Profibus PA and Profibus DP connectors

In aluminium and stainless steel housing
With overvoltage protection
With spur line fusing
Ex-certified version
Accessories

NEW

The FBCon fieldbus connectors are available in industrial design with over-voltage protection for the trunkline and fusing for individual spur lines.

They are designed to couple 1-8 measuring devices or sensors. The connection is made via spur lines. The spur line can be optionally connected using an M 12 connector or directly via an EMC cable gland.

- Tension clamp connection technology
- Overvoltage protection
- Fusing for the individual spur lines
- EMC cable glands
- M 12 connectors
- External earth connection
- Uninterrupted bus operation
- Industrial design
- Integrated bus termination (non EX)
- EX version ⟨Ex⟩ ATEX
- Pressure compensation element
- Types in stainless steel housing

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胜特力电子(上海) 86-21-54151736
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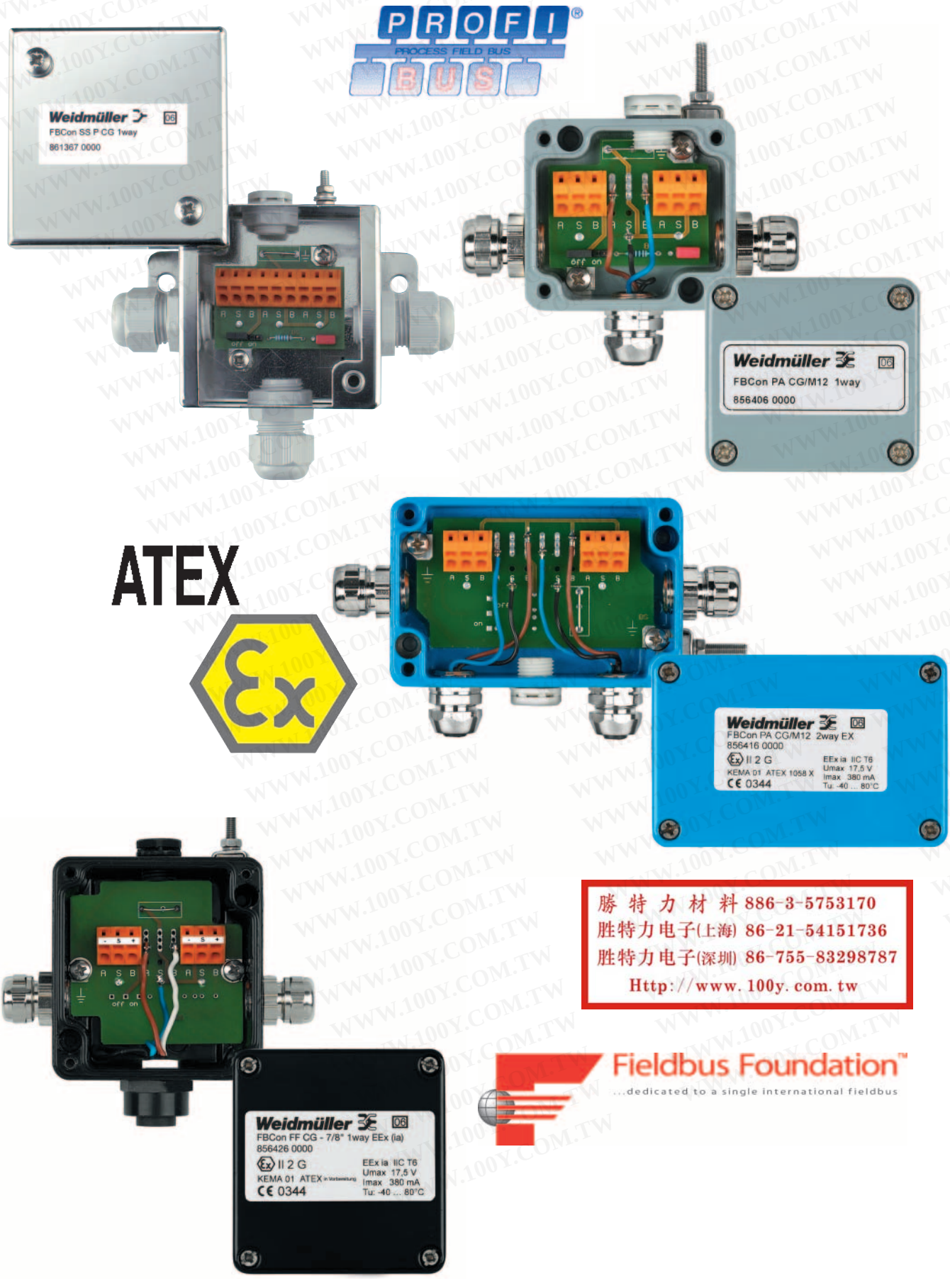
Weidmüller

Fieldbus connectors FB Con Overview



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Fieldbus Foundation™
...dedicated to a single international fieldbus

Profibus-DP Bus Connection 24 V power supply

Profibus-DP Distribution

Profibus has a line topology. The fieldbus connectors serve to connect the individual field devices and Remote I/O s with the bus line (trunk line). The length of the spur line depends on the transmission speed, and should be kept as short as possible. For transmission speeds up to 1.5 MBaud, the maximum total length of all spur lines must not exceed 6.6 meters.

The trunkline is fed in to an aluminium enclosure via EMC cable glands and connected by means of tension clamp terminals. The spur line to the device is connected via a B-coded M 12 connector.

The 24 V power supply is fed in through the cable gland provided on the right-hand side for connection.

Fieldbus connectors are included with pressure compensation elements to counteract cyclic climatic changes. Profibus User Organization guidelines are to be observed.

Profibus-PA

(EN 50 170, IEC 1158-2, DIN 19 245).

Profibus-PA is an open fieldbus standard. It was established to meet the requirements of process engineering, which include remote powering and intrinsic safety.

PROFIBUS-PA allows several sensors and actuators to be operated via one bus cable. The devices are supplied with power over a 2-wire architecture; process data is communicated digitally.

32 devices can be operated in one segment. Using repeaters allows the maximum number of stations to be increased 126, and the maximum end-to-end distance of the bus extended to 10 km. At a data transmission rate of 31.25 kbps, the length of the bus without repeaters can reach 1,900 m, in hazardous areas up to 1,000 m. The bus topology is star, tree or line.

A segment coupler is used for integration into PROFIBUS-DP networks.

Specific Advantages:

- Low wiring costs
- Process control system requires only a minimum of planning costs
- Remote inquiry and programming of field devices
- Intrinsically safe variant for applications in hazardous areas.
- PROFIBUS User Group offers further developments and support.

Weidmüller supplies PROFIBUS-PA T-connectors.

They allow field devices to be connected or replaced during servicing or system modifications without any interrupt in the bus system.

Profibus-DP Technical data

Operating temperature	–25 to 55 °C
Protection class	IP 66
Enclosure material	high-grade aluminium alloy (AL – SI 12)
Surface	Painted RAL 7001
Profibus-DP connection	Tension clamp terminal 0.5 - 1.5 mm²
Cable entry	Cable gland M16
Clamping range of cable gland	5.5 – 9.5 mm
Surface of contact	M12 plug/socket CuZnAu
Transmission rate	Max. 1.5 MBaud
Supply voltage	
Bus termination	24Vdc +/- 10%

Processing notes

Torques:	
M16 cable glands on enclosure	6.0 Nm
Union nut, M 16 cable gland	4.0 Nm
Enclosure lid	1.8 – 2.0 N
Earth connection, external	1.8 – 2.0 Nm
Adapter/spur line	Finger-tight

Aluminium enclosures Technical data

Operating temperature	-40 to 85 °C
Protection class	IP 66
Enclosure material	High-grade aluminium alloy (AL - Si 12)
Surface	Painted RAL 7001
Profibus-PA connection	Tension clamp connection 0.5 - 1.5 mm²
Cable entry	Cable gland M16
Terminal range	5.5 - 9.5 mm
Measuring instrument connection	M12x1, 4 pole
Contact MS, surface	CuZnAu

Processing notes

Torques:	
M16 cable glands on enclosure	6.25 Nm
Union nut, M 16 cable glands	4.5 Nm
Enclosure lid	1.8 - 2.0 Nm
Earth connection, external	1.8 - 2.0 Nm
Adapter/spur line	Finger-tight

Stainless steel enclosures Technical data

Operating temperature	-40 to 85 °C
Protection class	IP 66
Material, enclosure	Stainless steel 316 (L) 1.4404
Profibus-PA connection	Tension clamp connection 0.5 - 1.5 mm²
Cable entry	Cable gland M16
Terminal range	5.5 - 9.5 mm
Measuring instrument connection	M12x1, 4 pole
Contact MS, surface	CuZnAu

Processing notes

Torques:	
M16 cable glands on enclosure	~ 5 Nm
Union nut, M 16 cable glands	~ 3.75 Nm
Enclosure lid	1.8 - 2.0 Nm
Earth connection, external	1.8 - 2.0 Nm

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EX AREA – EX AREA – EX AREA – EX AREA – EX AREA – EX AREA – EX AR

A new concept for explosion protection in Europe

The so-called ATEX directive (from the French “atmosphères explosives”), official number 94/9/EC, was defined in law in 1996 in the member states of CENELEC. Behind the concept of the new directive was the intention of simplifying the previous system where changes in the laws in the member states were regulated by national and international standards. The law was passed under article 95 of the Treaty of Rome (foundation of the European Union). The directive ATEX 95 resulted from this law.

First standards such as the EN50014 series for hazard areas were adopted in the EC directive. As national legal requirements are based on this directive, even minor changes require a standards change in the related directive as well as in national law.

The ATEX directive is not based on a single standard, but specifies a series of essential health and safety requirements. The EN50014 series of ‘harmonised standards’ support the ATEX directive, but no longer stipulates their content. This is termed a ‘new concept’.

Objective of the directive

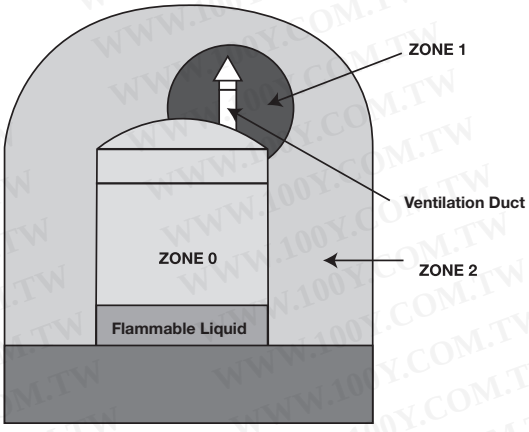
ATEX 95 is concerned with the continual introduction and commissioning of all products on the market. Primarily, the issue is the free exchange of goods across national borders within the EU and the member states of CENELEC.

All products that are in operation since 01.07.2003 must meet the requirements of the directive.

The difference with ATEX

In comparison to the “old concept”, the mechanical components and systems are to be taken into account with ATEX. This also relates to mining.

The existing definition of the term “area subject to explosion hazards” remains unaffected. This refers to inflammable substances and materials that could deflagrate with air under atmospheric conditions.



Flammable Liquid Storage Vessel

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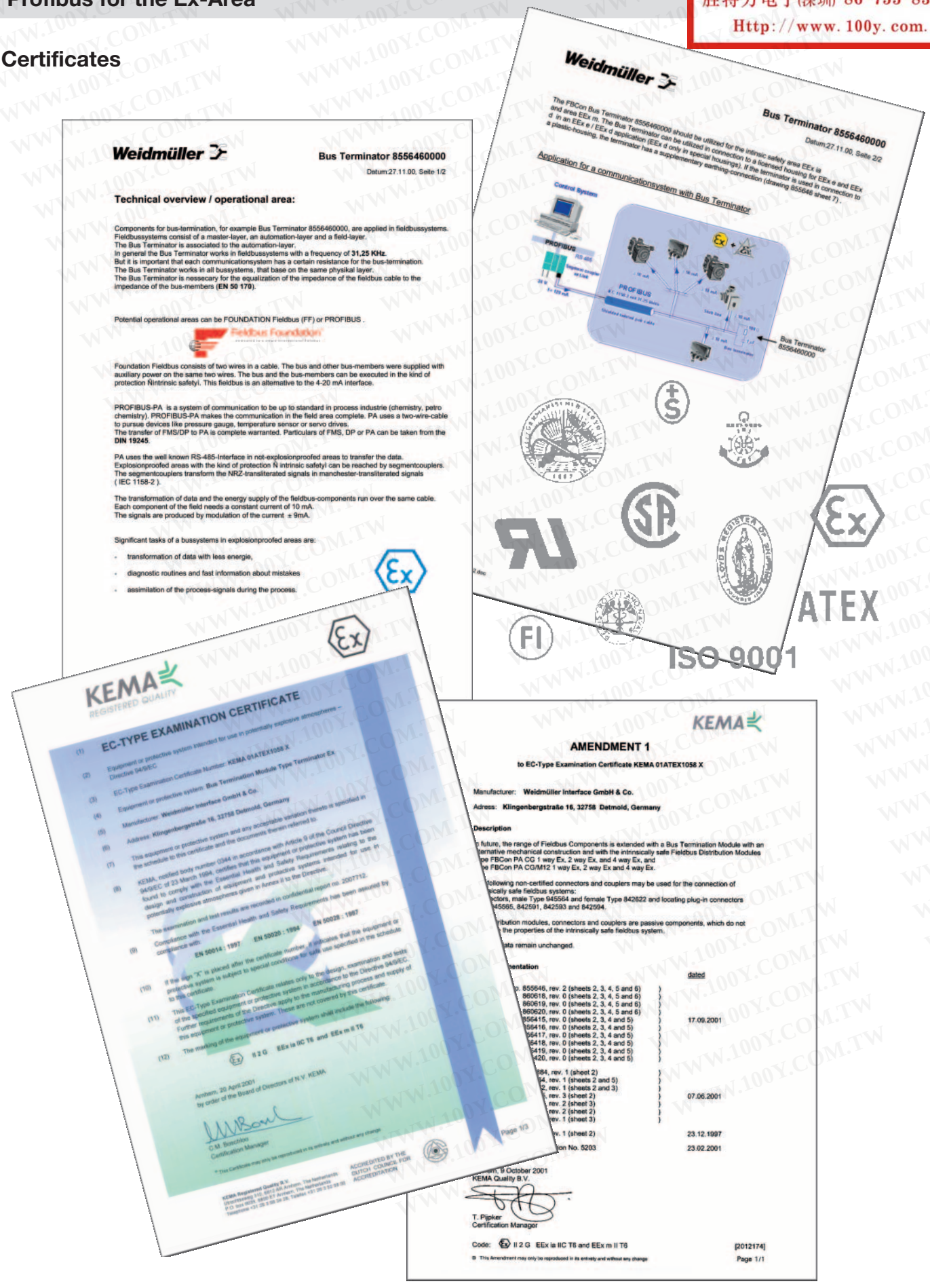
Certificates



Weidmüller

Bus Terminator 8556460000

Datum:27.11.00, Seite 1/2

Technical overview / operational area:

Components for bus-termination, for example Bus Terminator 8556460000, are applied in fieldbussystems. Fieldbussystems consist of a master-layer, an automation-layer and a field-layer.
The Bus Terminator is associated to the automation-layer.
In general the Bus Terminator works in fieldbussystems with a frequency of **31,25 KHz**.
But it is important that each communicationsystem has a certain resistance for the bus-termination.
The Bus Terminator works in all bussystems, that base on the same physikal layer.
The Bus Terminator is nessecary for the equalization of the impedance of the fieldbus cable to the impedance of the bus-members (**EN 50 170**).

Potential operational areas can be FOUNDATION Fieldbus (FF) or PROFIBUS .

Foundation Fieldbus consists of two wires in a cable. The bus and other bus-members were supplied with auxiliary power on the same two wires. The bus and the bus-members can be executed in the kind of protection Ñintrinsic safetyì. This fieldbus is an alternative to the 4-20 mA interface.

PROFIBUS-PA is a system of communication to be up to standard in process industrie (chemistry, petro chemistry). PROFIBUS-PA makes the communication in the field area complete. PA uses a two-wire-cable to pursue devices like pressure gauge, temperature sensor or servo drives.
The transfer of FMS/DP to PA is complete warranted. Particulars of FMS, DP or PA can be taken from the **DIN 19245**.

PA uses the well known RS-485-Interface in not-explosionproofed areas to transfer the data.
Explosionproofed areas with the kind of protection N intrinsic safetyì can be reached by segmentcouplers.
The segmentcouplers transform the NRZ-transliterated signals in manchester-transliterated signals (IEC 1158-2).

The transformation of data and the energy supply of the fieldbus-components run over the same cable.
Each component of the field needs a constant current of 10 mA.
The signals are produced by modulation of the current ± 9mA.

Significant tasks of a bussystems in explosionproofed areas are:

- transformation of data with less energie,
- diagnostic routines and fast information about mistakes
- assimilation of the process-signals during the process.

Weidmüller

Bus Terminator 8556460000

Datum:27.11.00, Seite 2/2

The FBCon Bus Terminator 8556460000 should be utilized for the intrinsic safety area EEx ia and area EEx m. The Bus Terminator can be utilized in connection to a licensed housing for EEx e and EEx d in an EEx e / EEx d application (EEx d only in special housings). If the terminator is used in connection to a plastic-housing, the terminator has a supplementery earthing-connection (drawing 855846 sheet 7) .

Application for a communicationsystem with Bus Terminator

ATEX

ISO 9001

KEMA
REGISTERED QUALITY

EC-TYPE EXAMINATION CERTIFICATE

(1) Equipment or protective system intended for use in potentially explosive atmospheres – Directive 94/9/EC

(2) EC-Type Examination Certificate Number: KEMA 01ATEX1058 X

(3) Equipment or protective system: Bus Termination Module Type Terminator Ex

(4) Manufacturer: Weidmüller Interface GmbH & Co.

(5) Address: Klingenbergstraße 16, 32758 Detmold, Germany

(6) This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(7) KEMA, notified body number 0344 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

(8) The examination and test results are recorded in confidential report no. 2007712.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with: EN 50014 : 1997 EN 50020 : 1994 EN 50028 : 1987

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-Type Examination Certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

(12) The marking of the equipment or protective system shall include the following: II 2 G EEx ia IIC T6 and EEx m II T6

Arnhem, 20 April 2001
by order of the Board of Directors of N.V. KEMA

C.M. Boschloo
Certification Manager

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KEMA

AMENDMENT 1

to EC-Type Examination Certificate KEMA 01ATEX1058 X

Manufacturer: Weidmüller Interface GmbH & Co.

Adress: Klingenbergstraße 16, 32758 Detmold, Germany

Description

In future, the range of Fieldbus Components is extended with a Bus Termination Module with an alternative mechanical construction and with the intrinsically safe Fieldbus Distribution Modules type FBCon PA CG 1 way Ex, 2 way Ex, and 4 way Ex, and type FBCon PA CG/M12 1 way Ex, 2 way Ex and 4 way Ex.

The following non-certified connectors and couplers may be used for the connection of intrinsically safe fieldbus systems:
Connectors, male Type 945564 and female Type 842822 and locating plug-in connectors 842565, 842591, 842593 and 842594.

The distribution modules, connectors and couplers are passive components, which do not influence the properties of the intrinsically safe fieldbus system.

The data remain unchanged.

Documentation

	dated
855646, rev. 2 (sheets 2, 3, 4, 5 and 6)	
860618, rev. 0 (sheets 2, 3, 4, 5 and 6)	
860619, rev. 0 (sheets 2, 3, 4, 5 and 6)	
860620, rev. 0 (sheets 2, 3, 4, 5 and 6)	
856415, rev. 0 (sheets 2, 3, 4 and 5)	17.09.2001
856416, rev. 0 (sheets 2, 3, 4 and 5)	
856417, rev. 0 (sheets 2, 3, 4 and 5)	
856418, rev. 0 (sheets 2, 3, 4 and 5)	
856419, rev. 0 (sheets 2, 3, 4 and 5)	
856420, rev. 0 (sheets 2, 3, 4 and 5)	
855884, rev. 1 (sheet 2)	
855884, rev. 1 (sheets 2 and 5)	
855892, rev. 1 (sheets 2 and 3)	
855893, rev. 3 (sheet 2)	07.06.2001
855893, rev. 2 (sheet 3)	
855894, rev. 2 (sheet 2)	
855894, rev. 1 (sheet 3)	
855895, rev. 1 (sheet 2)	23.12.1997
Addition No. 5203	23.02.2001

Arnhem, 9 October 2001
KEMA Quality B.V.

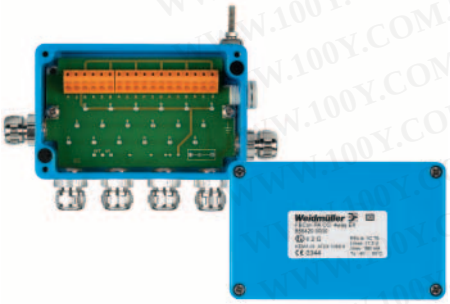
T. Pipker
Certification Manager

Code: II 2 G EEx ia IIC T6 and EEx m II T6 [2012174]

This Amendment may only be reproduced in its entirety and without any change

Page 1/1

Profibus PA fieldbus connectors FB Con



Technical data Profibus PA connector

Operating temperature	from -40 to 85°C
Type of protection	IP 66
Material of housing	high-quality aluminium alloy (AL - Si 12)
Surface	powder coated RAL 7001
PROFIBUS-PA - Connection	tension clamp connection 0.5 - 1.5 mm^2
Cable bushing	cable gland M16
Clamping area	5.5 - 9.6 mm
Connector M12 x 1 4-pole	contacts brass, surface CUZnAu

Technical data Profibus PA connector with overvoltage protection

Nominal voltage DCV/AC	Un = 24 V DC / 18 V AC
Max. operating voltage	Uc = 30 V DC / 21 V AC
Nominal current with 25°C	In = 500 mA
Limited output voltage (wire-wire/ wire-PE)	<65 V/< 600 V
Rated discharge current	Isn = 5 kA (wire-wire/wire-PE)
Output voltage max.	Up = 65 V
Resistor per line	2,2 Ohm

Technical data Profibus PA connector with fuse

Nominal voltage DCV/AC	Un = 24 V DC / 18 V AC
Max. operating voltage	Uc = 30 V DC / 21 V AC
Nominal current with 25°C	In = 500 mA
Short circuit, spur	100 mA Polyfuse
Max. hold current	Ihold = 100 mA, 20 °C
Max. tripping current	Itrip = 200 mA, 20 °C

Installation advice

M16 cable gland on housing	6.0 Nm
Coupling ring M16 cable gland	4.0 Nm
Housing lid	1.8 - 2.0 Nm
External earthing cable	1.8 - 2.0 Nm

Ordering data

Type	Part No.
Profibus PA T connector FBCon PA CG/M12 1way	**8564060000**
Profibus PA T connector FBCon PA CG/M12 2way	**8564070000**
Profibus PA T connector FBCon PA CG/M12 4way	**8564080000**
Profibus PA T connector FBCon PA CG/M12 8way	**8564310000**
Profibus PA T connector FBCon PA CG 1way	**8564090000**
Profibus PA T connector FBCon PA CG 2way	**8564100000**
Profibus PA T connector FBCon PA CG 4way	**8564110000**
Profibus PA T connector FBCon PA CG 8way	**8564300000**
Profibus PA T connector FBCon PA CG/M12 1way Fuse	**871416 0000**
Profibus PA T connector FBCon PA CG/M12 2way Fuse	**871417 0000**
Profibus PA T connector FBCon PA CG/M12 4way Fuse	**871418 0000**
Profibus PA T connector FBCon PA CG/M12 8way Fuse	**871419 0000**
Profibus PA T connector FBCon PA CG 1way Fuse	**871420 0000**
Profibus PA T connector FBCon PA CG 2way Fuse	**871421 0000**
Profibus PA T connector FBCon PA CG 4way Fuse	**871422 0000**
Profibus PA T connector FBCon PA CG 8way Fuse	**871423 0000**
Profibus PA T connector FBCon PA CG/M12 1way OVP	**871408 0000**
Profibus PA T connector FBCon PA CG/M12 2way OVP	**871409 0000**
Profibus PA T connector FBCon PA CG/M12 4way OVP	**871410 0000**
Profibus PA T connector FBCon PA CG/M12 8way OVP	**871411 0000**
Profibus PA T connector FBCon PA CG 1way OVP	**871412 0000**
Profibus PA T connector FBCon PA CG 2way OVP	**871413 0000**
Profibus PA T connector FBCon PA CG 4way OVP	**871414 0000**
Profibus PA T connector FBCon PA CG 8way OVP	**871415 0000**

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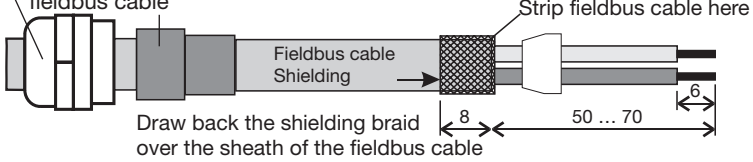
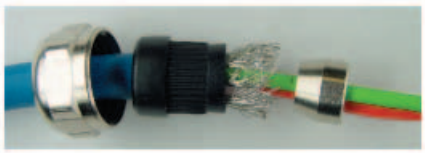
Shield is connected to the enclosure via the EMC cable glands.
Thread the cable gland onto the seal, on the unprepared fieldbus cable





Use ferrules!

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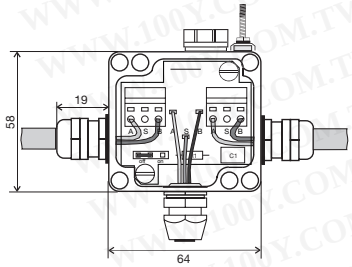
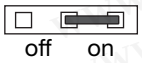
Profibus PA fieldbus connectors FB Con in aluminium housing

- Trunkline with EMC cable gland connection
- Spur lines with M12 connectors

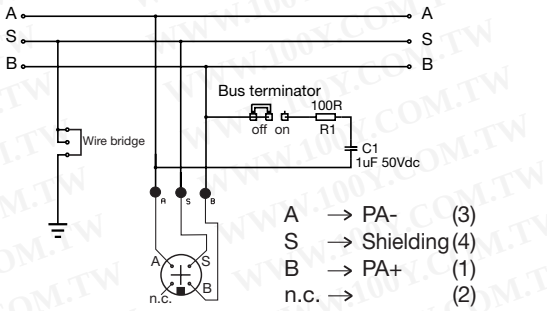
PROFIBUS-PA T-Connector standard 1-way / Type FBCon PA CG/M12 1way



Bus terminator:



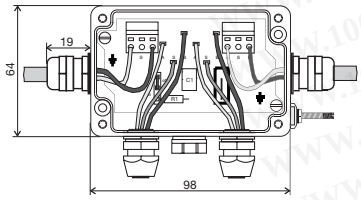
Circuit diagram



Ordering data

Type	Part No.
Profibus PA T connector FBCon PA CG/M12 1way	**8564060000**

PROFIBUS-PA T-Connector standard 2-way / Type FBCon PA CG/M12 2way



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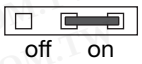
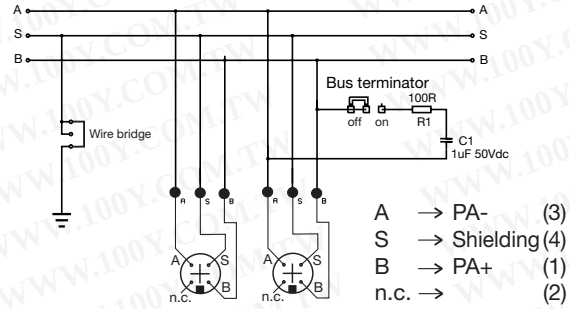


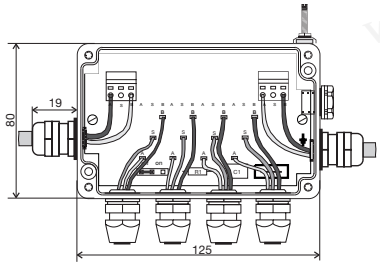
Circuit diagram



Ordering data

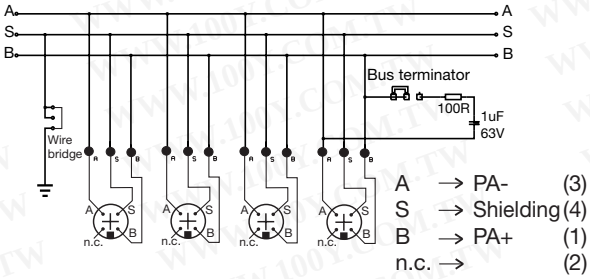
Type	Part No.
Profibus PA T connector FBCon PA CG/M12 2way	**8564070000**

PROFIBUS-PA T-Connector standard 4-way / Type FBCon PA CG/M12 4way



Bus terminator:

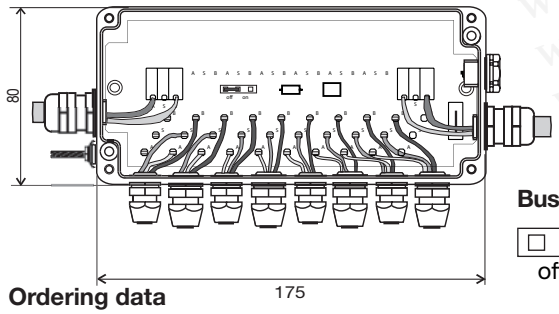
Circuit diagram



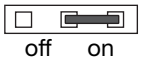
Ordering data

Type	Part No.
Profibus PA T connector FBCon PA CG/M12 4way	**8564080000**

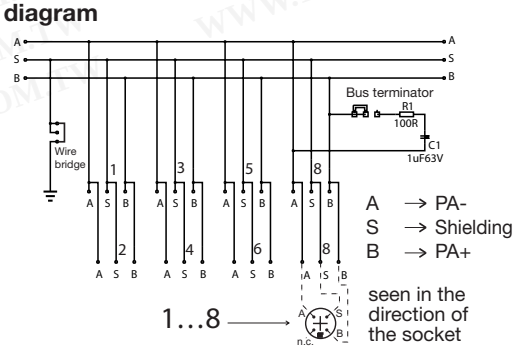
PROFIBUS-PA T-Connector standard 8-way / Type FBCon PA CG/M12 8way



Bus terminator:



Circuit diagram



Ordering data

Type	Part No.
Profibus PA T connector FBCon PA CG/M12 8way	**8564310000**

勝 特 力 材 料 886-3-5753170
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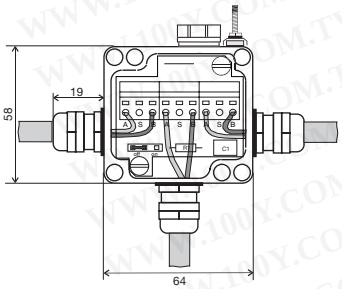
胜特力电子(深圳) 86-755-83298787
Http://www.100y.com.tw

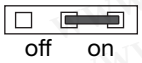
Profibus PA fieldbus connectors FB Con in aluminium housing

- Trunkline and all spur lines with EMC cable gland connection

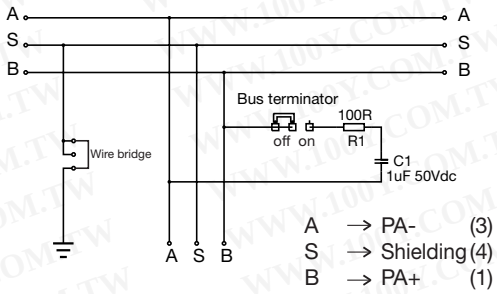
PROFIBUS-PA T-Connector EMC version 1-way / Type FBCon PA CG 1way



Bus terminator:



Circuit diagram

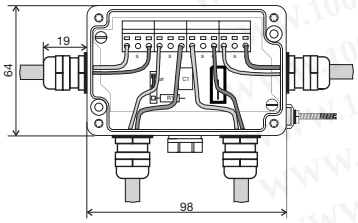


A → PA- (3)
S → Shielding (4)
B → PA+ (1)
n.c. → (2)

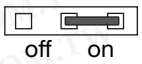
Ordering data

Type	Part No.
Profibus PA T connector FBCon PA CG 1way	**8564090000**

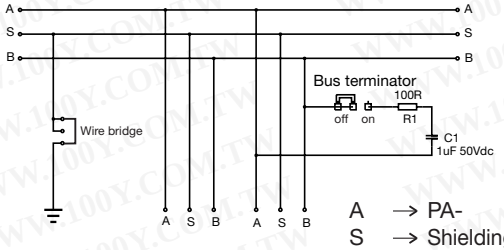
PROFIBUS-PA T-Connector EMC version 2-way / Type FBCon PA CG 2way



Bus terminator:



Circuit diagram

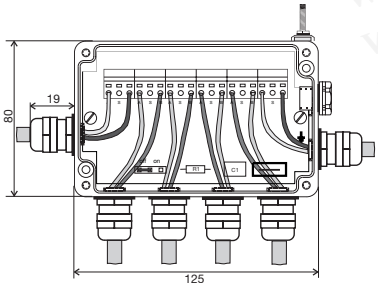


A → PA- (3)
S → Shielding (4)
B → PA+ (1)
n.c. → (2)

Ordering data

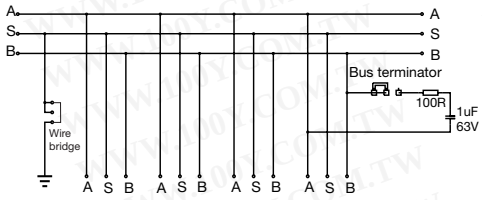
Type	Part No.
Profibus PA T connector FBCon PA CG 2way	**8564100000**

PROFIBUS-PA T-Connector EMC version 4-way / Type FBCon PA CG 4way



Bus terminator:

Circuit diagram

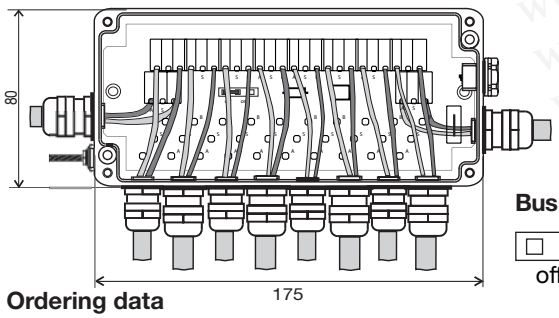


A → PA- (3)
S → Shielding (4)
B → PA+ (1)
n.c. → (2)

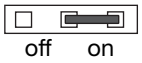
Ordering data

Type	Part No.
Profibus PA T connector FBCon PA CG 4way	**8564110000**

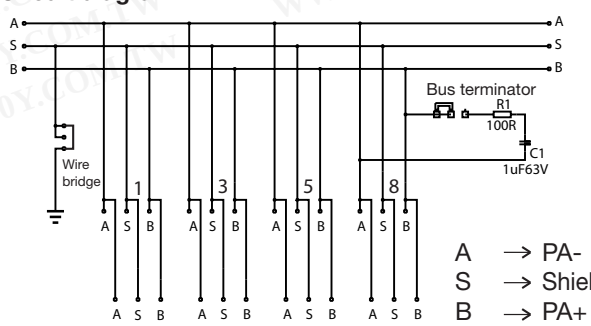
PROFIBUS-PA T-Connector EMC version 8-way / Type FBCon PA CG 8way



Bus terminator:



Circuit diagram



A → PA-
S → Shielding
B → PA+

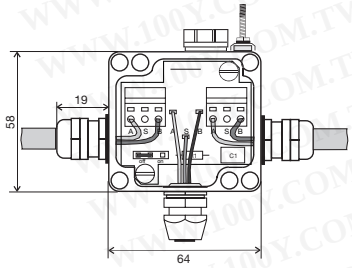
Ordering data

Type	Part No.
Profibus PA T connector FBCon PA CG 8way	**8564300000**

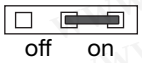
Profibus PA fieldbus connectors FB Con in aluminium housing, with fuse

- Trunkline with EMC cable gland connection
- All spur lines with M12 connectors and 100 mA self refreshing fuses

PROFIBUS-PA T-Connector standard 1-way / Type FBCon PA CG/M12 1way Fuse



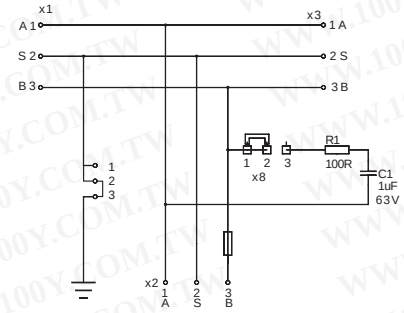
Bus terminator:



Ordering data

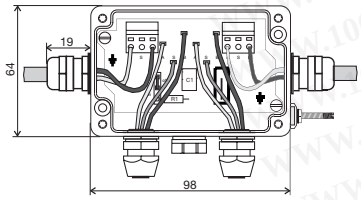
Type	Part No.
Profibus PA T connector FBCon PA CG/M12 1way Fuse	**8714160000**

Circuit diagram

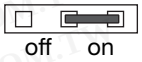


A → PA- (3)
S → Shielding (4)
B → PA+ (1)

PROFIBUS-PA T-Connector standard 2-way / Type FBCon PA CG/M12 2way Fuse



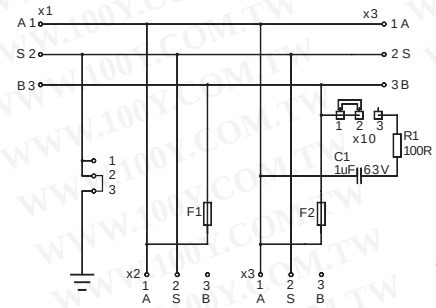
Bus terminator:



Ordering data

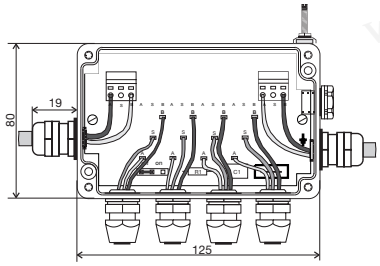
Type	Part No.
Profibus PA T connector FBCon PA CG/M12 2way Fuse	**8714170000**

Circuit diagram



A → PA- (3)
S → Shielding (4)
B → PA+ (1)

PROFIBUS-PA T-Connector standard 4-way / Type FBCon PA CG/M12 4way Fuse

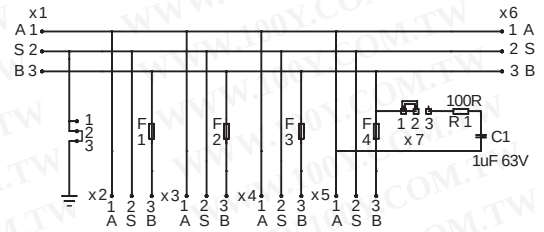


Bus terminator:

Ordering data

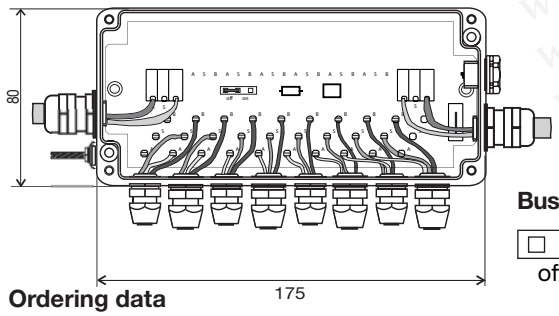
Type	Part No.
Profibus PA T connector FBCon PA CG/M12 4way Fuse	**8714180000**

Circuit diagram

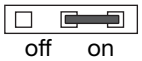


A → PA- (3)
S → Shielding (4)
B → PA+ (1)

PROFIBUS-PA T-Connector standard 8-way / Type FBCon PA CG/M12 8way Fuse



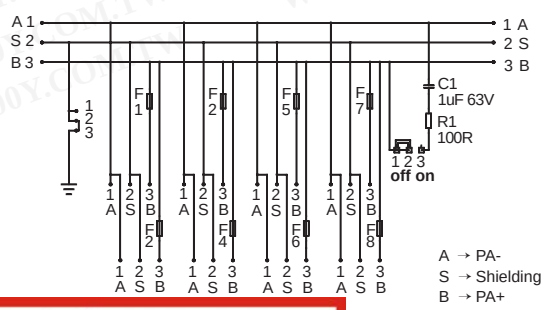
Bus terminator:



Ordering data

Type	Part No.
Profibus PA T connector FBCon PA CG/M12 8way Fuse	**8714190000**

Circuit diagram



A → PA- (3)
S → Shielding (4)
B → PA+ (1)

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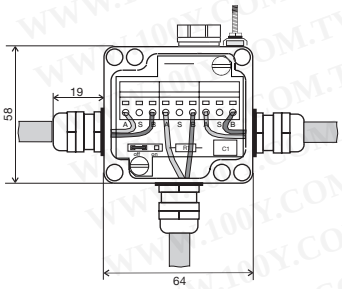
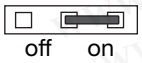
Profibus PA fieldbus connectors FB Con in aluminium housing, with fuse

- Trunkline and spur lines with EMC cable gland connection
- All spur lines with 100 mA self refreshing fuses

PROFIBUS-PA T-Connector EMC version 1-way / Type FBCon PA CG 1way Fuse



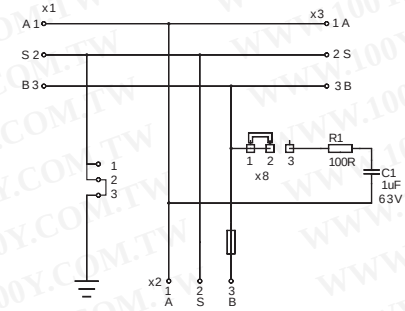
Bus terminator:



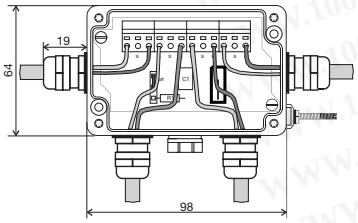
Ordering data

Type	Part No.
Profibus PA T connector FBCon PA CG 1way Fuse	**8714200000**

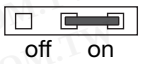
Circuit diagram



PROFIBUS-PA T-Connector EMC version 2-way / Type FBCon PA CG 2way Fuse



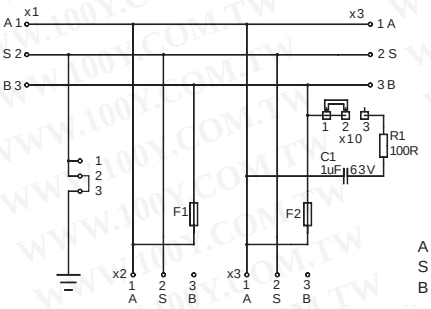
Bus terminator:



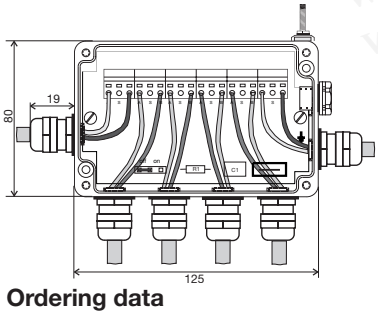
Ordering data

Type	Part No.
Profibus PA T connector FBCon PA CG 2way Fuse	**8714210000**

Circuit diagram



PROFIBUS-PA T-Connector EMC version 4-way / Type FBCon PA CG 4way Fuse

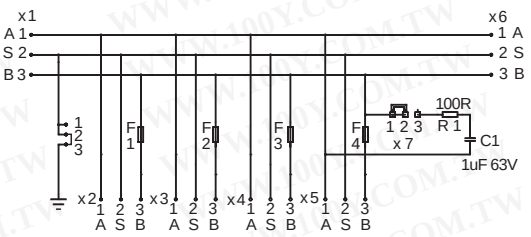


Bus terminator:

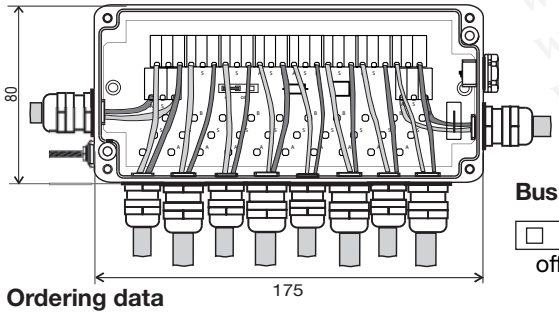
Ordering data

Type	Part No.
Profibus PA T connector FBCon PA CG 4way Fuse	**8714220000**

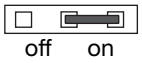
Circuit diagram



PROFIBUS-PA T-Connector EMC version 8-way / Type FBCon PA CG 8way Fuse



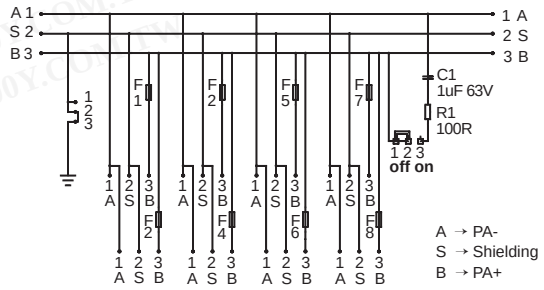
Bus terminator:



Ordering data

Type	Part No.
Profibus PA T connector FBCon PA CG 8way Fuse	**8714230000**

Circuit diagram



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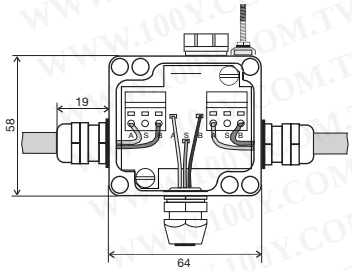
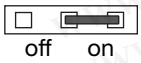
Profibus PA fieldbus connectors FB Con in aluminium housing, with OVP

- Trunkline with over voltage protection (OVP) and EMC cable gland connection
- Spur lines with M12 connector

PROFIBUS-PA T-Connector standard1-way / Type FBCon PA CG/M12 1way OVP



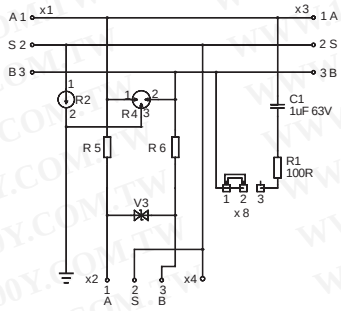
Bus terminator:



Ordering data

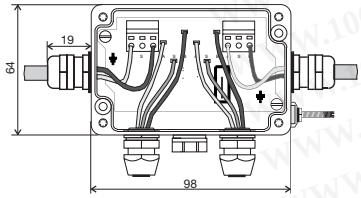
Type	Part No.
Profibus PA T connector FBCon PA CG/M12 1way OVP	**8714080000**

Circuit diagram

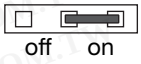


A → PA- (3)
S → Shielding (4)
B → PA+ (1)

PROFIBUS-PA T-Connector standard 2-way / Type FBCon PA CG/M12 2way OVP



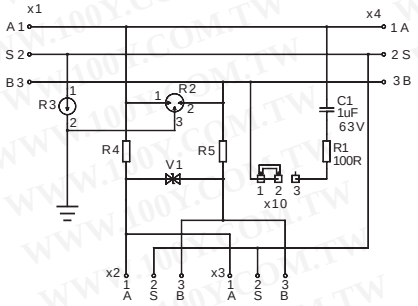
Bus terminator:



Ordering data

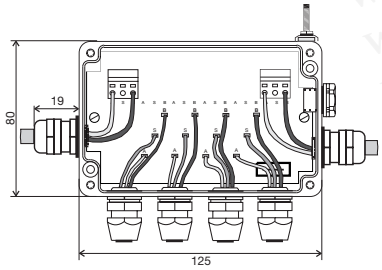
Type	Part No.
Profibus PA T connector FBCon PA CG/M12 2way OVP	**8714090000**

Circuit diagram

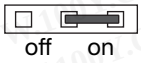


A → PA- (3)
S → Shielding (4)
B → PA+ (1)

PROFIBUS-PA T-Connector standard 4-way / Type FBCon PA CG/M12 4way OVP



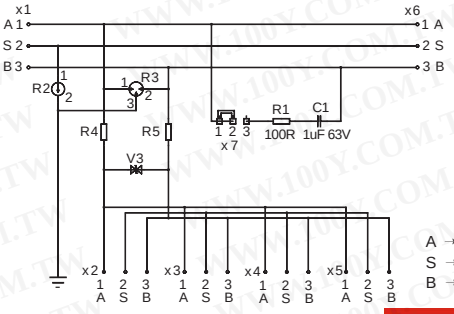
Bus terminator:



Ordering data

Type	Part No.
Profibus PA T connector FBCon PA CG/M12 4way OVP	**8714100000**

Circuit diagram



A → PA- (3)
S → Shielding (4)
B → PA+ (1)

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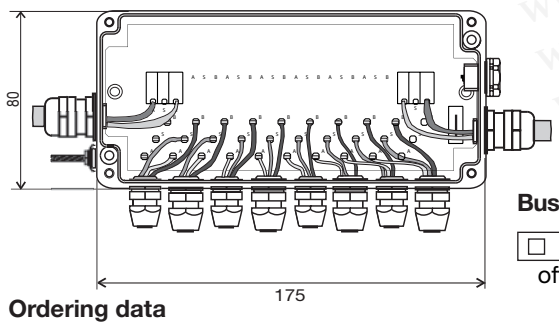
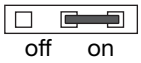
PROFIBUS-PA T-Connector standard 8-way / Type FBCon PA CG/M12 8way OVP



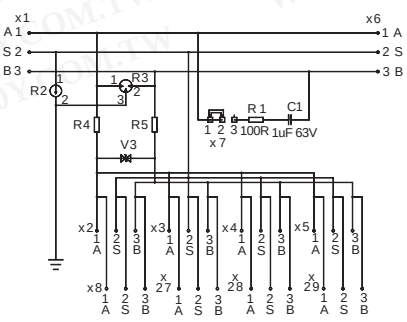
Bus terminator:



Ordering data

Type	Part No.
Profibus PA T connector FBCon PA CG/M12 8way OVP	**8714110000**

Circuit diagram



A → PA- (3)
S → Shielding (4)
B → PA+ (1)

Profibus PA fieldbus connectors FB Con in aluminium housing, with OVP

- Trunkline with over voltage protection (OVP)
- Trunkline and spur lines with emc cable gland connection

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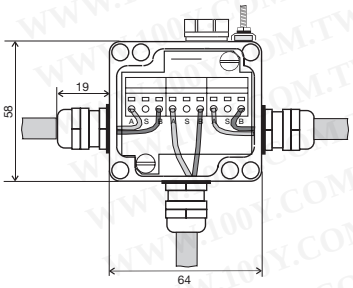
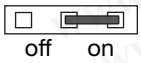
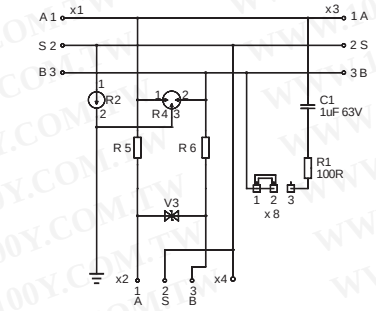
PROFIBUS-PA T-Connector standard 1-way / Type FBCon PA CG 1way OVP



Bus terminator:



Circuit diagram

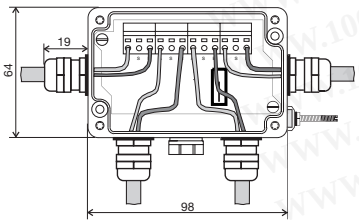


A → PA- (3)
S → Shielding (4)
B → PA+ (1)

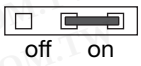
Ordering data

Type	Part No.
Profibus PA T connector FBCon PA CG 1way OVP	**8714120000**

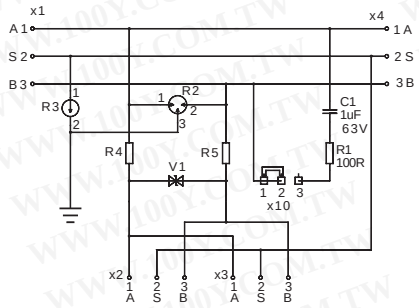
PROFIBUS-PA T-Connector standard 2-way / Type FBCon PA CG 2way OVP



Bus terminator:



Circuit diagram

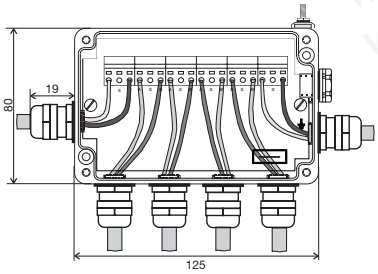


A → PA- (3)
S → Shielding (4)
B → PA+ (1)

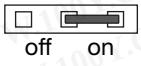
Ordering data

Type	Part No.
Profibus PA T connector FBCon PA CG 2way OVP	**8714130000**

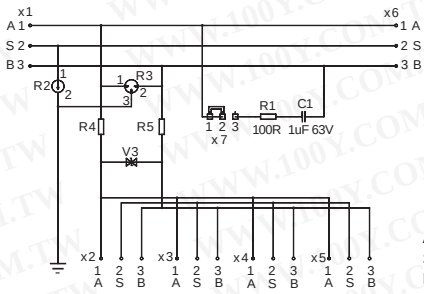
PROFIBUS-PA T-Connector standard 4-way / Type FBCon PA CG 4way OVP



Bus terminator:



Circuit diagram

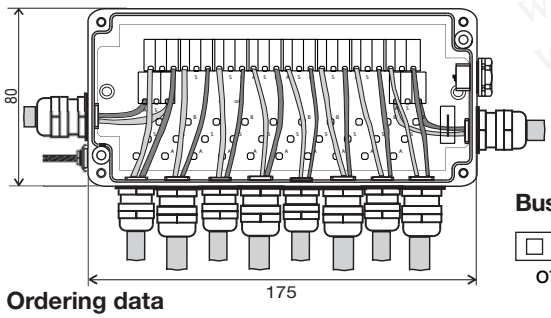


A → PA- (3)
S → Shielding (4)
B → PA+ (1)

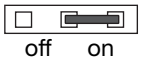
Ordering data

Type	Part No.
Profibus PA T connector FBCon PA CG 4way OVP	**8714140000**

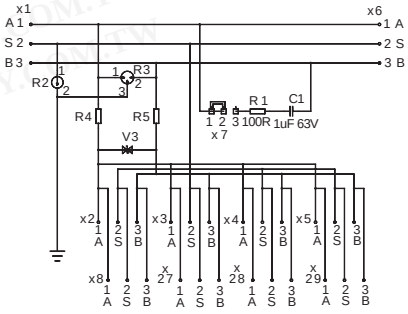
PROFIBUS-PA T-Connector standard 8-way / Type FBCon PA CG 8way OVP



Bus terminator:



Circuit diagram



A → PA- (3)
S → Shielding (4)
B → PA+ (1)

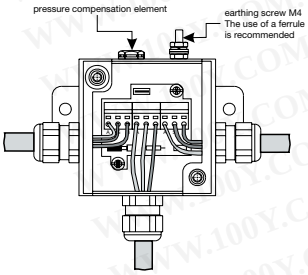
Ordering data

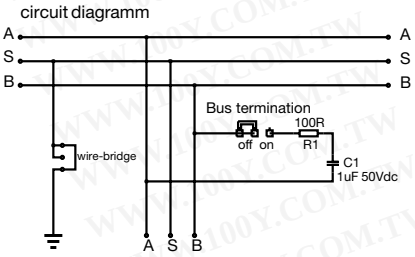
Type	Part No.
Profibus PA T connector FBCon PA CG 8way OVP	**8714150000**

Profibus PA fieldbus connectors FB Con in stainless steel housing

- Trunk line and spur lines with plastic or stainless steel cable glands

Stainless steel housing 1 way





Bus termination: off on

A → PA-
S → shield
B → PA+

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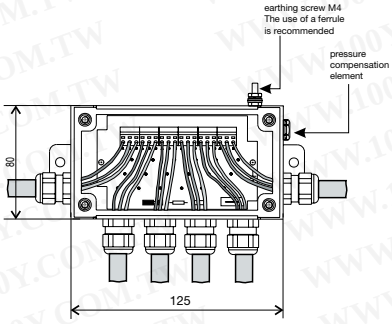
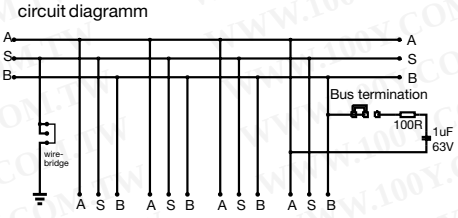
Stainless steel housing 4 way

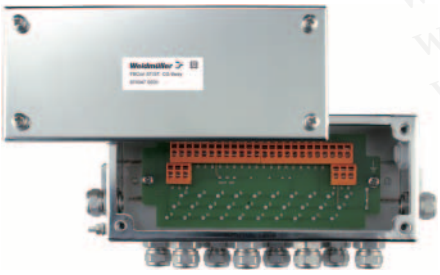


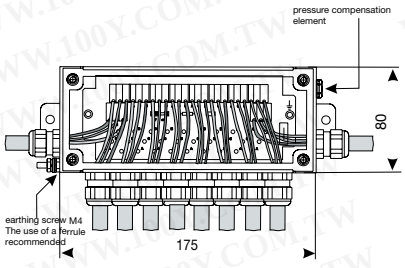


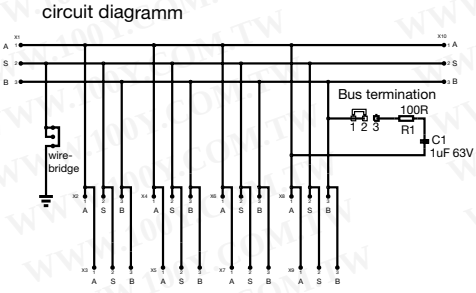
Bus termination: off on

A → PA-
S → shield
B → PA+

Stainless steel housing 8 way







Bus termination: off on

A → PA-
S → shield
B → PA+

Ordering data

	Type	Part No.
FB Con 1way		
with plastic cable glands	FBCon SS P CG 1way	**8613670000**
with stainless steel cable glands	FBCon ST/ST CG 1way	**8703430000**
FB Con 4way		
with plastic cable glands	FBCon SS P CG 4way	**8613680000**
with stainless steel cable glands	FBCon ST/ST CG 4way	**8703450000**
FB Con 8way		
with plastic cable glands	FBCon SS P CG 8way	**8640720000**
with stainless steel cable glands	FBCon ST/ST CG 8way	**8703470000**

Profibus PA for the Ex-Area

Profibus PA T-connector

- **EEx (ia) ATEX**

The **PROFIBUS-PA** installation products are increasingly found in the

- Food industries
- Fine and speciality chemicals
- Bulk chemicals industry.

The range is designed to accommodate a wide range of customer requirements in the harshest of environments.

These include Standard and Hazardous Area Versions with either single or multiple quick-connection variants with M12 connector or cable gland.

Weidmüller offers, for almost every application, a solution. In the case you don't see your solution here, please contact your local sales office.

PROFIBUS-PA T-Connector - EEx (ia)

- 1-way
- 2-way
- 4-way
- 8-way

The **PROFIBUS-PA T-Connector EEx (ia)** is intended for the coupling of sensors, actuators and measuring instruments in areas subject to explosion hazards.

- Approval for intrinsically safe usage ATEX approval
- Type of protection IP 66
- Modular design
- Non-interrupted BUS operations, also when being serviced
- Easy to use
- External grounding cable
- External bus terminator

FB Con Bus Terminator for the ⟨Ex⟩ area EEx (ia) ATEX

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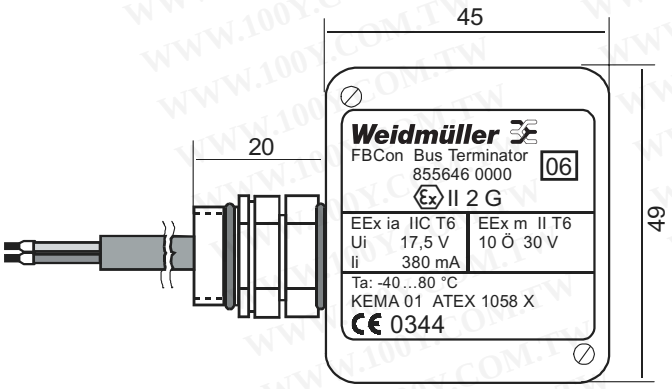
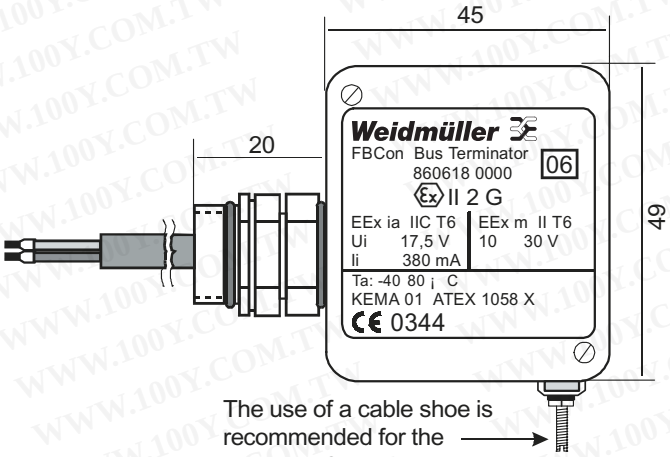
FBCon Bus Terminator without earth connection



FBCon Bus Terminator with earth connection



The use of a cable shoe is recommended for the earthing of the bus terminator.

Ordering data

Type	Part No.
FBCon Bus Terminator EEx with locking clip + without earth connection	**8556460000**
FBCon Bus Terminator EEx without locking clip + without earth connection	**8606190000**

Ordering data

Type	Part No.
FBCon Bus Terminator EEx with locking clip + with earth connection	**8606180000**
FBCon Bus Terminator EEx without locking clip + with earth connection	**8606200000**

Technical data

Temperature range/operating temperature	- 40 to 80 °C
Type of protection	IP 66
Material of housing	high-quality aluminium alloy (AL - Si 12)
Surface	black powder coated
Connecting cable	2x0.14 mm²
Cable bushing	Bus adapter M16

Technical data

Temperature range/operating temperature	- 40 to 80 °C
Type of protection	IP 66
Material of housing	high-quality aluminium alloy (AL - Si 12)
Surface	black powder coated
Connecting cable	2x0.14 mm²
Cable bushing	Bus adapter M16

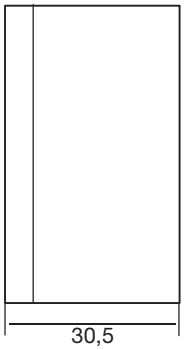
Installation advice

Torques	
M16 adapter on the housing	6.0 Nm
External earthing cable (if necessary)	1.8 - 2.0 Nm

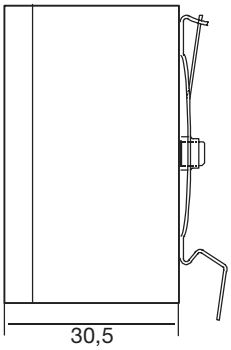
Installation advice

Torques	
M16 adapter on the housing	6.0 Nm
External earthing cable (if necessary)	1.8 - 2.0 Nm

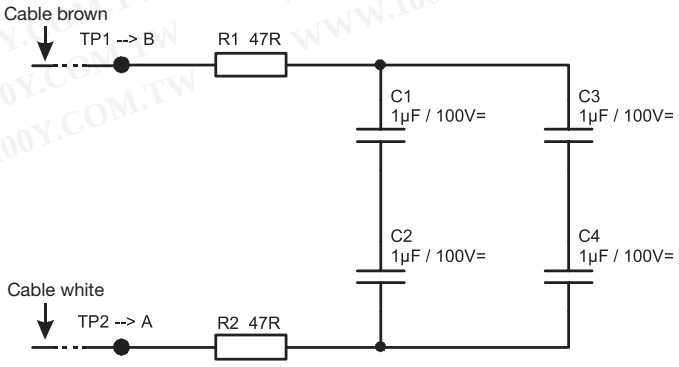
Housing lid without locking clip



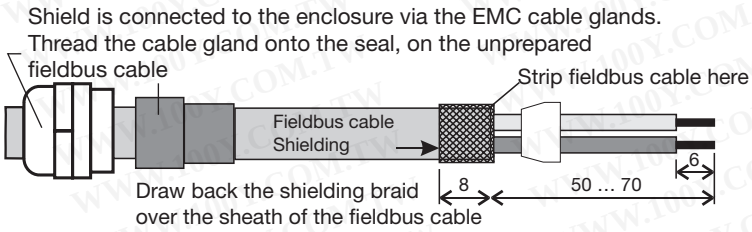
Housing lid with locking clip



Circuit diagram



Profibus PA for the Ex-Area



Use ferrules!

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Technical data for pages 10-11

Temperature range	
Operating temperature	from -40 to 60°C
Type of protection	IP 66
Material of housing	high-quality aluminium alloy (AL - Si 12)
Surface	stove-enamelled RAL 5015
PROFIBUS-PA - Connection	tension clamp connection 0.5 - 1.5 mm^2
Cable bushing	Cable gland M16
Clamping area	5.5 - 9.6 mm
Connector M12 x 1 4-pole	contacts brass, surface CUZnAu

Installation advice

Torques	
M16 cable gland on housing	6.25 Nm
Coupling ring M16 cable gland	4.5 Nm
Housing lid	1.8 - 2.0 Nm
Adapter / stub cable	hand-tight
External earthing cable	1.8 - 2.0 Nm

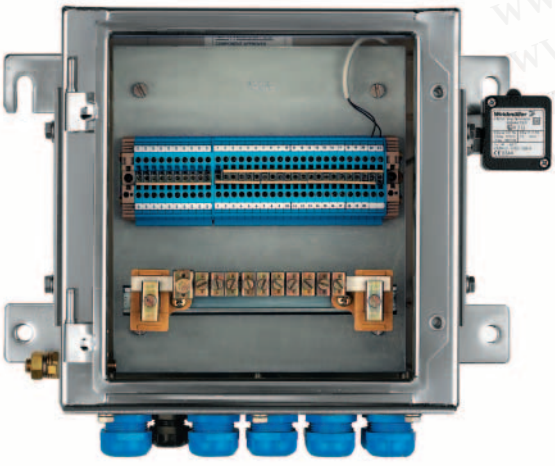
Ordering data

Type	Part No.
Profibus PA T connector FBCon PA CG/M12 1way EX	**8564150000**
Profibus PA T connector FBCon PA CG/M12 2way EX	**8564160000**
Profibus PA T connector FBCon PA CG/M12 4way EX	**8564170000**
Profibus PA T connector FBCon PA CG/M12 8way EX	**8564250000**
Profibus PA T connector FBCon PA CG 1way EX	**8564180000**
Profibus PA T connector FBCon PA CG 2way EX	**8564190000**
Profibus PA T connector FBCon PA CG 4way EX	**8564200000**
Profibus PA T connector FBCon PA CG 8way EX	**8564240000**

With the EEx (ia) version an external bus terminator is necessary at the end of the bus system

Weidmüller offers here the PROFIBUS-PA FB-Connector. In the event of service or plant modification, the PROFIBUS-PA FB-Connector from Weidmüller permits the connection or replacement of field devices without interrupting the bus system. Extensive accessories as well as preassembled cables and plugs round off the program.

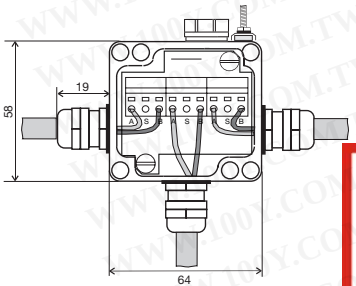
Customer-specific solutions on request



Profibus PA fieldbus connectors for the Ex area EEx (ia) ATEX

- Trunkline and all spur lines with emc cable gland connection

PROFIBUS-PA T-Connector EEx EMC version 1-way / Type FBCon PA CG 1way



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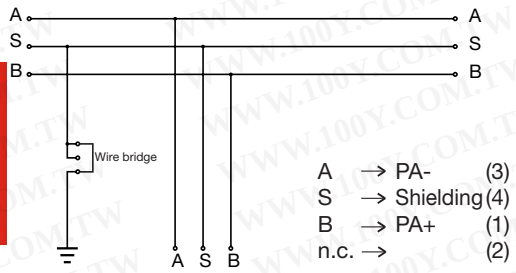
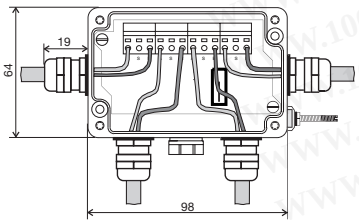
Circuit diagram



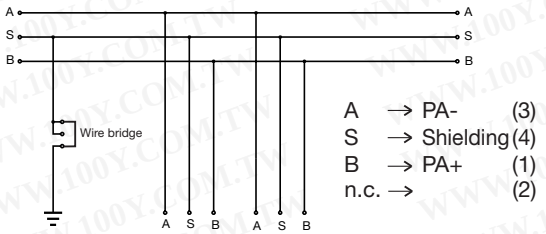
Ordering data

Type	Part No.
Profibus PA T connector FBCon PA CG 1way EX	**8564180000**

PROFIBUS-PA T-Connector EEx EMC version 2-way / Type FBCon PA CG 2way



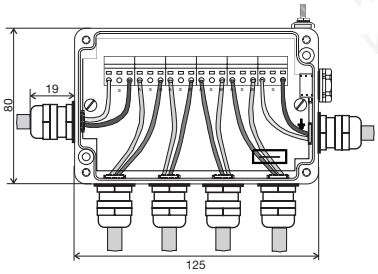
Circuit diagram



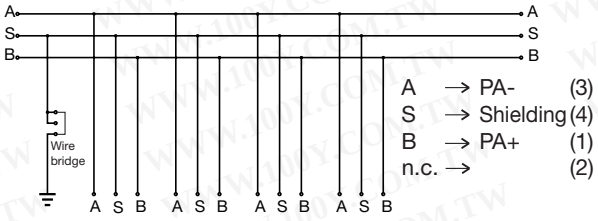
Ordering data

Type	Part No.
Profibus PA T connector FBCon PA CG 2way EX	**8564190000**

PROFIBUS-PA T-Connector EEx EMC version 4-way / Type FBCon PA CG 4way



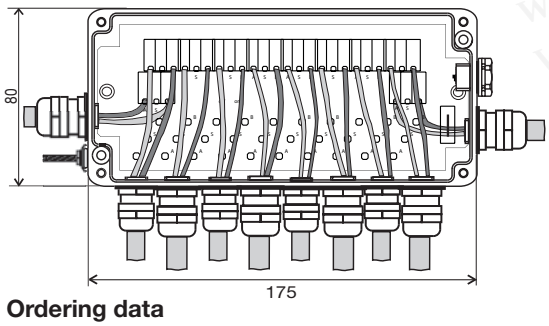
Circuit diagram



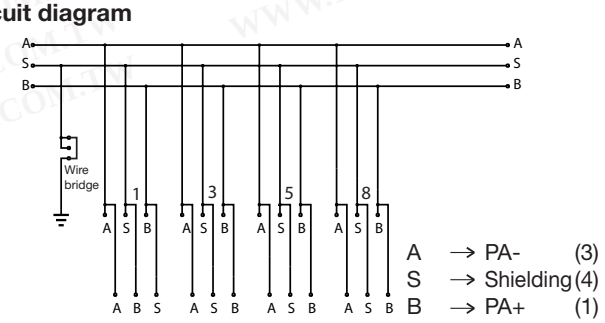
Ordering data

Type	Part No.
Profibus PA T connector FBCon PA CG 4way EX	**8564200000**

PROFIBUS-PA T-Connector EEx EMC version 8-way / Type FBCon PA CG 8way



Circuit diagram



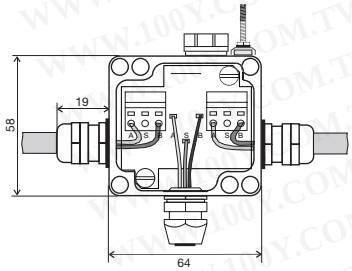
Ordering data

Type	Part No.
Profibus PA T connector FBCon PA CG 8way EX	**8564240000**

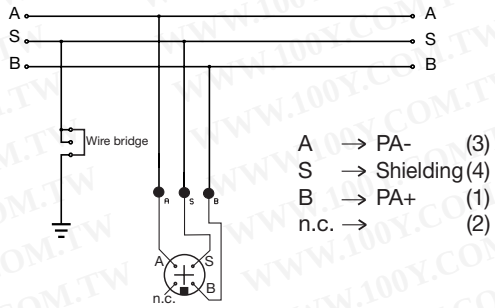
Profibus PA fieldbus connectors for the Ex area EEx (ia) ATEX

- Trunkline with emc cable glands connection.
- Spur lines with M12 connector

PROFIBUS-PA T-Connector EEx 1-way / Type FBCon PA CG/M12 1way



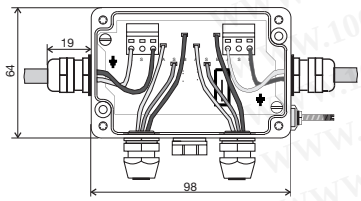
Circuit diagram



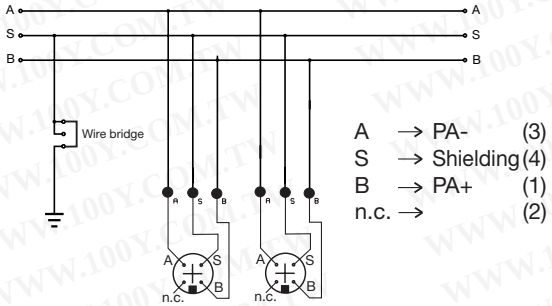
Ordering data

Type	Part No.
Profibus PA T connector FBCon PA CG/M12 1way EX	**8564150000**

PROFIBUS-PA T-Connector standard EEx 2-way / Type FBCon PA CG/M12 2way



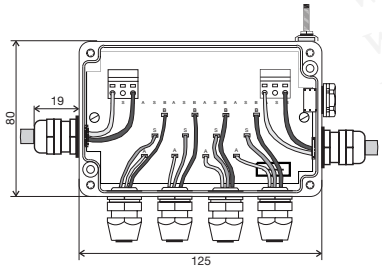
Circuit diagram



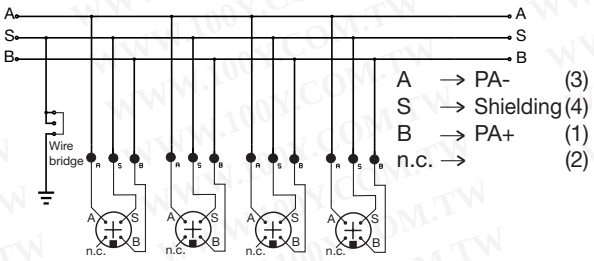
Ordering data

Type	Part No.
Profibus PA T connector FBCon PA CG/M12 2way EX	**8564160000**

PROFIBUS-PA T-Connector EEx 4-way / Type FBCon PA CG/M12 4way



Circuit diagram

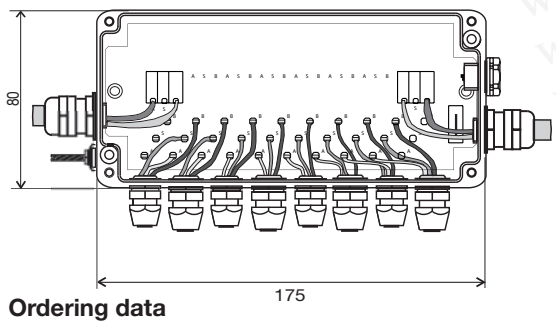


Ordering data

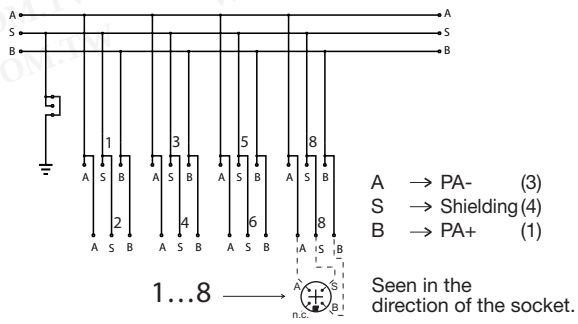
Type	Part No.
Profibus PA T connector FBCon PA CG/M12 4way EX	**8564170000**

勝 特 力 材 料 886-3-5753170
胜特力电子(上海) 86-21-54151736
胜特力电子(深圳) 86-755-83298787
Http://www.100y.com.tw

PROFIBUS-PA T-Connector EEx 8-way / Type FBCon PA CG/M12 8way



Circuit diagram

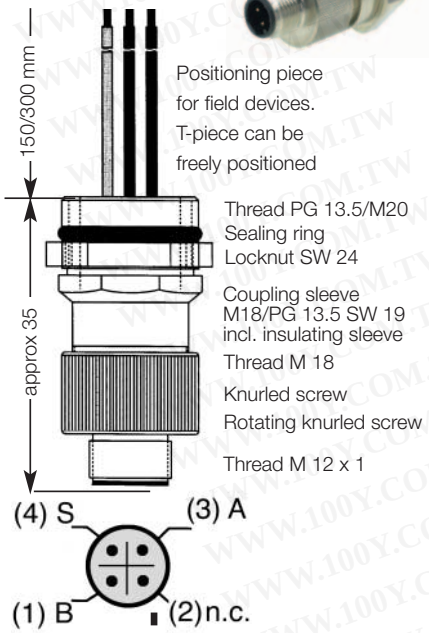


Ordering data

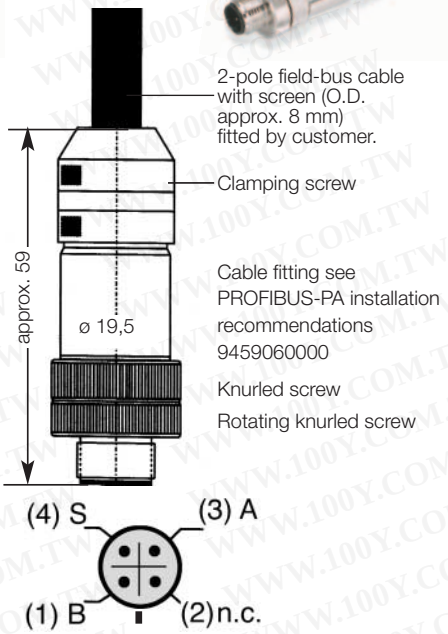
Type	Part No.
Profibus PA T connector FBCon PA CG/M12 8way EX	**8564250000**

勝 特 力 材 料 886-3-5753170
胜特力电子(上海) 86-21-54151736
胜特力电子(深圳) 86-755-83298787
Http://www.100y.com.tw

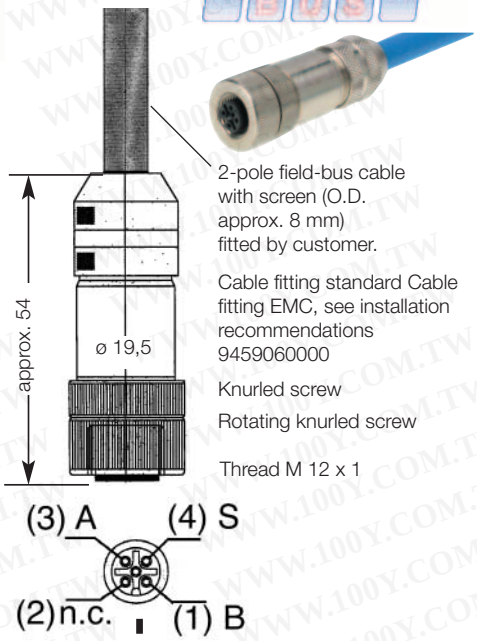
Locating plug-in connector (1)



Cable plug (2)



Cable socket



Front view of pin insert and pins Male PROFIBUS-PA: A ➔ PA- S➔ Screen B➔ PA+ n.c.➔ not connected

Ordering data

Type	Part No.
Locating plug-in connector PG 13.5 150 mm (1)	**9455650000**
Locating plug-in connector PG 13.5 300 mm (1)	**8425910000**
Locating plug-in connector M 20 150 mm (1)	**8425930000**
Locating plug-in connector M 20 300 mm (1)	**8425940000**
Cable plug for laid assembly (2)	**9455640000**
Cable socket for laid assembly (3)	**8426220000**

Technical data

	Locating plug-in connector for field device connection	Cable plug/socket
Poles	4 Poles	4 Poles
Type of connection	screwed	screwed
Cross-sectional area of connection	0.75 mm²	0.75 mm²
Connecting thread	PG 13.5 / M 20	M 12
Contact surface	CuZnAu	CuZnAu
Housing protection to DIN 40050 IEC 529	IP 67	IP 67 with cable ø 4 - 9 mm
Material of housing	Cu Zn surface nickel	Cu Zn surface nickel
Inflammability to UL - 94	V - 2	V - 2
Operating temperature	- 40 ° C .... 85 ° C	- 25 ° C .... 85 ° C
Rated current per contact	3 A	3 A
Nominal voltage to VDE standard 0110/ISO group C	125 V ~ 150 V =	125 V ~ 150 V =
Tracking resistance	KC 600	KC 600
Volume resistivity to IEC512 part 2	≥ 8 m ≥	≤ 8 m Ω
Insulation resistance to IEC 512 part 2	≥ 10^{12} Ω	≥ 10^{12} Ω

Installation advice

	Torques	Torques
Screw terminals		0.4 Nm
Coupling ring PG cable gland		4.0 Nm
Clamping screw	1.8 - 2.0 Nm	
Knurled screw hand-tight	hand-tight	
Lock nut 6.25 Nm		

Where the possibility of vibration at the field instrument exists, we recommend installation of a connecting cable to decouple the vibration source

Preassembled Cables for Field-Bus Distributor Profibus PA

Designation	Type	Part No.	Length	Colour	
Intrinsically Safe Area Exi	**Profibus-PA cable**				
one-sided preass. cable plug					
M12 EMC/blue/1M	FBCEX PA M12 M 1m	**1785150100**	1 m	blue	Exi
M12 EMV/blue/2M	FBCEX PA M12 M 2m	**1785150200**	2 m	blue	Exi
M12 EMV/blue/5M	FBCEX PA M12 M 5m	**1785150500**	5 m	blue	Exi
M12 EMV/blue/10M	FBCEX PA M12 M 10m	**1785151000**	10 m	blue	Exi
one-sided preass. cable socket					
M12 EMV/blue/1M	FBCEX PA M12 FM 1m	**1785140100**	1 m	blue	Exi
M12 EMV/blue/2M	FBCEX PA M12 FM 2m	**1785140200**	2 m	blue	Exi
M12 EMV/blue/5M	FBCEX PA M12 FM 5m	**1785140500**	5 m	blue	Exi
M12 EMV/blue/10M	FBCEX PA M12 FM 10m	**1785141000**	10 m	blue	Exi
preass. plug - cable socket					
M12 EMV/blue/1M	FBCEX PA M12 M-FM 1m	**1785130100**	1 m	v	Exi
M12 EMV/blue/2M	FBCEX PA M12 M-FM 2m	**1785130200**	2 m	blue	Exi
M12 EMV/blue/5M	FBCEX PA M12 M-FM 5m	**1785130500**	5 m	blue	Exi
M12 EMV/blue/10M	FBCEX PA M12 M-FM 10m	**1785131000**	10 m	blue	Exi

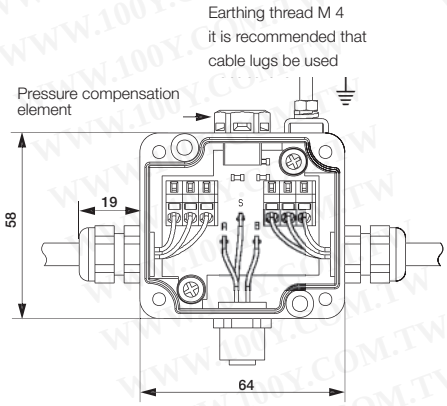
Designation	Type	Part No.	Length	Colour	
Intrinsically Safe Area Exi	**Profibus-PA cable**				
one-sided preass. cable plug					
M12 EMV/black/1M	FBC PA M12 M 1m	**1785120100**	1 m	black	/
M12 EMV/black/2M	FBC PA M12 M 2m	**1785120200**	2 m	black	/
M12 EMV/black/5M	FBC PA M12 M 5m	**1785120500**	5 m	black	/
M12 EMV/black/10M	FBC PA M12 M 10m	**1785121000**	10 m	black	/
one-sided preass. cable socket					
M12 EMV/black/1M	FBC PA M12 FM 1m	**1785110100**	1 m	black	/
M12 EMV/black/2M	FBC PA M12 FM 2m	**1785110200**	2 m	black	/
M12 EMV/black/5M	FBC PA M12 FM 5m	**1785110500**	5 m	black	/
M12 EMV/black/10M	FBC PA M12 FM 10m	**1785111000**	10 m	black	/
preass. plug - cable socket					
M12 EMV/black/1M	FBC PA M12 M-FM 1m	**1785100100**	1 m	black	/
M12 EMV/black/2M	FBC PA M12 M-FM 2m	**1785100200**	2 m	black	/
M12 EMV/black/5M	FBC PA M12 M-FM 5m	**1785100500**	5 m	black	/
M12 EMV/black/10M	FBC PA M12 M-FM 10m	**1785101000**	10 m	black	/

F > field / B > bus / C > cable / PA > process automation / EX > EX area / M12 > connector / M > male / FM > female

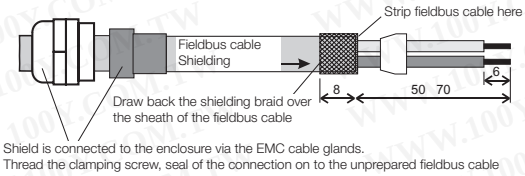
other lengths on request

Profibus DP fieldbus connectors FB Con

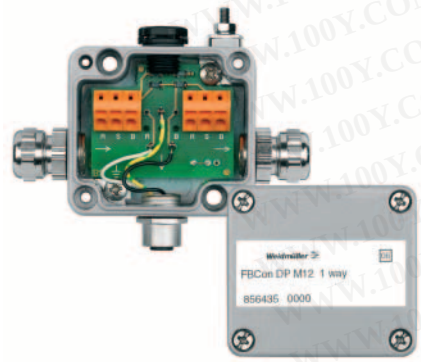
- In aluminium and stainless steel housing
- With cable gland and M12 connection

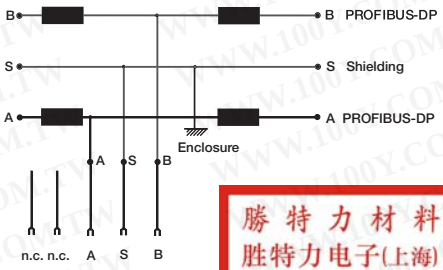


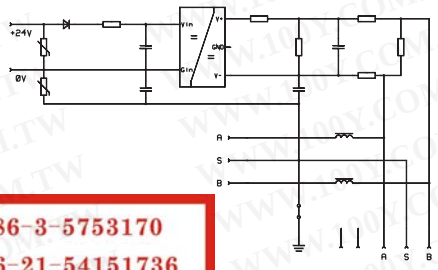
Shield is connected to the enclosure via the EMC cable glands



Shield is connected to the enclosure via the EMC cable glands.
Thread the clamping screw, seal of the connection on to the unprepared fieldbus cable







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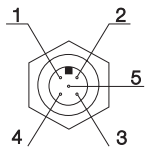
Http://www.100y.com.tw

Pin No.	Connection Conductor	color
Pin 1	Not connected	
Pin 2	RxDx/TxD-N / A-conductor	green
Pin 3	Not connected	
Pin 4	RxDx/TxD-N / B-conductor	red
Pin 5	Shield	
Cable gland	Shield	

Socket B-coded



RS70 DP-T-Connector

Technical Data

Operating temperature	–20 to 55 °C
Protection class	IP 66
Enclosure material	High-grade aluminum alloy (AL - Si 12)
Surface	painted RAL 7001
Cable entry	Brass EMC cable gland M 16
Clamping range	5.5 – 9.5 mm
Surface of contact	M12 plug/socket CuZnAU
Transmission rate	Max. 1.5 Mbaud
RS70 DP -T-connector	**tension clamp 0,5 - 1,5 mm**

Installation advice

Screw terminals	0.4 Nm
M16 cable glands on the enclosure	6.0 Nm
Union screw M 16 cable glands	4.0 Nm
Enclosure lid	1.8 – 2.0 Nm
External earth connection	1.8 – 2.0 Nm

Ordering data

Description	Type	Part No.	Qty.
Profibus DP T connector with Termination and cable gland	FBCon DP CG Term 24V	**8564290000**	1
Profibus DP T connector with Termination and cable gland	FBCon DP CG Term 5V	**8564320000**	1
Profibus DP T connector with Termination and M12	FBCon DP M12 Term 24V	**8564330000**	1
Profibus DP T connector with cable gland	FBCon DP CG 1 way	**8564340000**	1
Profibus DP T connector with M12	FBCon DP M12 1 way	**8564350000**	1
Profibus DP T connector with Termination (steenless steel) CG	FBCon SS DP CG Term 24V	**8714240000**	1
Profibus DP T connector with Termination (steenless steel) M12	FBCon SS DP M12 Term 24V	**8714250000**	1
Profibus DP T connector (steenless steel) with cable gland	FBCon SS DP CG 1 way	**8714260000**	1
Profibus DP T connector (steenless steel) with M12	FBCon SS DP M12 1 way	**8714270000**	1
M 12 DP B-coded connector	SAI SM 5/8S M12 5P B-COD	**1784790000**	1
M 12 DP B-socket	SAI BM 5/8S M12 5P B-COD	**1784780000**	1
Prepared cable with connector 0.3 m	SAI L-M12G-PB-DP-0,3	**1810520030**	1
Positioning connection	POS-5P M12/M20 300MM	**1795500000**	1
Profibus DP T connector in IP 20, with tension clamp connection	RS DP-T Connector	**8655280000**	1