

INSTALLATION INSTRUCTIONS
& CONDITIONS FOR SAFE USE

II 2 GD

Ex eb IIC Gb

Busbar Connectors and Accessories**DEMKO 03ATEX136028U****IECEX ULD 13.0005U****UL21UKEX2113U**

Standards:

EN 60079-0:2018 and EN 60079-7:2015 A1:2018

IEC 60079-0: 7th Edition and IEC 60079-7: 5.1th Edition

General Information:

Busbar assembly with clamping yokes types ZB and WBBD 16... for the connection of copper conductors in enclosures in type of explosion protection increased safety "eb". The following assembly elements are covered by this certification: rail mounting clamps type SH1, SH2 and SH2S, SH3, end bracket WEW35/1V0 and WEW 35/2 V0 and busbar NSCH, ESCH, SSch 10x3 , SSch 12x5, SSch 6x6, SSch 15x6, and SSch 12x10.

Version:	Type *	Order No
	ZB 4	0316500000
	ZB 4G BL	0322180000
	ZB 4K BL	0475380000
	ZB 4/6	0556700000
	ZB 16/6	0556800000
	ZB 4/6K BL	0565480000
	ZBE 6	0459500000
	ZBE 6K BL	0525980000
	ZB 10 F.10X3/10X5/10X10	1261300000
	ZB 16 ZKSC	0316600000
	ZB 16K BL	0502880000
	ZB 35/M6X16	0266500000
	ZB 35K BL M6X16	0502680000
	WBBD 16 GY	2603840000
End Brackets	WEW 35/1 V0*	
	WEW 35/2 V0*	
Busbar Holder	SH 1	0299860000
	SH 2	0494920000
	SH 2 S	0641720000
	SH 3	0556660000
Busbar	SSch 10x3	
	SSch 12x5	
	SSch 6x6	
	SSch 15x6	
	SSch 12x10	
	NSCH 2M	1313600000
	NSCH 1M	0280200000
	ESCH 1 M	0280300000
Accessories:	DKSUE NSCH/ESCH	0280100000
	BFSC M5X8 SCHLITZ	0296700000

* in all colours

Insulation material:

Operating temperature range -60°C ... +180°C (for ZB, NSCH, ESCH without insulating material)
 Operating temperature range -60°C ... +100°C (for WBBB 16 with PA6 insulating material)
 Operating temperature range -60°C ... +100°C (for ZB with plastic cover - PA66 insulating material)
 Operating temperature range -60°C ... +110°C (for SH1 and SH3 with PA66 insulating material)
 Operating temperature range -60°C ... +130°C (for SH2 and SH2S with KRG insulating material)
 Operating temperature range -60°C ... +110°C (for WEW with PA66 insulating material)

Technical data according to IEC/EN 60079-7 (increased safety "eb"):

Type**	Rated conductor cross section in mm ² (AWG)	Conductor cross section solid and stranded in mm ² (AWG)	Conductor cross section flexible in mm ² (AWG)	Stripping Length in mm	Maximum current in A***	Tightening torque in Nm	Number of conductors
ZB4 ZB4K ZB4G ZB4/6 ZB4/6K	4 (12)	Min. 0.5 (21) Max. 6.0 (10)	Min. 0.5 (21) Max. 4.0 (12)	16	28*	0.5	1
		Min. 0.5 (21) Max. 6.0 (10)	Min. 0.5 (21) Max. 4.0 (12)	13			
ZBE6 ZBE6K	6 (10)	Min. 1.0 (18) Max. 10 (8)	Min. 1.5 (16) Max. 10 (8)	20	36*	1.2	1
ZB10	10 (8)	Min. 1.5 (16) Max. 10 (8)	Min. 2.5 (14) Max. 10 (8)	17	50*	1.2	1
ZB16 ZB16K ZBE16K ZB16/6 ZB16/6K	16 (6)	Min. 2.5 (14) Max. 16 (6) Stranded: Min. 16 (6) Max. 25 (4)	Min. 2.5 (14) Max. 16 (6)	17 13	66*	2.6	1
ZB35 ZB35K	35 (2)	16 (6)	Min. 16 (6) Max. 35 (2)	20	109*	4.5	1
NSCH	2.5 (14)	2.5 (14)	2.5 (14)	-	24 per clamping unit 36 total current	2.0	1
ESCH	2.5 (14)	2.5 (14)	2.5 (14)	-	-	2.0	1
WBBB 16****	16 (6)	Min. 1.5 (16) Max. 16 (6)	Min. 1.5 (16) Max. 16 (6)	12	76 A	2.5	1

* Note: If smaller cross sections than the rated cross section are used, the belonging lower current has to be laid down

** in all colours

***The maximum temperature rise was determined $\leq \Delta T$ 40 K.

**** Contact resistance WBBB 16 with rated cross section 0,42 mOhm

Mounting instructions:

The Busbar assembly type SH..., WEW ,..., with clamping yokes type ZB..., WBBB 16, NSCH and ESCH are suitable for application in enclosures in atmospheres with flammable gases and combustible dust. For use in flammable gases these enclosures must satisfy the requirements according to EN/IEC 60079-0 and EN/IEC 60079-7. For use in combustible dust these enclosures must satisfy the requirements according to EN/IEC 60079-0 and EN/IEC 60079-31.

In combination with other terminal block series and sizes and if other accessories are used, the applicable creepage and clearance distances shall be met. Regarding the use of accessories the instructions of the manufacturer must be followed.

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For WBBD 16 (resistance across terminal)

The Earthing Busbar assemblies are suitable for use in enclosures in atmospheres with flammable gases or combustible dust. For flammable gases these enclosures must satisfy the requirements according to EN/IEC 60079-0 and EN/IEC 60079-7. For combustible dust these enclosures must satisfy the requirements according to EN/IEC 60079-0 and EN/IEC 60079-31. The enclosure shall be constructed to block all sun and UV light from affecting the terminal blocks. The terminal blocks shall be placed inside a suitable certified IP54 enclosure in type of protection "e" for gas atmosphere. For dust atmosphere the terminal blocks shall be placed inside a suitable certified IP6X enclosure in type of protection "t" for dust atmosphere.

Schedule of Limitations:

Earthing and Neutral Busbar assembly, consisting of busbar holders type SH... or WEW..., a copper busbar and clamping yokes type ZB... and WBBD 16... for the connection of copper conductors in enclosures in type of explosion protection increased safety "eb".

The assembly is considered to form one component and are not to be used independently. The Ex-marking of the assembly is provided on the busbar holders. The following assembly elements are covered in this certification: rail mounting clamps type SH1, SH2, SH2S, SH3, WEW35/1 and WEW 35/2, a copper busbar size SSch 10x3, SSch 12x10, SSch 12x5 and SSch 6x6 and SSch 15x6 and clamping yokes type ZB... and WBBD 16...(as listed in the table above).

Earthing ESch and Neutral Busbar NSch to be used with DKSUE NSCH/ESCH and BFSC M5X8 SCHLITZ. For the installation of the busbar holders SH2 and SH2S should be used the cylinder head screw M5 DIN 84 washer A5.3 DIN and spring washer A5 DIN 127.

The Earthing and Neutral Busbar assembly described above is considered to form one component, with Ex marking applied to the busbar holders type SH... and WEW.. If used independently, the above mentioned parts are not covered by this certificate.

Essential Health and Safety Requirements:

Concerning ESRs this Schedule verifies compliance with the Annex II of ATEX / Schedule 1 of UKCA directive and Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016 only. By placing the product on the market, the manufacturer declares compliance with other relevant Directives, and all other safety related requirements including those of Annex II / Schedule 1 of these Directives.