



JUNCTION BOX

TEF 1058, 1059 & 1060

TERMINAL ENCLOSURES & CONTROL STATIONS

ZONE 1, ZONE 2 & SAFE AREA

USER MANUAL

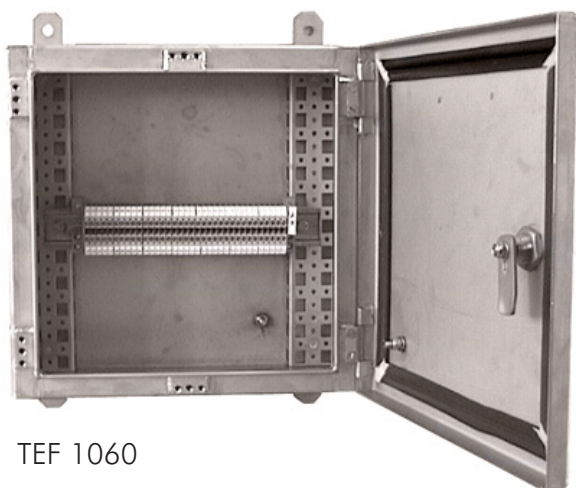
Subject to change without prior notice TUM4309 REV. I 23.04.2018



TEF 1058



TEF 1059



TEF 1060

IMPORTANT

Read this instruction carefully before taking this product in use



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TEF 1058, 1059 & 1060 JUNCTION BOXES USER MANUAL

INTRODUCTION

Thank you for purchasing this product!
For installation, maintenance and assurance of a long life of this product, please follow this manual.

STORAGE AND PRESERVATION

The product should be stored in the original packing material, in a dry location and within the operational temperature range. The product may have been equipped with plastic plugs instead of, or in addition to cable glands, and these should be left as they are until cable glands are to be installed.

UNPACKING AND INSPECTIONS

While unpacking the product, please ensure that no loose items are lost. Inspect the exterior of the product for any transport damages and/or other defects. When opening the junction box, remove any foreign objects that may have been inserted for transportation and/or preservation purposes. If the product is to be repacked and kept for storage, replace any such preservation component(s).

Damages due to transportation is not the responsibility of the manufacturer. If the contents is not complete or the product does not work at intended, file a claim to the supplier or manufacturer immediately.

SAFETY INSTRUCTION

Changes made to the product not confirming to the approvals of this equipment, is a safety violation. The manufacturer is under no circumstances responsible for personal injuries, death or any other damage caused by such activities. For replacement and repairs of the terminal/junction box, only Tranberg AS spare parts may be used. Repairs effecting the explosion protection of the equipment, may only be carried out by Tranberg AS, or qualified electricians in compliance with the respective national regulations.

APPLICATIONS

The complete application built to specific needs, as terminal box, control station or High Voltage enclosure equipped with f. ex. bus bar.

MAINTENANCE / REPAIR / MODIFICATION

Before opening the junction box make sure that the power is disconnected. In case of intrinsically safe circuits, working is permitted while voltage applies.

Servicing the junction box is done by checking the intactness of the junction box, gasket and glands. If necessary lubricate the lid bolt threads with grease type Renolit Unitemp 2 from Fuchs or equivalent.

If repair or overhaul is necessary this may only be done with Tranberg spare parts.

Modification of the terminal / junction box or change of design are not permitted, except for installing additional glands and terminals according to the approval documents of the terminal / junction box.

INSTALLATION

Only qualified personnel are allowed to perform installation and maintenance tasks to this product.

The Terminal/Junction box may be equipped according to customer specification and is then ready for installation when leaving the production facilities of Tranberg AS. Otherwise the equipment installed in the Terminal/Junction box has to be according to product data sheet.

Note: The number of components varies dependent on the maximum operating temperature on conductors.

Mounting

The Terminal/Junction box should be mounted with the drainplug facing downwards. The Terminal-/Junction box is mounted with at least four bolts. M6 for TEF 1058 and TEF 1059 and M8 for TEF 1060.

Note: Prior to mounting the Junction box, all temporary plastic plugs shall be replaced with cable glands, stopping plugs, drain plug or similar. IECEx and ATEX approved.

Connections

In order to maintain the mode of protection, the conductor must be connected with special care. The isolation must reach up to the terminal and the conductor must not be damaged. All conductors, including floating/non-current carrying wires, should be properly terminated. Wires should not be bundled in bundles with more than three wires per bundle. For larger enclosures, cable trays are recommended, to ensure proper routing of the cables. All screws and nuts on the terminals are to be tightened, whether a cable is terminated or not. Tightening torque according to table 1.

For earth connections to a stud or a bar, a cable shoe shall be used.

Only certified cable entries and stopping plugs may be used. Make sure the cable gland matches the cable diameter and the holes in the Terminal-/Junction box, and tighten according to the cable gland user manual.

Reinstall lid and tighten screws firmly by hand force. Over tightening of the lid screws may impair the mode of protection and ingress protection.

ENTRIES ALLOWED

Diameters A and B: The smallest possible circle circumscribing the outermost corners of the cable gland or stopping plug used, concentric with the hole in the enclosure. For other entries, "A" and "B" shall be the hole diameter +min. 2mm.

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Minimum center distance for holes in the enclosure: $(A+B)/2$ or "A" if the circles are of the same diameter.

There shall be a minimum of 5mm between every hole and any edge or obstruction in the enclosure. There shall also be a minimum distance of 5mm between the edge of every hole.

A minimum distance of 5mm between every circle "A" or "B" and the nearest edge or obstruction is recommended.

Any entry should have a diameter between 8 and 100mm.

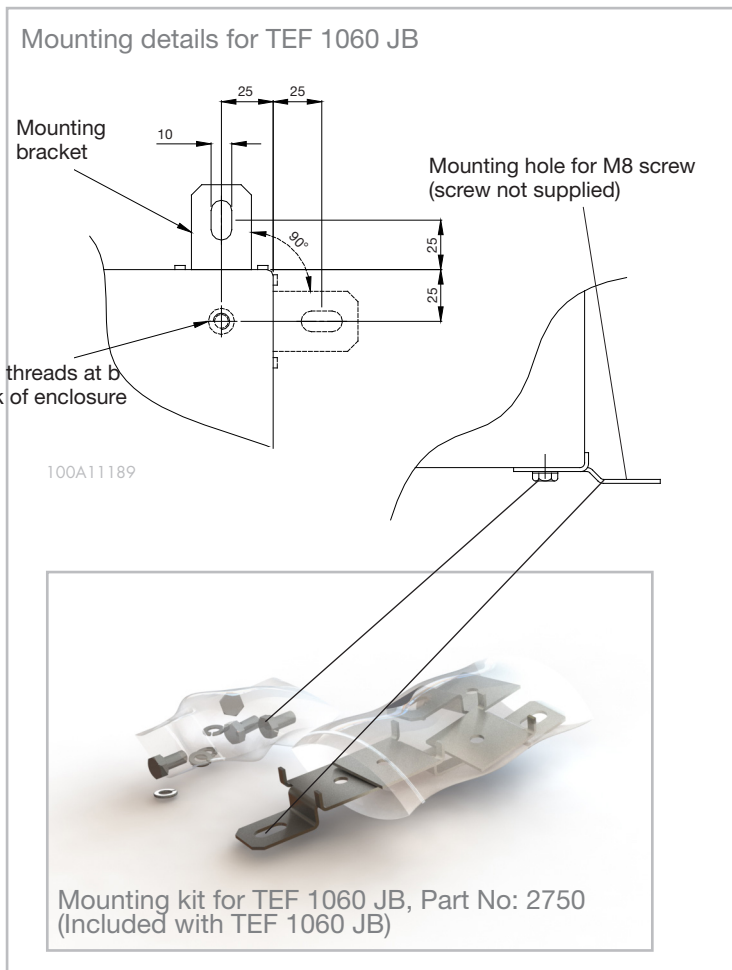


Table 1

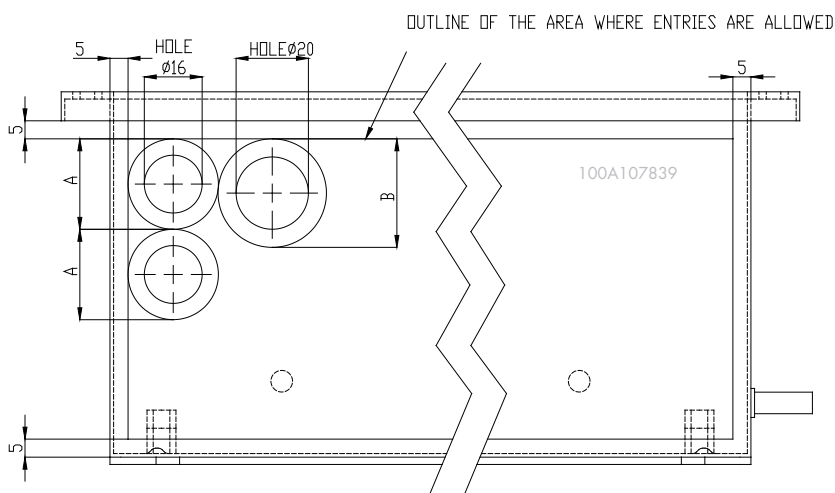
Type	Torque (Nm)
WFF 300	25-60
WFF 185	14-31
WFF 120	10-20
WFF 70	6-12
WFF 35	3-6
WDK 10/ PE	1,5-1,8
WDK 4N/PE	0,5-1
WDK 2,5	0,4-0,6
WDU 70/95	6-12
WDU 35	4-5
WDU 16	3-4
WDU 10	1,5-1,8
WDU 6	0,8-1,6
WDU 4	0,5-1
WDU 2,5	0,4-0,8
WDU 2,5 N	0,4-0,6

Tightening torque
Weidmüller terminals:

Table 1

Type	Torque (Nm)
MBK3/E-Z	0,6-0,8
MBK6/E	1,5-1,8
MSLKG 5	0,6-0,8
MSLKG 6	1,5-1,8
MXK 4	0,6-0,8
UK 1,5 N	0,22-0,25
UK 2,5 N	0,6-0,8
UK3N	0,6-0,8
UK5/N/TWIN	0,6-0,8
UK 35	1,5-1,8
UK 16 N	1,5-1,8
UK 10 N	1,5-1,8
UK 6 N	1,5-1,8
UKH50	6-8
UKH95	15-20
UKH150	25-30
UKH240	25-30
USLKG 1,5 N	0,22-0,25
USLKG 2,5	0,6-0,8
USLKG 3	0,6-0,8
USLKG 5	0,6-0,8
USLKG 6 N	1,5-1,8
USLKG 10 N	1,5-1,8
USLKG 16 N	1,5-1,8
UT 2,5 /PE/Twin/Quattro	0,6-0,8
UT 4 /PE/Twin/Quattro	0,6-0,8
UT6 /PE	1,5-1,8
UT10 /PE	1,5-1,8
UT16 /PE	2,5-3
UT35	3,2-3,7

Tightening torque
Phenix Contact terminals:



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Table 2

Terminal size / crossection	Load
1,5mm ² /AWG16	10A
2,5mm ² /AWG14	16A
4mm ² /AWG12	20A
6mm ² /AWG10	25A
10mm ² /AWG8	35A
16mm ² /AWG6	63A
25mm ² /AWG4	80A
35mm ² /AWG1	100A
50mm ² /AWG1/0	135A
70mm ² /AWG2/0	165A
95mm ² /AWG4/0	210A
120mm ² /AWG250	230A
150mm ² /AWG300	250A
185mm ² /AWG400	300A
240mm ² /AWG500	300A
300mm ² /AWG600	450A

APPROVALS

Marking (depending on installed equipment):

ATEX Approval Explosion category:

ATEX: Ex II2G Ex db eb mb ia/ib op pr IIC Gb T6/T5/T4

IECEx: Ex db eb mb ia/ib op pr IIC Gb T6/T5/T4

Certificate No.: Presafe 14ATEX4124

CSA Approval, Canada Explosion category:

Ex e II, T6/T4, IP 66/67 (1058, 1060)

Class I. Division 2, Groups A,B,C and D (1058)

Master contract No.:  216432

Certificate No.:  1370698

Notified Body: Presafe AS, Norway

Notified Body: CSA Group, Edmonton, Canada

TECHNICAL DATA

Housing:	Acid proof stainless steel
IP-rating:	1058 & 1059: IP66/67 1060: IP66
Ambient temp.:	Depending on installed equipment
Operating temp.1058 & 1059 JB:	EPDM gasket: Min. -40°C to max +80°C Silicone gasket: Min. -60°C to max +135°C
Operating temp.1060 JB:	EPDM gasket: Min. -20°C to max +60°C Silicone gasket: Min. -50°C to max +100°C
Compliance with:	EN 60079-0:2012/A11:2013, EN 60079-1:2015, EN 60079-7:2015, EN 60079-11:2012, EN 60079-18:2015, EN 60079-28:2015 IEC 60079-0:2011, IEC 60079-1:2014, IEC 60079-7:2015, IEC 60079-11:2011, IEC 60079-18:2014, IEC 60079-28:2015
Compliance with:	CAN/CSA -C22.2 No. 0-10, CAN/CSA -C22.2 No. 14-10, CAN/CSA -C22.2 No. 60079-0:07, CAN/CSA -C22.2 No. 60079-7:08 UL 508
Area of use:	Zone 1, Zone 2 and safe area



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