

Assembly Instructions for Junction Box type: EA231513 to EA624522 & MEA231513 to MEA624522

IMPORTANT: This document should be read carefully before commencing installation

Zones of Use for Terminal Box - as defined in IEC/EN 60079-0 and IEC/EN 60079-10-1

- Group II Category 1G, for use in Zone 0 (plus Zone 1 and Zone 2).
- Group II Category 1D, for use in Zone 20 (plus Zone 21 and Zone 22).
- Group II Category 2G, for use in Zone 1 (plus Zone 2).
- Group II Category 2D, for use in Zone 21 (plus Zone 22).

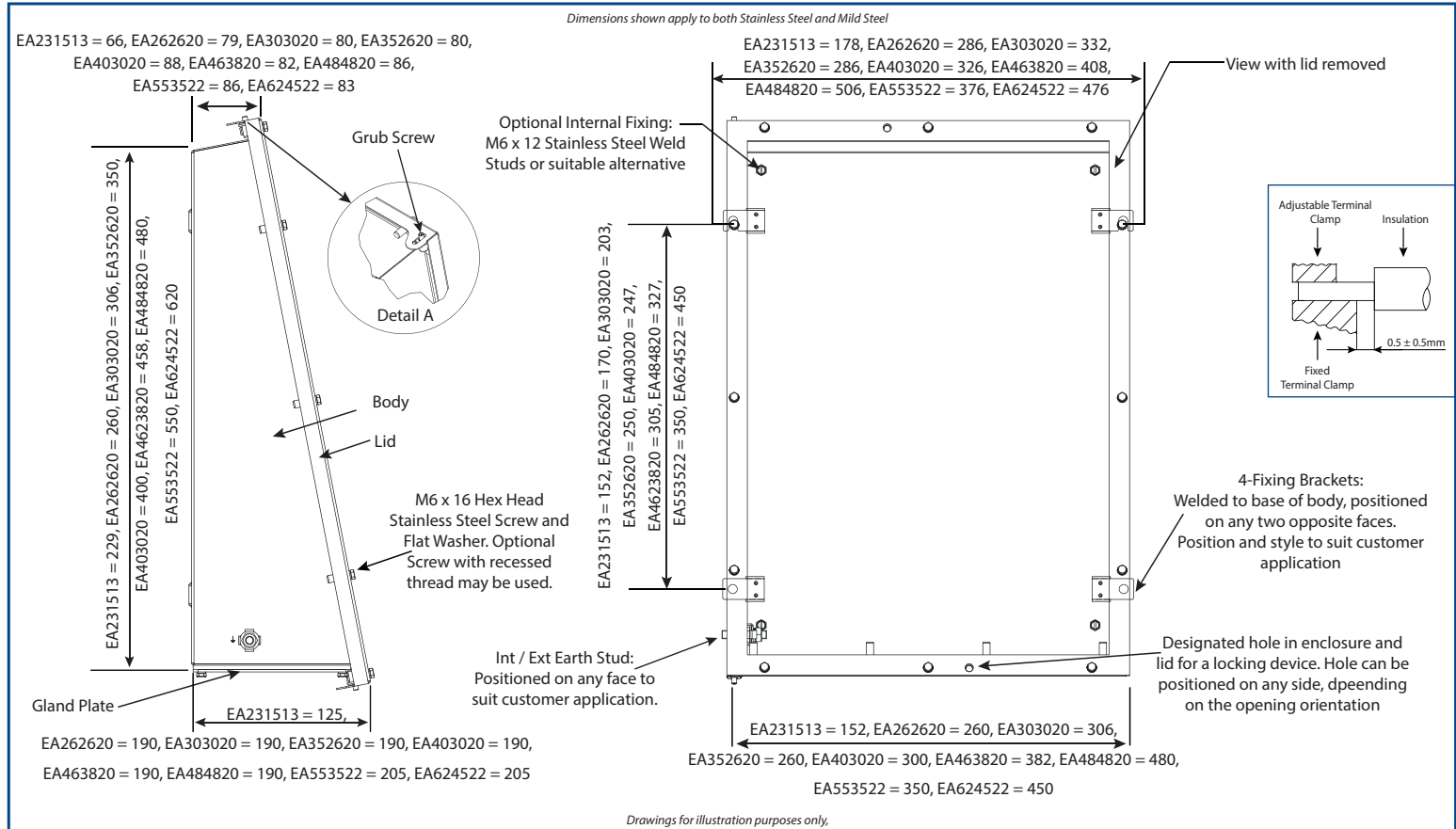
Service Temperature: -60°C to +80°C
Minimum Installation Temperature: -5°C

Certification Details

Box Type: EA231513 to EA624522 & MEA231513 to MEA624522

Ⓢ II 2G Exe IIC T* Gb, Ⓢ II 2D Extb IIIC T***C Db IP66 CE
 Ⓢ II 2G Exib IIC T* Gb, Ⓢ II 2D Exib IIIC T***C Db IP66 CE
 Ⓢ II 1G Exia IIC T* Ga, Ⓢ II 1D Exia IIIC T***C Da IP66 CE
 Baseefa08ATEX0208X / IECEx BAS08.0065X
 IEx 16.0144X
 EAC TC RU C-GB-AA87.B.00430

This is a certified product which should be installed in line with the Assembly Instructions provided with the product. Failure to follow the Assembly Instructions, or making any changes to the product, may invalidate the product certification.



W = Maximum Dissipated Wattage N = No. of Terminals Fitted F = Combined Terminal Resistance I = Maximum Current

$$W = N \times F \times I^2 \qquad N = W / F \times I^2 \qquad I = \text{Sqrt} (W / N \times F)$$

Note: Combined Terminal Resistance = Resistance of Maximum Conductor Length (see BS 6360 and table below) + Terminal Resistance

Box Type	Maximum Power Dissipation (Watts)															Max. Cable Length Per Terminal (M)		
	T*	T**	T***	T*	T**	T***	T*	T**	T***	T*	T**	T***	T*	T**	T***			
	T6	80°C	+40°C	T6	80°C	+55°C	T6	80°C	+65°C	T5	80°C	+40°C	T5	80°C	+55°C		T5	80°C
EA231513		7.09			4.4			2.6			9.7		7.09			5.3		0.300
EA262620		15.92			9.9			5.9			21.8		15.92			11.9		0.390
EA303020		4.40			2.7			1.6			6.0		4.40			3.3		0.455
EA352620		4.30			2.6			1.6			5.9		4.30			3.3		0.455
EA403020		5.78			3.6			2.1			7.9		5.78			4.3		0.520
EA463820		10.40			6.5			3.9			14.3		10.40			7.8		0.610
EA484820		17.20			10.7			6.4			23.6		17.20			12.9		0.690
EA553522		31.31			19.5			11.7			43.0		31.31			23.4		0.670
EA624522		27.68			17.3			10.3			38.0		27.68			20.7		0.780

SPECIAL CONDITIONS FOR SAFE USE:

1. Unused entry holes shall be fitted with stopping plugs as specified in the empty enclosure certificates Baseefa 08ATEX0207U and IECEx BAS 08.0064U. The operating temperature range of the enclosure is limited to that of the stopping plug fitted.
2. Only breather / drain devices as specified in the empty enclosure certificates Baseefa 08ATEX0207U and IECEx BAS 08.0064U may be used with these enclosures. The breather / drain devices must be installed in their correct orientation in either the bottom face or bottom face gland plate of the enclosure. The operating temperature range of the enclosure is limited to that of the breather / drain device fitted.
3. All terminal screws, used and unused, shall be tightened down by the end user.
4. Insulation of conductors must extend to within 1mm of the metal of the terminal throat unless specified otherwise on the terminal certificate.
5. No more than one single or multi-stranded lead shall be connected to either side of any terminal unless multiple conductors have been joined in a suitable manner e.g. two conductors into a single insulated bootlace ferrule, or any method indicated on the terminal certificate.
6. Terminals shall be installed in such a manner that the creepage and clearance distances between the terminal and adjacent components, enclosure walls and covers comply with the requirements of EN 60079-7 for Exe IIC junction boxes, or IEC 60079-11 for Exia IIC / Exib IIC junction boxes for the rated voltage of the equipment.
7. Terminal temperatures must not exceed the operating range specified on the component certificate.
8. All terminals and accessories such as cross-connectors, shall be installed in accordance with the terminal manufacturers instructions.
9. The maximum voltage, current and dissipated power shown on the rating label must not be exceeded.
10. When connecting conductors of cross section below the maximum allowed for the particular terminal then the maximum amps per pole must be reduced in line with the maximum amps permitted for a terminal equivalent to the conductor size fitted e.g. if a terminal that can take a 6 sq. mm. conductor at 29 amps is fitted with a 2.5 sq. mm. conductor then the current shall be reduced to a maximum of 17 amps, or the rating marked on the apparatus label, whichever is the lower.
11. When metallic and non-metallic trunking is provided inside the junction box, the maximum operating current in any circuit within the trunking is limited to 90%.
12. When a self adhesive certification label is fitted, the minimum ambient temperature shall be -40°C.
13. **Unused entries may be fitted with alternative stopping plugs and/or beather drains to those listed in the schedule. The user is responsible for ensuring that the protection concept temperature class and relevant IP rating are maintained.**
14. The EA & MEA junction box range **shall not** be fitted with the "screwless" type terminals.

TO OPEN THE LID (with hinge):

1. Disconnect power (isolate all circuits).
2. Unlock padlock (if fitted) and remove.
3. Untighten the M6 lid securing screws.
4. Carefully swing the lid open on its hinges.

TO REMOVE THE LID (with hinge):

1. Disconnect power (isolate all circuits).
2. Unlock padlock (if fitted) and remove.
3. Untighten the M6 lid securing screws.
4. Screw one of the hinge grub screws inwards until it clears the hole in the lid.
5. Hold the lid securely and then screw the other grub screw inwards until it clears the hole in the lid - see Detail A.
6. Remove the lid and place in an area where it will not be subject to damage or moisture.

TO REMOVE THE LID (without hinge):

1. Disconnect power (isolate all circuits).
2. Unlock padlock (if fitted) and remove.
3. Untighten the M6 lid securing screws.
4. Remove the lid and place in an area where it will not be subject to damage or moisture.

TO CLOSE THE LID (with hinge):

1. Carefully close the lid.
2. Tighten the M6 lid securing screws.

TO REPLACE THE LID (with hinge):

1. Ensure the inside of the lid is dry and free from dust and foreign matter.
2. Place the lid back onto the base and hold securely in position.
3. Unscrew the hinge grub screws through the holes in the lid as far as possible.
4. Tighten the M6 lid securing screws.

TO REPLACE THE LID (without hinge):

1. Ensure the inside of the lid is dry and free from dust and foreign matter.
2. Place the lid back onto the base and hold securely in position.
3. Tighten the M6 lid securing screws.

ENCLOSURE INSTALLATION (EI)

- a) The IP rating of the enclosure must be maintained for the area of use (e.g. IP6* for Zone 21 dust environment) by the use of correct arrangement of cable/gland/sealing arrangements and in accordance with the installation codes as detailed in IEC/EN 60079-14 and these installation instructions.
- b) Where other certified components are part of the assembly, the user must take account of any limitations listed on relevant certificates.
- c) The enclosure may be ready supplied with cable entries. Where the customer drills cable entries they must be installed in accordance with the component certificates Baseefa 08ATEX0207U or IEC Ex BAS 08.0064U and enclosure limitations, these specify a maximum clearance on the entry thread of 0.7mm for plain holes and where adjacent cable entries are installed sufficient clearance must be maintained to allow for the fitting of sealing/retaining washers and the rotation of the cable gland hexagons, and leave a minimum of material between adjacent holes in line with the above certificate number(s).

TERMINAL WIRING (TW)

- All wiring must be carried out in accordance with the relevant code of practice and/or instructions e.g. IEC/EN 60079-14.
- When used as a general purpose junction box or marshalling box the circuits carrying currents $\geq 1A$ shall be individually protected against over current such that the protective device operates effectively at no more than 1.45 times the current carrying capacity of the smallest conductor used in that circuit.
- Where a major portion of the terminals are carrying maximum rated current the temperature at the branching point of the conductors may exceed 70°C. Under these circumstances the installer must ensure that the limiting temperature for the cable insulation used is acceptable e.g. 85°C (T6) or 100°C (T5).

EARTHING:

- Where there is a requirement for bonding of gland plate, this can be achieved by using earthtags on the outside of the enclosure in conjunction with cable glands or by use of gland plates and enclosure lids with factory fitted earth studs. In the case of painted boxes, consideration must be given to the removal of the paint. e.g. under a serrated washer on the inside of the box which may lead to corrosion of the enclosure and potential reduction in earthing protection. This area must be protected against corrosion following installation.

SCHEDULE OF TERMINALS FITTED (T6 40°C AND T5 55°C)

EA231513 Terminal Capacity Data										
Terminal Type	Conductor Size mm ²		Max. Volts	Maximum Physical Terminal Content		Reduced Terminal Content at Maximum Terminal Amps		Combined Terminal Resistance (Ohms)	Insulation Stripping Length (mm)	Terminal Tightening Torque (Nm)
	Min	Max		Term. Qty.	Amps	Term. Qty.	Amps			
WDU2.5	0.5	2.5	690	25	10	9	17	0.00259	10	0.4 - 0.8
UT2.5	0.5	2.5	690	25	12	17	15	0.00179	9	0.5 - 0.6
WDU4	0.5	4.0	690	21	14	8	22	0.00167	10	0.5 - 1.0
UT4	0.5	4.0	690	21	16	12	20	0.00118	9	0.6 - 0.8
WDU6	0.5	6.0	690	16	19	7	29	0.0011	12	0.8 - 1.6
UT6	0.5	6.0	690	15	25	12	28	0.00075	10	1.5 - 1.8
WDU10	1.5	10.0	690	13	26	5	40	0.0007	12	1.2 - 2.4
UT10	1.5	10.0	690	13	33	9	39	0.00049	10	1.5 - 1.8
WDU16	1.5	16.0	690	10	37	5	53	0.00051	12	2.0 - 4.0
UT16	1.5	16.0	690	11	45	7	53	0.00032	14	2.5 - 3.0
WDU35	2.5	35.0	690	8	58	3	80	0.0003	12	4.0 - 5.0
UT35	2.5	35.0	690	8	70	8	70	0.00018	18	3.2 - 3.7

EA262620 Terminal Capacity Data										
Terminal Type	Conductor Size mm ²		Max. Volts	Maximum Physical Terminal Content		Reduced Terminal Content at Maximum Terminal Amps		Combined Terminal Resistance (Ohms)	Insulation Stripping Length (mm)	Terminal Tightening Torque (Nm)
	Min	Max		Term. Qty.	Amps	Term. Qty.	Amps			
WDU2.5	0.5	2.5	690	32	12	17	17	0.00326	10	0.4 - 0.8
UT2.5	0.5	2.5	690	31	15	34	15	0.00221	9	0.5 - 0.6
WDU4	0.5	4.0	690	26	17	15	22	0.00209	10	0.5 - 1.0
UT4	0.5	4.0	690	26	20	30	19	0.00146	9	0.6 - 0.8
WDU6	0.5	6.0	690	20	23	12	29	0.00138	12	0.8 - 1.6
UT6	0.5	6.0	690	19	28	22	28	0.00091	10	1.5 - 1.8
WDU10	1.5	10.0	690	16	32	10	40	0.00087	12	1.2 - 2.4
UT10	1.5	10.0	690	16	39	17	39	0.00059	10	1.5 - 1.8
WDU16	0.5	16.0	690	13	45	11	53	0.00061	12	2.0 - 4.0
UT16	0.5	16.0	690	13	53	15	53	0.00036	14	2.5 - 3.0
WDU35	0.5	35.0	690	10	72	8	80	0.00035	12	4.0 - 5.0
UT35	0.5	35.0	690	10	70	11	70	0.00021	18	3.2 - 3.7

EA303020 Terminal Capacity Data										
Terminal Type	Conductor Size mm ²		Max. Volts	Maximum Physical Terminal Content		Reduced Terminal Content at Maximum Terminal Amps		Combined Terminal Resistance (Ohms)	Insulation Stripping Length (mm)	Terminal Tightening Torque (Nm)
	Min	Max		Term. Qty.	Amps	Term. Qty.	Amps			
WDU2.5	0.5	2.5	690	82	3	4	17	0.00374	10	0.4 - 0.8
UT2.5	0.5	2.5	690	80	4	7	15	0.00251	9	0.5 - 0.6
WDU4	0.5	4.0	690	68	5	3	22	0.00239	10	0.5 - 1.0
UT4	0.5	4.0	690	66	6	6	20	0.00166	9	0.6 - 0.8
WDU6	0.5	6.0	690	52	7	3	29	0.00158	12	0.8 - 1.6
UT6	0.5	6.0	690	50	9	5	28	0.00103	10	1.5 - 1.8
WDU10	1.5	10.0	690	42	10	2	40	0.00098	12	1.2 - 2.4
UT10	1.5	10.0	690	40	12	4	39	0.00066	10	1.5 - 1.8
WDU16	1.5	16.0	690	34	13	2	53	0.00068	12	2.0 - 4.0
UT16	1.5	16.0	690	32	18	3	53	0.0004	14	2.5 - 3.0
WDU35	2.5	35.0	690	26	22	1	80	0.00038	12	4.0 - 5.0
UT35	1.5	16.0	690	26	26	3	70	0.00024	18	3.2 - 3.7

EA352620 Terminal Capacity Data										
Terminal Type	Conductor Size mm ²		Max. Volts	Maximum Physical Terminal Content		Reduced Terminal Content at Maximum Terminal Amps		Combined Terminal Resistance (Ohms)	Insulation Stripping Length (mm)	Terminal Tightening Torque (Nm)
	Min	Max		Term. Qty.	Amps	Term. Qty.	Amps			
WDU2.5	0.5	2.5	690	98	3	4	17	0.00374	10	0.4 - 0.8
UT2.5	0.5	2.5	690	96	4	7	15	0.00251	9	0.5 - 0.6
WDU4	0.5	4.0	690	82	4	2	22	0.00239	10	0.5 - 1.0
UT4	0.5	4.0	690	80	5	6	20	0.00166	9	0.6 - 0.8
WDU6	0.5	6.0	690	62	6	3	29	0.00158	12	0.8 - 1.6
UT6	0.5	6.0	690	60	8	5	28	0.00103	10	1.5 - 1.8
WDU10	1.5	10.0	690	50	9	2	40	0.00098	12	1.2 - 2.4
UT10	1.5	10.0	690	48	11	4	39	0.00066	10	1.5 - 1.8
WDU16	1.5	16.0	690	38	12	2	53	0.00068	12	2.0 - 4.0
UT16	1.5	16.0	690	36	17	3	53	0.0004	14	2.5 - 3.0
WDU35	2.5	35.0	690	30	20	1	80	0.00038	12	4.0 - 5.0
UT35	2.5	35.0	690	30	24	3	70	0.00024	18	3.2 - 3.7

EA403020 Terminal Capacity Data										
Terminal Type	Conductor Size mm ²		Max. Volts	Maximum Physical Terminal Content		Reduced Terminal Content at Maximum Terminal Amps		Combined Terminal Resistance (Ohms)	Insulation Stripping Length (mm)	Terminal Tightening Torque (Nm)
	Min	Max		Term. Qty.	Amps	Term. Qty.	Amps			
WDU2.5	0.5	2.5	690	118	3	4	17	0.00422	10	0.4 - 0.8
UT2.5	0.5	2.5	690	116	4	9	15	0.00281	9	0.5 - 0.6
WDU4	0.5	4.0	690	98	4	4	22	0.00269	10	0.5 - 1.0
UT4	0.5	4.0	690	96	5	7	20	0.00186	9	0.6 - 0.8
WDU6	0.5	6.0	690	76	6	3	29	0.00178	12	0.8 - 1.6
UT6	0.5	6.0	690	73	8	9	28	0.00115	10	1.5 - 1.8
WDU10	1.5	10.0	690	60	9	3	40	0.0011	12	1.2 - 2.4
UT10	1.5	10.0	690	58	11	5	39	0.00074	10	1.5 - 1.8
WDU16	1.5	16.0	690	50	12	2	53	0.00076	12	2.0 - 4.0
UT16	1.5	16.0	690	49	16	6	53	0.00043	14	2.5 - 3.0
WDU35	2.5	35.0	690	38	20	2	80	0.00042	12	4.0 - 5.0
UT35	2.5	35.0	690	38	23	4	70	0.00026	18	3.2 - 3.7

EA463820 Terminal Capacity Data										
Terminal Type	Conductor Size mm ²		Max. Volts	Maximum Physical Terminal Content		Reduced Terminal Content at Maximum Terminal Amps		Combined Terminal Resistance (Ohms)	Insulation Stripping Length (mm)	Terminal Tightening Torque (Nm)
	Min	Max		Term. Qty.	Amps	Term. Qty.	Amps			
WDU2.5	0.5	2.5	690	213	3	7	17	0.00489	10	0.4 - 0.8
UT2.5	0.5	2.5	690	209	3	13	15	0.00322	9	0.5 - 0.6
WDU4	0.5	4.0	690	177	4	6	22	0.0031	10	0.5 - 1.0
UT4	0.5	4.0	690	174	5	11	20	0.00214	9	0.6 - 0.8
WDU6	0.5	6.0	690	138	5	5	29	0.00205	12	0.8 - 1.6
UT6	0.5	6.0	690	133	7	9	28	0.00132	10	1.5 - 1.8
WDU10	1.5	10.0	690	108	8	4	40	0.00127	12	1.2 - 2.4
UT10	1.5	10.0	690	105	10	7	39	0.00084	10	1.5 - 1.8
WDU16	1.5	16.0	690	90	11	4	53	0.00086	12	2.0 - 4.0
UT16	1.5	16.0	690	88	15	7	53	0.00048	14	2.5 - 3.0
WDU35	2.5	35.0	690	66	19	3	80	0.00046	12	4.0 - 5.0
UT35	2.5	35.0	690	66	22	6	70	0.0003	18	3.2 - 3.7

EA484820 Terminal Capacity Data										
Terminal Type	Conductor Size mm ²		Max. Volts	Maximum Physical Terminal Content		Reduced Terminal Content at Maximum Terminal Amps		Combined Terminal Resistance (Ohms)	Insulation Stripping Length (mm)	Terminal Tightening Torque (Nm)
	Min	Max		Term. Qty.	Amps	Term. Qty.	Amps			
	WDU2.5	0.5		2.5	690	300	3			
UT2.5	0.5	2.5	690	294	4	21	15	0.00359	9	0.5 - 0.6
WDU4	0.5	4.0	690	252	4	10	22	0.00347	10	0.5 - 1.0
UT4	0.5	4.0	690	252	5	17	20	0.00239	9	0.6 - 0.8
WDU6	0.5	6.0	690	192	6	8	29	0.0023	12	0.8 - 1.6
UT6	0.5	6.0	690	185	7	14	28	0.00146	10	1.5 - 1.8
WDU10	1.5	10.0	690	152	8	7	40	0.00141	12	1.2 - 2.4
UT10	1.5	10.0	690	148	11	11	39	0.00093	10	1.5 - 1.8
WDU16	1.5	16.0	690	128	11	6	53	0.00095	12	2.0 - 4.0
UT16	1.5	16.0	690	125	16	11	53	0.00052	14	2.5 - 3.0
WDU35	2.5	35.0	690	96	19	4	80	0.00051	12	4.0 - 5.0
UT35	2.5	35.0	690	96	23	10	70	0.00033	18	3.2 - 3.7

EA553522 Terminal Capacity Data										
Terminal Type	Conductor Size mm ²		Max. Volts	Maximum Physical Terminal Content		Reduced Terminal Content at Maximum Terminal Amps		Combined Terminal Resistance (Ohms)	Insulation Stripping Length (mm)	Terminal Tightening Torque (Nm)
	Min	Max		Term. Qty.	Amps	Term. Qty.	Amps			
	WDU2.5	0.5		2.5	690	356	4			
UT2.5	0.5	2.5	690	349	5	39	15	0.0035	9	0.5 - 0.6
WDU4	0.5	4.0	690	296	5	18	22	0.00338	10	0.5 - 1.0
UT4	0.5	4.0	690	291	6	33	20	0.00232	9	0.6 - 0.8
WDU6	0.5	6.0	690	228	7	15	29	0.00224	12	0.8 - 1.6
UT6	0.5	6.0	690	220	9	27	28	0.00143	10	1.5 - 1.8
WDU10	1.5	10.0	690	184	10	13	40	0.00138	12	1.2 - 2.4
UT10	1.5	10.0	690	179	13	22	39	0.00091	10	1.5 - 1.8
WDU16	1.5	16.0	690	152	14	11	53	0.00093	12	2.0 - 4.0
UT16	1.5	16.0	690	148	20	21	53	0.00051	14	2.5 - 3.0
WDU35	2.5	35.0	690	112	24	9	80	0.0005	12	4.0 - 5.0
UT35	2.5	35.0	690	112	29	19	70	0.00032	18	3.2 - 3.7

EA624522 Terminal Capacity Data										
Terminal Type	Conductor Size mm ²		Max. Volts	Maximum Physical Terminal Content		Reduced Terminal Content at Maximum Terminal Amps		Combined Terminal Resistance (Ohms)	Insulation Stripping Length (mm)	Terminal Tightening Torque (Nm)
	Min	Max		Term. Qty.	Amps	Term. Qty.	Amps			
	WDU2.5	0.5		2.5	690	510	2			
UT2.5	0.5	2.5	690	500	3	29	15	0.00401	9	0.5 - 0.6
WDU4	0.5	4.0	690	425	4	14	22	0.00389	10	0.5 - 1.0
UT4	0.5	4.0	690	418	4	25	20	0.00266	9	0.6 - 0.8
WDU6	0.5	6.0	690	330	5	11	29	0.00258	12	0.8 - 1.6
UT6	0.5	6.0	690	318	7	21	28	0.00163	10	1.5 - 1.8
WDU10	1.5	10.0	690	260	7	10	40	0.00158	12	1.2 - 2.4
UT10	1.5	10.0	690	252	10	17	39	0.00104	10	1.5 - 1.8
WDU16	1.5	16.0	690	220	10	9	53	0.00106	12	2.0 - 4.0
UT16	1.5	16.0	690	215	14	16	53	0.00057	14	2.5 - 3.0
WDU35	2.5	35.0	690	160	18	7	80	0.00055	12	4.0 - 5.0
UT35	2.5	35.0	690	160	21	15	70	0.00036	18	3.2 - 3.7

EU Declaration of Conformity in accordance with European Directive 2014/34/EU

Manufacturer: Hawke International

Address: Oxford Street West, Ashton-under-Lyne, OL7 0NA, United Kingdom

Equipment: EA Stainless Steel & MEA Mild Steel Range of Junction Boxes

Provisions of the Directive fulfilled by the Equipment:

Group II Category 2G Exe IIC T* Gb, II 2D Extb IIIC T**°C Db - IP66

Group II Category 2G Exib IIC T* Gb, II 2D Exib IIIC T**°C Db - IP66

Group II Category 1G Exia IIC T* Ga, II 1D Exia IIIC T**°C Da - IP66

Notified Body for EU-Type Examination: Baseefa 1180 Buxton UK

EU-type Examination Certificate: Baseefa08ATEX0208X

Notified Body for production: SGS-Baseefa 1180 Buxton UK

Harmonized Standards used: EN 60079-0:2012+A11:2013, EN60079-7:2007, EN60079-11:2012 EN60079-31:2014

On behalf of the above named company, I declare that, on the date the equipment accompanied by this declaration is placed on the market, the equipment conforms with all technical and regulatory requirements of the above listed directives.


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A. Tindall

Technical Manager