

GUIDANCE SIGNS

AGSB-L

LED Light Bar Airfield Guidance Sign ICAO/TP 312



Compliance with Standards

ICAO: Annex 14, Volume I, para 5.4 and Appendix 4

T/C: Transport Canada TP 312

Uses

On Civil Airfields:

- Mandatory instruction signs
- Information signs
- VOR check-point sign

On Military Airbases:

- Mandatory instruction signs
- Information signs
- VOR check-point sign
- Runway distance-to-go signs
- Arrestor barrier signs

Mandatory signs - are used to identify a location beyond which an authorization from the tower is required to proceed. They include road-, taxi- and Cat I, II and III holding position signs, runway designation signs and "NO ENTRY" signs. They have white legends on red background.

Information signs - are all the other signs (except runway distance signs) providing information on routing (direction or destination) and on location. Information signs have black lettering on yellow background, except location signs. Location signs have a yellow legend on a black background. The message on stand-alone location signs is surrounded by a yellow border.

Operating Conditions

The taxiway and runway signs are designed for continuous outdoor use under the conditions presented below for operating temperature range, humidity, and wind.

Temperature: -55 °F to +131 °F (-55 °C to +55 °C)
Humidity: 0 to 100%
Wind: ADB Safegate standard signs withstand a wind loading of 320 km/h (200 mph) and break before the wind loading reaches 480 km/h (300 mph).

Features

- Unique LED light bar design maximizes energy efficiency
- Available battery-powered tester provides for quick and easy testing of individual LED light bars
- Electrical design uses a minimal number of components which maximizes sign MTBF and greatly simplifies troubleshooting efforts
- Virtually eliminates runway and taxiway shutdowns due to long-lasting LED light source
- Creates a highly uniform distribution of light, eliminating hot spots and shadows
- Operates on ferroresonant or thyristor CCRs that are designed in compliance with FAA or IEC requirements
- Operates on all steps of a 3-step or 5-step CCR and on a 5.5 A CCR
- Exceeds latest ICAO and TP 312 requirements for colorimetry
- Maintains constant luminosity at maximum brightness on all CCR steps
- Improved safety with regulated low DC voltage inside sign
- Eliminates re-lamping expenses and reduces on-going maintenance cost
- Modular construction: commonality of mechanical and electrical components throughout entire sign range
- Low mass, frangible yet rigid construction based on aluminum extrusions and panels

Electrical Supply

Signs are internally lighted. The signs are connected to a series circuit using the appropriately-sized 50 or 60 Hz L-830/L-831 isolation transformer.

Construction

Corrosion-resistant sign construction requires minimal maintenance. The sign uses aluminum housing, acrylic sign legend panels, stainless steel hardware, and translucent sheeting.

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Ordering Code

Type

B = ICAO/TP 312 LED Light Bar

Sign Height¹

6 = 600 mm standard height
 8 = 800 mm standard height
 D = 600 mm 48" (1219 mm) OAH^{2,3}
 E = 600 mm 60" (1524 mm) OAH^{2,3}
 F = 600 mm 72" (1829 mm) OAH^{2,3}
 G = 800 mm 48" (1219 mm) OAH²
 H = 800 mm 60" (1524 mm) OAH²
 J = 800 mm 72" (1829 mm) OAH²

Illuminated Face Length

A = 700 mm
 B = 900 mm
 C = 1100 mm
 D = 1300 mm
 E = 1500 mm
 F = 1700 mm
 G = 1900 mm
 H = 2100 mm
 J = 2300 mm
 K = 2500 mm
 L = 2700 mm
 M = 2900 mm
 N = 3300 mm
 P = 3700 mm

Illumination

7 = Constant illumination from 2.8 to 6.6 A⁵

Face

1 = Single
 2 = Double

Wind Rating

S = Standard (320 km/h, 200 mph)

6

Power

1 = Power through leg without ON/OFF switch
 2 = Power through leg with ON/OFF switch
 3 = Power through side without ON/OFF switch
 4 = Power through side with ON/OFF switch
 5 = Customer-provided entry without ON/OFF switch⁶
 6 = Customer-provided entry with ON/OFF switch⁶
 7 = Power through bottom without ON/OFF switch
 8 = Power through bottom with ON/OFF switch

Tether

0 = No tether
 1 = One tether on one end of sign⁴
 2 = Two tethers, one on each end⁴
 3 = One tether per leg⁴

0

SXXX - X X X 6 X X 0

Ordering Code Notes

- Left/right designation determined when viewing secondary side of the sign
- Customer to provide legend information and power connection side. It is important to match power cord exit location with legend side.
- All signs are provided with an internal inspection window on the end of the sign.
- ¹ Standard character height for 600 mm sign is 300 mm. Standard character height for 800 mm sign is 400 mm. Customer to advise if different character height is needed.
- ² TP 312 standard configuration.
- ³ Tether ordered separately. See 600 mm Tether Kit information.
- ⁴ Option not available on all 48", 60" and 72" signs. For Canadian 600 mm applications, use Tether Kit 970724 -XX (ordered separately).
- ⁵ Operates on 3-step and 5-step circuits.
- ⁶ Cord set coiled up inside. Customer provides entry hole.

Legend Panel Replacement

Ordering Code

Visible Face Height

6 = 600 mm
 8 = 800 mm

Visible Panel Width

07 = 700 mm
 09 = 900 mm
 11 = 1100 mm
 13 = 1300 mm
 15 = 1500 mm
 17 = 1700 mm
 19 = 1900 mm
 21 = 2100 mm
 23 = 2300 mm
 25 = 2500 mm
 27 = 2700 mm
 29 = 2900 mm
 33 = 3300 mm
 37 = 3700 mm

Panel Type

1 = With legend
 2 = Black (blank)

Wind Rating

0 = Standard

0

Note:

Customer to specify character height and legend information.

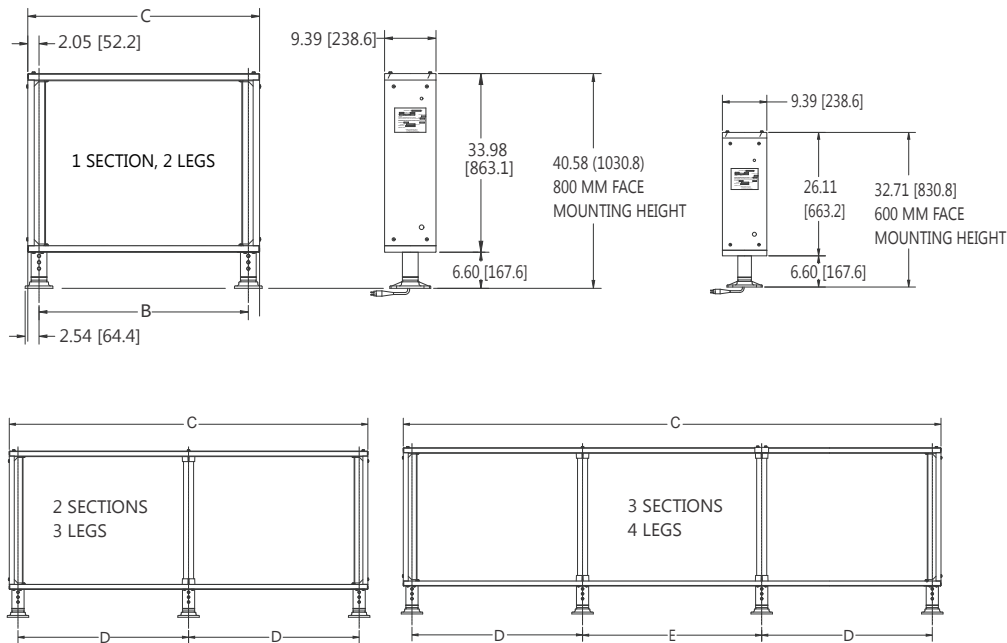
44A7433 - X X X X X 0

LED Light Engine Tester

44A7264-1

Battery-powered tester is used during maintenance activities to separately test a single LED light bar. Uses four size D batteries and outputs 350 mA. Output is activated using a momentary switch.

Sign Dimensions - 600 mm and 800 mm Height (mm/in) - Standard mounting height shown.



Sign Type	Illuminated Face Length	B	C	D	E
1 Section, 2 Legs					
SBXA	700 mm	655.3 (25.90)	759.7 (29.92)	NA	NA
SBXB	900 mm	855.5 (33.68)	959.9 (37.79)	NA	NA
SBXC	1100 mm	1055.4 (41.55)	1159.8 (45.66)	NA	NA
SBXD	1300 mm	1255.3 (49.42)	1359.7 (53.53)	NA	NA
SBXE	1500 mm	1455.4 (57.30)	1559.8 (61.41)	NA	NA
2 Section, 3 Legs					
SBXF	1700 mm	NA	1759.7 (69.28)	827.7 (32.59)	NA
SBXG	1900 mm	NA	1959.7 (77.16)	927.7 (36.53)	NA
SBXH	2100 mm	NA	2159.7 (85.03)	1027.7 (40.26)	NA
SBXJ	2300 mm	NA	2359.7 (92.90)	1127.7 (44.40)	NA
SBXK	2500 mm	NA	2559.7 (100.78)	1227.7 (48.34)	NA
SBXL	2700 mm	NA	2759.7 (108.65)	1327.7 (52.27)	NA
SBXM	2900 mm	NA	2959.7 (116.53)	1427.7 (56.21)	NA
3 Section, 4 Legs					
SBXN	3300 mm	NA	3359.7 (132.27)	1077.7 (42.43)	1100.0 (43.31)
SBXP	3700 mm	NA	3636.5 (143.17)	1277.7 (50.30)	1100.0 (43.31)

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Sign Load & Transformer Requirements

In the table below, the number for the total VA load imposed on the CCR represents the actual load imposed on the regulator and accounts for power factor and load imposed by the transformer. For signs that require two transformers a wye connector 94A0173 (ordered separately) is required to connect the transformers in series. Load data are estimates for worst case scenario.

600 mm and 800 mm Sign				
Sign Type	Sign Length (mm)	Transformer	Power Factor	Volt Amp VA Load
3-Step LED Signs (4.8 - 6.6 A)				
SBXA	700	300 W	0.87	150
SBXB	900	300 W	0.86	168
SBXC	1100	300 W	0.87	118
SBXD	1300	300 W	0.88	132
SBXE	1500	300 W	0.84	150
SBXF	1700	300 W	0.84	150
SBXG	1900	300 W	0.84	150
SBXH	2100	300 W	0.87	180
SBXJ	2300	300 W	0.87	180
SBXK	2500	500 W	0.88	241
SBXL	2700	500 W	0.88	241
SBXM	2900	(2) 300 W	0.88	295
SBXN	3300	(2) 300 W	0.88	295
SBXP	3700	(2) 300 W	0.88	289

600 mm and 800 mm Sign				
Sign Type	Sign Length (mm)	Transformer	Power Factor	Volt Amp VA Load
5-Step LED Signs (2.8 - 6.6 A)				
SBXA	700	300 W	0.85	151
SBXB	900	300 W	0.84	168
SBXC	1100	300 W	0.83	119
SBXD	1300	300 W	0.84	134
SBXE	1500	300 W	0.84	148
SBXF	1700	300 W	0.84	148
SBXG	1900	300 W	0.84	148
SBXH	2100	500 W	0.84	184
SBXJ	2300	500 W	0.84	184
SBXK	2500	(2) 300 W	0.84	261
SBXL	2700	(2) 300 W	0.84	261
SBXM	2900	(2) 300 W	0.84	291
SBXN	3300	(2) 300 W	0.84	291
SBXP	3700	(2) 500 W	0.84	299

600 mm and 800 mm Sign				
Sign Type	Sign Length (mm)	Transformer	Power Factor	Volt Amp VA Load
Single-Step LED Signs (5.5 A)				
SBXA	700	200 W	0.89	124
SBXB	900	300 W	0.87	135
SBXC	1100	300 W	0.82	103
SBXD	1300	300 W	0.88	121
SBXE	1500	300 W	0.87	135
SBXF	1700	300 W	0.87	135
SBXG	1900	300 W	0.87	135
SBXH	2100	300 W	0.88	168
SBXJ	2300	300 W	0.88	168
SBXK	2500	300 W	0.89	220
SBXL	2700	300 W	0.89	220
SBXM	2900	500 W	0.89	255
SBXN	3300	500 W	0.89	255
SBXP	3700	500 W	0.89	252

Packaging Data (600 mm Signs)

Signs are shipped with L-823 cord set(s), frangible couplings, and mounting flanges - ready for installation.

Sign Type	Gross Assembled Weight								Carton Dimensions (h × w × d)	
	SB6X Standard Height		SBDX 1219 mm (48")		SBEX ¹ 1524 mm (60")		SBFX ¹ 1829 mm (72")			
	(lb)	(kg)	(lb)	(kg)	(lb)	(kg)	(lb)	(kg)	(in)	(mm)
SBXA	64	29.0	69	31.3	75	34.0	79	35.8	36 × 37 × 13	914 × 950 × 330
SBXB	72	32.6	77	34.9	83	37.6	87	39.5	36 × 45 × 13	914 × 1150 × 330
SBXC	80	36.3	85	38.5	91	41.3	95	43.1	36 × 53 × 13	914 × 1350 × 330
SBXD	88	39.9	93	42.2	99	44.9	103	46.7	36 × 61 × 13	914 × 1550 × 330
SBXE	97	44.0	102	46.3	108	49.0	112	50.8	36 × 70 × 13	914 × 1750 × 330
SBXF	122	55.3	130	59.0	138	62.6	145	65.8	36 × 77 × 13	914 × 1950 × 330
SBXG	130	59.0	138	62.6	146	66.2	153	69.4	36 × 85 × 13	914 × 2150 × 330
SBXH	138	62.6	146	66.2	154	69.8	161	73.0	36 × 93 × 13	914 × 2350 × 330
SBXJ	146	66.2	154	68.9	162	73.5	169	76.6	36 × 100 × 13	914 × 2550 × 330
SBXK	153	69.4	161	73.0	169	76.6	176	79.8	36 × 108 × 13	914 × 2750 × 330
SBXL	161	73.0	169	76.6	177	80.3	184	83.5	36 × 116 × 13	914 × 2950 × 330
SBXM	169	76.6	177	80.3	185	83.9	192	87.1	36 × 124 × 13	914 × 3150 × 330
SBXN	203	92.1	213	96.6	225	102.0	233	101.1	36 × 140 × 13	914 × 3550 × 330
SBXP	220	99.8	230	104.3	242	109.8	250	113.4	36 × 156 × 13	914 × 3950 × 330

Notes

- 1219 mm (48 in) signs ship as 1295 mm (51 in) height.
 - 1524 mm (60 in) and 1829 mm (72 in) signs ship as standard height.
- ¹ Shipped same carton size as standard height; legs enclosed separately; requires assembly.

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Packaging Data (800 mm Signs)

Signs are shipped with L-823 cord set(s), frangible couplings, and mounting flanges - ready for installation.

Sign Type	Gross Assembled Weight								Carton Dimensions (h × w × d)	
	SB8X Standard Height		SBGX 1219 mm (48")		SBHX ¹ 1524 mm (60")		SBJX ¹ 1829 mm (72")			
	(lb)	(kg)	(lb)	(kg)	(lb)	(kg)	(lb)	(kg)	(in)	(mm)
SBXA	72	32.6	77	34.9	83	37.6	87	39.5	43.5 X 37 X 13	1105 X 960 X 330
SBXB	82	37.0	87	39.5	93	42.2	97	44.0	43.5 X 45 X 13	1105 X 1150 X 330
SBXC	94	42.6	99	44.9	105	47.6	109	49.4	43.5 X 53 X 13	1105 X 1350 X 330
SBXD	104	47.0	109	49.4	115	52.2	119	54	43.5 X 61 X 13	1105 X 1550 X 330
SBXE	114	51.7	119	54.0	125	56.7	129	58.5	43.5 X 70 X 13	1105 X 1750 X 330
SBXF	136	61.7	144	65.3	152	68.9	159	72.1	43.5 X 77 X 13	1105 X 1950 X 330
SBXG	149	67.6	157	71.2	165	74.8	172	78.0	43.5 X 85 X 13	1105 X 2150 X 330
SBXH	161	73.0	169	76.7	177	80.3	184	83.5	43.5 X 93 X 13	1105 X 2350 X 330
SBXJ	173	78.5	181	82.1	189	85.7	196	88.9	43.5 X 100 X 13	1105 X 2550 X 330
SBXK	182	82.5	190	86.2	198	89.8	205	93.0	43.5 X 108 X 13	1105 X 2750 X 330
SBXL	193	87.5	201	91.2	209	94.8	216	98.0	43.5 X 116 X 13	1105 X 2950 X 330
SBXM	205	93.0	213	96.6	221	100.2	228	103.4	43.5 X 124 X 13	1105 X 3150 X 330
SBXN	242	110.0	252	114.3	264	119.7	272	123.4	43.5 X 140 X 13	1105 X 3550 X 330
SBXP	265	120.2	275	124.7	287	130.2	294	133.4	43.5 X 156 X 13	1105 X 3950 X 330

Notes

- 1219 mm (48 in) signs ship as 1295 mm (51 in) height.
 - 1524 mm (60 in) and 1829 mm (72 in) signs ship as standard height.
- ¹ Shipped same carton size as standard height; legs enclosed separately; requires assembly.