RELIANCE

Approach Flash System

Elevated and Inset

Compliance with Standards

FAA	EB 67D
ICAO	Annex 14, Vol. I
IEC	TS 61827
NATO	STANAG 3316
EASA	CS-ADR-DSN
Canada	TP312
Australia	MOS139

Uses

LED light used for approach sequential flash and threshold identification for CAT I, II and III operations

System Design

The RELIANCE™Approach Flash System, referred to as SFL, consists of a control unit, main chain (SFL - light 1..30), threshold identification (TIL - light 31..32) and power distribution units (1..32).

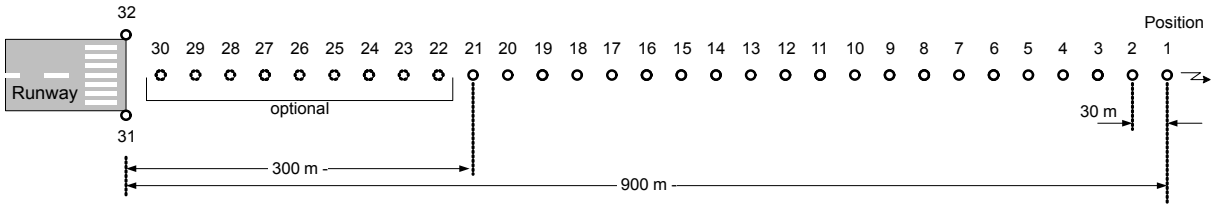
The RELIANCE SFL system enables following static (installation) or dynamic (configuration settings) system configurations:

- Full main chain with/without TIL (light 1..32)
- Reduced main chain with/without TIL (light 1..20 + 31..32)
- TIL without main chain (light 31..32)

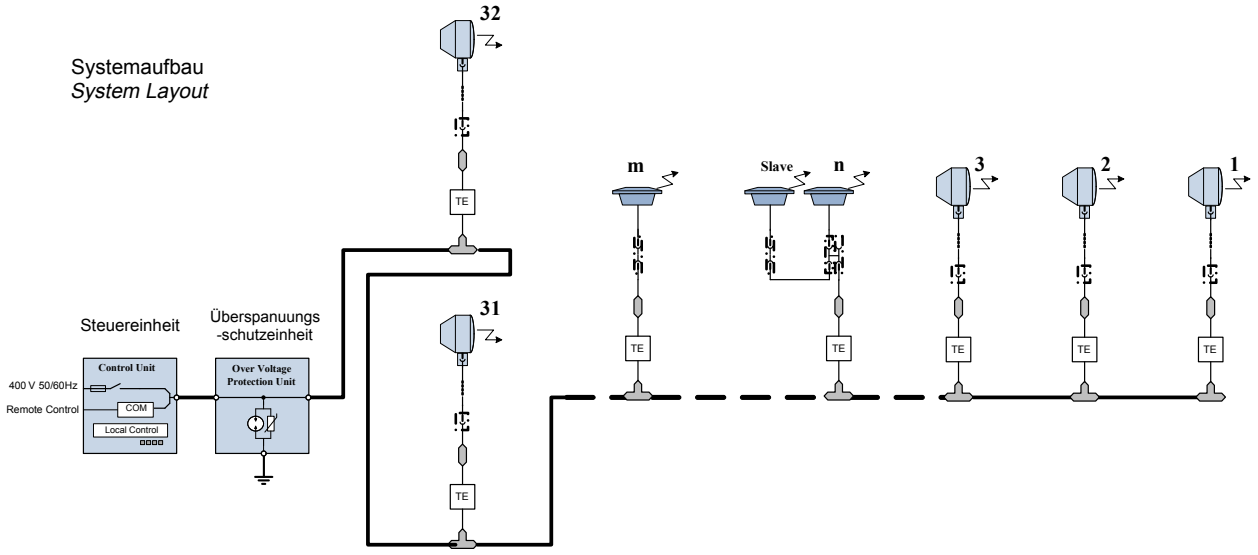
Elevated, single inset or double inset lights available for installation.

Features and Benefits

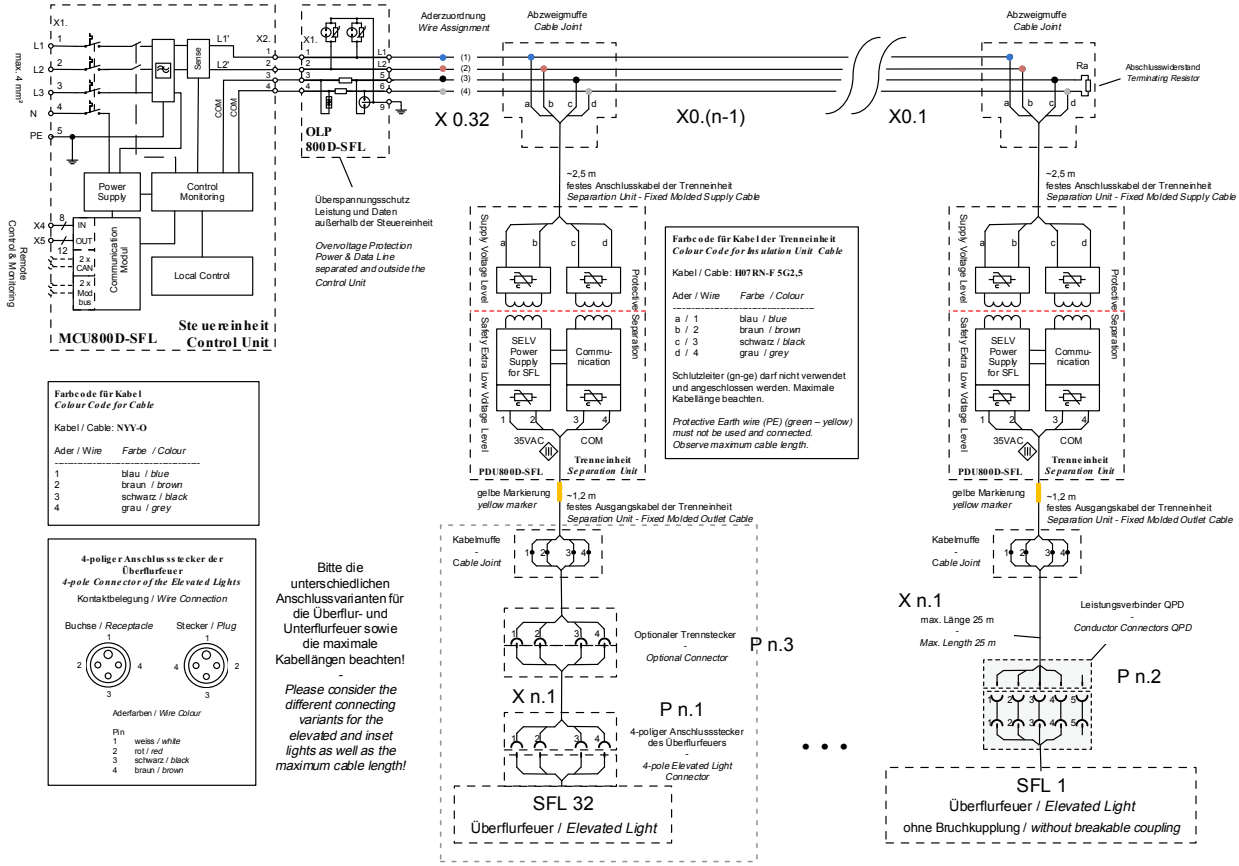
- Dynamic system configuration by parameter setting
- Single light monitoring even in standby mode
- Dynamic operation mode in 3 brightness steps (100%, 10% and 3%)
- Flash frequency switchable between 2 or 1 Hz
- Optional lights with high intensity
- Service local control at control unit possible
- Comfort control panel for service local control
- lucDMC Service Software
- Over voltage and lighting current protection of power and data lines
- 1× parallel remote control interface (default)
- 2× serial remote control interface (redundant) with RS-485 MODBUS / RTU (optional)
- Optional remote control interface with Ethernet MODBUS/TCP or PROFIBUS DP (optional)
- Optional CANBUS interface (proprietary protocol for RELIANCE control system)
- Light power supply with SELV
- EMI (Electro-Magnetic Interference) filter to harmonize power fluctuation



SFL System Layout



SFL System Detail



Control Unit (MCU800D-SFL)

Power supply	Power circuit: 400 VAC, 3 Ph., 50/60 Hz
Power consumption	~1.4 kVA, asymmetric load, main load at L1/L2
Fuse	Internal fuse automat 10A fuse characteristic K
Communication interface remote control	1× parallel remote control interface (default) 2× serial remote control interface (redundant) with RS-485 MODBUS / RTU (optional) Optional remote control interface with Ethernet MODBUS/TCP or PROFIBUS DP Optional CANBUS interface (proprietary protocol for RELIANCE control system)
Communication interface comfort local control	I2C
Communication interface service computer	USB
Communication interface flash lights	2-wire power line
Environmental temperature	-25 to +45 °C
Relative humidity, not condensed	10 to 90%
International Protection class	IP 43
Altitude over NN (operation)	-100 to +2,500 m
Housing	Metal housing wall mounted
Dimensions (B × H × D)	600 × 600 × 210 mm
Weight	~22 kg

Power Distribution Unit (PDU800D-SFL)

Power circuit	Primary circuit: 400 VAC, 50/60 Hz Primary circuit: 36 VAC (SELV)
Power supply	Control voltage 24 V from the cabinet
Data communication	Primary circuit: Powerline Primary circuit: Powerline (SELV)
Environmental temp.	-40 to +55 °C
Relative humidity, not condensed	10 to 100%
Protection class	IP 68, 1 m immersion depth
Altitude over NN (operation)	-100 to +2,500 m
Housing	Full potted PU housing
Dimensions (D × L)	142 × 192 mm, without cable
Weight	~6.5 kg

Flashing Light (SFL or TIL)

Power supply	36 VAC, 50/60 Hz (SELV)
Max. Power consumption	EL = 20 VA IL = 20 VA
Communication interface control unit	2-wire power line (SELV)
Environmental temp.	-25 to +85 °C
Relative humidity, not condensed	10 to 100%
Protection class	IP68
Altitude over NN (operation)	-100 to +2,500 m
Dimensions (W × H × D)	EL = 300 × 300 × 190 mm IL = 310 × 310 × 190 mm
Weight	EL = ~7.5 kg IL = ~6.9 kg
Intensity (SFL Config.): **Standard (dimmed)** **High**	Elevated 12' 500 cd eff. 21' 000 cd eff.
Intensity (SFL Config.): **Standard (dimmed)** **High**	In-Pavement 6' 500 cd eff. 6' 500 cd eff. [1]
Nominal LED life	> 50.000 h

[1]For harmonization of the visual impression the use of double inset flash lights is recommended.

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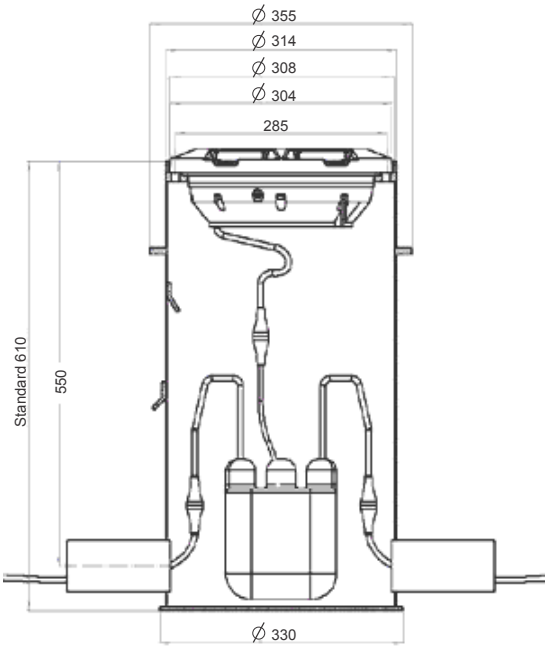
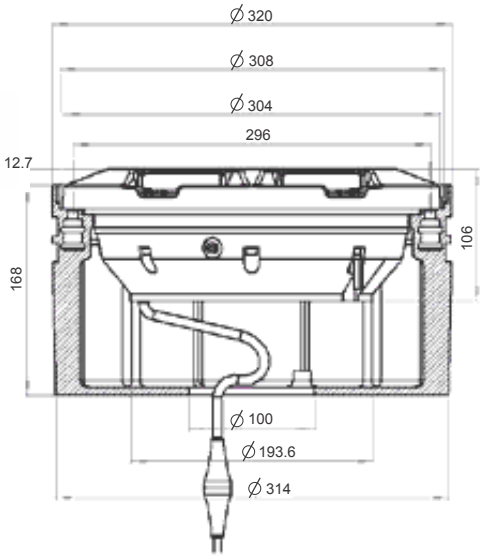
In-Pavement Flasher

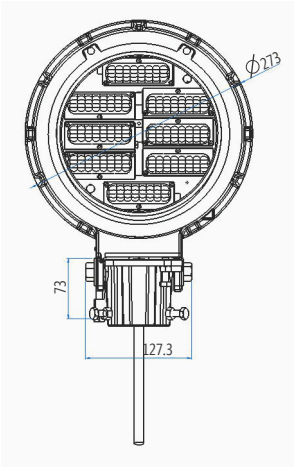
12″ shallow base and deep base can with transformer shown for complete view only but not part of the flash light. These articles can be ordered separately as accessories.

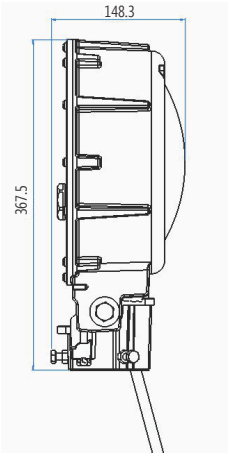




Elevated Flasher

Base plate and frangible pedestal are not shown and are not part of the flash light. These articles can be ordered separately as accessories.





Control Cabinet and Software Ordering Information

Ordering Code	Part	Description
MCU800D-SFL-20	MCU 800D-SFL	MCU with Multiwire Interface
MCU800D-SFL-21	MCU 800D-SFL	MCU with CAN Bus Interface
MCU800D-SFL-22	MCU 800D-SFL	MCU with Modbus Interface
MCU800D-SFL-23	MCU 800D-SFL	MCU with Single Profibus Interface
MCU800D-SFL-24	MCU 800D-SFL	MCU with Redundant Profibus Interface
MCU800D-SFL-25	MCU 800D-SFL	MCU with Single Ethernet Interface
MCU800D-SFL-26	MCU 800D-SFL	MCU with Redundant Ethernet Interface
P1299	lucDMC	lucDMC + 1 License Dongle
P1300	lucDMC	lucDMC + 2 License Dongles
P1301	lucDMC	lucDMC + 3 License Dongles
P1302	lucDMC	lucDMC + 4 License Dongles
P1303	lucDMC	lucDMC + 5 License Dongles
P1030	PSD800D-SFL	Dongle For Inset Lights
SP.A3446	LUC12711410	Master PCB
SP.A3447	LUC12711420	COM Gateway
SP.A1608	MINI-PS-100-240AC/24DC/2	Power Supply Unit
SP.A3913	LUC15710110	Mains Filter

In-Pavement and Elevated Flasher Ordering Information

Ordering Code	Part	Description
817.213.5	EL 817D-SFL/TIL	Elevated Cold/W - FAA Connector + receptacle
817.214.5	EL 817D-SFL/TIL	Elevated Cold/W - Phoenix Connector + receptacle
817.215.5	EL 817D-SFL/TIL	Elevated Cold/W - Phoenix Connector + Receptacle + FAA-lead (connector + receptacle)
817.216.5	EL 817D-SFL/TIL	Elevated Cold/W Sim Flash (+ pole)
817.203.5	EL 817D-SFL/TIL	Elevated Cold/W - Phoenix Connector (no receptacle)
817.204.5	EL 817D-SFL/TIL	Elevated Cold/W - FAA Connector (no receptacle)
868.211.1	IL868D-SFL/TIL	Single Inset Cold/W+ 1x 2m FAA 5 pole cable
868.212.1	Double Set IL868D-SFL/TIL	Double Inset Cold/W + 2x 2m 5 pole cable +1x H- Phoenix Connector + 1x Phoenix Connector
868.200.1	IL868D-SFL/TIL	Single Inset Cold/W - FAA 5 pole plug
868.205.1	IL868D-SFL/TIL	Single Inset Cold/W - Phoenix Connector

Transformer, Connection, and Mounting Ordering Information

Ordering Code	Part	Description
P864	PDU800D-SFL	PDU SELV Isolating Unit
P1006	OLP800D-SFL	Overvoltage Protection Unit - Optional
A5326	OLP Remote Monitor Accessory	Remote Monitoring Module for Data Line Overvoltage Protection - Optional
P1029	JBX800D-SFL	T-Connection Junction Box
300.241	QPD Plug	Phoenix Connector Plug (QPD Nut included)[1]
300.245	QPD Receptacle	Phoenix Connector Receptacle (QPD Nut included)[1]
300.244	QPD H Connector	Phoenix Connector H (QPD Nuts not included), Use Nut or Receptacle
300.243	QPD Dustcap	Phoenix Dustcap (to seal off unused connections)
300.246	QPD Nut	Phoenix Nut (for reusing a Phoenix plug or receptacle)[1]
SP.205.046	QPD 4 Pole Cable Lead Plug	4-Pole Cable Assembly, Phoenix Connector, for EL817D, (includes cable gland and terminals), 280 mm
SP.205.016	FAA 4 Pole Cable Lead Plug	4-Pole Cable Assembly, FAA Style 1 Connector, for EL817D, (includes cable gland and terminals), 300 mm
MCMR80CF4U16-2.00	FAA 4 Pole Cable Lead Receptacle	4-Pole Cable Assembly, FAA Style 8 Receptacle, for EL817D, 2000 mm
SP.205.042	QPD 5 Pole Cable Lead Plug	5-Pole Cable Assembly, Phoenix Connector, for IL868D, (includes cable gland and terminals), 280 mm
SP.205.043	FAA 5 Pole Cable Lead Plug	5-Pole Cable Assembly, FAA Style 1 Connector, for IL868D, (includes cable gland and terminals), 300 mm
061.607	Base Plate	Base Plate, 2"-11.5 NPS
061.186	Pedestal	Frangible Coupling, 2"-11.5 NPS
211.319	Shallow Base	Eurobase, Waterproof Shallow Base with O-Ring 7080.90.650

[1]The QPD Nut is considered a single-use nut and should be replaced when reusing a Phoenix connector.