

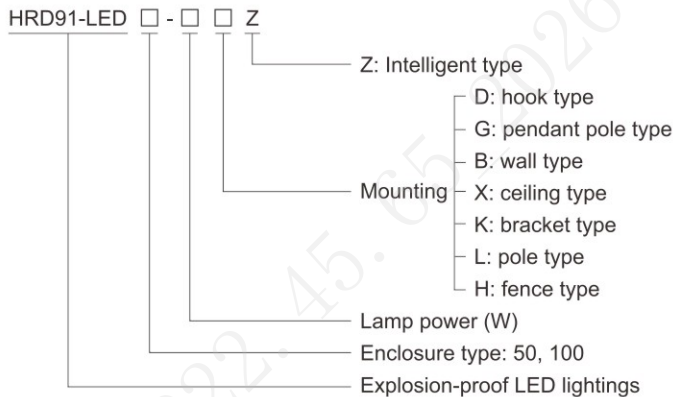
SCS-ZM Intelligent Lighting Management and Control System

HRD91-LED □ □ Z Series Explosion-proof LED Lightings (Intelligent Type)



- ◆ Explosion protection to
 - CENELEC
 - IEC
 - NEC
- ◆ Can be used in
 - Zone 1 and Zone 2
 - Zone 21 and Zone 22
 - Class I, Zone 1 and Zone 2
 - Class I, Division 1, Groups A, B, C, D
- ◆ Two enclosure types: 50, 100
- ◆ Isolated LED lamp compartment, CC-CV (constant current - constant voltage) power controller compartment and terminal compartment; Wind-convection heat dissipation structure.
- ◆ Low-maintenance costs due to long service life, which is up to 100,000 operating hours.
- ◆ Luminaires feature adjustable brightness for efficient energy-saving lighting;
- ◆ When used with an intelligent lighting system, they enable centralized intelligent management and control of lighting equipment.

■ Catalogue number logic



■ Product features



Intelligent Control

Equipped with an intelligent control chip, it supports individual lamp control, enabling remote on/off operation and brightness adjustment. It can also integrate with smart functions such as light sensing and human presence detection.



Intelligent Monitoring

Built-in intelligent sensor chip continuously monitors lamp parameters including power, current, voltage, brightness, on/off status, and fault conditions.



Wireless Communication

Features an embedded Zigbee industrial wireless communication module, offering flexible connectivity without the need for communication cabling—greatly simplifying on-site installation.



Human Presence Detection

The lamp housing can be equipped with a human presence detection module that senses movement and activates nearby lights accordingly, achieving automatic lighting when people enter the area and turning off when they leave.

Zones 1&2; 21&22

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Technical data

Explosion-proof LED lightings (Intelligent type) HRD91-LED□-□□Z

Explosion protection

Global (IECEX)
Gas and dust

IECEX (applied for)
Ex db IIC T6/T5/T4 Gb
Ex tb IIIC T80°C/T85°C/T95°C/T100°C Db

Europe (ATEX)
Gas and dust

ATEX (applied for)
Ⓔ II 2 G Ex db IIC T6/T5/T4 Gb
Ⓔ II 2 D Ex tb IIIC T80°C/T85°C/T95°C/T100°C Db

Certificates

IECEX; ATEX; CU-TR

Conformity to standards

EN 60079-0, EN 60079-1, EN 60079-31
IEC 60079-0, IEC 60079-1, IEC 60079-31

Material

Enclosure
Transparent cover
Exposed fastener
LED driver

Copper-free aluminium alloy, powder coated surface, yellow (RAL1021)
Toughened glass, stands 4J impact
Stainless steel
Wide voltage input, CC-CV (constant current - constant voltage) output, power factor ≥ 0.95 , with function of distributed current, constant current, surge-proof and anti-electromagnetic interference, and protection against overcurrent, open circuit, and short circuit

Lamp

Lamp specification
Lamp power (W)
Colour rendering index (Ra)
Colour temperature (CCT)

LED
30W, 50W, 70W, 100W
 ≥ 80
5700K
Note: cool white is available in general. Warm white or nature white is optional, please specify when ordering.

Rated voltage

100~277V AC 50/60Hz

Earthing protection

M5 (internal & external earth bolts)

Degree of protection

IP66

Ambient temperature

30W, 50W: T6/T80°C for Tamb: -20°C~+43°C; T5/T95°C for Tamb: -20°C~+58°C
70W, 100W: T5/T85°C for Tamb: -20°C~+43°C; T4/T100°C for Tamb: -20°C~+58°C

Terminal

3×1.5~4mm² (L+N+PE)

Mounting

Ceiling type, pole type, pendant pole type, wall type, bracket type, hook type, fence type

Cable entries

M25×1.5

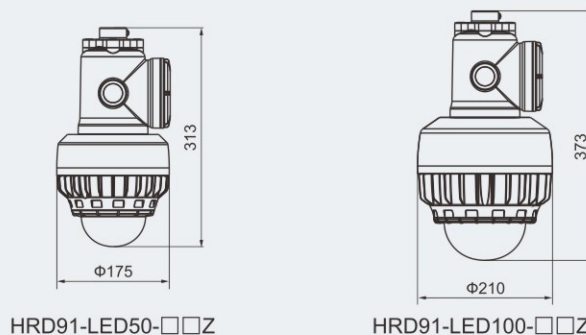
Cable gland

See Mounting type (see P2/53)

Available cable outer diameter

Φ10~Φ14(mm)

Dimension drawings (all dimensions in mm) - subject to alteration



Detailed Parameters

Luminaire photometric curve diagram, external dimensions, installation schematic, mounting accessories, mounting components, and spare parts list are detailed on page P2/52~53.