

# Falkirk Tunnel

## Case Study



**MaxiLINK**  
ENABLED



2 Core  
Data over Power



DMX  
RGBW



UK MANUFACTURED



# Information

**Client:** Scottish Canals - United Kingdom

**Location:** Falkirk, Scotland - United Kingdom

**Products Used:** MaxiLED Large Globe RGBW DMX

**Controller Used:** Pharos

# Technology



Data over Power distribution  
to the fixtures



2 Core  
Data over Power



DMX RGBW  
Controllable



**Environment:**  
Dry, damp and wet locations (IP68).



**Power Output:**  
48VAC with combined data over  
line voltage.



**Watts:**  
2.35W per Globe at full RGBW on.



**Light Source:**  
CREE LED's with red, green, blue and  
white dies.

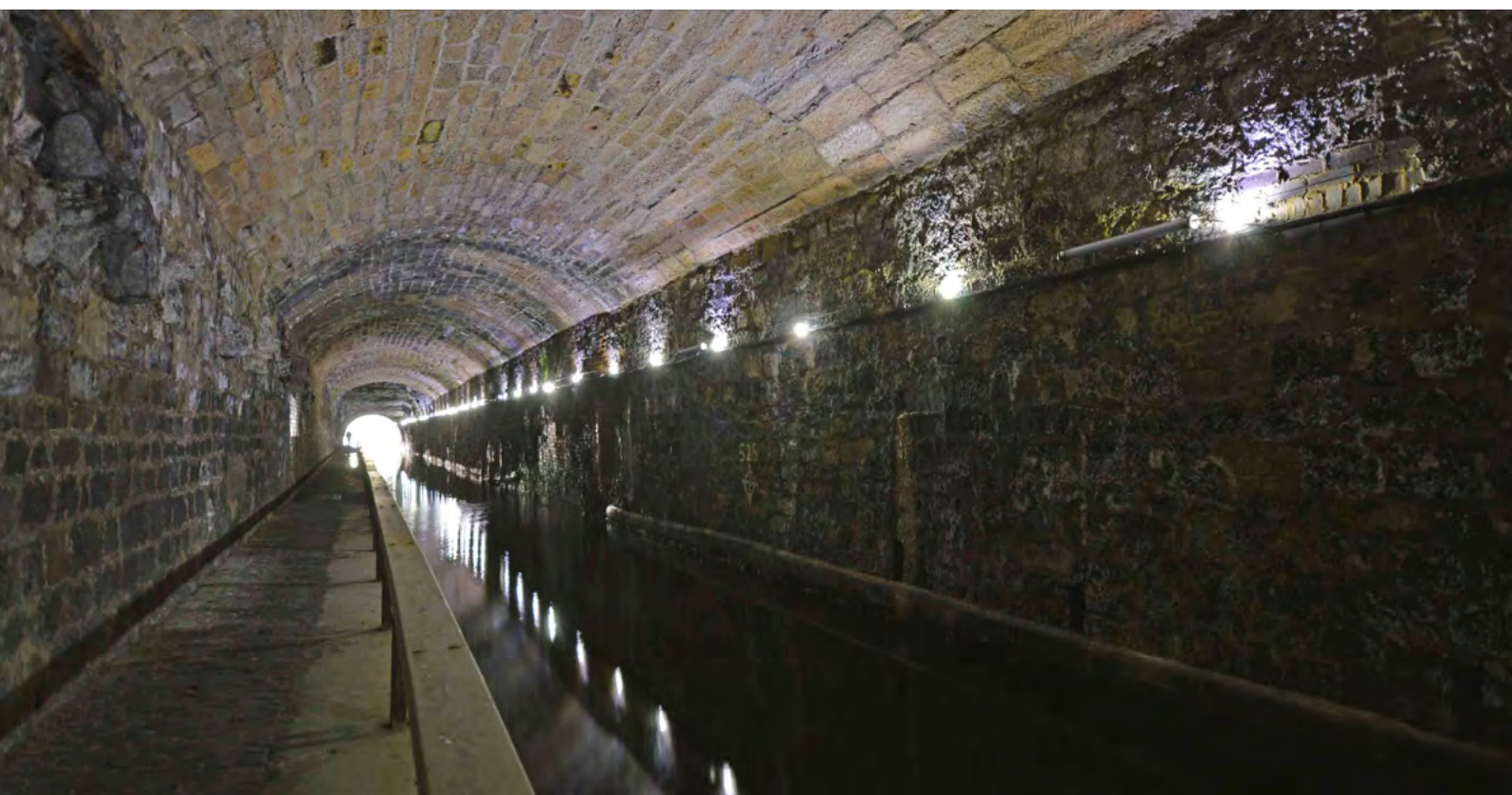
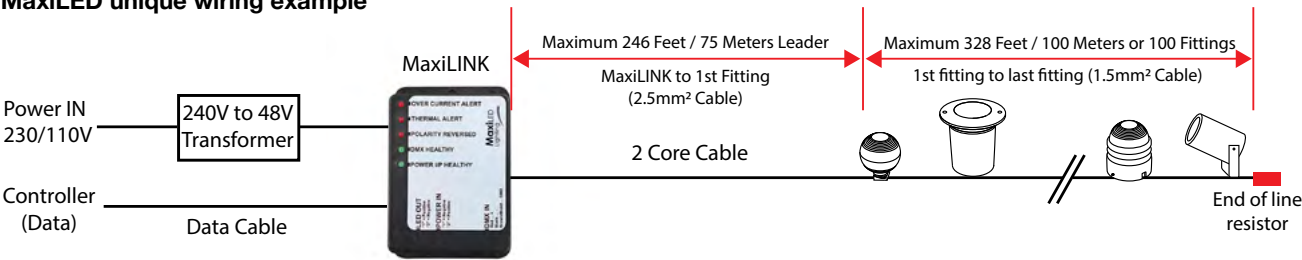


**Cable/Run Lengths:**  
100 Globes per strand.  
175m (574ft) maximum strand length.  
75m (246ft) maximum length  
for leader cable to first fitting.



**Listings:**  
UL/cUL, CE, FCC, IK07 impact  
protection, BS EN 60598, IEC 60598

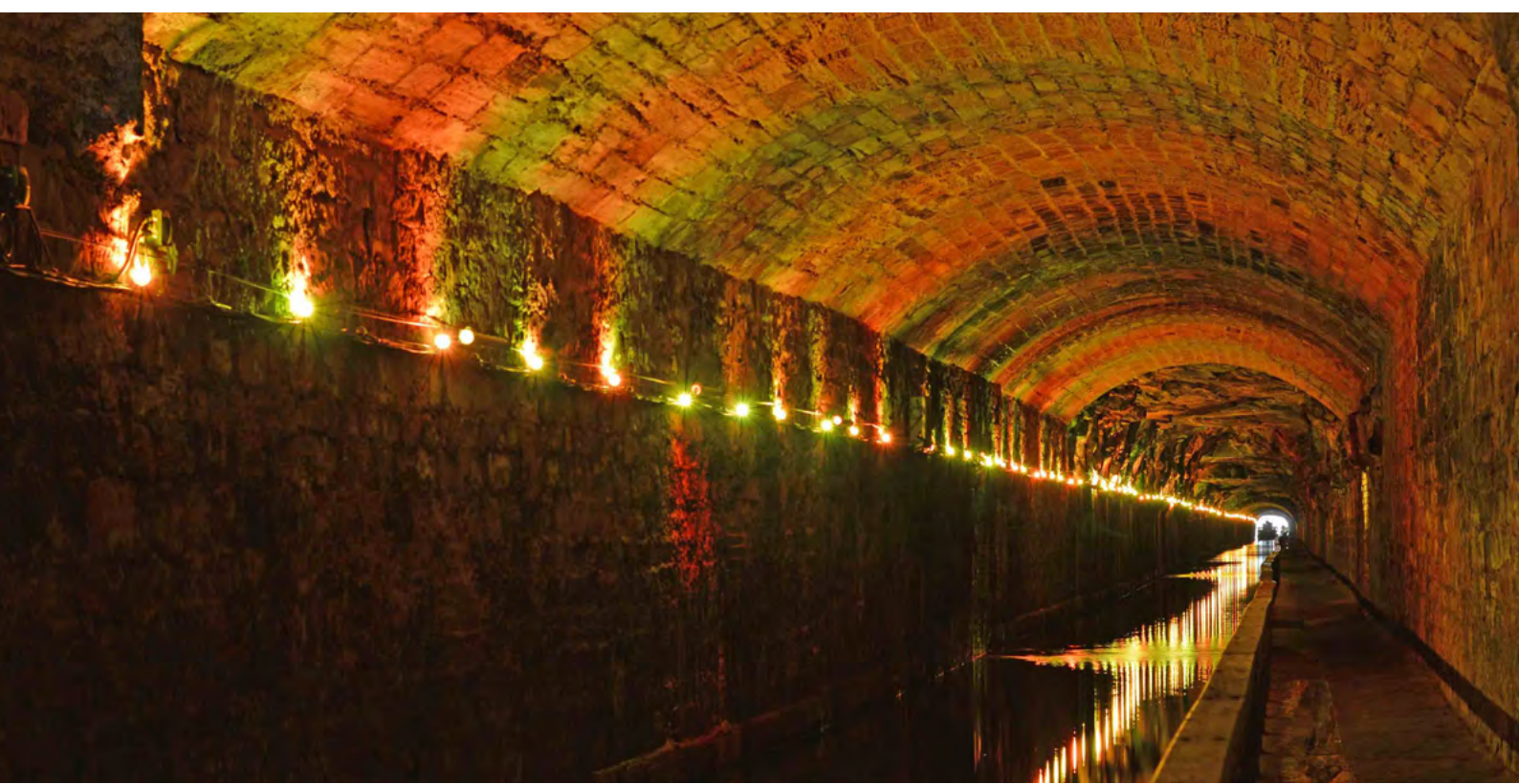
## MaxiLED unique wiring example





# Background

Falkirk tunnel, which is 690 yards in length and has a towpath running right through it, has been cut out of solid rock, with deep rock cuttings existing at both ends. There is constant water seepage through the roof. The tunnel which dates back to 1818 is part of the Union Canal and is located close to the iconic Falkirk Wheel. This tunnel is of some interest in that it dates earlier than the railway-tunnels and therefore, presumably, the oldest tunnel in Scotland. The tow-path inside the tunnel has been renovated and provided with a handrail for the use of pedestrians and cyclists.



## Design

Scottish Canals upgraded the existing functional lighting to programmable White LED, but in addition wanted to include a dynamic RGBW LED solution to add to the general atmosphere of the space. LITE worked in conjunction with Scottish Canals, a lighting designer and the contractor to provide an appropriate Lighting solution that could be programmed but also endure the testing conditions within the tunnel. LITE's MaxiLED RGBW Festoon product was selected specifically because of the IP68 and IK07 rating and the easy installation method using catenary cable to reduce the amount of fixings.

A further development was the addition of a 3G remote access control interface which allows the client to change control settings from the office or home using a mobile phone or laptop.







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