UpWatch

ORIGINAL INSTRUCTIONS

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User Manual

EQUIPMENT SAFETY SYSTEMS

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Important Information

Information contained in this publication regarding this device's proper use and applications, is accurate at the date of publication and may be superseded by updates. Always obtain the latest version from our website and avoid printing. The user agrees to all terms and conditions of use for Equipment Safety Systems products as detailed on our website.

The UpWatch is designed as an aid to the operator. The device detects the operator's position and movement with respect to the EWP's direction of movement and calculates if a crushing event is occurring, at which point it will trigger the cut-out of the machine's operation. The device responds to an event where actual contact occurs to the EWP operator. As a secondary guarding system, the device is designed to minimise the occurrence of an event resulting in serious injury or fatality.

UpWatch is a secondary guarding system only and does not discharge the operator from operating the EWP in accordance with the manufacturer's correct operating procedures. The device does not provide protection against all operational hazards that may be encountered while operating an EWP. It may not work in all situations and environments, it is not intended as a replacement for the safety features installed by the manufacturer of an EWP, and it will not provide adequate protection where an operator has failed to conduct a proper safe work assessment or uses the EWP in an unsafe way. The device should not be relied upon to safely operate the EWP and should not replace the correct operational training and safe work procedures.

UpWatch User Manual

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Operational Instructions

WARNING: RISK OF SEVERE INJURY OR DEATH

The UpWatch is an aid to the operator and this system does not replace operator training or safe operating practices. The system relies on optical detection and the operator must use the machine while standing in front of the control box at all times.
Operation may be impaired or stopped if the sensor is covered by water, dust or other material. Wipe the sensor before use and ensure it has a clean surface during operation

Starting Position

The UpWatch sensor is mounted next to the operator controls. The sensor must always maintain a visible line of sight to the operator's chest. The operator must always remain in position and maintain normal movements when using the vertical lift

Machines without the dead man switch:

Stand Infront of the control box, wait for the in-position audio beep from the sensor and then select the up movement

Machines with a dead man switch

Stand in front of the control box, push the deadman button and then select the up movement

Cutout

The UpWatch will cutout and stop the machine movement when:

- The operator is too close to the sensor
- The operator moves rapidly toward the sensor when the machine is elevating upwards
- The operator moves out of the sensor beam when elevating upwards

Always Lower

The UpWatch does not interact with the machines lowering function switch. Lowering of the machine is always available and the operator does not have to be in position to activate the lowering function

Lowering function is always available

There is no override to raise the platform

Prone Operator Alarm

The alarm will sound after a cutout to alert the worksite that the operator may be trapped. The alarm will repeat at short intervals until the operator moves away from the sensor and the controls are returned to neutral position

Prone alarm will sound after a cutout if Operator remains motionless

Obstructed Sensor

The UpWatch detects if the sensor is obstructed. An obstruction may occur if the sensor is physically covered with an object or a material such as paint or concrete. An obstruction will also occur with any attempt to trick or bypass the system. The OverWatch-Solo will announce “Sensor Obstruction”. The operator must then clean the sensor to operate the machine

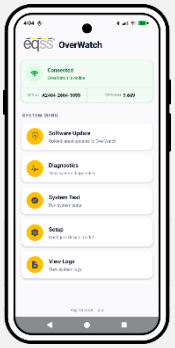
The system detects of the sensor is **obstructed**, clean the sensor to continue normal operation

Companion App

The UpWatch has a companion app available on the App Store or the Google Play Store. The EQSS app can connect to the UpWatch system for diagnostic purposes and viewing machine usage logs

Download on the App Store

GET IT ON Google Play



Cutout Behaviour

The UpWatch detects the operator's position and movements, with respect to the machine's direction of movement. It will then apply a cutout to stop the machine to reduce the risk of harm to the operator

ELEVATE MODE: Cutout Behaviour		
Operator Action	**Elevate**	**Lower**
Body is in front of sensor to start movement	No Cutout	No Cutout
Body is not in front of sensor to start movement	Cutout	No Cutout
Body moves out of the sensor beam or duck down	Cutout	No Cutout
Body moves rapidly toward the sensor	Cutout	No Cutout
Body moves rapidly away from the sensor	Cutout	No Cutout
Body moves over the sensor	Cutout	No Cutout

Audio and Visual Notifications

The UpWatch detects the operator's position and movements, with respect to the scissor lift's direction of movement. It will then apply a cutout to stop the machine to reduce the risk of harm to the operator. The UpWatch normal operating noise level is less than 70 dB(A)

Light	Audio	Description
Green	UpWatch Version	Device is powered and operational
Blue	Elevate	Button is pressed and session is running
Blue Flash	None	The sensor is pointing to a reflective surface
Yellow	Sensor Obstruction	There is an object covering the sensor
Purple	Operator Zone	Operator is not in the defined range / box
Red	Cutout	Cutout has occurred and EWP has stopped

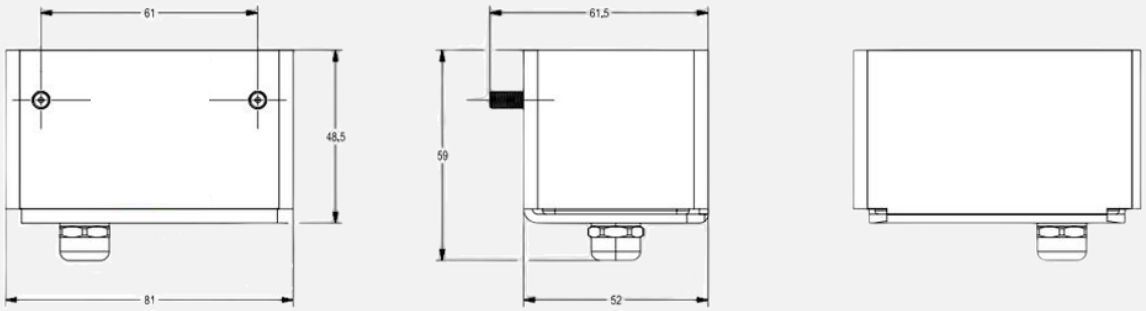
Pre-Operation Checks

It is a requirement to complete an inspection of the UpWatch as part of the daily pre-operational inspection and the maintenance periodic inspection. Each inspection will confirm the UpWatch is functioning correctly. This inspection must be conducted by a person with the expertise to safely operate the MEWP and evaluate the operation and condition of the system

Visual Inspection		
Item	**Action**	**Result**
1	**Sensor Condition:** Inspect the sensor for any cracks or damage, make sure the sensor face is clean	
2	**Sensor Installation:** Check the sensor is not loose and is in the correct position pointing towards the operator chest	
3	**Sensor Wiring:** Check wiring is secure and undamaged. Check the wire running from the control box to the operator sensor is secure	

Functional Inspection		
Item	**Action**	**Result**
4	**Indicator Lights:** Confirm the sensors light is visible when the system is active	
5	**Audio:** Stand in position, and elevate the machine, confirm the audio is Elevate	
6	**Operator Zone:** Stand away from the sensor and press the trigger, confirm the audio is “Operator zone”. The UpWatch should not allow elevate movement	
7	**Sensor Obstruction:** Hold your hand over the face of the sensor and press the elevate button. Confirm the audio is “Sensor obstruction” and the machine does not elevate	
8	**Cutout:** Stand in front of the control box, start to elevate and lean over the sensor. Confirm the machine cuts movement	

Dimensions & Specifications



ELECTRICAL	
Supply Voltage	7VDC to 36VDC
Current	350mA @ 12VDC
Protection	1000mA Regulation
CONNECTIVITY	
Inputs	2 x Analogue - 12 bit
Outputs	1 x SSR 4A | 1 x Digital 0.5A
Wi-Fi	802.11 b/g/n
Band	2.4GHz
Diagnostics	Embedded Server
Static IP	192.168.1.5
PROCESSOR	
Architecture	32Bit LX6 140MHz
RAM	524KB
Flash	16MB – Data Storage
Watchdog	250mS
Data Logging	1024
Bootloader	OTA
AUDIO	
Feedback	Voice & Alarms
Language	Multilingual
Power	4W, 8Ω
Sound Level	100dB @ 10cm
SENSOR	
Type	LIDAR
Light Source	VCSEL
Wavelength	905nm
Field of View	Typ. 14 x 1
Eye Safety	Class 1 Eye Safe [EN60825]
ENVIRONMENTAL	
Operating Temp	-20°C to +65°C
Storage Temp	-25°C to +90°C
Sensor Protection	IP64
Humidity	5% to 98%
Vibration	EN60068-2-6
Shock	EN60068-2-7
EMC	EN61006-6-1 /2 /3/ 4
SAFETY	
Function Safety	SIL1 / CAT2 Plc

Inspection Log

Date	Visual Inspection	Functional Inspection	Notes & Sign Off

Notes

Markings

The UpWatch is marked on the left-hand side with a warning decal which also contains information on how to access the user manual. The right-hand side is marked with the product specifications and CE / UKCA declaration

LA001044

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