

INSTRUCTIONS SHEET FOR EX **STEEL** EMPTY ENCLOSURES


1. Manufacturer

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2. Product Description

Raychem RPG Ex Empty Enclosures may be used for fitting ATEX/IECEx approved terminals and components. Stainless Steel or Mild Steel Enclosures has been manufactured as per the requirements of EN/IEC 60079-0, EN/IEC 60079-7 & EN/IEC 60079-31 and satisfies requirements of ATEX Directive 2014/34/EU. The enclosures has been developed & manufactured in accordance with EN/IEC 80079-34. The enclosures consist of a Lid and Base screwed together by SS or MS Hex screw with rubber washer and a sealing system which ensures Ingress Protection rating of IP 64 in accordance with IEC 60529.

3. Technical Data

Material:	Stainless Steel or Mild Steel
Surface:	Natural, brushed, painted or Electro polished
Lid Screws:	Stainless Steel/Mild Steel Hex Screws with rubber washer
Sealing/Gasket:	Silicone (Operating temperature: -60°C to + 140°C) Viton (Operating temperature: - 30°C to + 150°C)
Mechanical Strength:	Impact Energy > 7 Nm
Ingress Protection:	IP 64 in accordance with IEC 60529 IP 66 in acc. with IEC 60529 (Based on Manufacturers Declaration)
Marking:	 II 2 GD Ex eb IIC Gb Ex tb IIIC Db
Certification:	SIRA 18 ATEX 3261U IECEx SIR 18.0070U

4. Applicable Standards

IEC/EN 60079-0	Explosive atmospheres – Part 0: Equipment – General requirements
IEC/EN 60079-7	Explosive atmospheres – Part 7: Equipment protection by increased safety “e”
IEC/EN 60079-31	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure “t”

Satisfies requirements of ATEX Directive 2014/34/EU – Equipment for Potentially Explosive atmosphere

5. Model Numbers

Part Code	Box Size			Bolt Size	Lid Screws Quantity
	Length (A) (mm)	Width (B) (mm)	Depth (C) (mm)		
SRJ 101060	100	100	60	M6	4
SRJ 111165	110	110	65	M6	4
SRJ 141493	143	143	93	M6	4
SRJ 151590	150	150	90	M6	4
SRJ 191910	190	190	100	M6	4
SRJ 191918	193	193	186	M6	4
SRJ 221613	220	165	130	M6	4
SRJ 211613	218	168	130	M6	4
SRJ 211621	218	168	210	M6	4
SRJ 372115	377	218	156	M6	4
SRJ 372121	377	218	210	M6	4
SRJ 231513	229	152	130	M6	4
SRJ 262615	260	265	150	M6	4
SRJ 262620	260	265	200	M6	4
SRJ 303015	306	306	150	M6	4
SRJ 303020	306	306	200	M6	4
SRJ 352615	350	265	150	M6	4
SRJ 352620	350	265	200	M6	4
SRJ 373715	377	377	156	M6	4
SRJ 373721	377	377	210	M6	4
SRJ 453815	458	382	150	M6	6
SRJ 453820	458	388	200	M6	6
SRJ 484815	480	480	150	M6	8
SRJ 484820	480	480	200	M6	8
SRJ 524215	527	427	156	M6	6
SRJ 535315	530	530	150	M6	8
SRJ 525221	527	527	210	M6	8
SRJ 553615	550	360	150	M6	6
SRJ 553620	550	360	200	M6	6
SRJ 765015	762	508	150	M6	8
SRJ 765020	762	508	200	M6	8
SRJ 825715	827	577	156	M6	8
SRJ 825721	827	577	210	M6	8
SRJ 825730	827	577	300	M6	8
SRJ 926120	920	610	200	M6	10
SRJ 976720	977	677	208	M6	10
SRJ 976715	977	677	156	M6	10
SRJ 976730	977	677	300	M6	10
SRJ 117715	1177	777	156	M6	10
SRJ 117721	1177	777	210	M6	10
SRJ 117730	1190	770	300	M6	10
SRJ 20020060	2000	2000	600	M6	40

6. Installation & Safety Precautions

The following points must be noted when assembling final equipment:

1. Only ATEX/IECEx certified terminals and components must be installed in an enclosure.
2. Gasket works as a sealing between the lid and base which provides an Ingress Protection rating of IP 64 in accordance with IEC 60529. The gasket must be undamaged before initial operation. If lid has been opened for occasional inspection, it shall be verified that gasket material has not been adhered to the base of Junction Box.
3. Lid and base must be screwed together with help of M6 stainless steel or mild steel hex screws and rubber washer with tightening torque of 4 Nm.
4. Gland plates must be fixed with surface of an enclosure with the help of M6 Stainless steel or mild steel hex screws/bolts with tightening torque of 2 Nm.
5. Electrical connections must be performed only by trained electricians & applicable code of practices.
6. The Creepage & Clearance distances must be maintained between bare conductive parts in accordance with applicable code of practices.
7. Entries to the enclosures must be either threaded or plain entries which can be fitted on any side of the enclosure (Gland plates optional), within the following constraints - a minimum of 5 mm is maintained between the cable entry holes and also: (a) the distance between hole centres of adjacent cable glands/plugs/locknuts will clear it's across corners dimensions and (b) the distance from the hole centre to the edge of enclosure must be sufficient to clear the across corner dimensions of cable glands/plugs/locknuts.
8. The cable glands must be fitted according to the information provided by cable glands manufacturer. When the temperature is higher than 70 °C at the entry point or 80 °C at the branching point of the conductors, information shall be marked on the equipment exterior to provide guidance to the user on the proper selection of cable and cable gland or conductors. Ensure all unused device openings are fitted with certified blanking elements or stop plug, which shall be removable by aid of a tool.
9. The entry hole shall be sized to be no larger than 0.7 mm above major diameter of 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.

7. Earthing or Grounding

Protective earthing (PE) conductor connection facilities shall allow for effective connection of at least one conductor whose cross sectional area will be according to the table below:

Cross sectional area of phase conductors, S (mm ²)	Minimum cross sectional area of corresponding PE conductor (mm ²)
$S \leq 16$	S
$16 < S \leq 35$	16
$S > 35$	0.5 S

Equipotential bonding connection facilities on the outside of electrical equipment shall provide effective connection of a conductor with a cross-sectional area of at least 4 mm². When this

connection facility is also intended to serve as the PE connection, the requirements of above table apply.

8. Maintenance/Repair

Operator of electrical equipment has to operate, supervise and maintain electrical equipment in good condition. The period of maintenance must be determined so that any non-conformity can be avoided. All assembly/dismantling and maintenance work must only be performed by trained technical personnel and in accordance with applicable code of practice.

- The equipment must not be opened when energised
- The gasket must be undamaged. If damaged, original part from Raychem RPG must be used.
- All cable glands and locknuts must be tighten and undamaged. If found damage, replace as necessary.
- Check for any signs of ingress in the enclosure and change the seal as required. Original seal from Raychem RPG must be used.
- Must ensure all connections facilities are tighten accordingly.
- Must check for any signs of damage which can affect the equipment performance.
- All parameters of initial operation must be taken into consideration before putting equipment into service after maintenance.

9. Schedule of Limitations

The following conditions are applied:

- All cable entry devices must be certified for protection concept ‘eb’ and ‘tb’ and all unused openings shall be fitted with suitable blanking elements with protection concept ‘eb’ and ‘tb’ so that minimum ingress protection of IP 64 is maintained.
- The suitability of all components / terminals employed shall be considered in the end use application.
- 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 EN IEC 60079-0:2018.
- Service temperature may exceed +70°C. Cables suitable for use at this temperature shall be used.
- 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

10. Conditions Of Manufacture

- When marking the enclosures, the manufacturer shall consider the gasket material used and shall not apply a service temperature that contradict this range.