

# **Certificate of Compliance**

Certificate:	70039997	Master Contract:	178267 (078713_0_000)
Project:	70182522	Date Issued	2018-10-25
Issued to:	Hawke International A Division of H Oxford St W Ashton-Under-Lyne, Lancashire OL UNITED KINGDOM	Iubbell Limited .7 0NA	
	Attention: Roger Lomax		

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.



Issued by: Siros Ghanbar-zadeh Siros Ghanbarzadeh

#### **PRODUCTS**

CLASS - C441802 - OUTLET BOXES AND FITTINGS-Boxes - For Hazardous Locations CLASS - C441882 - OUTLET BOXES AND FITTINGS-Boxes - For Hazardous Locations - Certified to US Standards

#### PART A:

Class I Zone 1: Rating see below; IP66/67/68 (where applicable), Temp Coded T6 or T5: Increase Safety Polymeric outlet boxes Types PL/ZPL Series 5, 6 or 7

Series	Model #'s	Rating	Enclosure	Ambient
PL5	PL511 PL513 PL514 PL520	Ex e IIC Gb Ex tb IIIC T80°C Db And Class I, Zone 1, AEx e IIC Gb Zone 21,AEx tb IIIC T80°C Db	IP66/67 IP66	-60 C to 75C
PL6	PL612 PL615 PL620 PL626 PL630	Ex e IIC Gb Ex tb IIIC T80°C Db And Class I, Zone 1, AEx e IIC Gb Zone 21,AEx tb IIIC T80°C Db	IP66/67	-60C to 75C



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PL7	PL712 PL722	Ex e II Gb Ex tb IIIC T80°C Db And Class I, Zone 1, AEx e II Gb Zone 21, AEx tb IIIC T80°C Db	IP66 /67	-60°C to 75C
ZPL5	ZPL511 ZPL513 ZPL514 ZPL520	Ex e IIC Gb Ex tb IIIC T80°C Db And Class I, Zone 1,AEx e IIC Gb Zone 21, AEx tb IIIC T80°C Db	IP66/67 IP66	-60Cto 75C
ZPL6	ZPL612 ZPL615 ZPL620 ZPL626 ZPL630	Ex e IIC Gb Ex tb IIIC Db And Class I, Zone 1,AEx e IIC Gb Zone 21, AEx tb IIIC Db	IP66/67/68	-60C to 75C
ZPL7	ZPL712 ZPL722	Ex e IIC Gb Ex tb A21 IIIC And Class I, Zone 1,AEx e IIC Gb Zone 21, AEx tb A21 IIIC	IP66/67	-60°C to 75C

		Ма	aximum	Dissipa (Watts)		Min Supply			
Enclosure Type	T6	T6	T6	T5	T5	T5	Max Cable	Wire	
	Amb 40°C	Amb 55°C	Amb 65°C	Amb 40°C	Amb 55°C	Amb 65°C	length (m)	Rating (°C)	
PL511	1.63	1.02	0.61	2.24	1.63	1.22	0.135	90	
PL513	4.1	2.5	3.5	5.6	4.1	3.5	0.179	90	
PL514	4.1	2.5	1.5	5.6	4.1	3.0	0.179	90	
PL520	4.8	3.0	1.8	6.6	4.8	3.6	0.229	90	
PL612	4.1	2.5	1.5	5.6	4.1	3	0.127	90	
PL615	6.4	4	2.4	8.8	6.4	4.8	0.175	90	
PL620	11.4	7.1	4.2	15.6	11.4	8.5	0.24	90	
PL626	11.4	7.1	4.2	15.6	11.4	8.5	0.275	90	
PL630	20.8	13	7.8	28.6	20.8	15.6	0.365	90	
PL712	3.35	2.15	1.2	4.6	3.35	2.4	0.142	90	
PL722	5.32	3.23	1.9	7.3	5.32	3.9	0.226	90	

Notes:

**Conditions of Acceptability**:



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- 1. Outlet boxes Type PL are for use with terminal blocks rated for 600V ac max, 80A max. Detail electrical ratings for designated terminal blocks for each type of outlet box are covered in the body of the report.
- 2. Installer shall follow North American electrical rating of internal components.
- 3. Outlet boxes Type ZPL are identical to Type PL minus the terminal block(s) and are certified as component only where the final installation acceptance is determined by CSA Group.
- 4. Do not allow dust layers to build up on this product.
- 5. Unused cable entries must be fitted with stopping plugs as listed on the ZP5\*\* component certificate IECEx BAS 14.0120U or unused entries may be fitted with alternative stopping plugs and or breather 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.
- 6. The breather/drain devices must be installed in their correct orientation in the bottom face of the enclosure. The ingress protection rating and operating temperature range of the junction box is limited to that of the breather/drain and adaptor/reducer device fitted.
- 7. All terminal screws, used and unused, shall be fully tightened down by the end user.
- 8. 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.
- 9. Terminals shall be installed in such a manner that the creepage and clearance distances between the terminal and adjacent components, enclosure walls and covers complying with the requirements of IEC 60079-7 for the rated voltage of the equipment.
- 10. Terminal temperatures must not exceed the operating range specified on the component certificate.

#### PART B:

#### Ex e IIC, T4, T5, or T6 Gb; Ex tb IIIC T80°C Db; IP66, Class I, Zone 1 AEx e IIC Gb, T6 or T5; AEx tb IIIC T80°C Db;IP66, Type 4X (where applicable) Class I Division 2 Group A, B, C, D T4, T5, or T6; Type 4X (where applicable):

- S\* range (Size 1 to 17) and M\* range (Size 1 to 9) where S designates Stainless Steel, and M designates Mild steel junction Boxes
- SFI\*, SFE\*, MFI\* and MFE\* range (Size 1 to 9). Where FI designates a internal flange construction and FE indicates an external Flange box design
- EA\* and MEA\* range is a wedge shaped box construction
- EJB\* and MEJB\* range stainless and Mild junction boxes

Nomenclature: Model Number XY

X may be (Series)	S M SFI MFI SFE MEE	Stainless Steel Mild Steel Stainless Steel with internal flange design Mild Steel with internal flange design Stainless Steel with external flange design
Y may be (Sizes)	1 to 9 15, 17	wild Steel with external flange design



Notes:

- 1. Sizes1 through 9 enclosures have a -60°C lower operating ambient temperature.
- 2. Size 1-9 may be followed by the letter "L" to designate a landscape orientation
- 3. Sizes 15 1nd 17 enclosures have a low operating ambient of  $-20^{\circ}C$
- 4. Optional EMC gaskets available upon request NEMA4X

	Ν	laximun	n Dissipa	ated Powe	er (Watt	s)		Min Sup	ply Wire		
Enclosure Type	T6	T5	T6	T5	T6	T5	Max Cable length	Temp (°C)			
Enclosure Type	Amb 40°C	Amb 55°C	Amb 55°C	Amb 40°C	Amb 65°C	Amb 65°C	(m)	T6	Т5		
S1, M1, SFl1, SFE1, MFl1, MFE1	13	.95	8.7	19.1	5.2	10.4	0.307	90	105		
S2, M2, SF12, SFE2 , MF12, MFE2	18	.15	11.3	24.9	6.8	13.6	0.425	90	105		
S2L, M2L, SF12L, SFE2L , MF12L, MFE2L	18	.15	11.3	24.9	6.8	13.6	0.425	90	105		
S3, M3, SFI3 , SFE3, MFI3, MFE3	23.7		, M3, SFI3 , FE3, MFI3, 23.7 MFE3		14.8	32.5	8.8	17.7	0.515	90	105
S4, M4, SFI4 , SFE4, MFl4, MFE4	29.95		18.7	41.1	11.2	22.4	0.579	90	105		
S4L, M4L, SF14L , SFE4L, MF14L, MFE4L	29	.95	18.7	41.1	11.2	22.4	0.579	90	105		
S5, M5, SFI5 , SFE5, MF15 , MFE5	32	.85	20.5	45.1	12.3	24.6	0.662	90	105		
S6, M6, SF16 , SFE6, MF16, MFE6	40		25	55	15	30	0.792	90	105		
S7, M7, SFI7, SFE7, MF17, MFE7	52		32.5	71.5	19.5	39	0.945	90	105		
S8, M8, SFI8, SFE8, MFI8, MFE8	65		40.6	89.3	24.3	48.7	1.09	90	105		
S9, M9, SF19, SFE9, MF19, MFE9	79.35		49.5	109.1	29.7	59.5	1.238	90	105		



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							1	
	T5	T5	T5	T5			Max Cable length	Min Supply Wire
Enclosure	Amb	Amb	Amb	Amb			(m)	Temp ( $^{\circ}C$ )
	40°C	45°C	50°C	55°C			(III)	Temp (C)
S15 and M15		19	9.78				0.57	90
	T4	T4	T4	T4	-	-	Max Cabla langth	Min Supply Wiro
Enclosure	Amb	Amb	Amb	Amb			(m)	Temp (°C)
	40°C	45°C	50°C	55°C	-	-	(III)	Temp ( C)
S17and M17	221.39			-	-	-	0.57	90
	-	-	221	.39	-	_	0.57	100

Enclosure		Maxin		Min S	upply				
Туре	T6	Т5	T6 T5		T6	Т5	Cable length per terminal(m)	Wire Temp (°C)	
	Amb -60°C +40°C	Amb -60°C +55°C	Amb -60°C +55°C	Amb -60°C +40°C	Amb -60°C +65°C	Amb -60°C +65°C	(Max box diagonal)	T5	T6
EA231513 and MEA231513	7.	.09	4.4	9.7	2.6	5.3	0.300	90	105
EA262620 and MEA262620	15.92		9.9	21.8	5.9	11.9	0.390	90	105
EA303020 and MEA303020	4.4		2.7	6.0	1.6	3.3	0.455	90	105
EA352620 and MEA352620	4.3		2.6	5.9	1.6	3.2	0.455	90	105
EA403020 and MEA403020	5	.7	3.5	7.8	2.1	4.2	0.520	90	105
EA463820 and MEA463820	10	0.0	6.2	13.7	3.7	7.5	0.610	90	105
EA484820 and MEA484820	1′	7.0	10.6	23.3	6.3	12.7	0.690	90	105
EA553522 and MEA553522	3	1.0	19.3	42.6	11.6	23.2	0.670	90	105
EA624522 and MEA624522	27	0. 7	16.8	37.1	10.1	20.2	0.780	90	105

The maximum dissipated wattage for the EJB\* & MEJB\* junction boxes are as follows:



	T6	Maximu T5	m Dissipa T6	ted Powe T5	r (Watts) T6	T5	Cable length per	Min Sup Temp	Min Supply Wire Temp (°C)	
Junction box Type	Amb -60°C +40°C	Amb -60°C +55°C	Amb -60°C +55°C	Amb -60°C +40°C	Amb -60°C +65°C	Am -60°C +65°C	(Max box diagonal)	T6	T5	
EJB1 and MEJB1	4.74		2.96	6.5	1.7	3.5	0.185	90	105	
EJB2 and MEJB2	6.64		4.15	9.1	2.4	4.9	0.228	90	105	
EJB3 and MEJB3	6.64		4.15	9.1	2.4	4.9	0.300	90	105	

Notes:

#### **Conditions of Acceptability:**

- 1. Suffix S denotes stainless steel construction, whereas suffix MS denotes mild steel construction.
- 2. Outlet boxes sizes 1S through 5S and 1MS through 17MS contain terminal strips. Sizes 1ZS through 17ZS and 1ZMS through 17ZMS are empty boxes intended to be fitted with Exe approved terminals in accordance with manufacturer's schedule drawings and are certified as components only where the final installation acceptance is determined by CSA Group.
- 3. Suffix L indicates enclosure with longer length.
- 4. Installer shall follow North American electrical rating of internal components
- 5. Unused entries may be fitted with alternative stopping plugs and or breather 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.
- 6. 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.
- 7. All terminal screws, used and unused, shall be tightened down by the end user.
- 8. Insulation of conductors must extend to within 1 mm of the metal of the terminal throat unless specified otherwise on the terminal certificate.
- 9. 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.
- 10. Terminals shall be installed in such a manner that the creepage and clearance distances between the terminal and adjacent components, enclosure walls and covers complying with the requirements of IEC 60079-15 for the rated voltage of the equipment.
- 11. Terminal temperatures must not exceed the operating range specified on the component certificate.
- 12. All terminals, and accessories such as cross-connectors, shall be installed in accordance with the terminal manufacturer's instructions. Hawke International will supply the relevant terminal manufacturer's instructions with each junction box covered by this certificate.
- 13. 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 6mm2 conductor at 29Amps is fitted with a 2.5mm2 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.
- 14. When a self-adhesive certification label is fitted, the minimum ambient temperature shall be -40°C.



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#### **APPLICABLE REQUIREMENTS**

CAN/CSA-C22.2 No. 60079-0-2015 IEC 6 <sup>th</sup> Ed	Electrical Apparatus for Explosive Gas Atmospheres Part 0
	: General Requirements
CAN/CSA-C22.2 No. 60079-7-2012 IEC 4 <sup>th</sup> Ed	Electrical Apparatus for Explosive Gas Atmospheres Part 7
	: Increased Safety "e"
CAN/CSA-C22.2 No. 60079-31-2015 IEC 2 <sup>nd</sup> Ed	Electrical Apparatus for Explosive Gas Atmospheres Part
	31: Dust Safety "t"
CAN/CSA-C22.2 No. 94-M91	Special Purpose Enclosures
CAN/CSA-C22.2 No. 14-M91	Industrial Control Equipment
CAN/CSA-C22.2 N0 213-17	Nonincendive electrical equipment for use in Class I and II,
	Division 2 and Class III, Divisions 1 and 2 hazardous
	(classified) locations
UL 60079-0- 6 <sup>th</sup> Ed -IEC 6 <sup>th</sup> Ed	Electrical Apparatus for Explosive Gas Atmospheres Part 0
	: General Requirements
UL 60079-7- 2004 – IEC 4 <sup>th</sup> Ed	Electrical Apparatus for Explosive Gas Atmospheres Part 7
	: Increased Safety "e"
UL60079-31-2 <sup>nd</sup> Ed – IEC 2 <sup>nd</sup> Ed	Electrical Apparatus for Explosive Gas AtmospheresPart
	31: Dust Safety "t"
UL 50E- 3 <sup>rd</sup> Ed	Special Purpose Enclosures
UL 508-2013 7 <sup>th</sup> Ed.	Industrial Control Equipment
UL 12.12.01- 9 <sup>th</sup> Ed	Nonincendive electrical equipment for use in Class I & II,
	Division 2 and Class III, Divisions 1 & 2 hazardous
	(classified) locations

#### **MARKINGS**

The manufacturer is required to apply the following markings:

- Products shall be marked with the markings specified by the particular product standard.
- Products certified for Canada shall have all Caution and Warning markings in both English and French.

Additional bilingual markings not covered by the product standard(s) may be required by the authorities having Jurisdiction. It is the responsibility of the manufacturer to provide and apply these additional markings, where applicable, in accordance with the requirements of those authorities.

The products listed are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US (indicating that products have been manufactured to the requirements of both Canadian and U.S. Standards) or with adjacent indicator 'US' for US only or without either indicator for Canada only.

#### Nameplate adhesive label material approval information:

Markings are etched/ engraved on name plates are constructed from stainless steel plate and riveted in place or printed on an adhesive nameplate examined and approved by CSA nameplate See drawing C2542



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- Manufacturer's name or trade mark;
- Manufacturer's Type identification;
- Hazardous location ratings
- Operating temperature or temperature code;
- Type 4X Designation (where applicable);
- Electrical ratings: Volts, Amps
- The permissible maximum dissipated power;
- IP rating (where applicable) optional;
- The letter "X" after the Certificate reference;
- cCSAus Monogram along with the year of Certification followed by serial number of the Certificate
- (e.g. CSA17CA7003997X);
- "Keep Assembly tightly closed when in operation" or equivalent;
- For polymeric enclosures where bonding means is field installed, the words:
   "CAUTION: NON-METALLIC ENCLOSURE DOES NOT PROVIDE GROUNDING BETWEEN CONDUIT CONNECTION. USE GROUNDING BUSHINGS AND JUMPER WIRE".
- Installation instruction sheets are provided with each Terminal Box. (Refer to documentation drawing package for enclosure Type and Size cross reference).
- WARNING: Potential Electrostatic Hazard, clean only with a damp cloth.
- Warning 'DO NOT OPEN WHEN ENERGIZED
- Warning: Minimum Supply Wire rating\_°C



### Supplement to Certificate of Compliance

**Certificate:** 70039997

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The products listed, including the latest revision described below, are eligible to be marked in accordance with the referenced Certificate.

Project	Date	Description
70182522	2018-10-25	Update certificate 70039997 to Add PL511, ZPL511, PL514 and ZPL514 enclosures to the report. Corrected the temperature rating of table in part A for all "B" material. Update descriptive documents in accordance with change. Add Standard UL 508 missed from previous report edition. Upgrade standards in accordance with submitted information
70163390	2017-12-07	Update report 70039997 to include new enclosure series & addition of Class1 Div 2:
70039997	2015-10-22	Upgrade report LR78713-8 product listing to match iecex / atex certificate supplied by the client and add new box sizes Re-assess product to the latest IEC standards and National deviations - Assess dust marking for Canadian and USA national deviations # new qualification - Create new report and certificate to supercede old LR78713-8 report - Includes update to existing documents - Includes addition of new sizes - No Testing included# based on information provided is satisfactory for CSA certification

#### **Product Certification History**