AAS International

# We are All About Signs



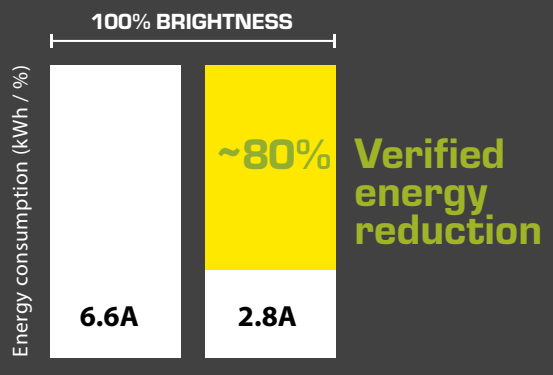

## AGL USE CASE

# WHY 6.6A IF 2.8A SAVES 80% ENERGY

### 80% SAVINGS, 100% COMPLIANCE

Reducing the environmental impact of airports requires concrete measures that sustainably lower energy consumption. Within the airfield lighting installation at **Amsterdam Schiphol Airport (AMS)**, a 2.8A configuration has been implemented for the power supply of guidance signs, replacing the conventional 6.6A configuration.

This configuration is fully operational and functions as part of the daily airport infrastructure. Despite the lower current setting, the guidance signs deliver 100% brightness while significantly reducing energy consumption and cable losses.




DUTCH DESIGN

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## OPERATIONAL RESULTS

The 2.8A configuration operates fully in line with all operational and visual requirements. The illumination maintains 100% brightness, is stable, uniform, and meets all ICAO and EASA specifications. Due to the lower current level, energy losses in the cabling are significantly reduced.

From a physics perspective, this reduction is explained by the quadratic relationship between current and power loss ($P_{loss} = I^2 \times R$). As a result, lowering the current from 6.6A to 2.8A leads to a disproportionately large reduction in energy dissipation in the primary circuit.

**Comparison**

| Parameter | Standard | Reduced |
|---|---|---|
| Current | 6.6A | 2.8A |
| Brightness | 100% | 100% |
| Cable Losses | 100% | 18% |
| Relative Energy Consumption | 100% | 33% |

*Transformer losses not included.*

## TECHNICAL CONFIGURATION

| | |
|---|---|
| Number of circuits | 2 (runway and taxiways) |
| Primary circuit length | approx. 10 km per circuit |
| Secondary circuit length | approx. 1,700 m |
| Number of signs | 28 TGS Series 4 |
| Includes | 3 windsock installations |
| CCR type | IGBT |
| Nominal current | 2.8A (reduced from the standard 6.6A) |
| Brightness | 100% |

## CONCLUSION

The operational implementation of the 2.8A configuration for guidance signs demonstrates that:

- Brightness and visibility are fully maintained;
- Energy losses are reduced by more than 80%;
- Thermal load on cables and connectors is significantly lower;
- The measure directly contributes to reducing the airport's environmental impact through lower energy consumption.

## SUMMARY OF BENEFITS

**100%**
brightness at 2.8A

Up to **82%**
less cable loss

**67%**
lower energy consumption

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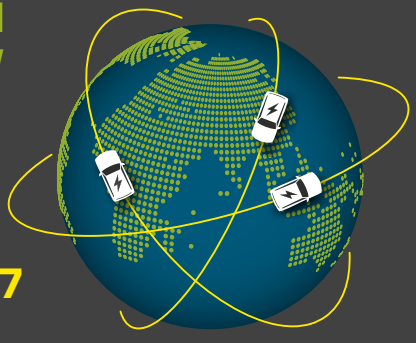
**Longer component lifespan**
through lower thermal load

**Fully compliant**
with ICAO/EASA requirements

**Annual energy saving**

> 3x around the world with an EV

**≈ 3.267**



**Proven performance**
in operational environment

**Direct contribution to the sustainability**
of airfield lighting installations