverschraubung beträgt 7…13 mm. Für kleinere Leitungsdurchmesser Reduziereinsatz nutzen (auf Anfrage erhältlich).
- ▸ Nur fest verlegte Leitungen einführen.
- ▸ Isolierung der Anschlussleitungen vollständig in den Isolierstoffkörper der Anschlussklemmen führen.
- ▸ Zugentlastung der Leitungen sicherstellen.
- ▸ Über den Schirmleiter (Shield) keinen Potenzialausgleich führen.
- ▸ Gerät gemäß „Wiring Diagram“ anschließen.

Geräte mit Flanschanschluss anschließen

Zum Anschluss der Versorgungsspannung und der Feldgeräte verfügen die Verteilerbausteine
JBBS-…-E… über einen M12-Flanschanschluss. Die Verteilerbausteine JBBS-…M… sind mit einem 7/8“-Flanschanschluss ausgestattet.
- ▸ Geräte gemäß „Wiring Diagrams“ anschließen.

In Betrieb nehmen

Nach Anschluss der Leitungen und Aufschalten der Versorgungsspannung geht das Gerät automatisch in Betrieb.

Betreiben

LED-Funktionen

LED	Anzeige	Bedeutung
Power	grün	Gerät betriebsbereit
1…n	rot	Kurzschluss an Kanal 1…n

Einstellen

! ACHTUNG

Niedrige Umgebungstemperaturen
Mögliche Geräteschäden
- ▸ Bei Temperaturen unter -25 °C die Schalter am Gerät nicht betätigen.

Mit Schalter SW1 lässt sich die Verbindung des Geräts zum Gehäusepotenzial einstellen. Über den Schalter SW2 kann der Abschlusswiderstand für den Feldbus ein- und ausgeschaltet werden. Die Schalter SW1 und SW2 befinden sich auf der Platine im Gehäuse. Die max. Kurzschluss-Strombegrenzung kann über einen Drehcodierschalter eingestellt werden.

Schalter	Schalterstellung	Bedeutung
SW1	rechts	Schirmung direkt mit dem Gehäusepotenzial verbinden
	links	Schirmung kapazitiv mit dem Gehäusepotenzial verbinden
SW2	rechts	Abschlusswiderstand aus
	links	Abschlusswiderstand ein
SW3 (nur JBBS-… SC…)	30	Kurzschluss-Strombegrenzung 30 mA
	35	Kurzschluss-Strombegrenzung 35 mA
	45	Kurzschluss-Strombegrenzung 45 mA
	60	Kurzschluss-Strombegrenzung 60 mA

EN Quick Start Guide

JBBS-…/EX

Other Documents

Besides this document the following material can be found on the Internet at www.turck.com:
- Data sheet
- Declarations of conformity (current version)
- Approvals

For Your Safety

Intended Use

The four-channel junction boxes JBBS-…-…4…/EX and the six-channel junction boxes JBBS-…-…6…/EX are used to distribute energy and data for PROFIBUS PA or FOUNDATION fieldbus systems. The devices can be used in Zone 1 or 2 if the circuit of the separately approved supply unit is intrinsically safe.
The housing is made from die-cast aluminum and is in protection class IP67.
The device must only be used as described in these instructions. Any other use is not in accordance with the intended use. TURCK accepts no liability for any resulting damage.

General Safety Notes
- The device must only be mounted, installed, operated, configured and maintained by trained and qualified personnel.
- The device meets the EMC requirements for industrial areas. When used in residential areas, take measures to prevent radio interference.
- Only combine devices if their technical data renders them suitable to be used in a combined manner.
- Ensure that there is sufficient equipotential bond in the system. Connect the device to the equipotential bond via the M5 × 1 bolt on the housing.
- Only use the device within the permitted operating and ambient conditions.
- Seal unused cable entries with sealing plugs.
- Secure unused connectors with protective caps.
- Check devices for damage before installing.

Notes on Ex Protection
- Observe national and international regulations for explosion protection.
- When using the device in Ex circuits, the user must also have knowledge of explosion protection (IEC/EN 60079-14 etc.).
- Only use the device within the permissible operating and ambient conditions (see approval data and Ex approval specifications).
- Observe the respective fieldbus specifications (e.g. FISCO in accordance with IEC/EN 60079-11) when interconnecting multiple JBBS-…EX junction boxes or using terminating resistors.
- Never connect the device to intrinsically safe circuits if it has been previously operated in non-intrinsically safe circuits.
- Label cables and terminals with intrinsically safe circuits. Use light blue if labeling in color. Disconnect cables and terminals from non-intrinsically safe circuits or insulate them accordingly (IEC/EN 60079-14).
- Install the junction box outside the dust explosion hazard zone. Do not route outgoing circuits into the dust explosion hazard area unless the supplying circuits are approved for that purpose. In zones 20 and 21, ensure only devices with the appropriate certification are connected.

Product Description

Device Overview

See fig. 1: Device view (example: JBBS-48SC-M613/EX),
Fig. 2: Dimensions JBBS-…-T4…/EX
Fig. 3: Dimensions JBBS-…-T6…/EX
Fig. 4: Dimensions JBBS-…-M4…/EX
Fig. 5: Dimensions JBBS-…-M6…/EX
Fig. 6: Dimensions JBBS-…-E4…/EX
Fig. 7: Dimensions JBBS-…-E6…/EX
Fig. 8: Connections and switches (example: JBBS-…-T615B/EX)

Functions and Operating Modes

The junction boxes have a switchable terminating resistor for the fieldbus (see block diagram). The switch for the terminating resistor is located on the board in the housing.
The shield is capacitively coupled to the housing potential. Using a switch, the shield can be connected directly to the housing. Condensation in the housing is prevented by a breather.
The JBBS-…SC…/EX junction boxes are equipped with an adjustable short-circuit limiter. A maximum current limitation of 30, 35, 45 and 60 mA can be selected for all channels using a rotary coder switch.

Installing

- ▸ Fit the device at the intended mounting location.
- ▸ Connect the M5 × 1 bolt on the device with the equipotential bond.

Connection

Connect devices using the cable gland

! ATTENTION

Low ambient temperatures
Possible damage to device
- ▸ At temperatures below -25 °C, do not connect any cables to the spring-type terminals.

The JBBS-…-T… junction boxes have cable glands with internal spring-type terminals
for connecting the supply voltage and the field devices.
- ▸ The clamping width of the cable gland is 7–13 mm. For smaller cable diameters, use the reduction insert (available on request).
- ▸ Only insert cables that are fixed.
- ▸ Guide the insulation on the connection cables fully into the insulating body on the connection terminals.
- ▸ Ensure that cables have sufficient strain relief.
- ▸ Do not provides the equipotential bond via the shield.
- ▸ Connect the device in accordance with the “Wiring Diagram”.

Connect the devices with a flange connection

The JBBS-…-E… junction boxes have an M12 receptacle for connecting the supply voltage and the field devices. The JBBS-…M… junction boxes are equipped with a 7/8” receptacle.
- ▸ Connect the devices in accordance with the “Wiring Diagrams”.

Commissioning

The device is operational automatically once the cables are connected and the power supply is switched on.

Operation

LED Functions

LED	Display	Meaning
Power	Green	Device is operational
1…n	Red	Short-circuit channel 1…n

Setting

! ATTENTION

Low ambient temperatures
Possible damage to device
- ▸ At temperatures below -25 °C, do not operate the switches on the device.

You can adjust the connection of the device to the housing potential using switch SW1. Switch SW2 is used to turn the terminating resistor for the fieldbus on and off. Switches SW1 and SW2 are located on the board in the housing. The maximum short-circuit current limitation can be set using a rotary coder switch.

Switch	Switch position	Meaning
SW1	Right	Connect shielding directly with the housing potential
	Left	Connect shielding capacitively with the housing potential
SW2	Right	Terminating resistor: off
	Left	Terminating resistor: on
SW3 (JBBS-… SC… only)	30	Short-circuit current limitation: 30 mA
	35	Short-circuit current limitation: 35 mA
	45	Short-circuit current limitation: 45 mA
	60	Short-circuit current limitation: 60 mA

Repair

The device is not intended for repair by the user. Take defective devices out of operation. Observe our return acceptance conditions when returning the device to TURCK.

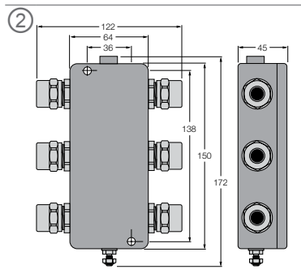
Disposal

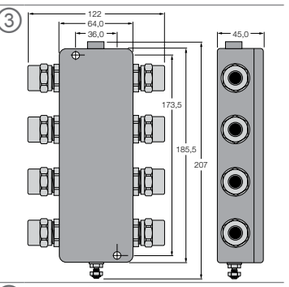
The devices must be disposed of correctly and must not be included in normal household garbage.

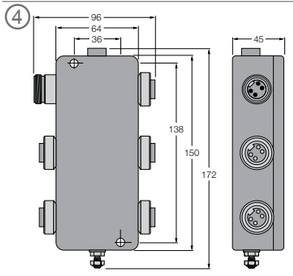
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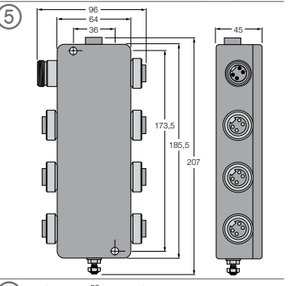
JBBS-…-…/EX
Junction Box
Quick Start Guide
Doc. no. 100002435

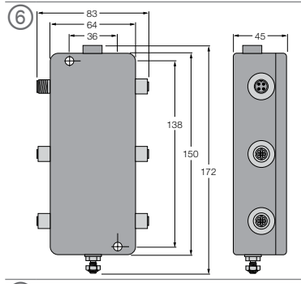
Additional information see turck.com

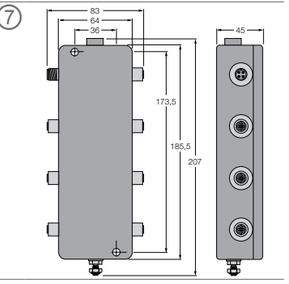
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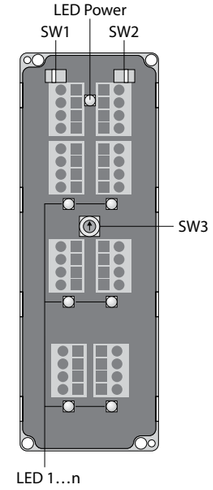
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DE Kurzbetriebsanleitung

Reparieren

Das Gerät ist nicht zur Reparatur durch den Benutzer vorgesehen. Sollte das Gerät defekt sein, nehmen Sie es außer Betrieb. Bei Rücksendung an TURCK beachten Sie bitte unsere Rücknahmebedingungen.

Entsorgen

Die Geräte müssen fachgerecht entsorgt werden und gehören nicht in den normalen Hausmüll.

EN Quick Start Guide

Certification Data | Technical data

Approvals and Markings

Approvals	
PTB 03 ATEX 2236	II 2 G Ex ib IIC T4 Gb II 2 (1) G Ex ia [ia Ga] IIC T4 Gb II 2 (1D) G Ex ia [ia IIIC Da] IIB T4 Gb II 2 (2D) G Ex ib [ib IIIC Db] IIB T4 Gb
分线盒	Ex ib IIC T4 Gb Ex ia [ia Ga] IIC T4 Gb Ex ia [ia IIIC Da] IIB T4 Gb Ex ib [ib IIIC Db] IIB T4 Gb
TÜV 13.1660-001 X	
3025465	Intrinsically safe for use in Class I, Division 1, Groups A, B, C, & D; Class I, Zone 0, Group IIC; Nonincendive for use in Class I, Division 2, Groups A, B, C, & D; indoor hazardous (classified) location and Nonincendive field wiring with connection to Class I, Division 2, Groups C & D hazardous (classified) location in accordance with control drawing NI-2.405 or NI-2.406. The equipment has a Temperature Class T5, Ta = 70°C. The Junction Blocks shall be installed in a final enclosure in order to retain its safety approval. Special Conditions of Use: 1. In Division 2 installations, all cabling drops must be ITC or PLTC cable types as defined by the NEC, using the Approved lokfast Guard. 2. Use TURCK installation drawing NI-2.406 in addition to NEC.

Ambient temperature: T_{amb}: -40…+70 °C (JBBS-…-T…)
Ambient temperature: T_{amb}: -30…+70 °C (JBBS-…-M…)
Ambient temperature: T_{amb}: -30…+70 °C (JBBS-…-E…)

Electrical Data – Supply (Segment In/Segment Out)

Internal terminal: X01, (1…4) and X02 (1…4)
Protection type intrinsic safety Ex ia/ib IIC/IIB

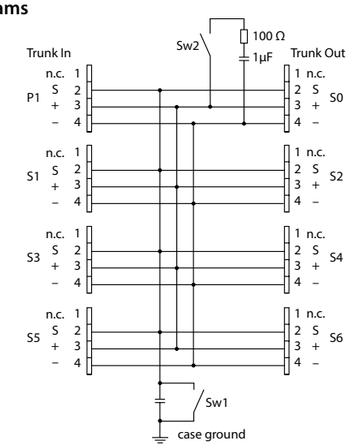
	Entity parameters	FISCO parameters to IEC 60079-11
Max. input voltage U_i	24 VDC	17.5 VDC
Max. input current I_i	250 mA	380 mA
Max. input power P_i	2.56 W	5.32 W
Max. output voltage U_0	24 VDC	17.5 VDC
Max. output current I_0	250 mA	380 mA
Max output power P_0	2.56 W	5.32 W
Internal inductance L_i		negligible
Internal capacitance C_i		< 5 nF

Electrical Data – Field Device Current Circuits (Spur 1…n)

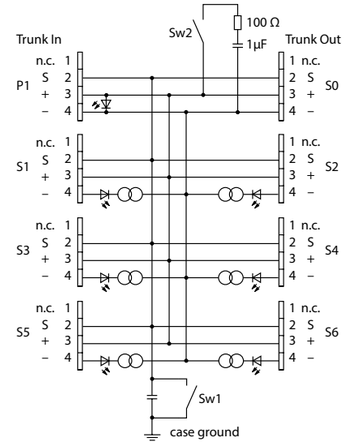
Internal terminal: X1…X6, (1…4)

	Entity parameters		FISCO parameters to IEC 60079-11
Max. output voltage U_0	24 VDC		17.5 VDC
Max. output current I_0	250 mA		380 mA
Max output power P_0	2.56 W		5.32 W
Internal inductance L_i		C_i	L_i
Internal capacitance C_i	individually for each output	< 0.82 nF	negligible
	for all outputs of the field devices together	< 5 nF	negligible

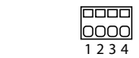
Wiring diagrams



Example: JBBS-…-…-T6…/EX
(six-channel, internal terminals)



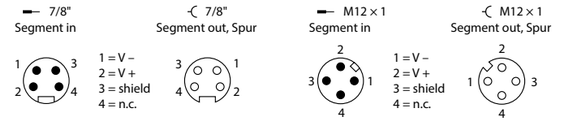
Example: JBBS-…-…SC-T6…/EX
(six-channel, internal terminals and short-circuit current limitation)



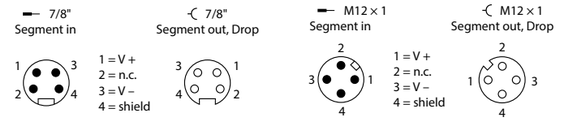
1 = n.c.
2 = Shield
3 = +
4 = –

1 2 3 4

Terminal JBBS-49…-T…/EX and JBBS-48…-T…/EX



Connector JBBS-49…-M…/EX
Connector JBBS-49…-E…/EX



Connector JBBS-48…-M…/EX
Connector JBBS-48…-E…/EX

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FR Guide d'utilisation rapide

JBBS-…/EX

Documents complémentaires

Vous trouverez les documents suivants contenant des informations complémentaires à la présente notice sur notre site Web www.turck.com :

- Fiche technique
- Déclarations de conformité (version actuelle)
- Homologations

Pour votre sécurité

Utilisation correcte

Les boîtiers de distribution à 4 canaux JBBS-…-…4…/EXet les boîtiers de distribution à 6 canaux JBBS-…-…6…/EX servent à la distribution d'énergie et de données pour les bus de terrain PROFIBUS-PA et FOUNDATION Fieldbus. L'utilisation des appareils en zone 1 et en zone 2 dépend du circuit électrique à sécurité intrinsèque de l'appareil d'alimentation homologué séparément.
Le boîtier est composé de fonte d'aluminium et équipé du mode de protection IP67.
L'appareil doit exclusivement être utilisé conformément aux indications figurant dans la présente notice. Toute autre utilisation est considérée comme non correcte. La société TURCK décline toute responsabilité en cas de dommages causés par une utilisation non correcte.

Consignes de sécurité générales

- Seul un personnel qualifié est habilité à monter, installer, utiliser, configurer et entretenir l'appareil.
- L'appareil répond aux exigences CEM pour les zones industrielles. Lorsqu'il est utilisé dans des zones résidentielles, des mesures doivent être prises pour éviter les interférences radio.
- Raccordez des appareils entre eux uniquement si leurs caractéristiques techniques le permettent.
- Assurez une compensation du potentiel suffisante dans l'installation. Raccordez l'appareil à la compensation du potentiel à l'aide des boulons M5 × 1 sur le boîtier.
- Utilisez l'appareil uniquement dans les conditions ambiantes et de fonctionnement autorisées.
- Obturer les entrées de câbles non utilisées avec des bouchons d'étanchéité.
- Protéger les connecteurs non utilisés avec des capuchons de protection.
- Vérifiez que les dispositifs ne sont pas endommagés avant de les installer.

Indications relatives à la protection contre les explosions

- Respectez les consignes nationales et internationales relatives à la protection contre les explosions.
- En cas d'utilisation de l'appareil dans des zones à risque d'explosion, vous devez en outre disposer des connaissances requises en matière de protection contre les explosions (IEC/EN 60079-14, etc.).
- Utilisez uniquement l'appareil dans le respect le plus strict des conditions ambiantes et des conditions d'exploitation autorisées (voir données de certification et consignes relatives à l'homologation Ex).
- Lors de l'interconnexion de plusieurs boîtiers de distribution JBBS-…EX ou de l'utilisation des résistances de fin de ligne, veillez à respecter les spécifications respectives de chaque bus de terrain (p. ex. FISCO conformément à IEC/EN 60079-11).
- Ne raccordez jamais l'appareil à des circuits électriques à sécurité intrinsèque s'il a déjà été utilisé sur de s circuits sans sécurité intrinsèque.
- Identifiez les câbles et les bornes des circuits électriques à sécurité intrinsèque. Si vous utilisez une identification par code couleur, utilisez le bleu clair. Séparez les câbles et les bornes des circuits sans sécurité intrinsèque ou isolez-les en conséquence (IEC/EN 60079-14).
- Installer la boîte de distribution en dehors de la zone à risque d'explosion de poussières. Ne pas acheminer les circuits de sortie dans la zone à risque d'explosion de poussières, sauf si les circuits d'alimentation sont homologués à cet effet. En zones 20 et 21, s'assurer que seuls des appareils bénéficiant de la certification appropriée sont raccordés.

Description du produit

Aperçu de l'appareil

Voir fig. 1 : Vue de l'appareil (exemple : JBBS-48SC-M613/EX),
Fig. 2 : Dimensions JBBS-…-T4…/EX
Fig. 3 : Dimensions JBBS-…-T6…/EX
Fig. 4 : Dimensions JBBS-…-M4…/EX
Fig. 5 : Dimensions JBBS-…-M6…/EX
Fig. 6 : Dimensions JBBS-…-E4…/EX
Fig. 7 : Dimensions JBBS-…-E6…/EX
Fig. 8 : Connexions et commutateurs (exemple : JBBS-…-T615B/EX)

Fonctions et modes de fonctionnement

Les boîtiers de distribution sont équipés d'une résistance de fin de ligne intégrée activable pour le bus de terrain (voir schéma fonctionnel). L'interrupteur de la résistance de fin de ligne se trouve sur la platine dans le boîtier.
Le blindage est lié d'une façon capacitive au potentiel du boîtier. Le blindage peut être lié directement au boîtier à l'aide d'un interrupteur.
Un reniflard empêche la formation de condensation dans le boîtier.
Les distributeurs JBBS-…SC…/EX sont équipés d'un dispositif réglable de limitation de courant contre les courts-circuits. Pour la limitation de courant maximale, il est possible de sélectionner les valeurs 30, 35, 45 et 60 mA pour tous les canaux à l'aide d'un commutateur-codeur rotatif.

Installation

- ▶ Montez l'appareil à l'emplacement prévu.
- ▶ Installez des boulons M5 x 1 sur l'appareil avec compensation de potentiel.

Raccordement

Raccorder les appareils à l'aide d'un presse-étoupe

ATTENTION

Températures ambiantes basses

Dommages potentiels des appareils

- ▶ Si la température est inférieure à -25 °C, aucun câble ne peut être raccordé aux bornes à ressort internes.

Pour raccorder la tension d'alimentation et les appareils de terrain, les boîtiers de distribution
JBBS-…-T… sont équipés de presse-étoupes avec bornes à ressort internes.

- ▶ La zone de serrage du presse-étoupe est de 7…13 mm. Pour des diamètres de câble plus petits, utilisez un réducteur (disponible sur demande).
- ▶ N'utilisez que des câbles correctement fixés.
- ▶ Effectuez une isolation complète des câbles de raccordement dans le matériau isolant des bornes de raccordement.
- ▶ Vérifiez les dispositifs de décharge de traction des câbles.
- ▶ Ne réalisez pas de liaison équipotentielle à l'aide du conducteur blindé (Shield).
- ▶ Raccordez l'appareil conformément au schéma de câblage (« Wiring Diagram »).

Raccorder les appareils avec un connecteur à bride

Pour raccorder la tension d'alimentation et les appareils de terrain, les boîtiers de distribution
JBBS-…-E… sont équipés d'un connecteur à bride M12. Les boîtiers de distribution JBBS-…M… sont équipés d'un connecteur à bride 7/8".

- ▶ Raccordez les appareils conformément aux schémas de câblage (« Wiring Diagrams »).

Mise en service

L'appareil se met automatiquement en marche après le raccordement des câbles et l'activation de la tension d'alimentation.

Fonctionnement

Fonctions des LED

LED	Indication	Signification
Power	verte	Appareil prêt à fonctionner
1…n	rouge	Court-circuit sur le canal 1…n

PT Guia de Início Rápido

JBBS-…/EX

Documentos adicionais

Além deste documento, o seguinte material pode ser encontrado na Internet em www.turck.com:

- Folha de dados
- Declarações de conformidade (versão atual)
- Homologações

Para sua segurança

Finalidade de uso

As caixas de junção de quatro canais JBBS-…-…4…/EX e as caixas de junção de seis canais JBBS-…-…6…/EX são usadas para distribuir energia e dados para sistemas fieldbus PROFIBUS PA ou FOUNDATION.
Os dispositivos podem ser usados em Zona 1 ou 2 se o circuito da unidade de alimentação aprovada separadamente for intrinsecamente seguro.
A estrutura é feita de alumínio fundido e está em classe de proteção IP67.
Os dispositivos devem ser usados apenas como descrito nessas instruções. Qualquer outro uso está fora de concordância com o uso pretendido. A TURCK se exime de qualquer responsabilidade por danos resultantes.

Instruções gerais de segurança

- O dispositivo só deve ser montado, instalado, operado, configurado e mantido por pessoal profissionalmente treinado.
- O dispositivo atende aos requisitos de EMC para a área industrial. Em caso de uso em áreas residenciais, tome medidas para evitar interferência de rádio.
- Combine apenas dispositivos cujos dados técnicos sejam adequados para o uso conjunto.
- Deve existir uma ligação equipotencial suficiente no sistema. Conecte o dispositivo à ligação equipotencial por meio do parafuso M5 × 1 na estrutura.
- Só use o dispositivo dentro das condições de operação e do ambiente.
- Vedar as entradas de cabos não utilizadas com bujões de vedação.
- Proteger os conectores não utilizados com capas de proteção.
- Verifique se há danos nos dispositivos antes de instalá-los.

Notas de proteção contra explosão

- Observe os regulamentos nacionais e internacionais para proteção contra explosão.
- Ao usar o dispositivo em circuitos Ex, o usuário deverá ter conhecimento prático sobre proteção contra explosões (IEC/EN 60079-14, etc.).
- Use apenas o dispositivo em condições ambientais e de operação permitidas (consulte os dados de aprovação e as especificações de aprovação Ex).
- Observe as respectivas especificações fieldbus (por exemplo, FISCO em conformidade com IEC/EN 60079-11) quando interconectar várias caixas de junção JBBS-…EX ou usar resistores de terminação.
- Nunca conecte o dispositivo a circuitos intrinsecamente seguros se ele tiver sido operado em circuitos que não sejam intrinsecamente seguros.
- Identifique os cabos e terminais com circuitos intrinsecamente seguros. Se fizer a identificação por cores, use azul-claro. Desconecte os cabos e terminais dos circuitos não intrinsecamente seguros ou os isole adequadamente (IEC/EN 60079-14).
- Instalar a caixa de junção fora da zona de risco de explosão por poeira. Não rotear circuitos de saída para a zona de risco de explosão por poeira, a menos que os circuitos de alimentação sejam aprovados para essa finalidade. Em zonas 20 e 21, certificar-se de que apenas dispositivos com a certificação apropriada sejam conectados.

Descrição do produto

Visão geral do produto

Ver fig. 1: Vista do dispositivo (exemplo: JBBS-48SC-M613/EX),
Fig. 2: Dimensões JBBS-…-T…/EX
Fig. 3: Dimensions JBBS-…-T…/EX
Fig. 4: Dimensions JBBS-…-M…/EX
Fig. 5: Dimensions JBBS-…-M…/EX
Fig. 6: Dimensions JBBS-…-E…/EX
Fig. 7: Dimensions JBBS-…-E…/EX
Fig. 8: Conexões e interruptores (por exemplo: JBBS-…-T615B/EX)

Funções e modos de operação

As caixas de junção tem um resistor de terminação comutável para o fieldbus (consulte o diagrama de blocos). O interruptor para o resistor de terminação está localizado na placa da estrutura.
A blindagem é acoplada de modo capacitivo no potencial da estrutura. Usando um interruptor, a blindagem pode ser conectada diretamente à estrutura.
A condensação na estrutura é prevenida por um respiro.
As caixas de junção JBBS-…SC…/EX estão equipadas com um limitador de curto-circuito ajustável. Uma limitação de corrente máxima de 30, 35, 45 e 60 mA pode ser selecionada para todos os canais usando um interruptor codificador giratório.

Instalação

- ▶ Instale o dispositivo no local de montagem previsto.
- ▶ Conecte o parafuso M5 × 1 no dispositivo com a ligação equipotencial.

Conexão

Conectar dispositivos usando o prensa-cabos

ATENÇÃO

Baixas temperaturas ambientes

Possíveis danos ao dispositivo

- ▶ Em temperaturas abaixo de -25 °C, não conecte os cabos nos terminais tipo mola.

As caixas de junção JBBS-…-T… têm prensa-cabos com terminais do tipo mola interna para conectar a tensão de alimentação e os dispositivos de campo.

- ▶ A largura de fixação do prensa-cabos é de 7 a 13 mm. Para diâmetros de cabo menores, use o inserto de redução (disponível mediante solicitação).
- ▶ Somente insira os cabos que são fixos.
- ▶ Guie o isolamento nos cabos de conexão totalmente para dentro do corpo de isolamento dos terminais de conexão.
- ▶ Certifique-se de que os cabos tenham alívio de tensão suficiente.
- ▶ Não fornece a ligação equipotencial através da blindagem.
- ▶ Conecte o dispositivo de acordo com o "Wiring diagrams".

Conecte os dispositivos com uma conexão de flange

As caixas de junção JBBS-…-E… têm um receptáculo M12 para conectar a tensão de alimentação e os dispositivos de campo. As caixas de junção JBBS-…M… são equipadas com um receptáculo de 7/8".

- ▶ Conecte os dispositivos de acordo com os "Wiring diagrams"

Comissionamento

O dispositivo fica automaticamente operacional assim que os cabos são conectados e a fonte de alimentação ligada.

Operação

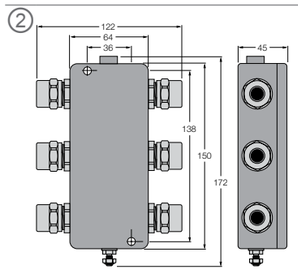
Funções de LED

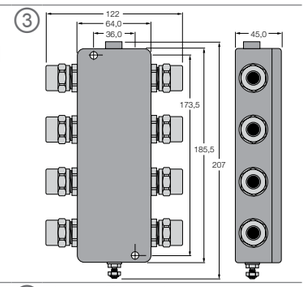
LED	Visor	Significado
Power	Verde	O dispositivo está em funcionamento
1…n	Vermelho	Curto-circuito do canal 1…n

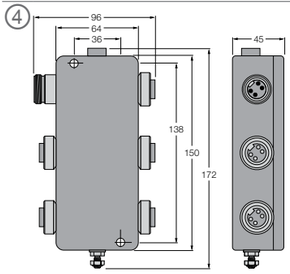
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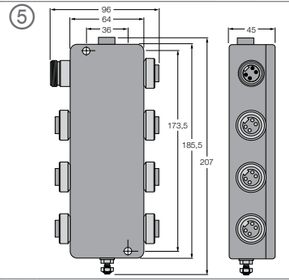
JBBS-…-…/EX
Junction Box
Quick Start Guide
Doc. no. 100002435

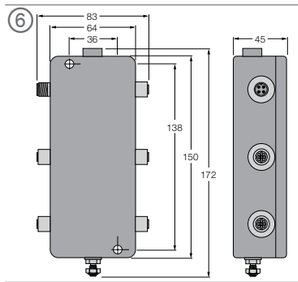
Additional information see
turck.com

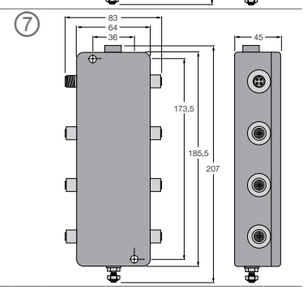
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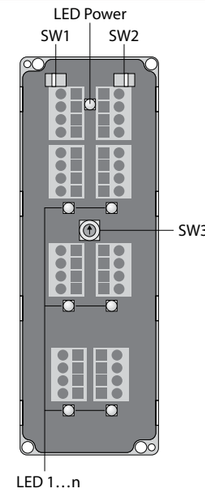
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FR Guide d'utilisation rapide

Réglages

ATTENTION

Températures ambiantes basses

Dommages potentiels des appareils

- N'activez pas les interrupteurs de l'appareil si la température est inférieure à -25 °C.

Il est possible de régler la connexion de l'appareil au potentiel du boîtier via l'interrupteur SW1. La résistance de fin de ligne pour le bus de terrain peut être activée et désactivée via l'interrupteur SW2. Les interrupteurs SW1 et SW2 se trouvent sur la platine dans le boîtier. La limitation de courant contre les courts-circuits peut être réglée à l'aide d'un commutateur de codage rotatif.

Interrupteur	Position de l'interrupteur	Signification
SW1	à droite	Liez directement le blindage au potentiel du boîtier
	à gauche	Liez le blindage d'une façon capacitive au potentiel du boîtier
SW2	à droite	Résistance de fin de ligne - sortie
	à gauche	Résistance de fin de ligne - entrée
SW3 (uniquement JBBS-…SC…)	30	Limitation de courant contre les courts-circuits 30 mA
	35	Limitation de courant contre les courts-circuits 35 mA
	45	Limitation de courant contre les courts-circuits 45 mA
	60	Limitation de courant contre les courts-circuits 60 mA

Réparation

L'appareil ne peut pas être réparé par l'utilisateur. En cas de dysfonctionnement, mettez l'appareil hors tension. Veuillez tenir compte de nos conditions de reprise lorsque vous souhaitez renvoyer l'appareil à TURCK.

Mise au rebut

Les appareils doivent être mis au rebut de manière appropriée et ne peuvent être jetés avec les ordures ménagères.

PT Guia de Início Rápido

Configuração

ATENÇÃO

Baixas temperaturas ambientes

Possíveis danos ao dispositivo

- Em temperaturas abaixo de -25 °C, não opere o interruptor no dispositivo.

Você pode ajustar a conexão do dispositivo para o potencial da estrutura usando o interruptor SW1. O interruptor SW2 é usado para ligar e desligar o resistor de terminação do fieldbus. Os interruptores SW1 e SW2 estão localizados na placa na estrutura. O número máximo de limitação de correntes de curto-circuito pode ser definido usando um interruptor codificador giratório.

Interruptor	Posição do interruptor	Significado
SW1	Lado direito	Conecte a blindagem diretamente no potencial da estrutura
	Lado esquerdo	Conecte a blindagem de modo capacitivo no potencial da estrutura
SW2	Lado direito	Resistor de terminação: desligado
	Lado esquerdo	Resistor de terminação: ligado
SW3 (somente JBBS-…SC…)	30	Limitação de corrente em curto-circuito: 30 mA
	35	Limitação de corrente em curto-circuito: 35 mA
	45	Limitação de corrente em curto-circuito: 45 mA
	60	Limitação de corrente em curto-circuito: 60 mA

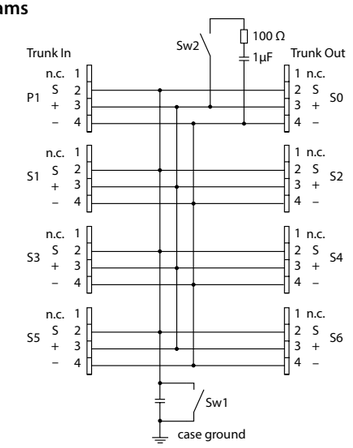
Reparo

O dispositivo não se destina a receber reparo feito pelo usuário. O dispositivo deverá ser desativado caso esteja com defeito. Observe nossas condições para aceitação de devolução quando devolver o dispositivo à TURCK.

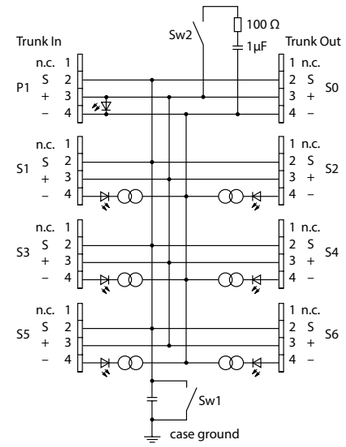
Descarte

Os dispositivos devem ser descartados corretamente e não em um lixo doméstico normal.

Wiring diagrams



Example: JBBS-…-…-T6…/EX
(six-channel, internal terminals)

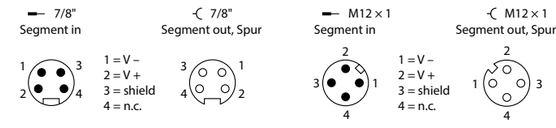


Example: JBBS-…-…-SC-T6…/EX
(six-channel, internal terminals and short-circuit current limitation)



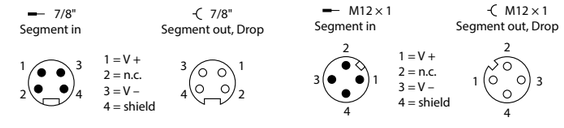
1 = n.c.
2 = Shield
3 = +
4 = –

Terminal JBBS-49…-T…/EX and JBBS-48…-T…/EX



Connector JBBS-49…-M…/EX

Connector JBBS-49…-E…/EX



Connector JBBS-48…-M…/EX

Connector JBBS-48…-E…/EX

Certification Data | Technical data

Approvals and Markings

Approvals	
PTB 03 ATEX 2236	II 2 G Ex ib IIC T4 Gb II 2 (1) G Ex ia [ia Ga] IIC T4 Gb II 2 (1D) G Ex ia [ia IIIC Da] IIB T4 Gb II 2 (2D) G Ex ib [ib IIIC Db] IIB T4 Gb
分线盒	Ex ib IIC T4 Gb Ex ia [ia Ga] IIC T4 Gb Ex ia [ia IIIC Da] IIB T4 Gb Ex ib [ib IIIC Db] IIB T4 Gb
TÜV 13.1660-001 X	
3025465	Intrinsically safe for use in Class I, Division 1, Groups A, B, C, & D; Class I, Zone 0, Group IIC; Nonincendive for use in Class I, Division 2, Groups A, B, C, & D; indoor hazardous (classified) location and Nonincendive field wiring with connection to Class I, Division 2, Groups C & D hazardous (classified) location in accordance with control drawing NI-2.405 or NI-2.406. The equipment has a Temperature Class T5, Ta = 70°C. The Junction Blocks shall be installed in a final enclosure in order to retain its safety approval. Special Conditions of Use: 1. In Division 2 installations, all cabling drops must be ITC or PLTC cable types as defined by the NEC, using the Approved lokfast Guard. 2. Use TURCK installation drawing NI-2.406 in addition to NEC.

Ambient temperature: T_{amb}: -40…+70 °C (JBBS-…-T…)
Ambient temperature: T_{amb}: -30…+70 °C (JBBS-…-M…)
Ambient temperature: T_{amb}: -30…+70 °C (JBBS-…-E…)

Electrical Data – Supply (Segment In/Segment Out)

Internal terminal: X01, (1…4) and X02 (1…4)
Protection type intrinsic safety Ex ia/ib IIC/IIB

	Entity parameters	FISCO parameters to IEC 60079-11
Max. input voltage U_i	24 VDC	17.5 VDC
Max. input current I_i	250 mA	380 mA
Max. input power P_i	2.56 W	5.32 W
Max. output voltage U_0	24 VDC	17.5 VDC
Max. output current I_0	250 mA	380 mA
Max output power P_0	2.56 W	5.32 W
Internal inductance L_i		negligible
Internal capacitance C_i		< 5 nF

Electrical Data – Field Device Current Circuits (Spur 1…n)

Internal terminal: X1…X6, (1…4)

	Entity parameters		FISCO parameters to IEC 60079-11
Max. output voltage U_0	24 VDC		17.5 VDC
Max. output current I_0	250 mA		380 mA
Max output power P_0	2.56 W		5.32 W
Internal inductance L_i Internal capacitance C_i		C_i	L_i
	individually for each output	< 0.82 nF	negligible
	for all outputs of the field devices together	< 5 nF	negligible

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ZH 快速入门指南

JBBS-…/EX

其他文档
除了本文档之外，还可在www.turck.com网站上查看以下资料：
- 数据表
- 合规声明（最新版本）
- 产品认证

安全须知
预期用途
四通道接线盒 JBBS-…-…4…/EX 和六通道接线盒 JBBS-…-…6…/EX 用于为 PROFIBUS PA 或 FOUNDATION fieldbus 系统分配电力和数据。如果经单独批准的供电装置的电路具有本安性，则该设备可用于1区或2区。
外壳由压铸铝制成，防护等级为IP67。
必须严格按照本说明使用该装置。任何其他用途都不属于预期用途。图尔克公司对于由此导致的任何损坏概不承担责任。

一般安全须知
- 该设备必须仅由经过培训且具备资质的人员进行安装、调试、操作、配置和维护。
- 该装置符合工业领域的EMC（电磁兼容性）要求。在住宅区使用时，请采取相应的措施防止无线电干扰。
- 仅当技术数据支持该装置联用时，才能组合使用该装置。
- 确保在系统中有足够的等电位联结点。通过壳体上的M5 × 1螺栓将设备连接至等电位联结点。
- 仅在允许的工作条件和环境条件中使用本装置。
- 用密封塞密封未使用的线缆入口。
- 用保护盖将未使用的连接器保护起来。
- 安装前检查装置是否损坏。

防爆说明
- 请遵守国内和国际防爆法规。
- 在将该装置应用到防爆电路时，用户还必须具有防爆知识（GB/T 3836.15等）。
- 只可在允许的工作条件和环境条件中使用该装置（参见认证数据和防爆认证规格）。
- 在互连多个JBBS-…EX防爆接线盒或使用端接电阻时，请遵守相应的现场总线规格（例如，依据GB/T 3836.4标准的FISCO）。
- 切勿将以前曾在非本安电路中工作过的装置连接至本安电路。
- 为本安电路中的电缆和端子贴上标签。如果贴彩色标签，请使用浅蓝色标签。从非本安电路上断开线缆和端子，或对其进行相应隔离处理（依据GB/T 3836.15）。
- 将接线盒安装在粉尘爆炸危险区域之外。除非供电回路已获准用于该用途，否则不得 stroke/将输出回路引入粉尘爆炸危险区域。在 20 区和 21 区，确保仅连接具有相应认证的的设备。

产品说明
装置概述
见图1：装置视图（示例：JBBS-48SC-M613/EX），
图2：JBBS-…-T4…/EX尺寸
图3：JBBS-…-T6…/EX尺寸
图4：JBBS-…-M4…/EX尺寸
图5：JBBS-…-M6…/EX尺寸
图6：JBBS-…-E4…/EX尺寸
图7：JBBS-…-E6…/EX尺寸
图8：连接和开关（示例：JBBS-…-T615B/EX）

产品功能和工作模式
接线盒配备了一个可切换的现场总线终端电阻（参见框图）。终端电阻的开关位于机壳内的电路板上。
屏蔽层与外壳电位之间存在电容耦合。通过一个开关，可将屏蔽层直接连接到外壳上。
外壳利用通气口防止凝露。
JBBS-…SC…/EX型接线盒配备了可调节的短路限流器。使用旋转编码开关可为所有通道选择30、35、45和60 mA的最大限流。

安装
- 将该装置安装在预定的安装位置。
- 用等电位联结方式连接装置上的M5 × 1螺栓。

连接
使用电缆接头连接设备

! 注意
最低环境温度
可能损坏装置
- 当温度低于 -25 °C 时，请勿将任何电缆连接到弹簧式端子上。

JBBS-…-T…型接线盒配有带内部弹簧式端子的电缆接头，
用于连接电源电压和现场设备。
- 该电缆接头的夹紧宽度为 7–13 毫米。对于直径较小的电缆，请使用减径套（可应要求提供）。
- 仅插入已固定的电缆。
- 将连接电缆上的绝缘层完全插入连接端子上的绝缘体中。
- 确保线缆具有足够的应力消除能力。
- 请勿通过屏蔽层实现等电位连接。
- 按照“Wiring diagrams”连接该装置。

使用法兰连接将设备连接起来。
JBBS-…-E…型接线盒配有一个 M12 插座，用于连接电源电压和现场设备。JBBS-…M… 接线盒配有 7/8 英寸的插座。
- 按照“Wiring diagrams”连接该装置。

调试
一旦连接线缆并接通电源，该装置便会自动运行。

操作
LED指示灯功能

LED	显示	含义
电源	绿灯	装置正常运行
1…n	红灯	通道1…n短路

设置
! 注意
最低环境温度
可能损坏装置
- 当温度低于 -25 °C 时，请勿操作设备上的开关。

您可以通过开关 SW1 调节设备与外壳电位的连接。开关SW2用于打开和关闭现场总线的终端电阻器。开关SW1和SW2位于外壳中的接线板上。最大短路电流限值可通过旋转编码器开关进行设置。

开关	开关位置	含义
SW1	右侧	将屏蔽层与外壳等电位点直接相连
	左侧	将屏蔽层与外壳等电位点进行电容连接
SW2	右侧	终端电阻器：关闭
	左侧	终端电阻器：打开
SW3（仅限JBBS-…SC…）	30	短路电流限制30 mA
	35	短路电流限制35 mA
	45	短路电流限制45 mA
	60	短路电流限制60 mA

维修
用户不得对该装置进行维修。务必停止使用有缺陷的装置。如果要将该装置退回图尔克公司维修，请遵从我们的返修验收条件。

废弃处理
必须正确处置本装置，不得混入普通的生活垃圾之中。

KO 빠른 시작 가이드

JBBS-…/EX

추가 문서
이 문서 외에도 다음과 같은 자료를 인터넷(www.turck.com)에서 확인할 수 있습니다.
- 데이터 시트
- 적합성 선언(현재 버전)
- 인증

사용자 안전 정보
사용 목적
4채널 정션 박스 JBBS-…-…4…/EX 과 6채널 정션 박스 JBBS-…-…6…/EX 는 PROFIBUS PA 또는 FOUNDATION 필드버스 시스템의 전력 및 데이터를 분배하는 데 사용됩니다. 별도로 승인된 전원 공급 장치의 회로가 본질 안전 방식인 경우, 해당 장치는 구역 1 또는 2에서 사용할 수 있습니다.
하우징은 다이캐스팅 알루미늄으로 제작되었으며, 보호 등급은 IP67입니다.
이 장치는 이 지침에서 설명한 목적으로만 사용해야 합니다. 기타 다른 방식으로 사용하는 것은 사용 목적을 따르지 않는 것입니다. 터크는 그로 인한 손상에 대해 어떠한 책임도 지지 않습니다.

일반 안전 정보
- 전문적인 훈련을 받은 숙련된 기술자만 이 장치의 조립, 설치, 작동, 매개 변수 설정 및 유지보수를 수행해야 합니다.
- 이 장치는 산업 분야의 EMC 요구 사항을 충족합니다. 주거 지역에서 사용하는 경우 무선 간섭을 방지하기 위한 조치를 취하십시오.
- 기술 데이터에 따라 공동 사용에 적합한 것으로 표시된 장치만 결합하십시오.
- 시스템에 충분한 등전위 본딩이 있는지 확인하십시오. 하우징의 M5 × 1 볼트를 통해 등전위 본드에 장치를 연결하십시오.
- 허용된 작동 및 주변 조건 내에서만 장치를 사용하십시오.
- 사용하지 않는 케이블 인입구는 밀봉 플러그로 막으십시오.
- 사용하지 않는 커넥터는 보호 캡으로 보호하십시오.
- 설치 전에 장치가 손상되었는지 확인하십시오.

폭발 방지 참고 사항
- 폭발 방지에 관한 국내 및 국제 규정을 준수하십시오.
- 폭발 위험 회로에서 이 장치를 사용할 경우 사용자는 폭발 방지(KS C IEC 60079-14 등)에 대한 지식이 있어야 합니다.
- 허용되는 작동 및 주변 조건에서만 장치를 사용하십시오(인증 데이터 및 방폭 인증 사양 참조).
- 여러 개의 JBBS-…EX 정션 박스를 서로 연결하거나 종단 저항을 사용할 때는 해당하는 필드버스 사양(예: KS C IEC 60079-11 규격 FISCO)을 준수하십시오.
- 이전에 비본질 안전 회로에서 작동했다면 절대로 장치를 본질 안전 회로에 연결하지 마십시오.
- 본질 안전 회로가 있는 케이블과 터미널에 라벨을 부착하십시오. 색상으로 라벨을 지정하는 경우에는 하늘색을 사용하십시오. 비본질 안전 회로에서 케이블과 터미널을 분리하거나 그에 따라 절연하십시오(KS C IEC 60079-14).
- 정션 박스는 본진 폭발 위험 지역 외부에 설치하십시오. 공급 회로가 해당 목적으로 승인된 경우를 제외하고는, 출력 회로를 본진 폭발 위험 지역 내로 배선하지 마십시오. 20종 및 21종 구역에서는 적절한 인증을 받은 장치만 연결되도록 하십시오.

제품 설명
장치 개요
그림 1: 기기 보기 (예: JBBS-48SC-M613/EX),
그림 2: 치수 JBBS-…-T4…/EX
그림 3: 치수 JBBS-…-T6…/EX
그림 4: 치수 JBBS-…-M4…/EX
그림 5: 치수 JBBS-…-M6…/EX
그림 6: 치수 JBBS-…-E4…/EX
그림 7: 치수 JBBS-…-E6…/EX
그림 8: 연결 장치 및 스위치 (예: JBBS-…-T615B/EX)

기능 및 작동 모드
정션 박스에는 필드버스용 전환 가능한 종단 저항이 장착되어 있습니다(블록 다이어그램 참조). 종단 저항용 스위치는 하우징 내부의 기판에 위치해 있습니다.
이 실드는 하우징 전위에 정전용량 결합되어 있습니다. 스위치를 사용하면 실드를 하우징에 직접 연결할 수 있습니다.
베어링 하우징 내부의 결로 현상은 통기구를 통해 방지됩니다.
JBBS-…SC…/EX 접속함에는 조절 가능한 단락 제한기가 장착되어 있습니다. 로터리 코더 스위치를 사용하여 모든 채널에 대해 30, 35, 45 및 60 mA의 최대 전류 제한값을 선택할 수 있습니다.

설치
- 장치를 원하는 장착 위치에 설치합니다.
- 등전위 본드가 있는 장치에 M5 × 1 볼트를 연결하십시오.

연결
케이블 글랜드를 사용하여 장치를 연결하십시오

! 주의
최저 주변 온도
기기 손상 가능성
- 온도가 -25 °C 이하일 때는 스프링식 단자에 어떤 케이블도 연결하지 마십시오.

JBBS-…-T… 접속함에는 공급 전압과 현장 장치를 연결하기 위한 내부 스프링식 단자가 장착된 케이블 글랜드가 있습니다.
- 케이블 글랜드의 클램핑 폭은 7–13 mm입니다. 케이블 직경이 이보다 작은 경우에는 리덕션 인서트(요청 시 제공)를 사용하십시오.
- 단단히 고정된 케이블만 삽입하십시오.
- 연결 케이블의 절연체를 연결 단자의 절연 본체 안으로 완전히 밀어 넣으십시오.
- 케이블에 스트레인 릴리프가 충분한지 확인하십시오.
- 차폐층을 통해 등전위 연결을 하지 마십시오.
- "Wiring diagrams"에 따라 필드 장치를 연결하십시오.

플랜지 연결 방식으로 장치를 연결하십시오
JBBS-…-E… 접속함에는 공급 전압 및 현장 장치를 연결하기 위한 M12 커넥터가 장착되어 있습니다. JBBS-…M… 접속함에는 7/8인치 콘센트가 장착되어 있습니다.
- "Wiring diagrams"에 따라 필드 장치를 연결하십시오.

시운전
케이블이 연결되고 파워 서플라이가 켜지면 장치가 자동으로 작동 가능해집니다.

작동
LED 기능

LED	표시	의미
전원	녹색	장치 작동 가능
1…n	적색	단락 채널 1…n

설정
! 주의
최저 주변 온도
기기 손상 가능성
- 온도가 -25 °C 이하일 때는 장치의 스위치를 작동하지 마십시오.

스위치 SW1을 사용하여 장치를 하우징 전위에 연결하는 방식을 조정할 수 있습니다. 스위치 SW2는 필드버스의 종단 저항을 켜고 끄는 데 사용됩니다. 스위치 SW1 및 SW2는 하우징 내부의 보드에 있습니다. 최대 단락 전류 제한은 로터리 코딩 스위치를 사용하여 설정할 수 있습니다.

스위치	스위치 위치	의미
SW1	오른쪽	실드를 하우징 포텐셜과 직접 연결하십시오.
	왼쪽	실드를 하우징 포텐셜과 용량적으로 연결하십시오.
SW2	오른쪽	종단 저항: 꺼짐
	왼쪽	종단 저항: 켜짐
SW3 (JBBS-…SC… 전용)	30	단락 전류 제한: 30 mA
	35	단락 전류 제한: 35 mA
	45	단락 전류 제한: 45 mA
	60	단락 전류 제한: 60 mA

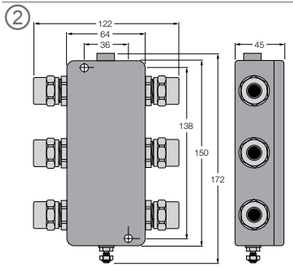
수리
이 장치는 사용자가 수리할 수 없습니다. 결함이 있는 장치는 작동하지 마십시오. 장치를 TURCK로 반품할 때는 당사의 반품 접수 조건을 준수해 주십시오.

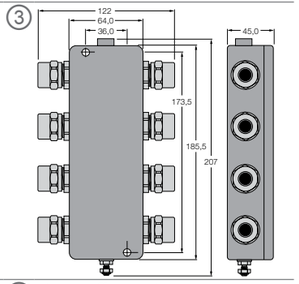
폐기
이 장치는 올바른 방법으로 폐기해야 하며 일반적인 가정 폐기물과 함께 배출해서는 안 됩니다.

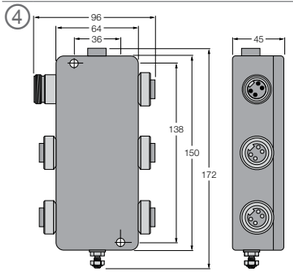
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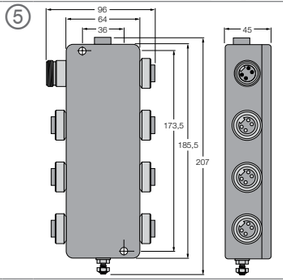

JBBS-…-…/EX
Junction Box
Quick Start Guide
Doc. no. 100002435

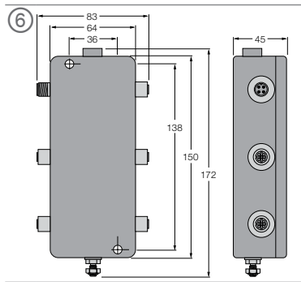
Additional information see
turck.com

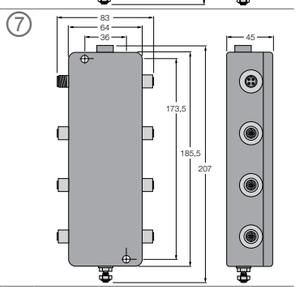
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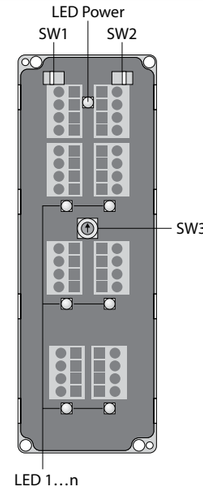
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ZH 快速入门指南

KO 빠른 시작 가이드

Certification Data | Technical data

Approvals and Markings

Approvals	
PTB 03 ATEX 2236	II 2 G Ex ib IIC T4 Gb II 2 (1) G Ex ia [ia Ga] IIC T4 Gb II 2 (1D) G Ex ia [ia IIIC Da] IIB T4 Gb II 2 (2D) G Ex ib [ib IIIC Db] IIB T4 Gb
分线盒	Ex ib IIC T4 Gb Ex ia [ia Ga] IIC T4 Gb Ex ia [ia IIIC Da] IIB T4 Gb Ex ib [ib IIIC Db] IIB T4 Gb
TÜV 13.1660-001 X	
3025465	Intrinsically safe for use in Class I, Division 1, Groups A, B, C, & D; Class I, Zone 0, Group IIC; Nonincendive for use in Class I, Division 2, Groups A, B, C, & D; indoor hazardous (classified) location and Nonincendive field wiring with connection to Class I, Division 2, Groups C & D hazardous (classified) location in accordance with control drawing NI-2.405 or NI-2.406. The equipment has a Temperature Class T5, Ta = 70°C. The Junction Blocks shall be installed in a final enclosure in order to retain its safety approval. Special Conditions of Use: 1. In Division 2 installations, all cabling drops must be ITC or PLTC cable types as defined by the NEC, using the Approved lokfast Guard. 2. Use TURCK installation drawing NI-2.406 in addition to NEC.

Ambient temperature: T_{amb}: -40…+70 °C (JBBS-…-T…)
Ambient temperature: T_{amb}: -30…+70 °C (JBBS-…-M…)
Ambient temperature: T_{amb}: -30…+70 °C (JBBS-…-E…)

Electrical Data – Supply (Segment In/Segment Out)

Internal terminal: X01, (1…4) and X02 (1…4)
Protection type intrinsic safety Ex ia/ib IIC/IIB

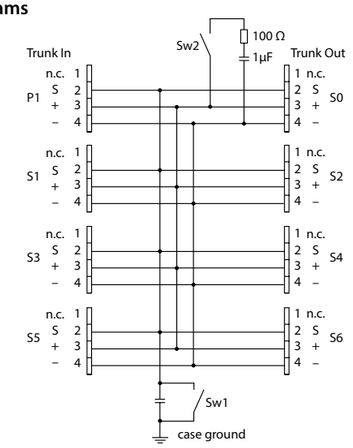
	Entity parameters	FISCO parameters to IEC 60079-11
Max. input voltage U_i	24 VDC	17.5 VDC
Max. input current I_i	250 mA	380 mA
Max. input power P_i	2.56 W	5.32 W
Max. output voltage U_0	24 VDC	17.5 VDC
Max. output current I_0	250 mA	380 mA
Max output power P_0	2.56 W	5.32 W
Internal inductance L_i		negligible
Internal capacitance C_i		< 5 nF

Electrical Data – Field Device Current Circuits (Spur 1…n)

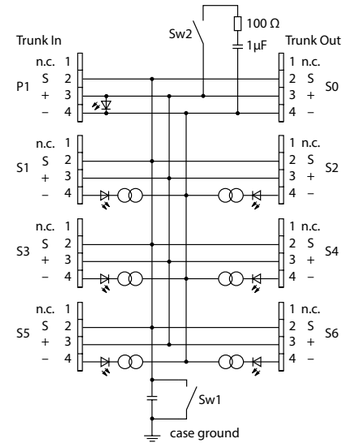
Internal terminal: X1…X6, (1…4)

	Entity parameters		FISCO parameters to IEC 60079-11
Max. output voltage U_0	24 VDC		17.5 VDC
Max. output current I_0	250 mA		380 mA
Max output power P_0	2.56 W		5.32 W
Internal inductance L_i		C_i	L_i
Internal capacitance C_i	individually for each output	< 0.82 nF	negligible
	for all outputs of the field devices together	< 5 nF	negligible

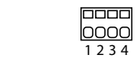
Wiring diagrams



Example: JBBS-…-…-T6…/EX
(six-channel, internal terminals)

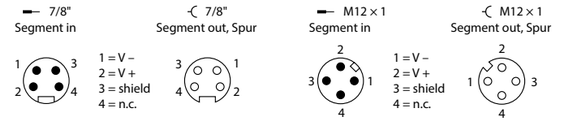


Example: JBBS-…-…SC-T6…/EX
(six-channel, internal terminals and short-circuit current limitation)

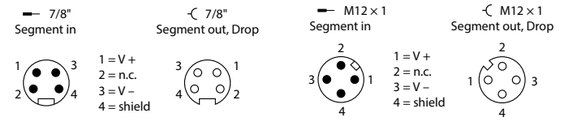


1 = n.c.
2 = Shield
3 = +
4 = –

Terminal JBBS-49…-T…/EX and JBBS-48…-T…/EX



Connector JBBS-49…-M…/EX
Connector JBBS-49…-E…/EX



Connector JBBS-48…-M…/EX
Connector JBBS-48…-E…/EX

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