

INSTRUCTION MANUAL FOR CONFIGURATION OF EQUIPMENT FROM IJB SERIES EMPTY ENCLOSURES



1.0 Technical Data

Manufacturer:

ROSE Systemtechnik GmbH
Erbeweg 13-15, D-32457 Porta Westfalica, GERMANY

Explosion Protection:

IECEx Gas: Ex db IIB Gb or Ex db IIB+H₂ Gb
Dust: Ex tb IIIC Db

ATEX Gas:  II 2 G Ex db IIB Gb or Ex db IIB+H₂ Gb
Dust:  II 2 G Ex tb IIIC Db

IECEx Certificate of Conformity No: IECEx DEK 18.0068U

EU Type examination Certificate No: DEKRA18ATEX0112U

Ambient Temperature

"-60°C*/-20°C ≤ Ta ≤ +40°C.....+110°C"

* IJB 01, IJB 02 and IJB 03 are suitable for both "-20°C and -60°C", other types are suitable for "-20°C" only.

Mechanical data

Enclosure: Marine grade copper free aluminium alloy

O Ring: Silicone

Finish: RAL 7035

Degree of protection: IP66 as per IEC 60529:2013 & EN 60529:1992+A2:2013

Installation: 4 mounting holes

2.0 General: The enclosures shall be configured as under to be covered under separate equipment certificate.

2.1 The max watt dissipation, dust temp marking & T Class is as under:

TYPE	T Class	T6			T5					T4				
	Dust Temp Marking	T85°C			T100°C					T135°C				
	Max ambient temp	+40°C	+50°C	+60°C	+40°C	+50°C	+55°C	+60°C	+75°C	+40°C	+50°C	+60°C	+90°C	+110°C
IJB 01	Max Watt Dissipation	108W	-	56W	-	-	108W	-	56W	-	-	-	108W	56W
IJB 02		120W	-	72W	-	-	120W	-	72W	-	-	-	120W	72W
IJB 03		145W	-	76W	-	-	145W	-	76W	-	-	-	145W	76W
IJB 04		198W	150W	95W	280W	220W	-	160W	-	480W	430W	360W	-	-
IJB 05		300W	200W	136W	408W	309W	-	241W	-	659W	586W	491W	-	-
IJB 06		332W	218W	155W	473W	400W	-	282W	-	894W	818W	636W	-	-

Note: IJB 01, IJB 02 and IJB 03 are suitable for both "-20°C and -60°C", other types are suitable for "-20°C" only.

2.2 Number, size & location of entries shall be in combination as required within max permissible limits specified in drawing in Metric as per ISO 965 or NPT as per ANSI/ASME B1.20.1. Generally these entries will be from sides of base. However, entries from rear of base can be provided as required subject to

- Total area of entries from all sides and rear shall not exceed total area of entries allowed from all the four sides
- All reinforcement provided in the base shall remain intact and
- Min center to center distance shall be maintained as in case of entries from sides.

MAX PERMISSIBLE ENTRIES FROM EACH SIDE														
TYPE NO	M20 or 1/2"NPT		M25 or 3/4"NPT		M32 or 1"NPT		M40 or 1.1/4"NPT		M50 or 1.1/2"NPT or 2"NPT		M63 or 2.1/2"NPT		M75 or 3"NPT	
	Short side	Long side	Short side	Long side	Short side	Long side	Short side	Long side	Short side	Long side	Short side	Long side	Short side	Long side
IJB 01	11	17	06	11	05	08	03	06	02	03	-	-	-	-
IJB 02	14	20	09	14	06	09	05	08	03	04	-	-	-	-
IJB 03	18	24	14	20	09	14	06	09	04	06	03	04	02	02
IJB 04	22	28	17	23	11	15	08	11	05	07	04	05	02	02
IJB 05	26	34	21	27	14	18	09	12	06	08	04	06	03	04
IJB 06	34	40	27	33	18	23	12	15	08	10	06	07	04	05

2.3 Enclosures shall be used as control panel, terminal box for control, instrumentation, power and heat trace etc. or as component enclosures for housing electrical/ electronic power components (e.g. Contactor, transformer, relays, transducers, isolators, barriers, power supply, PCB etc.) of upto 1.1KV AC/DC or as required subject to watt loss and clearances within permissible limits. However, declared voltage rating is nominal and items having higher rating as required may be populated inside enclosure subject to required creepage and clearance and within permitted watt loss. When enclosures are populated with Intrinsically Safe (IS) Devices necessary clearance between IS & NON IS devices, wiring and terminals shall be maintained.

2.4 Lid may be populated with separately certified control components (various type of PB actuators, rotary actuator for Switch, MCB, MCCB, MPCB etc. and LED Indicating lamp) in required numbers & combination within permissible limits shown in drawing. These control components can be located in side walls of base also if required.

2.5 Lid may be populated with display window as under for Indicating or control instruments with display. Smaller size display window can be provided e.g. 60x60 instead of 68x68 without altering the thickness of glass.

The table related to 2.4 & 2.5 is as under:

TYPE NO	Max Number Of control components	Display Window (mm)								
		44x 44	68x 68	92x 92	92x 140	140x 140	140x 186	186x 186	234x 234	280x 280
IJB 01	12	06	02	01	01	-	-	-	-	-
IJB 02	20	12	04	02	01	01	01	-	-	-
IJB 03	30	16	04	04	02	01	01	01	-	-
IJB 04	42	25	09	04	02	01	01	01	01	-
IJB 05	56	36	16	09	06	04	02	01	01	01
IJB 06	72	36	16	09	06	04	02	01	01	01

Note 1: Max no of control components (combination of various type of PB actuators, rotary actuators for switch & MCB and LED indicating lamps etc.)

Note 2: Glass window single or multiple, combined aperture not exceeding as shown in table. Display window can vary Up to max size as indicated. e.g. 60x60 instead of 68x68.

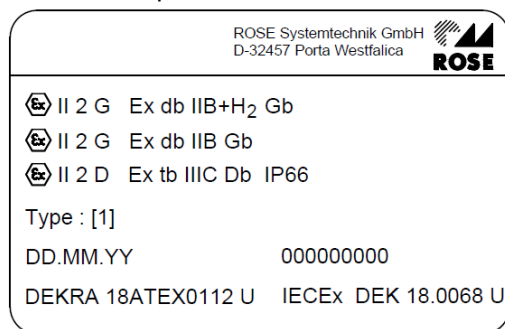
Window Size	Glass Size			Cemented path	Frame Size		
	WxH	Thick			WxH	Depth	
		-20°C	-60°C			-20°C	-60°C
44x44	68x68	10	15	12	94x94	18.5	23.5
68x68	92x92	12	19	12	118x118	20.5	27.5
92x92	116x116	12	19	12	142x142	20.5	27.5
92x140	122x170	15	22	15	148x196	23.5	30.5
140x140	170x170	15	22	15	196x196	23.5	30.5
140x186	170x220	15	22	15	196x246	23.5	30.5
186x186	220x220	15	22	17	246x246	23.5	30.5
234x234	270x270	19	X	18	296x296	29.5	X
280x280	316x316	19	X	18	346x346	29.5	X

2.6 Moulded terminals as per IEC, special terminals or bus-bar of suitable size & number in required combination can be located within enclosure subject to watt loss and clearances within permissible limit.

2.7 Enclosures shall be used within permissible watt dissipation as shown in certification drawing and they are within guideline of Annexure D of IEC 60079-1:2014 i.e. required clearance shall be maintained in X, Y & Z planes.

3.0 Marking:

3.1 Enclosure is provided with Ex label for empty enclosure



Note 1. This additional plate as under shall be affixed when option of Ingress protection with silicone grease is used.

WARNING - APPLY SILICONE GREASE BEFORE CLOSING TO MAINTAIN IP 66

Note 2. Option of IP protection by silicone grease is not possible in case of dust marking.

3.2 Thread type i.e. Metric or NPT and size of threaded entry is marked on supplied enclosure by affixing a suitable sticker near each entry.

4.0 SCHEDULE OF LIMITATIONS:

- 4.1 The ambient temperature range depends on the model (with or without glass window), the pressure applied during the routine overpressure test and on the glass thickness. See instruction manual point no 2.1 and 2.5.
- 4.2 For enclosures provided with a powder coating or liquid painting and intended for use in Group III applications, the user shall minimize the risk from electrostatic discharge by suitable selection and installation.
- 4.3 The maximum number of apertures, their maximum sizes and their positions are specified in the instruction manual point no 2.2
- 4.4 Oil-filled circuit-breakers and contactors shall not be used.
- 4.5 The content of the IJB enclosure may be placed in any arrangement provided that an area of at least 20 % (Group IIB) or 40 % (Group IIC) of each cross-sectional area remains free. Separate relief areas may be aggregated provided that each area has a minimum dimension in any direction of 12.5 mm.
- 4.6 The flanged flame path of the cover is more than required by IEC 60079-1. Contact the manufacturer for information on the dimensions of the flameproof joints.