

# SIGNS

# RELIANCE

## LED Signs for Airfield Guidance and Gate



### Compliance with Standards

<b>ICAO</b>	Annex 14 Volume I (current edition)
<b>EASA</b>	CS-ADR-DSN (current edition)
<b>Australia</b>	MOS 139
<b>NATO</b>	STANAG 3316
<b>STAC</b>	SPE/STAC/SE/E/VIS/6008
<b>AENA</b>	DIN/DSEYN/PPT/022-02/12
<b>ROS/MAK</b>	
<b>CE</b>	
<b>UKCA</b>	

### Uses

#### Information Sign

Informational Direction, Destination, and Boundary signs - black inscription on a yellow background. Designed to guide pilots to a particular point on the airfield by identifying runway exits, taxiway directions, taxiway intersections, taxiway ending, and inbound/outbound destinations, boundaries.

#### Mandatory Sign

Mandatory Instruction sign – white inscription on a red background. Designed to identify holding positions, runway intersections, and prohibit aircraft entry into designated areas.

#### Location Sign

Runway and Taxiway Location signs - yellow inscription on a black background and only where it is a stand-alone sign shall have a yellow border. Designed to identify taxiway and runway location on which the aircraft is located.

#### Runway Distance Remaining Sign

Runway Distance Remaining Signs - white inscription on a black background. Designed to provide enhanced situational awareness to the pilots for determining the remaining runway distance available.

#### Aircraft Stand Identification Sign

Gate and Stand Identification signs - black inscription on a yellow background. Designed to identify to the pilots the particular gate/stand location.

### Features and Benefits

LED Technology and durable design features provide a long lasting sign with enhanced operational efficiency.

- Long lasting LED light source
- Low power consumption
- Environmentally friendly
- Durable and vibration resistant
- Dramatically reduce maintenance costs and airport operation interruptions
- Available with fail-open monitoring
- Designed for harsh environments
- Anodized aluminum housings
- Stainless-steel hardware and fixings
- Built-in surge and lightning protection
- UV-resistant legend panel resists fading
- Ultra strong polycarbonate legend panel withstands jet blasts and impacts
- LED strip and electronics box tested and certified for IP67 protection
- Sign enclosure tested and certified for IP54 protection
- Available with 322 km/h or 480 km/h wind load compliant options

### Construction

- Sign housing/frame made from aluminum
- Mounting feet and poles made from aluminum
- Electronics box made from aluminum
- Legend panel front of UV-resistant polycarbonate

### Operating Conditions

Operating Condition	Symbol	Specification
Operating temperature	T <sub>A</sub>	-55 °C to +55 °C
Storage temperature	T <sub>STG</sub>	-60 °C to +80 °C
Humidity	RH	Up to 100%

### Power Consumption

Power Factor (PF) typically >95%. Use the table to calculate CCR load and transformer sizing. For circuits or signs operating as low as 6.3A, the VA consumption may increase up to 5%.

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Sign Size (mm) (Height x Length)	Electrical Supply	VA Load	Minimum Transformer Size (W) <sup>1</sup>
700 x 1150	6.6 A	20	45
700 x 1300	6.6 A	23	45
700 x 1600	6.6 A	27	45
700 x 1800	6.6 A	30	45
700 x 2100	6.6 A	35	45
700 x 2500	6.6 A	40	65
700 x 2650	6.6 A	42	65
700 x 3000	6.6 A	47	65
900 x 1150	6.6 A	29	45
900 x 1300	6.6 A	33	45
900 x 1600	6.6 A	40	65
900 x 1800	6.6 A	42	65
900 x 2100	6.6 A	48	65
900 x 2500	6.6 A	47	65
900 x 2650	6.6 A	50	65
900 x 3000	6.6 A	56	65
1300 x 1300	6.6 A	33	45
900 x 900 Gate	230 VAC	22	N/A
1200 x 1200 Gate	230 VAC	32	N/A
700 x 1300 Gate	230 VAC	TBD	N/A

## Electrical Supply

RELIANCE™ Airfield Signs are available in parallel and series versions. RELIANCE™ Gate Signs are available in parallel only.

Power	Requirements
Constant Current Regulator (Series system)	2.8-6.6 A, 50/60 Hz 3-7 step CCR
Mains Power System (Parallel system)	120-240 VAC, 50/60 Hz

## Dimensions and Weight

Dimensions are the overall outer dimensions of the sign frame. The visible face of the sign legend panel is 100 mm less than the height and width of the sign frame. When installed and mounted onto poles and Y-shaped feet, the total sign height increases by approximately 100 mm.

Sign Size (mm) (Height x Length)	Weight (kg) (322 km/h)	Weight (kg) (480 km/h)
700 x 1150	24.8	24.8
700 x 1300	26.5	26.5
700 x 1600	31.0	35.0
700 x 1800	33.7	37.7
700 x 2100	41.2	41.2
700 x 2500	46.0	50.0
700 x 2650	51.4	51.4
700 x 3000	60.0	60.0
900 x 1150	28.8	33.3
900 x 1300	31.0	35.5
900 x 1600	36.0	44.5
900 x 1800	39.7	48.2
900 x 2100	48.2	52.7
900 x 2500	53.9	62.4
900 x 2650	56.4	64.9
900 x 3000	61.9	66.4
1300 x 1300	44.0	48.0
900 x 900 Gate	21.0	N/A
1200 x 1200 Gate	32.5	N/A
700 x 1300 Gate	24.5	N/A

**Note:** 900 x 900 mm gate sign is used to display the gate/stand number only. 1200 x 1200 mm gate sign is used to display the gate/stand number and coordinates.

<sup>1</sup> Maximum 40m of 2.5mm<sup>2</sup> (AWG14) secondary cable and no ILCMS.

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## Guidance Sign

	Application												
	Height												
	Length												
	Intensity												
	Options												
	Sides												
	Frame Color												
	Power and Monitoring												
	Standard												
	Connector type												
	Cable leads												
	Version												

**RLSN**

### Application

2 = 322 km/h (mode 2)  
3 = 480 km/h (mode 3)

### Height

2 = 1300 mm<sup>1</sup>  
7 = 700 mm  
9 = 900 mm

### Length

1 = 1150 mm  
2 = 1300 mm  
3 = 1600 mm  
4 = 1800 mm  
5 = 2100 mm  
6 = 2500 mm  
7 = 2650 mm  
8 = 3000 mm

### Intensity

D = Dimmable

### Options

0 = No option

### Sides

1 = One-sided

### Frame Color

G = Grey  
Y = Yellow  
B = Black

### Power and Monitoring

S = 2.8 - 6.6 A, no monitoring  
M = 2.8 - 6.6 A, fail-open monitoring  
V = VAC

### Standard

I = ICAO

### Connector type

0 = No options

### Cable leads

0 = No options

### Version

1 = First version

## Gate Sign

	Application												
	Height												
	Length												
	Intensity												
	Options												
	Sides												
	Frame Color												
	Power and Monitoring												
	Standard												
	Connector type												
	Cable leads												
	Version												

**RLSN**

### Application

G = Gate Sign

### Height

2 = 1200 mm<sup>2</sup>  
7 = 700 mm<sup>[2]</sup>  
9 = 900 mm<sup>[2]</sup>

### Length

2 = 1200 mm<sup>[2]</sup>  
3 = 1300 mm<sup>[2]</sup>  
9 = 900 mm<sup>[2]</sup>

### Intensity

D = Dimmable

### Options

0 = No option

### Sides

1 = One-sided

### Frame Color

G = Grey  
Y = Yellow  
B = Black

### Power and Monitoring

V = VAC

### Standard

I = ICAO

### Connector type

0 = No options

### Cable leads

0 = No options

### Version

1 = First version

<sup>1</sup> Only available as 1300 x 1300 mm for a runway distance remaining sign. Compliant with NATO STANAG 3316 for runway distance remaining signs.

<sup>2</sup> Only available as 900 x 900, 1200 x 1200, and 700 x 1300 mm