MST
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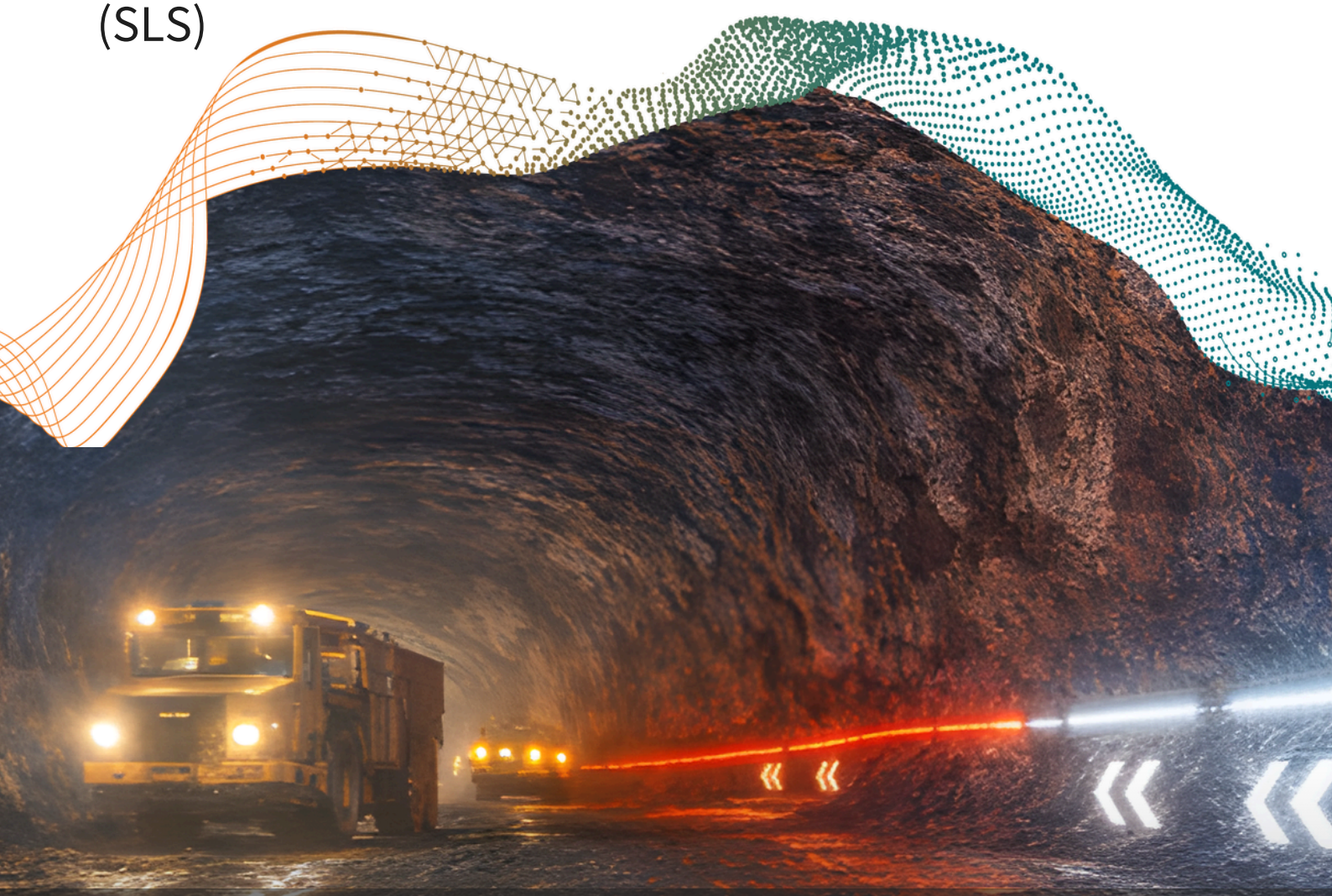
HELiX
Intelligent Control

Smart Lighting Solution (SLS)



CLEAR VISIBILITY + PROACTIVE TRAFFIC MANAGEMENT

MST Global's Smart Lighting Solution transorms underground lighting into an intelligent visual communication system. Integrated with HELIX, the solutions delivers dynamic lighting cues for vehicle movement alerts, traffic flow management, exclusion zone notification and emergency signalling; improving visibility, situational awareness and response across underground operations

- **Enhance Safety**
- **Improve Traffic Cycles**
- **Boost Production**

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MST Global, as part of the HELIX suite of automated solutions, is delivering a next-generation Smart Lighting Solution that brings together advanced underground illumination with real-time digital intelligence. By integrating industrial-grade LED lighting with MST's HELIX platform, the solution enhances visibility while introducing a new layer of operational awareness across underground environments.

Designed for demanding conditions, SLS industrial-grade LED strip lighting provides consistent, glare-free illumination to improve working conditions to support safer navigation through underground roadways, tunnels and work areas.

Through integration with HELIX, lighting infrastructure is transformed into an intelligent, connected system. Beyond illumination, it becomes a visual communication layer capable of delivering real-time alerts and operational signals directly within the mine.

Dynamic lighting cues can be triggered to support a range of applications, including vehicle movement alerts, traffic flow management, exclusion zone notifications and emergency signaling. These highly visible alerts enhance situational awareness and provide immediate, intuitive guidance to personnel and vehicle operators.

By linking lighting to live operational data such as fleet movements and location-based events, the solution enables a more responsive underground environment. Lighting can adapt in real time to changing conditions, helping to improve coordination, reduce risk and support faster decision-making.

The integration maximises the value of existing infrastructure by converting lighting networks into connected safety and productivity tools. With high-lumen output, energy efficiency and low maintenance requirements, the SLS lighting systems deliver reliable performance while supporting long-term operational efficiency.

As part of the broader HELIX ecosystem, the Smart Lighting solution strengthens digital mine capabilities by combining advanced illumination with intelligent signaling. The result is a safer, more connected underground environment that supports improved operational control, enhanced communication and more effective incident response.

SPECIFICATIONS

Desciption: em-Controller

Electrical	
Voltage Input	17-48VDC
Power Supply	24VDC (based on em- light voltage)
Current	500mA
Current	10A - em-Light Current
Frequency Range	2412~2484 MHz
Environmental	
IP Rating	IP65
Ambient Operating Temperature	-40° to 55° C
Communications	
WiFi	802.11 b/g/n (modbus/JSON)
Ethernet	10/100 Mbps (modBus/JSON)
Physical	
Material	Polycarbonate
Dimensions	150mm x 110mm x 95mm (WxDxH)
Lifetime	
Lifespan	Up to 10 years
Warranty	2 years
Control	
Colours	User defined (software interface) Red, Green, Amber, White (default) Manual Override- 3 Button Control
Software Integrations	
HELIX	3D Connect Automation

Lighting - RGB Chasing

em-Light	Max Length single feed	Max Length incl repeaters	Max Repeaters
em-Light-L-28-24V-RGB-c	50m	500m	9

Desciption: em-Light

Part Number	EmControl Kit-28-RGB-24v-20/50/100m
Lumens	135
Efficacy	45 Lumens/Watt
Maximum Running Length	100 metres - dual feed 50 metres - single feed
Recommended Fixing Height	2-3 metres
IP Rating	67
Maximum Watts/Metre	3.00 Watts
Colour Rendering Index CRI	> 80
Colour Temperature	RGB
Ambient Operating Temp.	-20° to 45° C
Voltage	24V DC only
Light Maintenance	20% reduction over 4 years
Lifespan	50,000 hours
Warranty	5 years
Protection	Short circuit Over voltage Over temperature Over current