Certification Record

Listing#: E115516
Report #: R11393A/00
Original Certification Date: May 27th 2022
Revised Certification Date: October 22, 2024 (correct voltage rating)

This Certification is issued to:

ABTECH UK
199 - 201 Newhall Rd,
Lower Don Valley,
Sheffield, S9 2QJ
United Kingdom

Stating that the product(s):

The SX range of junction boxes are rectangular profile, fabricated enclosures fitted with an arrangement of suitably certified terminals.

The enclosures utilise welded seems on the edges. The cover may be provided with detachable cover, or optionally provided with hinges, all cover types are secured to the base with M6 bolts that pass through the cover and are retained in M6 captive nuts in the corners. For larger enclosures, additional closed end hank bushings are located along the sides of the cover.

The cover may be provided with a glass window (toughened glass with a minimum thickness of 10mm), as detailed in the manufacturer's drawing ABT 37565 rev A.

Mounting lugs are welded to the rear face of the enclosure with a 7mm clearance hole for the mounting of the enclosure to a fixture, the quantity of which varies depending on the enclosure size.

The SX range is provided in the standard sizes detailed in Table 1 below. The enclosures may also be manufactured to sizes not specified in the Table 1. This assumes that any given dimension is not larger than the respective dimension of the largest or smaller than the respective dimension of the smallest enclosure. The power rating applied to a junction box of intermediate size is that of the next smallest enclosure.

SX Model	Length (mm)	Width (mm)	Depth (mm)	
			Min	Max
SX0	229	152	140	2000
SX 0.5	274	184	140	2000
SX 1	324	234	140	2000
SX 1.5	306	306	140	2000
SX 2	324	372	140	2000
SX 3	448	372	140	2000
SX 4	510	372	140	2000
SX 5	510	510	140	2000
SX 6	780	510	140	2000
SX 7	950	650	140	2000
SX 8	1250	800	140	2000
SX 225	2000	2000	140	2000
SX 45	114	114	51 (Nominal)	
SX 64	152	102	63 (Nominal)	
SX 66	152	152	102 (Nominal)	

Table 1 – Enclosure dimensions

Gland plates are optional and may be fitted on any of the four side faces. Gland plates are secured to the enclosure with with M6 bolts that pass through the plate and are retained in M6 closed end hank bushings located along the edge of the hole in the enclosure side, the quantity and location of which is dependent on the enclosure size. Cable entries may be made through the gland plates or directly through the walls of the enclosure, including the rear.

M6 Earth studs are provided throughout the enclosure to ensure that all parts are suitably bonded.

The mounting of internal parts is achieved with M6 studs that are welded to the internal rear face of the enclosure. On these studs may be mounted support rails or a chassis plate. Terminal rails are to be mounted to the support rails or chassis. Wiring terminals are mounted to the terminal rails, the quantity and location of which is to be determined based on the enclosure size and the maximum power dissipation specified for the particular junction box construction.

The junction boxes are suitable for ambient temperature ranges within the range of -60°C to +175°C. The actual rating is dependent on the limitations of the terminals used in construction and the rating of the junction box.

The range of junction boxes may optionally be marked with either: AEx/Ex ia, AEx/Ex ib, AEx/Ex ic.

The junction boxes may be populated with the appropriated listed/recognised wiring terminals and with the minimum parameters as detailed in the manufacturer's drawing ABT 37164.

Before the junction box is installed, its total power for its particular application will be calculated in accordance with UL60079-7, Ed 5/CSA-C22.2 NO. 60079-7:16, Annex E, E.2 and will not exceed the values given in Table 2 below:

Table 2. Ratings for all Junction Boxes options					
SX Ref.	**EPL**	**Max. Power Dissipation (W), Temperature Class, Max. Surface Temp. & Ta Max.**			
		(a) T6@40ºC (b) T5 @55ºC (c) T4 @80ºC	**(a) T6 @55ºC (b) T5 @70ºC (a) T4 @60ºC (e) T3 @80ºC**	**(a) T6 @60ºC (b) T5 @75ºC (b) T4 @80ºC (b) T3 @80ºC**	**(a) T6 @65ºC (b) T5 @80ºC (a) T4 @60ºC (d) T3 @175ºC**
SX0	Ga, Gb,	19	3.34	2.23	1.84
SX0.5	Ga, Gb,	22	3.9	2.8	2.1
SX1	Ga, Gb,	29	4.97	3.86	2.7
SX1.5	Ga, Gb,	32	5	4	2.8
SX2	Ga, Gb,	36	5.64	4.23	2.88
SX3	Ga, Gb,	42	5.9	4.1	3
SX4	Ga, Gb,	44	6.1	4.36	3.19
SX5	Ga, Gb,	50	9.35	6.19	4.2
SX6	Ga, Gb,	57	10.1	7.97	5.6
SX7	Ga, Gb,	68	17.14	9.36	6.67
SX8	Ga, Gb,	119	15.95	15.17	10.74
SX225*	Ga, Gb,	359	-	103	-
SX45	Ga, Gb,	8	1.65	1.57	1.28
SX64	Ga, Gb,	10	0.7	0.5	0.3
SX66	Ga, Gb,	14	2	1.9	1.5
Notes: (a), (b), (c), (d) & (e) indicated in the table above relate to the limiting temperature of the terminal insulation					

Table 2 – Junction box power dissipation limits

Model Differences:

See above. All model differences are described in the product description.

Electrical Rating:

Maximum voltage is 11,000 V, limited by the terminals used and their voltage and current rating limitations. For remaining electrical ratings, see Table 2 in the product description.

Achieved Certification to the following standard(s):

UL 61010-1/CSA 61010-1-12 (R2017), Third Edition: Electrical Equipment for Measurement, Control, and Laboratory Use - Part 1: General Requirements
UL60079-0/CSA-C22.2 NO. 60079-0:19 - Explosive atmospheres - Part 0: Equipment - General requirements
UL60079-7/CSA-C22.2 NO. 60079-7:16 - Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
UL60079-11/CSA-C22.2 NO. 60079-11:14 - Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
UL 121201-2017 / CSA C22.2 No. 213-2017 - Nonincendive Electrical Equipment For Use In Class I And II, Division 2 And Class III, Divisions 1 And 2 Hazardous (Classified) Locations
UL 50 Ed 13 / CSA C22.2 No 94.1:15 - Enclosures for Electrical Equipment, Non-Environmental Considerations
UL 50E Ed 3 / CSA C22.2 No 94.2:20 - Enclosures for Electrical Equipment, Environmental Considerations

H M Amos
Technical Manager
Eurofins MET Labs Safety Laboratory

All changes proposed in the previously identified product that affects the above information must be submitted to Eurofins MET Labs for evaluation prior to implementation to assure continued MET Certification status.

The covered product(s) shall be subject to follow-up inspections to ensure that the Certified product(s) are identical to the product sample evaluated by Eurofins MET Labs and that all manufacturer's responsibilities are being fulfilled as specified in the Manufacturer's Responsibility section of the Certification report. The applicant named above has been authorized by Eurofins MET Labs to represent the product(s) listed in this record as "MET Certified" and to mark this/these product(s) according to the terms and conditions of the MET Applicant Contract, MET Listing Reports, and the applicable marking agreements. Only the product(s) bearing the MET Mark and under a follow-up service are considered to be included in the MET Certification program. This certification has been granted under a System 3 program as defined in ISO/IEC 17067.

SCC Accredited CB-P/S OCPS Accrédité CCN ™

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