

Airport Signs

LSL-HAL

LSL-LED

LSL-REF

Standards

ICAO Annex14
 FAA AC150/5345-44 Signs
 MAK Part 170–Vol.II:2003 / Change 1:2008

Features

- Illuminated and Retroreflective Types
- 3 Sizes as specified in ICAO and MAK
- 5 Sizes as specified in FAA
- Construction fully made of Aluminium
- Powder-Coated in RAL 1003
- Frangible



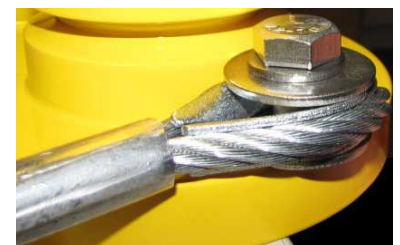
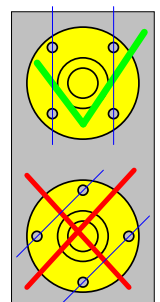
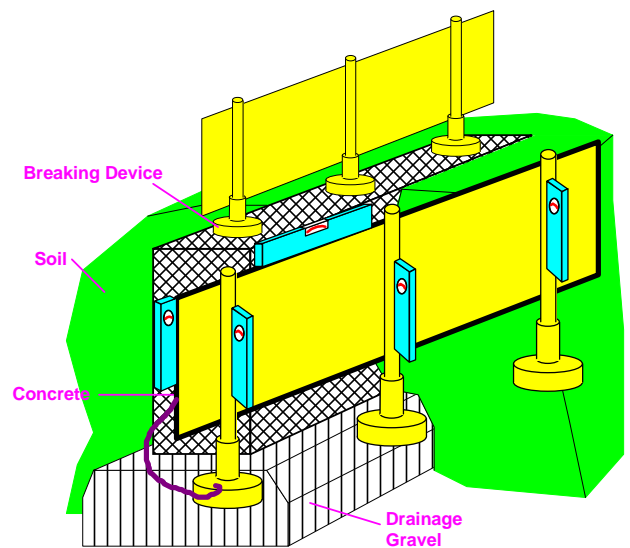
Style

- High Intensity Translucent special PVC film (80u) for internal lighted version
- Internal illuminated (Halogen or LED) for very best night time visibility
- Provides homogenous uniformity when illuminated through or on the material.
- High Intensity Prismatic Retroreflective Sheeting for reflective meets and exceeds EN 12899-1 & ASTM D4956 Type III & IV specifications
- Vivid daytime colors provide 24-hour performance with increased daytime visibility
- The improved optical performance increases nighttime visibility



Mounting

- Make a fundament with the following size:
 Length: min. as long as sign length
 Width: 25cm min
 Depth: Frost-Proof (60cm min)
 Upper Level: max 1cm under or over final ground level
- Use concret with a quality of C20/25 or better to make sure, that any straying airplane, that crosses this installation, will break the sign but not the fundament.
- Use an reinforcement concrete construction, designed for the maximal load you ever expect under worst case conditions.
- Wait the standard setting time as specified for your concrete, before continuing any further mounting.
- Define the locations for setting the breaking devices.
- Clean this locations and level them as flat as possible. Check leveling by place the frangible devices with a plugged in stud. When the stud comes into any acceptable upright position, it is OK for continue doweling.
- Turn the breaking devices as illustrated to make sure that any drill holes will be at their most inner point.
 Wrong positions, as shown in the illustrated bad example, causes out bonded drill holes, that blasts the concrete under water, snow and ice.
- When using the enclosed mounting set, then:
 - > Mark hole positions
 - > Drill 14mm holes with a minimum depth of 120mm
 - > Plug in the screw anchor
 - > Fasten all Breaking devices with screws 12x100mm
 - > Use ring washers.
 - > Check proper upright position while fasten screws
- Fasten the security rope with the most left screw by



- the use of the two big washer.
- Plug in the studs. Do not fix them.
 - Mount the sign by using the enclosed mouting sets.
Do not fasten the unit to make sure, that all together can be shifted into final position.
 - Shift and check the sign for final position.
 - Use a spirit leveling unit for checking while fasten all screws.
 - Also fasten the headless screws in the breaking device which holds the studs.
 - When thighthend all screws, check the sign by shaking it. Listen all noises for any untight parts or screws.
 - Fix the security rope at the sign with the enclosed mounting set as follows:
 - > Begin from back inner side
 - > Use Inox screw M10x40mm
 - > Use Washer M10
 - ..> Stick this from inside to outside through the one and only hole in the left side flange.
 - > Use a washer M10 with enlarged outer diameter.
 - > Place the security rope.
 - > Use a washer M10 with enlarged outer diameter.
 - > Use a self-locking nut M10.
 - > Fasten the unit and place security cable and make shure, that cable does not touch aluminium at any location.



Handling

- Clean surface time to time with smooth cleaner only – for example with dishwashing liquid.
- Do not jumble Signs while handling. Handle gently.
- Leave Signs in origin package while storing within a temperature range of 0°C to 45°C.
- Leave Sign in origin package while transporting within a temperature range of -55°C to 65°C.
- Store Signs under dry conditions only.

Ordering Numbers

LSL-fyyy-z-hhh-(“text”/b:f:r-“text”/b:f:r)-(“text”/b:f:r-“text”/b:f:r-....)
first side second side

f	Number of Faces (1 or 2 for lighted – 1 for retroreflective only)
yyy	HAL = Halogen Light LED = LED Light REF = Retro-Reflective
z	S = Serial Current 1,8 to 6,6AAC P = Parallel Voltage 180VAC to 245VAC 0 = no lighting
hhh	Character Height 200mm, 300mm or 400mm for ICAO and MAK 305mm (12”), 381mm (15”), 457mm (18”), 1016mm (40”) and 635mm (25”) for FAA
“text”	Text (Font = “Highway Signs, Series C upper case” or “Series D upper case”) (Font CALIBRI supports the use of arrows in all directions under SYMBOLS in any Office Document)
b	Background-Color (black,yellow,red,blue,white)
f	Foreground-Color (black,yellow,red,blue,white)
r	Frame (0=without / 1=with)

Examples

LSL-1HAL-S-400-“B”/b:y:0-“03-21”/r:w:0



LSL-2LED-P-400-(“03-21”/r:w:0-“B”/b:y:1)-(“← A →”/y:b:0)



LSL-1REF-0-300-“A ↘”/y:b:0



Technical Data Retroreflective Signs

Legend Size	Type	Length [m]	Poles				
200mm	Reflective	0,389	2				
		0,404	2				
		0,418	2				
		0,448	2				
		0,477	2				
		0,606	3				
		0,636	3				
		0,665	3				
		0,694	3				
		0,724	3				
		0,753	3				
300mm	Reflective	0,782	3				
		0,812	3				
		0,453	2				
		0,475	2				
		0,497	2				
		0,541	2				
		0,685	3				
		0,729	3				
		0,773	3				
		0,817	3				
		0,861	3				
		0,905	3				
		0,949	3				
		0,993	3				
		1,137	4				
		1,181	4				
		1,225	4				
		1,269	4				
		1,313	4				
400mm	Reflective	1,457	5				
		1,501	5				
		1,545	5				
		1,589	5				
		1,633	5				
		1,677	5				
		0,516	2				
		0,546	2				
		0,575	2				
		0,734	3				
		0,792	3				
		0,851	3				
		0,910	3				
		0,968	3				
		1,027	3				
		1,086	3				
		1,244	4				
1,303	4						
1,362	4						
1,420	4						
1,479	4						
1,638	5						
1,696	5						
1,755	5						
1,814	5						
1,872	5						
1,931	5						
1,990	5						
2,148	6						

Technical Data Lighted Signs

Legend Size	Type	Length [m]	Poles	Halogen		LEDs (One side)		
				Bulbs [48W]	Transformer [W]	LEDs [#]	Transformer [W]	# of Power Supply
200mm	Lighted	0,765	2	2	100	24	45	1
		0,802	2	3	150	26	45	1
		0,839	2	3	150	28	45	1
		0,912	2	3	150	30	45	1
		0,985	2	3	150	32	65	1
		1,259	3	4	200	42	65	1
		1,332	3	4	200	44	65	1
		1,405	3	4	200	46	65	1
		1,479	3	5	300	48	100	1
		1,552	3	5	300	52	100	1
		1,625	3	5	300	54	100	1
1,699	3	5	300	56	100	1		
1,772	3	6	300	60	100	1		
300mm	Reflective	0,917	2	3	150	36	65	1
		0,972	2	3	150	38	65	1
		1,027	2	3	150	40	65	1
		1,137	2	4	200	45	65	1
		1,447	3	5	300	57	100	1
		1,557	3	5	300	61	100	1
		1,667	3	6	300	65	100	1
		1,777	3	6	300	70	100	1
		1,887	3	6	300	74	100	1
		1,997	3	7	200 + 150	78	100	1
		2,107	3	7	200 + 150	83	100	1
		2,217	3	7	200 + 150	87	150	1
		2,527	4	8	200 + 200	99	150	1
		2,637	4	9	200 + 200	103	150	1
		2,747	4	9	200 + 200	108	150	1
		2,857	4	10	300 + 150	112	150	1
		2,967	4	10	300 + 150	116	150	1
		3,277	5	11	300 + 200	129	200	2
3,387	5	11	300 + 200	133	200	2		
3,497	5	12	300 + 300	137	200	2		
3,607	5	12	300 + 300	142	200	2		
3,717	5	12	300 + 300	146	200	2		
3,827	5	13	300+200+200	150	200	2		
400mm	Reflective	1,069	2	4	200	59	65	1
		1,142	2	4	200	63	65	1
		1,215	2	4	200	67	65	1
		1,562	3	5	300	86	100	1
		1,709	3	5	300	94	100	1
		1,855	3	6	300	102	100	1
		2,002	3	6	300	111	100	1
		2,149	3	7	200 + 150	119	150	1
		2,295	3	7	200 + 150	127	150	1
		2,442	3	7	200 + 150	135	150	1
		2,789	4	8	200 + 200	154	150	1
		2,935	4	9	300 + 150	162	150	1
		3,082	4	9	300 + 150	170	150	1
		3,229	4	10	300 + 200	178	100 + 100	2
		3,375	4	10	300 + 200	186	100 + 100	2
		3,722	5	11	300 + 300	205	100 + 100	2
		3,869	5	12	300 + 300	213	100 + 100	2
		4,015	5	12	300 + 300	221	100 + 100	2
		4,162	5	12	300 + 300	229	150 + 150	2
4,309	5	13	300+200+150	237	150 + 150	2		
4,455	5	13	300+200+150	245	150 + 150	2		
4,602	5	14	300+200+200	253	150 + 150	2		
4,949	6	15	300+300+300	273	150 + 150	2		