



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Ex COMPONENT CERTIFICATE

Certificate No.: IECEx SIR 18.0070U

Issue No: 0

Certificate history:

Issue No. 0 (2019-02-28)

Status: **Current**

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Date of Issue: **2019-02-28**

Applicant: **Raychem RPG Pvt Ltd.**
Ceat Mahal Annexe 463
Dr. Annie Besant Road, Worli
Mumbai 400030
India

Ex Component: **Ex Empty Enclosure, Type RJ, GRJ and SRJ**

This component is NOT intended to be used alone and requires additional consideration when incorporated into other equipment or systems for use in explosive atmospheres (refer to IEC 60079-0).

Type of Protection: **Increased Safety and Dust Ignition Protection by Enclosure**

Marking:

Ex eb IIC Gb
Ex tb IIIC Db

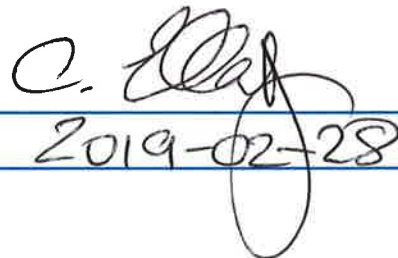
Approved for issue on behalf of the IECEx
Certification Body:

C Ellaby

Position:

Deputy Certification Manager

Signature:
(for printed version)



Date:

2019-02-28

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

SIRA Certification Service
CSA Group
Unit 6, Hawarden Industrial Park
Hawarden, Deeside, CH5 3US
United Kingdom

sira
CERTIFICATION





IECEX Certificate of Conformity

Certificate No: IECEX SIR 18.0070U Issue No: 0

Date of Issue: **2019-02-28** Page 2 of 3

Manufacturer: **Raychem RPG Pvt Ltd.**
1/62, M.G. Road, Near Bharat Petroleum Pump, Off Western Express Highway,
Post Sativali, Bassein, Taluka Vasai (East), District Palghar,
Maharashtra 401208
India

Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex Component covered by this certificate, was assessed and found to comply with the IECEX Quality system requirements. This certificate is granted subject to the conditions as set out in IECEX Scheme Rules, IECEX 02 and Operational Documents as amended.

STANDARDS:

The Ex Component and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2017 Edition:7.0	Explosive atmospheres - Part 0: Equipment - General requirements
IEC 60079-31 : 2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
IEC 60079-7 : 2017 Edition:5.1	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the Ex Component listed has successfully met the examination and test requirements as recorded in

Test Report:

[GB/SIR/ExTR19.0052/00](#)

Quality Assessment Report:

[US/UL/QAR13.0005/08](#)



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Schedule

Ex Component(s) covered by this certificate is described below:

Raychem RPG Ex Empty enclosures may be used for fitting ATEX/IECEx approved terminals and components. The enclosures are made of different materials, depending on the enclosure type. Type RJ is made of die cast aluminium, Type GRJ is made of glass reinforced polyester (GRP), and Type SRJ is made of either Stainless Steel or Mild Steel.

Type RJ and Type GRJ enclosures consists of a lid and a base secured together with the help of stainless steel captive screws and a sealing system which ensure ingress protection rating of IP 66. Type SRJ enclosures also consists of a lid and a base but these are secured together by SS or MS Hex screws with rubber washer and a sealing system which ensures ingress protection rating of IP 64.

Refer to Annexe for additional information and CONDITIONS OF MANUFACTURE.

SCHEDULE OF LIMITATIONS:

Refer to Annexe.

Annex:

[IECEx SIR 18.0070U Annexe Iss 0.pdf](#)

Annexe to: IECEx SIR 18.0070U Issue 0

Applicant: Raychem RPG Pvt Ltd.

Apparatus: Ex Empty Enclosure, Type RJ, GRJ and SRJ



Component

The full component description is shown as follows:

Raychem RPG Ex Empty enclosures may be used for fitting IECEx approved terminals and components. The enclosures are made of different materials, depending on the enclosure type. Type RJ is made of die cast aluminium, Type GRJ is made of glass reinforced polyester (GRP), and Type SRJ is made of either Stainless Steel or Mild Steel.

Type RJ and Type GRJ enclosures consists of a lid and a base secured together with the help of stainless steel captive screws and a sealing system which ensure ingress protection rating of IP 66. Type SRJ enclosures also consists of a lid and a base but these are secured together by SS or MS Hex screws with rubber washer and a sealing system which ensures ingress protection rating of IP 64.

Type RJ, Aluminium Enclosures

Type RJ enclosures utilize a die cast aluminium enclosure (minimum thickness 3 mm) that may be used for fitting IECEx approved terminals and components. The enclosure is available with powder coating (max. thickness of 80µm) as well. The terminals and the components would be fitted onto metal TS32 or TS35 mounting rails, or metal TS15 mounting rails for the smaller types, the rails may be fitted vertically or horizontally. The terminals and the components may be fitted onto a mounting plate instead of the DIN rails.

Various sizes of enclosures are used and all enclosures use a gasket seal on the lid, this is fixed by a groove and an adhesive. The gasket is made of either silicone rubber or Viton rubber. The enclosures are mounted via fixing holes within the enclosure, but outside the sealed compartment. Gland entries may be fitted to any of the side walls. Any machining can be provided on any face of the enclosure, provided that it has greater remaining surface area than the worst case test representatives and the openings are closed by an IP rated component with an IP rating equivalent to, or greater than, the IP rating of the enclosure.

Design Options - Alternative intermediate size Empty Enclosures may be manufactured, with any given dimension no larger than the respective dimension of the larger enclosure or smaller than the respective dimension of the smallest enclosure, and the maximum clearance between two screws shall be less than that of RJ 403111.

The table below contain all available enclosure references and sizes.

Part Code	Length (A) (mm)	Width (B) (mm)	Depth (C) (mm)
RJ 586434	58	64	34
RJ 986434	98	64	34
RJ 156434	150	64	34
RJ 758057	75	80	57
RJ 128057	125	80	57
RJ 178057	175	80	57
RJ 258054	250	80	54
RJ 101080	100	100	80
RJ 121280	122	120	80
RJ 121290	122	120	90
RJ 161080	160	100	80
RJ 221280	220	120	80
RJ 221290	220	120	90
RJ 141490	140	140	90
RJ 161690	160	160	90

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Sira Certification Service

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Part Code	Length (A) (mm)	Width (B) (mm)	Depth (C) (mm)
RJ 201490	200	140	90
RJ 261690	260	160	90
RJ 361690	360	160	90
RJ 181810	180	180	100
RJ 281810	280	180	100
RJ 202311	200	230	110
RJ 202318	200	230	180
RJ 282311	280	230	110
RJ 332311	330	230	110
RJ 332318	330	230	180
RJ 402311	400	230	110
RJ 403111	404	313	110
RJ 403118	404	313	180
RJ 603111	600	310	110
RJ 603118	600	310	180

Type GRJ, Glass Reinforced Polyester (GRP) Enclosures

Type GRJ enclosures are manufactured from black glass reinforced polyester (minimum wall thickness 4 mm for all walls except the wall upon which the ground continuity plate is mounted which is 6 mm thick) and may be fitted with IECEx approved terminals and components. The terminals and the components would be fitted onto metal TS32 or TS35 mounting rails, or metal TS15 mounting rails for the smaller types, the rails may be fitted vertically or horizontally. The terminals and the components may be fitted onto a mounting plate instead of the DIN rails. Optionally, earth continuity plate may be installed on the walls inside the enclosures.

Various sizes of enclosures are used and all enclosures use a gasket seal on the lid, this is fixed by a groove and an adhesive. The gasket is made of either silicone rubber or Viton rubber. The enclosures are mounted via fixing holes within the enclosure, but outside the sealed compartment. Gland entries may be fitted to any of the side walls. Any machining can be provided on any face of the enclosure, provided that it has greater remaining surface area than the worst case test representatives and the openings are closed by an IP rated component with an IP rating equivalent to, or greater than, the IP rating of the enclosure.

Design Options - Alternative intermediate size Empty Enclosures may be manufactured, with any given dimension no larger than the respective dimension of the larger enclosure or smaller than the respective dimension of the smallest enclosure, and the maximum clearance between two screws shall be less than that of GRJ 404012.

The table below contain all available enclosure references and sizes.

Part Code	Length (A) (mm)	Width (B) (mm)	Depth (C) (mm)
GRJ 807555	80	75	55
GRJ 117555	110	75	55
GRJ 167555	160	75	55
GRJ 197555	190	75	55
GRJ 167575	160	75	75
GRJ 807575	80	75	75
GRJ 117575	110	75	75
GRJ 197575	190	75	75
GRJ 121290	122	120	90
GRJ 161690	160	160	90

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Part Code	Length (A) (mm)	Width (B) (mm)	Depth (C) (mm)
GRJ 221290	220	120	90
GRJ 261690	260	160	90
GRJ 361690	360	160	90
GRJ 252512	255	250	120
GRJ 252516	255	250	160
GRJ 402512	400	250	120
GRJ 402516	400	250	160
GRJ 404012	400	405	120
GRJ 404020	400	405	201
GRJ 602512	600	250	120
GRJ 602516	600	250	160

Type SRJ, Stainless Steel or Mild Steel Enclosures

Type SRJ enclosures are manufactured from either stainless steel or mild steel with a corrosion resistance paint coating (minimum thickness 1.5 mm for enclosure size up to 458 x 388 x 200 except for SRJ101060 which is min. 1.2 mm thick. For the rest of enclosures, minimum thickness is 2 mm), and may be fitted with IECEx approved terminals and components. The terminals and the components would be fitted onto metal TS32 or TS35 mounting rails, or metal TS15 mounting rails for the smaller types, the rails may be fitted vertically or horizontally. The terminals and the components may be fitted onto a mounting plate instead of the DIN rails.

Gland entries may be fitted to any of the side walls. Optionally gland plates may be utilized (minimum thickness 2 mm for all except for SRJ101060 which is min. 1.5 mm thick), and fitted to any of the side walls. Various sizes of enclosures are used and all enclosures use a gasket seal on the lid and gland plates (if used), this is fixed by an adhesive. The gasket is made of silicone rubber or Viton rubber. Any machining can be provided on any face of the enclosure, provided that it has greater remaining surface area than the worst case test representatives and the openings are closed by an IP rated component with an IP rating equivalent to, or greater than, the IP rating of the enclosure.

The enclosures are mounted via fixing holes within the enclosure, but outside the sealed compartment. Optionally Back-straps/Mounting lugs may be welded to the back of the enclosure to provide fixings. Hinges may be fitted to the lid and they are welded if used.

Design Options - Alternative intermediate size Empty Enclosures may be manufactured, with any given dimension no larger than the respective dimension of the larger enclosure or smaller than the respective dimension of the smallest enclosure, and the maximum clearance between two screws shall be less than that of SRJ 524215.

The table below contain all available enclosure references and sizes.

Part Code	Length (A) (mm)	Width (B) (mm)	Depth (C) (mm)
SRJ 101060	100	100	60
SRJ 111165	110	110	65
SRJ 141493	143	143	93
SRJ 151590	150	150	90
SRJ 191910	190	190	100
SRJ 191918	193	193	186
SRJ 221613	220	165	130
SRJ 211613	218	168	130
SRJ 211621	218	168	210

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Part Code	Length (A) (mm)	Width (B) (mm)	Depth (C) (mm)
SRJ 372115	377	218	156
SRJ 372121	377	218	210
SRJ 231513	229	152	130
SRJ 262615	260	265	150
SRJ 262620	260	265	200
SRJ 303015	306	306	150
SRJ 303020	306	306	200
SRJ 352615	350	265	150
SRJ 352620	350	265	200
SRJ 373715	377	377	156
SRJ 373721	377	377	210
SRJ 453815	458	382	150
SRJ 453820	458	388	200
SRJ 484815	480	480	150
SRJ 484820	480	480	200
SRJ 524215	527	427	156
SRJ 535315	530	530	150
SRJ 525221	527	527	210
SRJ 553615	550	360	150
SRJ 553620	550	360	200
SRJ 765015	762	508	150
SRJ 765020	762	508	200
SRJ 825715	827	577	156
SRJ 825721	827	577	210
SRJ 825730	827	577	300
SRJ 926120	920	610	200
SRJ 976720	977	677	208
SRJ 976715	977	677	156
SRJ 976730	977	677	300
SRJ 117715	1177	777	156
SRJ 117721	1177	777	210
SRJ 117730	1190	770	300
SRJ 20020060	2000	2000	600

Schedule Of Limitations

1. All cable entry devices shall be suitably certified for protection types of 'eb' and 'tb', and all unused openings shall be fitted with suitable blanking elements with protection types of 'eb' and 'tb' so that minimum ingress protection of IP 64 is maintained.
2. The suitability of all components/terminals employed inside shall be considered in the end use application.
3. Internal and external earthing studs provide effective connection of a protective earthing (PE) conductor. Size of the protective earthing conductor shall be selected based on the phase conductors and table 12 of IEC 60079-0:2017.
4. Service temperature may exceed +70 °C. Cables suitable for use at this temperature shall be used.

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5. The service temperature is determined by the gasket material used. The user shall ensure that the enclosures are used within the correct service temperature range.

Enclosure Type	Gasket Material	Service Temperature
Aluminium (RJ Series)	Silicone	-60°C to +140°C
	Viton	-30°C to +150°C
Glass Reinforced Polyester (GRJ Series)	Silicone	-60°C to +110°C
	Viton	-30°C to +110°C
Steel (SRJ Series)	Silicone	-60°C to +140°C
	Viton	-30°C to +150°C

Conditions Of Manufacture

1. When marking the enclosures, the manufacturer shall consider the gasket material used and shall not apply a service temperature that contradict this range.
2. Gland entries may be fitted to any of the side walls, within the following constraints – a minimum of 5 mm is maintained between the cable entry holes and also: (a) the distance between hole centres will clear the across corners dimension of adjacent cable glands/plugs/locknuts (b) the distance from the hole centre to the edge of the enclosure must be sufficient to clear the across corners dimension of the cable glands/lugs/locknuts.
3. In addition the entry hole shall be sized to be no larger than 0.7 mm above the major diameter of the entry thread if it is a plain entry, and shall be tapered threads with not less than 3 threads or parallel threads with not less than five threads, with a tolerance class of 6H or better according to ISO 965-1 if it is a threaded entry.

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