



Certificate of Compliance

Certificate: 2633583 (078713_0_000)

Master Contract: 178267

Project: 70021433

Date Issued: April 09, 2015

Issued to: Hawke International A Division of Hubbell Limited
Oxford St W
Ashton-Under-Lyne, Lancashire OL7 0NA
UNITED KINGDOM
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: Donald Verbeem
Donald Verbeem

PRODUCTS

CLASS - C623801 - RECEPTACLES-Attachment Plug Type and Plugs - For Hazardous Locations

CLASS - C623881 - RECEPTACLES-Attachment Plug Type and Plugs-For Hazardous Locations-Certified to U.S. Standards

Exdbe IICGb T6, ExtbIIICDb T80 IP66 and IP67

Class I, Zone 1, AExde IICGb T6,AExtbIIIC Db T80 IP66 and IP67

Class III, Div 1; Class II, Div 1, Groups E, F, and G.

Instrumex Series multi-pin, live disconnect and connect connector system; maximum of 4 or 9 conductors are rated up to 250V a.c. 10 A or 60 V d.c. 2.5A and 1.5 – 2.5 mm² (14 - 16 AWG) cable; maximum of 9 conductors are rated up to 250V a.c. 1A or 60V d.c .0.25A and 0.39 mm² (22 AWG) cable; Ta -40C to 60C

Material Code

A	Aluminum
B	Brass
Y	Bronze
S	Stainless steel
I	Steel

Connector Style

CP	Connector Plug
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FP Flanged Connector Plug
CR Connector Receptacle
FR Flanged Connector Receptacle
BR1 Bulkhead Receptacle (Fixed Pos 1 Std)
BR2 Bulkhead Receptacle (Fixed Pos 2)
BR3 Bulkhead Receptacle (Fixed Pos 3)
BR4 Bulkhead Receptacle (Fixed Pos 4)
BR5 M Bulkhead Receptacle (Fixed Pos 5) Metric M20 (standard)

Entry Thread

M 4/8 way M20 (Metric standard), 9 way M32 (Metric standard)
N 4/8 way NPT 1/2" (NPT Standard), 9 way NPT 3/4" (NPT Standard),
R 4/8 way NPT 3/4" (NPT Alternative), 9 way NPT 1" (NPT Alternative)
A Earth Adaptor 9 way M25
X N/A (for CP or CR)

Conductor terminations

A 4 x 0.5 – 1 mm² (20 AWG) *
B 4 x 1.5 - 2.5 mm² (14 AWG) *
C 8 x 0.14 - 0.37 mm² (22 AWG)
D 9 x 0.5 – 1 mm² (20 AWG) *
E 9 x 1.5 - 2.5 mm² (14 AWG) *

**Note: 4 or 9 conductor Bulkhead Receptacles are supplied with 1.5mm² conductor terminations only*

Insert Type

P Pin Insert **
S Socket Insert **

*** Note: In all installations the "live" side of the connector must always contain the socket insert.*

Outer Sheath Diameter

S Cable Seal (2 Seals) 5.5 - 16mm
A Cable Seal (1 Seal) 12.5 – 20.5mm
B Cable Seal (1 Seal) 16.9 - 26mm
X N/A (Bulkhead Receptacle)

Bulkhead Receptacle Cable Length

0 0.5m (standard)
1 1m
2 2m
C Customer Specified
X N/A (for Connector Plug and Receptacle)

Bulkhead Receptacle Pin Quantities @

2 2 (pins 1 and 3 terminated) 4 way①
3 3 (pins 1,2 and 3 terminated) 4 way①
4 4 (pins 1-4 terminated) Std. 4 way①
8 8 (pins 1-8 terminated) Std. 8 way①
9 9 (pins 1-9 terminated) Std. 9 way①
C Customer Specified



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X N/A (for Connector Plug and Receptacle)
① *Note: Bulkheads include an additional ground/earth lead*

NOTE:

1. Following disconnection, the energised power supply must only be connected to the connector part incorporating the socket connections.
2. The connector part containing the pin connections must not be connected to equipment containing a power supply or energy storage devices likely to cause the plug to remain energised after disconnection.
3. The protective caps are to be fitted immediately following separation.
4. The bulkhead connector is not to be fitted to enclosures/bulkheads where the interface temperature may exceed 80°C. In addition the integral cables shall be mechanically protected.
5. The bulkhead mounting, shall be sealed in accordance with the installation code of practice to ensure that a minimum ingress protection level of IP66 is maintained.

Exdb IICGbT5 or T6,ExtbIIIC Db T95 or T80 IP66 and 67
Class I, Zone 1, AExd IIC Gb, T5 or T6.AExtbIIICDb T95 or T80 IP66 and 67
Class III, Div 1; Class II, Div 1, Groups E, F, and G.

Controlex' Series multi-pin connector system: maximum of 60 conductors and ground are rated up to 600V a.c. or DC; maximum current rating of 125 Amps (with 35 sq mm – 1AWG contacts and ground); Ta -40C to +60°C

Catalogue Logic

Method of PROTECTION

Exdb Flameproof

Shell Size

16	16
25	25
32	32
40	40
50	50
63	63

Material Code

A	Aluminum
B	Brass
Y	Bronze
S	Stainless steel

Connector Style

CP	Connector Plug
CR	Connector Receptacle
BR	Bulkhead Receptacle

Keying System

F	Fixed Keying
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V Variable Keying

Number Of Contacts

See Insert Selection Chart

X No Insert

Contact Type

1.5 1.5 mm²

2.5 2.5 mm²

4 4 mm²

6 6 mm²

10 10 mm²

16 16 mm²

25 25 mm²

35 35 mm²

X P No Insert Pin

Insert Type

S Socket

X No Insert

S Solder*

Termination Style

C Crimp*

X No Insert

FL Mounting Flange

* Note: Inserts for use in Bulkhead receptacles are solder termination only for contact sizes of 6mm² and above.

Accessories

FPC Flameproof Plug Cap

FRC Flameproof Receptacle Cap

PPC Environmental Plug Cap

PRC Environmental Receptacle Cap

NOTE:

1. These connectors must be electrically isolated before any attempt is made to remove the covers or join or separate the two halves
2. When separated the metal flameproof caps (not the acetal environmental caps) shall be fitted and locked before any associated supply cables are re-energised.
3. The cable entry devices selected for use with the in-line connectors shall provide a mechanical cable retention facility appropriate to the cable type and conditions of service.
4. The cables terminated within the bulkhead connectors shall be mechanically protected from pulling and twisting, and the potted ferrule shall not be subjected to temperatures exceeding 100 °C.
5. The cable entry threads, or bulkhead mounting, shall be sealed in



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accordance with the installation code of practice to ensure that a minimum ingress protection level of IP66 is maintained.

Exdb IICGb T5,ExtbIIIC Db T95 IP66 and 67
Class I, Zone 1, AExd IICGb T5,AExtbIIIC Db T95 IP66 and 67
Class III, Div 1; Class II, Div 1, Groups E, F, and G.

Powerex' Series multi-pin connector system: maximum of 4 conductors and ground are rated up to 600V a.c. or d.c.; Maximum current 780 Amps (with 630sqmm – 1000MCM and ground); Ta -40C to 60°C

Catalogue Logic

Method of PROTECTION

Exd Flameproof

Shell Size

32
40
50
63
75

Material Code

A Aluminum
B Brass
N Nickel Plated Brass
Y Bronze
S Stainless steel
I Steel

Connector Style

CP Connector Plug
CR Connector Receptacle

Internal Ground Size

A 50 mm² (1/0 AWG)
B 70 mm² (2/0 AWG)
C 95 mm² (4/0 AWG)
D 120 mm² (250 MCM)
E 150 mm² (300 MCM)
F 185 mm² (400 MCM)
G 240 mm² (500 MCM)

Number Of Contacts

See Insert Selection Chart
X No Insert

Contact Type



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<u>Size</u>	<u>Contact Type</u>	<u>Maximum Conductor Acceptance Diameter (mm)</u>
50	50 mm ²	9.5
70	70 mm ²	11.5
95	95 mm ²	13
120	120 mm ²	14.5
150	150 mm ²	16.5
185	185 mm ²	18.5
240	240 mm ²	20.5
300	300 mm ²	25
400	400 mm ²	29
500	500 mm ²	32
630	630 mm ²	38

Insert Type

P	Pin
S	Socket

Accessories

FL	Mounting Flange*
FPC	Flameproof Plug Cap
FRC	Flameproof Receptacle Cap
PPC	Environmental Plug Cap
PRC	Environmental Receptacle Cap

NOTE:

- 1) The Powerex Series plugs and connectors may be supplied with factory installed cable at a length specified by the customer. The cable will be certified in accordance with the CEC or NEC rules as applicable
- 2) These connectors must be electrically isolated before any attempt is made to remove the covers or join or separate the two halves
- 3) . When separated the metal flameproof caps (not the acetal environmental caps) shall be fitted and locked before any associated supply cables are re-energised.
- 4) The cable entry devices selected for use with the in-line connectors shall provide a mechanical cable retention facility appropriate to the cable type and conditions of service.
- 5) The cable entry threads shall be sealed in accordance with the installation code of practice to ensure that a minimum ingress protection level of IP66 is maintained.

APPLICABLE REQUIREMENTS

CAN/CSA-C22.2 No. 0-10:	General Requirements - Canadian Electrical Code, Part II
CAN/CSA-C22.2 No. 0.4:04:	Bonding of Electrical Equipment
C22.2 No. 182.1-13	Plugs, receptacles, and cable connectors of the pin and sleeve type
C22.2 No. 182.3-M1987:	Special use Attachment Plugs, Receptacles, and Connectors
CAN/CSA-C22.2 60079-0:11	Explosive atmospheres — Part 0: Equipment — General requirements
CAN/CSA-C22.2 60079-1:11	Explosive atmospheres — Part 1: Equipment protection by flameproof enclosures “d”



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CAN/CSA-C22.2 60079-7:12	Explosive atmospheres — Part 7: Equipment protection by increased safety “e”
UL 1977, 2 nd Ed.:	Standard for Safety for Component Connectors for Use in Data, Signal, Control and Power Applications
UL 60079-0, 6th Ed.	Explosive atmospheres – Part 0: Equipment – General requirements
UL 60079-1, 6th Ed.	Explosive Atmospheres – Part 1: Equipment Protection by Flameproof Enclosures “d”
UL 60079-7, 4th Ed.	Explosive Atmospheres – Part 7: Equipment protection by increased safety “e”
IEC 60079-0: 2007 Edition 6:	Part 0: Equipment – General requirements
IEC 60079-1: 2007 Edition 6:	Part 1: Equipment protection by flameproof enclosures “d”
IEC 60079-7: Edition 4:	Explosive atmospheres – Part 7: Equipment protection by increased safety “e” - Edition 4.0
IEC60079-31:- Edition 1:2008	Explosive Atmospheres- Part 31: Equipment dust ignition protected by enclosure “t”.

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.

1. The manufacturer’s name, trade name, trademark, or other descriptive marking by which the organization responsible for the device may be identified;
2. The catalog number or an equivalent designation;
3. The electrical rating in both volts and amperes;
4. “AC”, or “DC” or both AC and DC or an acceptable frequency marking;
5. Device wiring terminals intended for bonding shall be clearly and permanently identified with .
6. The method of tightening the connectors and conductors shall appear on an information sheet packed in the smallest unit container.
7. **WARNING: EXPLOSION HAZARD. DO NOT CONNECT OR DISCONNECT WHILE ENERGIZED.**
(Controlex and Powerex only)
8. The appropriate explosion protection concepts, Gas grouping, Temperature classification, ambient temperature range, ingress protection and wattage dissipation information.
9. cCSAus logo



Supplement to Certificate of Compliance

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

Product Certification History

Project	Date	Description
70021433	Apr 9 2015	Evaluate and expand Instrumex Series connector system product range to include 9 pin configuration
2633583	Jul 26 2013	Initial Hazardous Locations Certification of Instrumex and Controlex connector series