

TFLEX GEN2 DRIVE

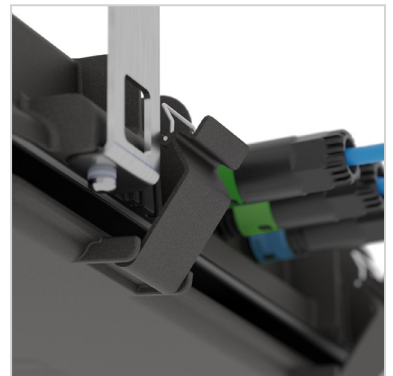


Flexible and powerful driver box for various tunnel lighting needs

TFLEX GEN2 DRIVE is a powerful and flexible remote driver box designed to meet the requirements of a variety of tunnel lighting projects. It can supply up to three optical units simultaneously, providing outstanding efficiency while reducing installation and maintenance costs.

Fully customisable, TFLEX GEN2 DRIVE can be configured to meet the specific power, safety and control requirements of your infrastructure. Its optimised and robust design ensures reliable operation even in demanding environments.

Equipped with the latest control technology (Lumgate V4), TFLEX GEN2 DRIVE is compatible with the Advanced Tunnel System 4 (ATS 4). This system dynamically adjusts lighting levels in response to real-time conditions such as weather, traffic and sensor inputs, ensuring the optimal balance between visibility, visual comfort and energy efficiency. By integrating with your lighting study, TFLEX GEN2 DRIVE allows faster commissioning and ensures full compliance with CIE curve standards — helping you deliver safer, smarter and more sustainable tunnels.



TUNNEL



LARGE
AREA

Concept

TFLEX GEN2 DRIVE is part of the **TFLEX GEN2 tunnel lighting platform**, delivering a **fully integrated solution** that combines drivers, surge protection, integrated control, tool-free connectors, CPR-compliant cabling and high-performance optical units. Designed for maximum flexibility, it enables lighting solutions precisely tailored to the diverse requirements of modern tunnel infrastructure.

This **modular philosophy** is reflected in the design of the TFLEX GEN2 DRIVE power supply unit. Its streamlined construction creates a lightweight, easy-to-install housing capable of supporting multiple electronic configurations, allowing you to adapt the system efficiently to the specific needs of each tunnel project.

This high degree of customisation helps **optimise energy consumption** while maintaining perfect photometric balance across your installation. The separation between the driver box and the optical units prevents heat transfer, ensuring **long-term performance and extending the lifetime** of your luminaires — a key advantage for sustainable tunnel infrastructure.

TFLEX GEN2 DRIVE integrates advanced remote lighting control technologies and is fully compatible with the Advanced Tunnel System 4 management system. This system enables remote, individual adjustment of each luminaire's light levels. When combined with sensors and cameras, it dynamically adapts lighting intensity to traffic flow and weather conditions. This integrated control approach ensures a rapid response to any external or internal tunnel event, significantly enhancing user safety and visual comfort. Furthermore, by integrating the photometric study directly into the ATS 4 control system, TFLEX GEN2 DRIVE guarantees that tunnel illumination levels are perfectly aligned with CIE curve standards. Remote management is also available via DALI network protocol (ATS 4 DALI).

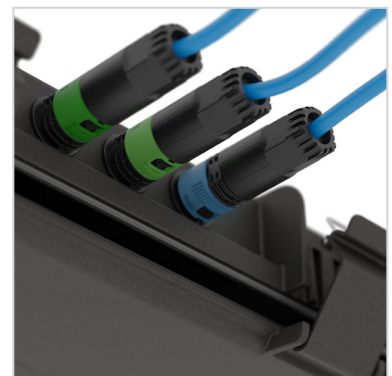
Designed for maximum convenience, TFLEX GEN2 DRIVE provides **tool-free access** to the electronic gears, making maintenance operations fast and straightforward. Its **quick connectors ensure error-free connections**, reducing installation time and simplifying on-site interventions. All TFLEX GEN2 tunnel lighting solutions are supplied with fire-retardant, CPR-compliant cables, enhancing safety and reliability throughout your tunnel infrastructure.



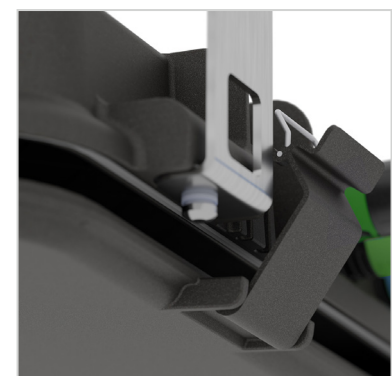
Customisable gear box that suit a wide range of project requirements.



Fully compatible with tunnel lighting management systems (ATS 4 and ATS 4 DALI) for greater energy savings.



Toolless connectivity in combination with fire-retardant cabling resulting in fast and error-proof installation.

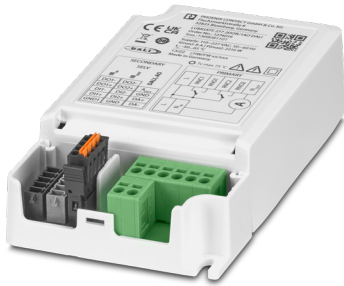


Tool-free access to the gear components, using a latch.

Lumgate V4 control technology

The Lumgate is a luminaire control unit that acts as an interface between the lighting management system and the tunnel luminaires or driver boxes. Connected to the luminaire drivers, it switches the drivers on/off, controls the light intensity and provides command/reporting features.

It is suitable for installation in driver boxes or directly in the luminaire. It communicates with the driver via 0-10V or DALI command. This brand new interface includes advanced Inrush Current Limitation Features and a 24 hour fail-safe repeat mode.



Compatible with the Advanced Tunnel lighting control System (ATS 4)

The ATS 4 (Advanced Tunnel System 4) is a powerful tunnel lighting control system for precise remote dimming and switching of each individual connected luminaire, based on various tunnel parameter inputs (emergency exits, smoke extraction system, traffic cameras, etc.).

The ATS 4 permanently communicates with the Lumgates, an RS422 closed-loop device connected to the luminaire drivers, to control the light intensity and provide command/reporting features.



Provides compatibility with DALI network protocol

The Advanced Tunnel System 4 DALI provides the essential functions of the ATS 4 over a DALI network protocol, enabling dimming of luminaire clusters to be controlled collectively. The ATS 4 DALI is the ideal solution to implement a reliable and powerful tunnel lighting control system with streamlined features and optimised costs.



CERTIFICATIONS

CE mark	Yes
ENEC certified	Yes
UL certified	Yes
RCM certified	Yes
Safety standards	IEC 60598-1 IEC 60598-2-1 IEC 61000-3-2 IEC 61000-3-3 IEC 55015 IEC 61547 IEC 62262

HOUSING AND FINISH

Housing	Cover & body: die-casted aluminium (EN-AC 44300) Brackets: stainless steel AISI 316L (DIN 1.4404) Opening latches: Aluminum alloy - EN AW 6060 T66
Gasket	Body & cover: extruded silicone (Silicon elastomer, 50 Shore)
Housing finish	Standard polyester powder coating (C4 according to the ISO 9223-2012 standard) Optional "seafront" polyester powder coating with anodisation (C5-CX according to the ISO 9223-2012 standard)
Standard colour(s)	AKZO grey 900 sanded
Tightness level	IP66/69 PSI100
Impact resistance	IK09
Vibration test	Compliant with ANSI C 136-31 (3G) and IEC 68-2-6 (1.5G)
Access for maintenance	Tool-less access

OPERATING CONDITIONS

Operating temperature range (Ta)	-40°C up to +55°C / -40°F up to 131°F
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· Depending on the box configuration. For more details, please contact us.

ELECTRICAL INFORMATION

GENERAL

No. drivers	2max. (custom design possible)
Driver wattage	75-320W
Nominal current	350-1000mA
Nominal voltage	220-240V – 50Hz 347-480V – 60Hz 120-277V - 60Hz

OUTPUT

Circuits	Single or double circuit
Connector(s)	RST connector 3 poles RST connector 5 poles PRC connector 3 poles PRC connector 5 poles

MAIN INPUT

Distributions	1Ph+N+ PE, 3Ph+N+PE
Connector(s)	1Ph+N+ PE: QPD 4 poles PRC 4 poles Cable gland M25 3Ph+N+PE: QPD 5 poles PRC 5 poles Cable gland M25
Terminal section	2.5mm ² 1.5mm ²

CONTROL INPUT

Control protocol(s)	1-10V/DALI 2.0/ RS422 Closed Loop
Control options	Lumgate
Connectors	Lumgate: M17 BUS IN/OUT PRC M25 BUS IN/OUT DALI or 0-10V: QPD 2 poles PRC 2 poles PRC 3 poles Cable glands (2xM20) Combined with Mains: QPD 5 poles QPD 4 poles PRC 5 poles PRC 4 poles Cable gland (M25)

Associated control system(s)	Advanced Tunnel System 4 Advanced Tunnel System 4 DALI
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OPTIONS

Fuse	Yes
ICL (Inrush current limiter)	Yes
Surge protection options (kV)	10 20

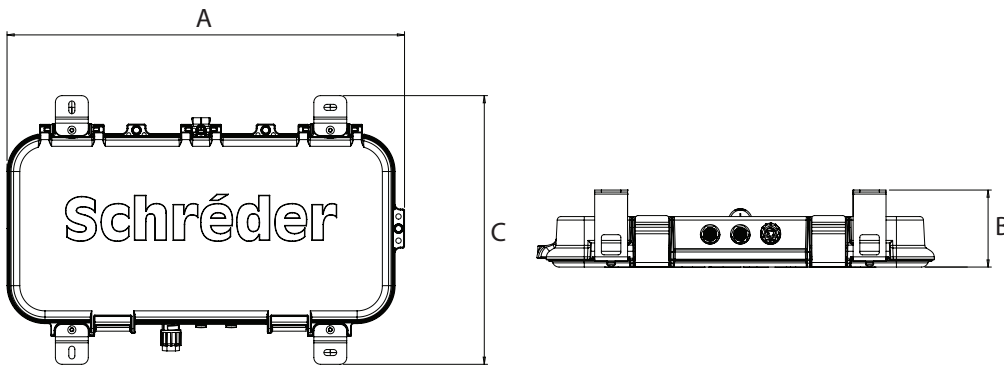
DIMENSIONS AND WEIGHTS

AxBxC (mm | inch) 592.1x114.7x400.2 | 23.3x4.5x15.7

Weights (kg | lbs) 11.1 | 24.5

Mounting Surface mounting (ceiling/ wall)

· For more information about mounting possibilities, please consult the installation sheet.



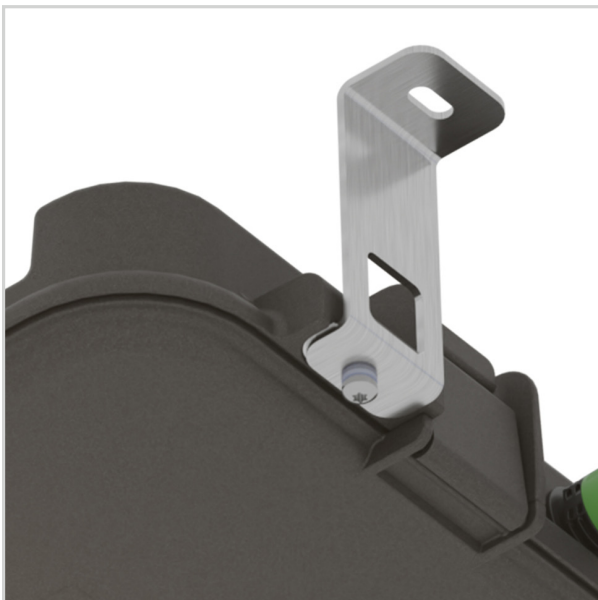
INTEGRATES WITH TUNNEL LIGHTING CONTROL SYSTEMS



FAST AND ERROR-FREE DEPLOYMENT VIA TOOL-FREE CONNECTORS



ROBUST STAINLESS STEEL FIXING BRACKETS (COMPLIANT WITH ANSI C 136-31 (3G VIBRATIONS))



DIRECT OR REMOTE CONFIGURATIONS TO OPTIMISE SPACE IN ANY TUNNEL LAYOUT

