HYTRONIK ®

347V TRI-LEVEL HF SENSOR, DETACHED VERSION HC603VRC-KD

1. Technical Specifications

Product type	347VAC HF Sensor (Tri-level control)
Operating voltage	347VAC 60Hz
Rated load	1200W / 3.5A / 347V (Incandescent) 800W / 2.4A / 347V (Fluorescent / LED)
Power consumption	< 1.5W
Detection angle	30° ~ 150°
Max. detection area (DxH)	12 x 6m (SAM5, SAM9); 16x15m (SAM6)
Detection range	10% / 50% / 75% / 100%
Hold time	5s/30s/1min/5min/10min/20min/30min (TEST 2s ~ 30min on RC)
Stand-by time	0s / 10s / 1min / 5min / 10min / 30min / 1h / +∞
Stand-by dimming level	10% / 20% / 30% / 50%
Daylight threshold	2 ~ 500Lux, Disable (2Lux ~ 500Lux /Lux disable / Ambient on RC)
Warmming up time	20s
Operating temperature	-20°C ~ +60°C
IP rating	IP20

Functions

1. Tri-level Control (Corridor Function)

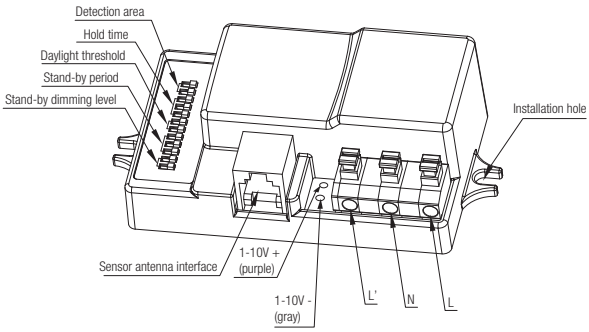
Hytronik builds this function inside the motion sensor to achieve tri-level control, for some areas require a light change notice before switch-off.
It offers 3 levels of light: 100%-->dimmed light-->off; and 2 periods of selectable waiting time: motion hold-time and stand-by time; Selectable daylight threshold and detection area.

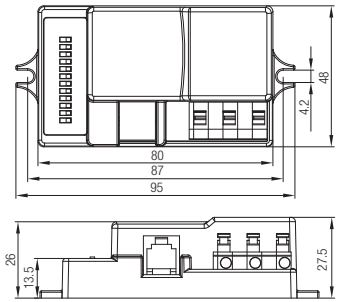
2. 24h Daylight Monitoring

Hytronik specially designed this function in software for deep energy-saving purpose. A built-in daylight sensor is designed to provide a "smart photocell" function. This function can only be activated when stand-by period is set to "+∞". In this mode the lamp will automatically illuminate at the dim level setting when the natural light goes below the threshold setting. The fixture will also switch off as the natural light returns.

3. Zero-cross relay operation

Designed in the software, sensor switches on/off the load right at the zero-cross point, to ensure the in-rush current is minimised, enabling the maximum lifetime of the relay.



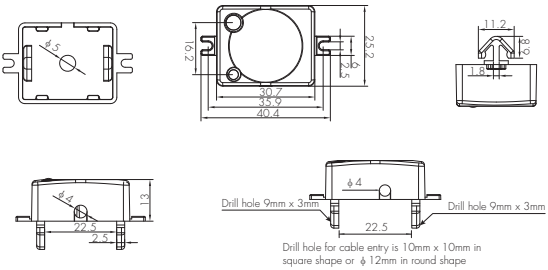


Dimensions (mm)

Model SAM5

(D x H: 12m x 6m)

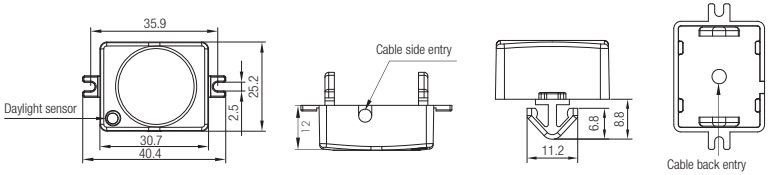
Super-compact sensor antenna, with optional cable entry (side entry and back entry) and IR receiver.



Model SAM9

(D x H: 12m x 6m)

Super-compact sensor antenna, with optional cable entry (side entry and back entry), without IR receiver.



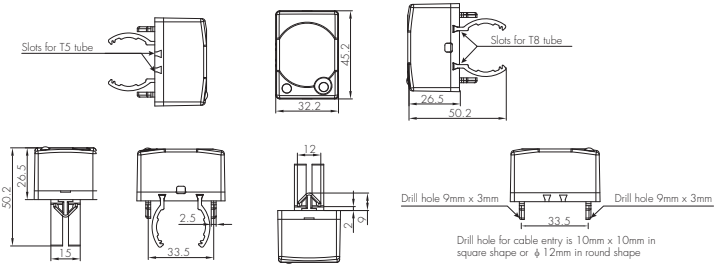
Model SAM6

(D x H: 16m x 15m)

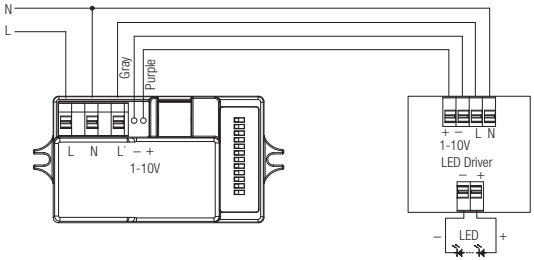
Flat sensor antenna, with plastic fingers to hook on highbay or T5/T8 tubes

option 1

option 2



Wiring Diagram



Feature Operation

1. Detection Range

Setting these switches will determine the sensitivity of the occupancy sensor. During commissioning it is recommeded to start at 10% to satisfy correct installation, before increasing the sensitivity to the environment for normal operation.

	1	2	
I	●	●	100%
II	●	○	75%
III	○	●	50%
IV	○	○	10%

2. Hold Time

Select the dip switch configuration for the full brightness on-time after presense detection.

Note for commissioning: There is a 20 second "warm-up" period for the sensor upon power-on. This time must elapse before testing for presense detection.

	1	2	3	
I	●	●	●	5s
II	●	●	○	30s
III	●	○	●	1min
IV	●	○	○	5min
V	○	●	●	10min
VI	○	●	○	20min
VII	○	○	○	30min

3. Daylight Threshold

Set the level according to the fixture and environment. In Photocell Advanced mode this level will determine at which point the fixture turns off and automatically turns back on again.

Disabling the daylight sensor will put the sensor into occupancy detection only mode.

	1	2	
I	●	●	Disable
II	●	○	50 Lux
III	○	●	10 Lux
IV	○	○	2 Lux

4. Stand-by period

The selected time will determine the period before the fixture switches completely off from the stand-by dimming level in periods of absence.

Note: Selecting Infinity '∞' will put the sensor into "24h daylight monitoring" mode.

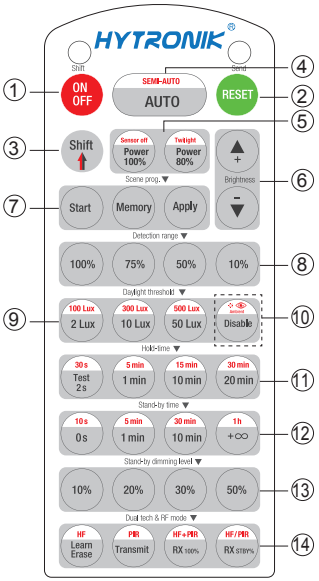
	1	2	3	
I	●	●	●	0s
II	●	●	○	10s
III	●	○	●	1min
IV	●	○	○	5min
V	○	●	●	10min
VI	○	●	○	30min
VII	○	○	●	1H
VIII	○	○	○	+∞

5. Stand-by Dimming Level

This setting is used to select the desired dimmed light level used in periods of absence for enhanced comfort and safety. In Photocell Advanced mode, it is also the level the fixture will automatically come on at when the natural daylight falls below the daylight threshold setting.

	1	2	
I	●	●	10%
II	●	○	20%
III	○	●	30%
IV	○	○	50%

Description of the Button Functions (remote control HRC-11)



HRC-11

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Permanent ON/OFF [button ①]
Press button ① to select permanent ON or permanent OFF mode.
* Press button ②/④ to resume automatic operation.
The mode will change to AUTO Mode after power failure.

RESET [button ②]
Press button ②, all settings go back to the DIP switch settings.

Shift [button ③]
Press button ③, the LED on the top left corner flashes to indicate mode selection.
All values / settings in RED are in valid for 20 seconds.

Auto Mode [button ④]
Press button ④ to initiate automatic mode. The sensor starts working and all settings remain as before the light was switched ON/OFF.
Note: The function of "SEMI-AUTO" is disabled.

Power output [button ⑤]
Press button ⑤, the light output shifts between 80% and 100%.
Note: the function of "Sensor off" and "Twilight" are disabled.

Brightness +/- [button ⑥]
Press button ⑥ to adjust light brightness between 10% ~ 100%.

Scene prog. [zone ⑦] (One-key-commissioning)
1. Press button "Start" to program.
2. Select the buttons in ⑧"Detection range",⑨/⑩"Daylight threshold",⑪"Hold time", ⑫"Stand-by time",⑬"Stand-by dimming level" to set all parameters.
3. Press button "Memory" to save all the settings programmed in the remote control.
4. Press button "Apply" to set the settings to each sensor unit(s).
   For example, to pre-set detection range 100%, daylight threshold Disable, hold time 5min, stand-by time +∞, stand-by dimming level 30%, steps should be:
   Press button ⑦Start, button ⑧ 100%, ⑩Disable, ③ Shift, ⑪ 5min, ③ Shift,⑫+∞, ⑬30%, ⑦ Memory. By pointing to the sensor unit(s) and pressing ⑦ Apply, all settings are passed on the sensor(s).

Ambient daylight threshold [button ⑩]
1. Press button ③Shift, the red LED flashes for indication.
2. Press button ⑩, the ambient lux level is sampled and set as the new daylight threshold.

Detection range [zone ⑧]
Press buttons in zone ⑧ to set detection range at 100% / 75% /50% / 10%.

Hold time [zone ⑪]
Press buttons in zone ⑪ to set the hold time at 2s / 30s / 1min / 5min /10min / 15min / 20min / 30min.
Note: 1.To set hold-time at 30s / 5min / 15min / 30min, press button ③ Shift at first.
2. 2s is for test purpose only, stand-by period and daylight sensor settings are disabled in this mode.
*To exit from Test mode, press button ② or any button in zone ⑪.

Daylight threshold [zone ⑨⑩]
Press buttons in zone ⑨⑩ to set the daylight sensor at 2Lux / 10Lux /50Lux / 100Lux / 300Lux / 500Lux or Disable.
Note: To set daylight sensor at 100Lux / 300 Lux / 500Lux, press button ③ Shift at first.

Stand-by time [zone ⑫]
Press buttons in zone ⑫ to set the stand-by period at 0s / 10s / 1min / 5min / 10min / 30min / 1h / +∞.
Note: "0s" means on/off control; "+∞" means the stand-by time is infinite and the light is effectively controlled by the daylight sensor, off when natural light is sufficient and automatically on at dimming level when insufficient.

Stand-by dimming level [zone ⑬]
Press buttons in zone ⑬ to set the stand-by dimming level at 10% / 20% / 30% / 50%.

Dual tech & RF mode [zone ⑭]
All buttons in zone ⑭ are disabled.

Caution, Safety and Warning Markings in	Caution, Safety and Warning Markings in
SAFETY STOP – DO NOT ALTER	DISPOSITIF DE SÛRETÉ – NE PAS MODIFIER
CAUTION: This product is combustible. A protective barrier or thermal barrier is required as specified in the appropriate building code.	ATTENTION : Ce produit est combustible. Une barrière de protection ou une barrière thermique est exigée par le code du bâtiment en vigueur.
WARNING – Interconnection of more than one power supply source to a section of grid rail bus may present a fire hazard.	AVERTISSEMENT – Interconnexion de plus d'une source d'alimentation à une section de bus sur rail grille peut présenter un risque d'incendie.
DANGER - RADIATION	DANGER – RAYONNEMENT

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