

FLIR C-Walk / SafeWalk

Video detection pedestrian sensors



FLIR's pedestrian detection sensors are improving safety and efficiency at signalized intersections and pedestrian crossings. Detection of pedestrians allows for the dynamic control of traffic lights and warning lights, such as flashing beacons or in-road lighting

FLIR's pedestrian sensors combine a video camera and detector in one unit. The sensors make use of predefined detection zones ("virtual loops"), superimposed on the video image. As soon as a pedestrian enters the predefined zone, a detection output is sent to the traffic light controller, enabling the activation of dynamic traffic signal schemes.

- C-Walk: detection of crossing pedestrians
- SafeWalk: detection of waiting and approaching, curbside pedestrians

PEDESTRIAN DETECTION FOR TRAFFIC LIGHT CONTROL

FLIR's pedestrian presence sensors are a safer and more efficient alternative to push buttons. Research has shown that 70% of pedestrians will cross the road without waiting for the green signal after pushing the button. This results in unnecessary interruption of traffic flows and in more traffic congestion. In contrast, pedestrian detection will drop the green call when pedestrians are no longer waiting to cross. While pedestrians are crossing, pedestrian detection will extend the red light signal for vehicles to enable a safe passage.

PEDESTRIAN DETECTION FOR ACTIVATION OF WARNING LIGHTS

Warning lights can effectively enhance driver awareness and reduce risks for pedestrians. However, traditional, continuously flashing warning signals will have a reduced effect, because motorists do not receive any real stimulus to change driving behavior. C-Walk and SafeWalk are more effective, because they activate warning lights, such as in-road lighting or flashing beacons, only when pedestrians enter a pre-defined detection zone.

FAST & EASY INSTALLATION

- QUICK AND SIMPLE INSTALLATION
- SENSORS CAN BE MOUNTED ON EXISTING INFRASTRUCTURE

USER-FRIENDLY SYSTEM CONFIGURATION

- CONFIGURE THE SENSOR ON YOUR LAPTOP IN LESS THAN FIVE MINUTES.
- USE CAMERA IMAGES TO POSITION DETECTION ZONES
- VERIFY DETECTION ON MPEG-4 STREAMING VIDEO.



Pedestrian detection for traffic signal control



Pedestrian detection for activation of warning lights

Imaging Specifications

System Overview	C-Walk Ethernet version		C-Walk BPL version		SafeWalk Ethernet version	SafeWalk BPL version
Detection Functionalities	Moving pedestrians (on-crossing)		Moving pedestrians (on-crossing)		Waiting pedestrians (kerbside)	Waiting pedestrians (kerbside)
Detection Zones	1		1		1	1
Detection Outputs	1 direct 1 via ETH interface		1 via interface TI x-stream		2 direct 2 via ETH interface	2 direct 4 via interface TI x-stream
CAMERA						
Resolution	640 x 480 pixels (VGA)		640 x 480 pixels (VGA)		640 x 480 pixels (VGA)	640 x 480 pixels (VGA)
Frame rate	25 FPS		25 FPS		25 FPS	25 FPS
Lens Types	Wide Angle	Narrow Angle	Wide Angle	Narrow Angle	Wide Angle	Wide Angle
Focal Distance	2,1 mm IR pass	6,0 mm IR block	2,1 mm IR pass	6,0 mm IR block	2,5 mm IR pass	2,5 mm IR pass
Detection Distance	0-12 m , depending on installation height		0-12m, depending on installation height		4 m by 6 m	4 m by 6 m
Mounting Height	3.5 - 8 m		3.5 - 8 m		3.5 - 4.5 m	3.5 - 4.5 m
CMOS type	1/4" color		1/4" color		1/4" black & white, stereovision	1/4" black & white, stereovision
Compression	MJPEG, MPEG-4, H.264 (dual stream)		MJPEG, MPEG-4, H.264 (dual stream)		MPEG-4	MPEG-4
Housing						
Material	Aluminum		Aluminum		Fiber reinforced polycarbonate	Fiber reinforced polycarbonate
Dimensions	Vertically mounted 450 mm x 160 mm x 120 mm, Horizontally mounted 410 mm x 180 mm x 120 mm		Vertically mounted 450 mm x 160 mm x 120 mm, Horizontally mounted 410 mm x 180 mm x 120 mm		230 mm x 310 mm x 180 mm	230 mm x 310 mm x 180 mm
Sunshield	Optional		Optional		Standard	Standard
Power, outputs, communication						
Power input	12-42VDC, 12-30VAC		12-42VDC, 12-30VAC		12-48VDC, 24-30VAC	12-48VDC, 24-30VAC
IP Address	Yes		Yes		Yes	Yes
Communication PC - Sensor	Direct or via ETH interface		Via interface		Direct or via ETH interface	Via interface
Interface(s)	ETH interface		TI x-stream		ETH interface	TI x-stream
Outputs (Pmax=300mV, Imax=50mA, Umax=48VDC)	1		1		2	2 direct 4 via interface TI x-stream
PC Tool for Setup	FLIR ITS Configuration Tool		FLIR ITS Configuration Tool		FLIR ITS Configuration Tool	FLIR ITS Configuration Tool
Regulatory, environmental						
EMC	Electromagnetic Compatibility 2004/108/EG		Electromagnetic Compatibility 2004/108/EG		Electromagnetic Compatibility 2004/108/EG	Electromagnetic Compatibility 2004/108/EG
FCC	FCC Part 15 Class A		FCC Part 15 Class A		FCC Part 15 Class A	FCC Part 15 Class A
Temperature Range	-34°C to +80°C		-34°C to +80°C		-34°C to +80°C	-34°C to +80°C
Weatherproof	Weatherproof (UV-resistant)		Weatherproof (UV-resistant)		Weatherproof (UV-resistant)	Weatherproof (UV-resistant)
Waterproof	Housing = IP68, connectors = IP67		Housing = IP68, connectors = IP67		Housing = IP68, connection box = IP65	Housing = IP68, connection box = IP65

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