IP65 DALI-2 PIR Zhaga book 18 Standard Motion Sensor

HIR15/D2 (High-Bay)

DALI-2 output

HYTRONIK®

Product Description

HIR15/D2 is an PIR motion sensor and compatible with the Zhaga book 18 standard. It is certified as DALI-2 input device with daylight sensor instance, to achieve dimming control and colour tuning. HIR15/D2 is also designed with a robust IP65 structure and suitable for high-bay applications as the capacity can be up to 12m installation height, which is ideal for the typical outdoor lamp (such as a streetlight).

TYPE B

Hardware Features

- Input device (Type B) compliant to standard IEC62386_101, 103, 303, 304, 351
- IP65 design
- Zhaga Book 18 standard
- High-bay (up to 12m height)
- 5-year warranty

Technical Specifications

Input & Output Characteristics	
Operating voltage	12-36 VDC
Stand-by power	<0.5W
Quiescent current	10mA
Lux range	0~1023 lux
Output	DALI-2

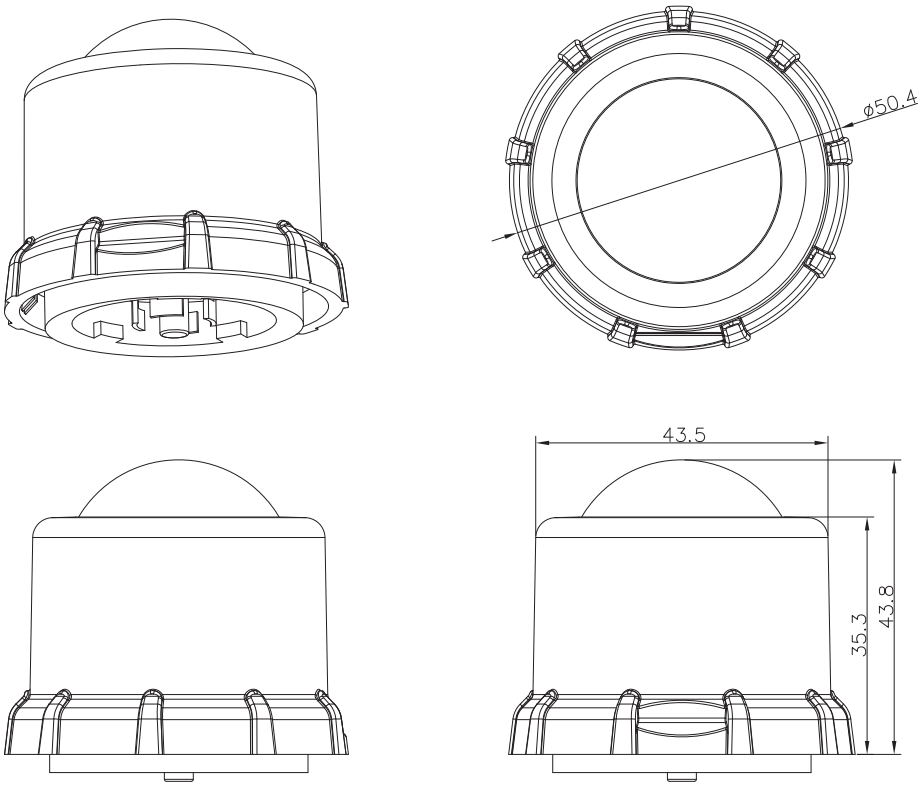
Environment	
Operation temperature	Ta: -20°C ~ +50°C
Storage temperature	-40°C ~ +70°C
Relative humidity	10 ~ 90%
IP rating	IP65
Insulation	Class II

Sensor Data	
Sensor principle	PIR
Detection range*	Max installation height: 12m Max diameter: 20m
Detection angle	360°

* The detection range is heavily influenced by sensor placement (angle) and different walking paces. It may be reduced under certain conditions.

Safety & EMC	
EMC standard (EMC)	EN55015, EN61547
Safety standard (LVD)	EN61347-1, EN61347-2-11
Certification	CE , UKCA
Compliance	RoHS Reach
DALI-2	IEC62386-101,103,303,304 351

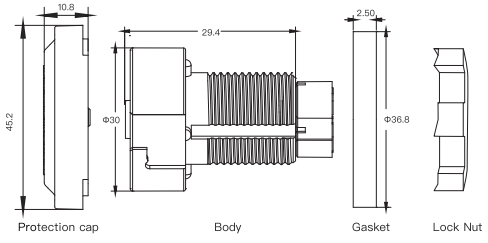
Mechanical Structure & Dimensions



Receptacle Accessory

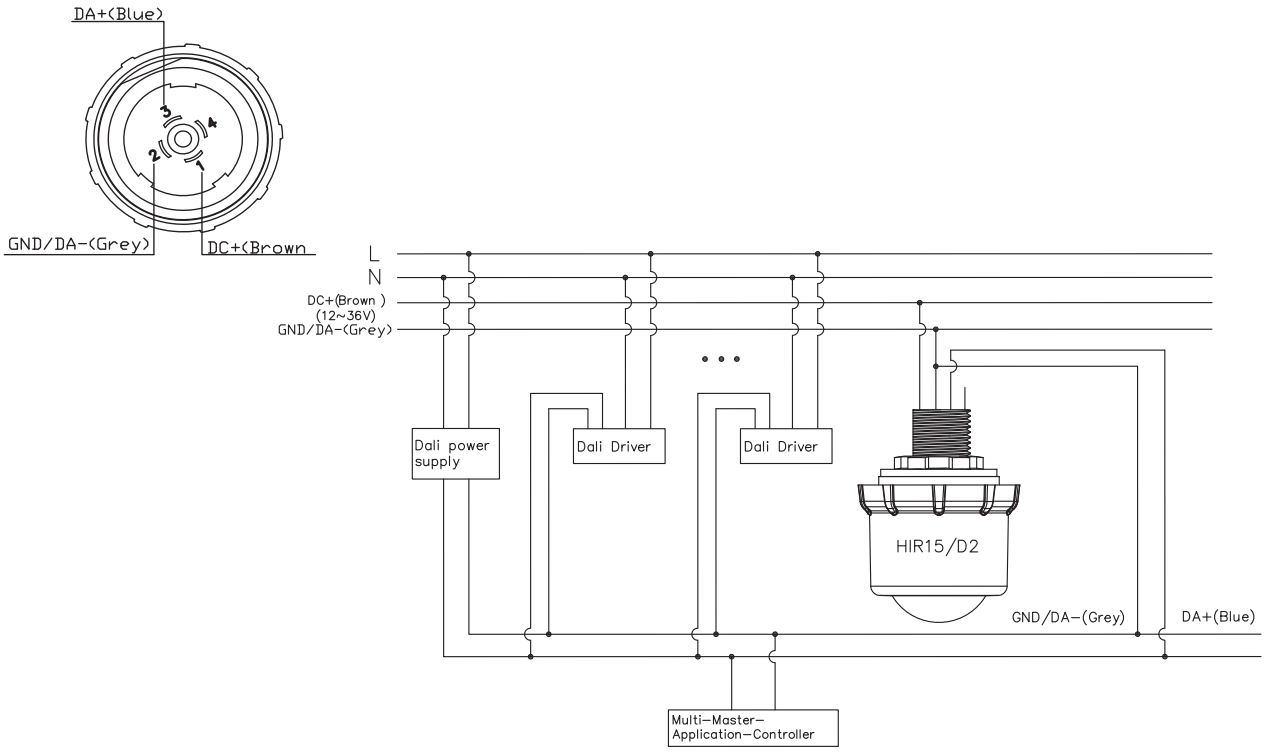
The HA18SKT receptacle is designed to be compatible with the SAM15 and HIR15 series products. It provides a Zhaga Book 18 standard interface, suitable for roadway lighting, area lighting, and occupancy lighting applications.

Mechanical Structure & Dimensions



For more details, please refer to https://hytronik.com/product/ha18skt
Note: HA18SKT not included in the package.

Wiring Diagram

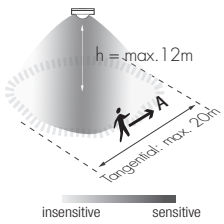


Detection Range

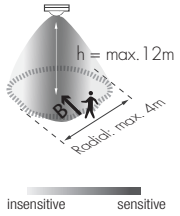
The data below is tested under following conditions:

- Single person walking;
- Sensor not connected to any driver that may have soft-on period;
- The testing is conducted in an open and spacious indoor field, without
- noticeable obstacles or influences that may affect PIR performances.

A: Tangential movement



B: Radial movement



Mount height	Tangential Movement (A)	Radial Movement (B)
3m	max 50m² (Ø = 8m)	max 13m² (Ø = 4m)
5m	max 79m² (Ø = 10m)	max 13m² (Ø = 4m)
8m	max 154m² (Ø = 14m)	max 13m² (Ø = 4m)
12m	max 314m² (Ø = 20m)	max 13m² (Ø = 4m)

Sensitivity Adjustment

The motion sensor only sends motion events. No further signals or commands will be sent. Sensor sensitivity ranges from 0 to 100%.

*Values of "detectionRange" and "detectionSensitivity" shall have the following meaning:
- [0,100]: 0-100%. 0 is the lowest detection range or detection sensitivity, 100 is the highest.
- 255: Adjustment not supported.

*Set sensitivity: 0x26
*Query sensitivity: 0x2B

Command name	Address byte	Instance byte	Opcode byte	DTR0	DTR1	DTR2	Answer	Send twice	See subclause	Command subclause
CATCH MOVEMENT	Device	Instance	0x20						9.4.6	11.7.2
SET HOLD TIMER (DTR0)	Device	Instance	0x21	√				√	9.5.1	11.8.3
SET REPORT TIMER (DTR0)	Device	Instance	0x22	√				√	9.5.2	11.8.4
SET DEADTIME TIMER (DTR0)	Device	Instance	0x23	√				√	9.5.3	11.8.5
CANCEL HOLD TIMER	Device	Instance	0x24						9.5.1	11.7.3
SET DETECTION RANGE (DTR0)	Device	Instance	0x25	√				√	9.5.7	11.8.6
SET SENSITIVITY (DTR0)	Device	Instance	0x26	√				√	9.5.7	11.8.7
QUERY INSTANCE CAPABILITIES	Device	Instance	0x29				√		9.5.6	11.9.7
QUERY DETECTION RANGE	Device	Instance	0x2A				√		9.5.7	11.9.8
QUERY SENSITIVITY	Device	Instance	0x2B				√		9.5.7	11.9.9
QUERY DEAOTIME TIMER	Device	Instance	0x2C				√		9.5.3	11.9.3
QUERY HOLD TIMER	Device	Instance	0x2D				√		9.5.1	11.9.4
QUERY REPORT TIMER	Device	Instance	0x2E				√		9.5.2	11.9.5
QUERY CATCHING	Device	Instance	0x2F				√		9.5.6	11.9.6

*The valid value range is 0-100, 0-25 is the lowest sensitivity of the first gear, 26-50 is the second gear, 51-75 is the third gear, and 76-100 is the highest sensitivity of the fourth gear.

Additional Information / Documents

1. Regarding precautions for PIR sensor installation and operation, please kindly refer to www.hytronik.com/download ->knowledge ->PIR Sensors - Precautions for Product Installation and Operation

2. Regarding Hytronik standard guarantee policy, please refer to www.hytronik.com/download->knowledge ->Hytronik Standard Guarantee Policy