



# ***SAFETY EQUIPMENT***

FOR RESPONSE TEAMS



**STABILITY CONTROLER AND ALARM FOR RISK OF COLLAPSE | CURRENT DETECTOR**



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## MAKE YOUR RESCUE OPERATION SAFE!

# LEADER BRINGS SAFETY MONITORING DEVICES FOR VARIOUS EMERGENCY APPLICATIONS

### HERITAGE

#### A COMBINATION OF EXPERTISE

We have decided to improve the safety for rescuers following an assessment that there was no real versatile safety monitoring system for early warning of potential building collapse. We have chosen 2 technologies to make emergency operations around unstable buildings or objects safer. LEADER now provides welcome substitutes to traditional methods of monitoring movement which eliminate the potential for human error.

- Since 2010, LEADER has offered the LEADER SENTRY laser telemeter fulfilling this safety needs. Since end of 2019, the company supplies Fire and Rescue teams with the LEADER SENTRY WIRELESS which brings even better performances together with wireless communication between units. The new design is a lot more compact, keeping simplicity for the use of the additional features.
- Also, at the end of 2018, LEADER acquired the WASP emergency safety monitoring device from WASP-RESCUE and his inventor Matt KEOGH, former Greater Manchester Fire and Rescue firefighter and member of the UK - ISAR

team. Matt created the WASP, for Warning Alarm for Stability Protection, especially to protect Urban Search And Rescue colleagues during daring earthquake rescues.

- LEADER also offers the well-known LEADER VOLT detector which is useful for teams to detect AC current on the field.

### OUR COMMITMENT PROCESS FOR QUALITY

Our equipment is specifically designed for Fire and Rescue operations to protect rescue crews in hostile environments. The work of our R&D and Production teams brings you with qualitative safety monitoring devices. The whole Leader range is manufactured in France, within the strictest quality processes. Our engineers never stop digging for quality. This is the reason why our equipment is reputed as very reliable!

### OUR OFFER

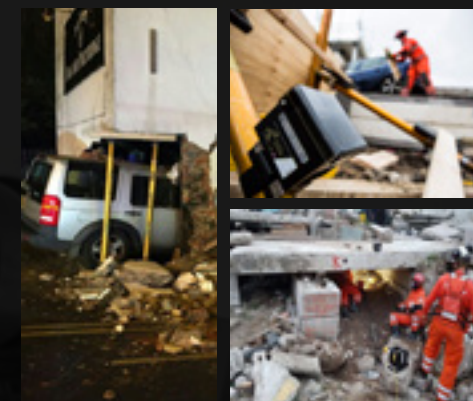
#### EVERYTHING FOR EASE AND SAFETY !



#### ■ Early warning to preserve lives

LEADER proposes complementary technologies to alert the crews working around the structures of imminent danger of collapse. This makes LEADER the main company worldwide to provide alternatives in this crucial area of incident safety.

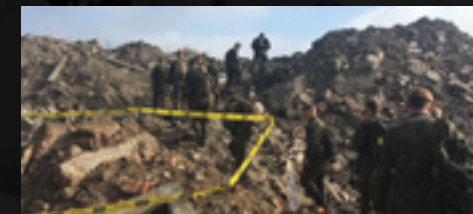
- LEADER SENTRY WIRELESS laser telemeter: Pointed to an object at distance, the SENTRY monitors the distance and warns the crew as soon as the targets shows a movement over the selected threshold.
- LEADER WASP Accelerometer: Fixed on an object WASP monitors rotational movement and warns as soon as there is a difference in angle of the structure
- LEADER VOLT detector: Pointed to any direction, it detects alternative current and warns when getting closer to electrical danger.



#### ■ Versatility

LEADER safety equipment is dedicated to Fire response, Rescue operation, or USAR search that implicates firefighters, rescue teams, K9, medics, police, investigators, etc...

- Help in making safety critical decisions
- Provide protection from unstable objects for:
  - Structural fires
  - Road traffic collisions
  - Partly collapsed structures
  - Trench rescues
  - Shoring systems movement
  - Internal breach operations
  - Fragile building structures during and following fire / flood incidents, etc...



#### ■ Creating safe zones

Creating implicit safe zone for the crew working in risky areas. The stability controller concept is well known for USAR applications and may become mandatory in some FIRE situations:

- **At arrival** of the command vehicle on the fire/rescue scene LEADER safety controllers can be implemented for creating a safe zone and make sure a structure is not moving before the crew enters the building.
- **During fire attack** to alert in case of ongoing movement of the structure.
- **Following fire extinguishing** to keep the area safe for people (Overhaul, Clearing, Police investigation...) because the building is weakened.



#### ■ Easy job using dry cell batteries

By choosing dry cell batteries for powering our safety equipment, the idea was to facilitate the travels by plane of national and international rescue teams. Indeed Lithium batteries bring heavy constraints (declaration, logistics...). USAR, INSARAG teams or National rescue teams who need to fly out to join a neighbor state or some further country can easily bring the LEADER safety equipment with them in planes. Then the safety equipment will be implemented quickly upon landing! Dry cell batteries are also easily found worldwide even on catastrophe scenes.



#### ■ Robustness and ergonomics

LEADER engineers are focused on how the safety devices are being used on the field. This is a critical point taken into account daily to bring the most robust, ergonomic and intuitive design to the Fire and Rescue Services.





# LEADER SENTRY WIRELESS : STRUCTURE STABILITY MONITORING TELEMETER

## EARLY DETECTION AND ALERT OF MOVEMENT FROM THE STRUCTURE IT IS POINTED TO

LEADER SENTRY is a safety monitoring device which is portable and autonomous. It continuously detects slight movements at distance of any unstable structure or object. The structure is targeted by a harmless laser. In case of movement, The LEADER SENTRY immediately triggers a powerful siren for alerting the team working around about dangerous moves or imminent collapse.

It creates safe zones and secured working conditions for responders engaged on the rescue scene.

LEADER SENTRY can be positioned up to 50m distance from unstable structures. It will trigger a 105dB alarm in case of weak movement detected (from 2 to 100mm). It provides a 6h running time using dry cell batteries. Compact and lightweight: 3.8kg (laser + tripod). IP55 Ingress Protection will keep it

reliable in any weather condition.

Mainly used for outdoor large areas LEADER SENTRY can connect 2 wireless lasers together up to a 100m distance. They can be supplied with an optional wireless remote control box with integrated siren. The siren can also be voluntarily activated to ask for evacuation. Being held by a supervisor it allows better management of the LEADER SENTRY lasers at distance.

Applications:

- Structural fires
- Road traffic collisions
- Collapsed structures
- Trench rescues
- Shoring systems movement
- Fragile structures during or after fire / flood incidents



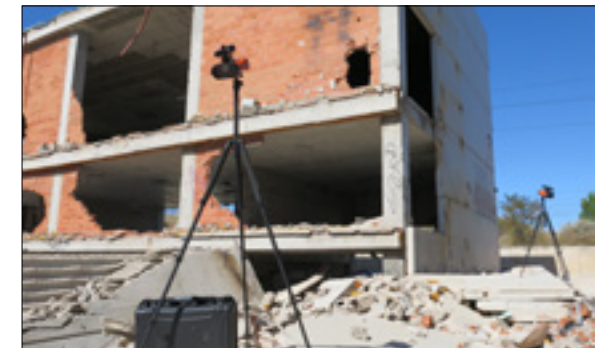
10/2020 - ZCL.15.356.EN.1

## FEATURES AND BENEFITS



### Intuitive control board

Device offers 7 thresholds : 2, 5, 10, 20, 40, 70 and 100mm with 1mm accuracy. Information is displayed on an OLED screen with excellent clarity even in bright sunlight. Software is intuitive and buttons are easy to operate with gloves.



### 50m laser beam range

In addition to the 50m range, the harmless laser filters out any quick interruption of the laser beam by a bird or person passing through. This prevents from false alarms.



### Telescopic sight

Associated telescopic sight to pinpoint precisely target that needs monitoring. It is equipped with a 2.5x/10x focus and a Ø40mm objective lens.



### Audio and Visual alarms

In case the structure moves over the selected threshold, a 105dB audible alarm is triggered together with 3 powerful white flash blinking beacons to ensure working crew to hear and see the alert.



### Wireless connection

- 2 lasers can be wireless connected up to 100m from each other. This allows managing both lasers from one of them.
- An optional wireless remote control can be supplied to even better ease management at distance.



### Various power supplies

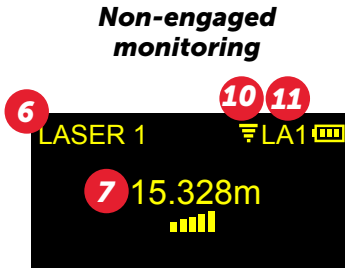
- 12 AAA alkaline supplied cell batteries provide 6h run time (9h with Lithium dry cells). Easy to find on the field and no transportation constraints compared to Lithium batteries.
- 110/240V 50/60Hz mains power supply that can also be plugged to 12/24V cigar lighter plug via an integrated adaptor.



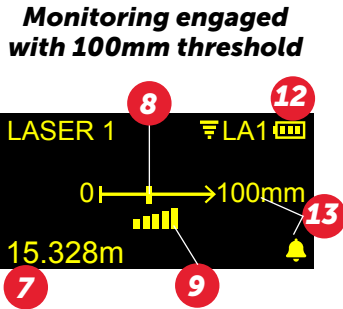
LEADER SENTRY FUNCTIONS



- 1 | OLED display
- 2 | Power On-Off
- 3 | Measurement units: mm or inches
- 4 | Display of the main parameters of both lasers beams at the same time. Also allows to deactivate the audible alarm for silent operations (the flashes remain active).
- 5 | Allows switching from one laser to another and thus making the settings on the manipulated laser or the remote one.
- 6 | Name of the laser being configured.



- management.
- 7 | Distance between the laser and target (m or ft).
  - 8 | Movable cursor representing the movement of the target.
  - 9 | Laser quality measure permanently displayed
  - 10 | Wireless connection quality level between lasers
  - 11 | Reminder of the name of the laser physically handled. (LA1 or LA2)
  - 12 | Battery level
  - 13 | Bell indicating that monitoring is activated and that the alarm is ready to alert if the selected threshold is exceeded.



**Note:** An optional wireless remote control (RC) can be connected for better

CHARACTERISTICS

<b>Fire and Rescue applications</b>	■ Designed for use in large indoor and outdoor areas	<b>Monitoring technology</b>	■ Telemeter laser beam
<b>Design concept</b>	■ Laser head on tripod + warning alarm	<b>Accurate</b>	■ Accuracy: +/-1mm
<b>Monitoring method</b>	■ Detects distance difference		■ Laser: 2kg and Tripod: 1.8kg
<b>Positioning</b>	■ Placed at distance up to 50m from structure		● Remote control : 550g
<b>Safe zone to create</b>	■ Safe and easy implementation at distance from the dangerous structure	<b>Lightweight</b>	● External rechargeable battery : 640g
<b>7 thresholds</b>	■ 2, 5, 10, 20, 40, 70, 100 mm (or inches)		● Suction pad : 300g
<b>See live monitoring</b>	■ Distance displayed at all time		■ Laser: H182 x D165 x W241 mm
<b>Visual alarm</b>	■ 3x 100 Lumens white flash lights for 360° visibility		■ Tripod: H1785 mm unfolded / H190 mm folded
<b>Audible alarm</b>	■ 105dB alarm or Mute		● Remote control : H33 x D128 x L192 mm
<b>Wireless connection</b>	■ 2.4GHz Zigbee technology / 100m range / 2 lasers + 1 optional remote control	<b>Compact</b>	● External rechargeable battery : H70 x D95 x L175 mm
<b>Alarm relay</b>	■ Optional remote control integrating 80dB alarm. Output connection for more powerful remote loud speaker (not supplied).		● Suction pad : H120 x Ø98 mm
<b>Robust</b>	■ 2m drop test onto concrete	<b>Strong material</b>	■ High impact resistant thermoplastic elastomer
<b>Water resistant</b>	■ IP 55	<b>Run time with dry cell batteries</b>	■ Alkaline (supplied): >6h
<b>Dry battery cells power supply</b>	■ 12x 1.5V AAA type cells		■ Lithium (not supplied): >9h
<b>Main power supply</b>	■ 110/240V transformer for use with mains plug, combined with 12-24V cable for use in cigar light plug (as standard).	<b>Remote control run time</b>	● 55h
<b>Battery power supply</b>	● External NiMH rechargeable battery (up to 45h run time)	<b>External battery run time</b>	● 45h (charging time 5.5h)
<b>Sentry single</b>	■ 1 SENTRY in transport bag with standard accessories	<b>Wide operating t°C range</b>	■ Laser: -10°C to +50°C.
<b>Sentry double</b>	■ 2 SENTRY in back pack with standard accessories		■ Remote control: -20°C to +50°C
<b>Safety dual pack</b>	■ 1 WASP + 1 SENTRY in back pack with standard accessories	<b>Wide storage t°C range</b>	■ Laser and Remote control: -20°C to +50°C
		<b>Protection for carriage</b>	■ <b>Single:</b> Padded bag / H170 x D200 x L360 mm Empty: 1.3kg / Full: 6kg. No hard case. <b>Double:</b> Back pack / H225 x D440 x L575 mm Empty: 3.2kg / Full: 12.4kg Optional IP67 hard case: Empty: 7.3kg / Full: 19.7kg <b>Single Full:</b> Padded bag / H170 x D200 x L360 mm Empty: 1.3kg / Full: 8kg. No hard case. <b>Double Full:</b> IP67 hard case / H245 x D525 x L655 mm Empty: 7.3kg / Full: 22.5kg <b>Dual:</b> Back pack / H225 x D440 x L575 mm Empty: 3.2kg / Full: 17.3kg Optional IP67 hard case: Empty: 7.3kg / Full: 24.6kg
		<b>Warranty</b>	■ 24 months
		<b>Made in France</b>	■ Designed and manufactured in France

**LEGEND**  
■ As standard  
● Option adaptable afterward

AVAILABLE MODELS

<b>LEADER SENTRY SINGLE</b>	D11.06.020	1 telemeter with telescope, tripod, ball-joint mount, 4 battery packs to receive 12 AAA supplied alkaline batt., 110/220V mains power supply with international adaptors, 12/24V cable cigar lighter adaptor, straps with hooks, padded transport bag, user manual, quick start guide
<b>LEADER SENTRY SINGLE FULL KIT</b>	D11.06.020F	1 telemeter with telescope, tripod, ball-joint mount, 4 battery packs to receive 12 AAA supplied alkaline batt., 110/220V mains power supply with international adaptors, 12/24V cable cigar lighter adaptor, straps with hooks, padded transport bag, user manual, quick start guide, 1 remote control, 1 external rechargeable battery and charger
<b>LEADER SENTRY DOUBLE</b>	D11.06.022	2 telemeters with telescope, tripod, ball-joint mount, 8 battery packs to receive 24 AAA supplied alkaline batt., 2x 110/220V mains power supply with international adaptors, 2x 12/24V cable cigar lighter adaptor, 2 straps with hooks, 1 back pack, user manual, quick start guide
<b>LEADER SENTRY DOUBLE FULL KIT</b>	D11.06.022F	2 telemeters with telescope, tripod, ball-joint mount, 8 battery packs to receive 24 AAA supplied alkaline batt., 2x 110/220V mains power supply with international adaptors, 2x 12/24V cable cigar lighter adaptor, 2x straps with hooks, 1 back pack stowed into IP67 hard case, user manual, 1 quick start guide, 1 remote control, 2 external rechargeable batteries and 2 chargers
<b>SAFETY DUAL KIT WASP + SENTRY</b>	D11.06.032	1 WASP unit, 4x C supplied alkaline batteries, Attachment accessories (1 Clamp, 1 Sucking pad, 1 Strut bracket, 1 Multi-purpose plate, 1 String with carabiners), user manual. + 1 SENTRY telemeter with telescope, tripod, ball-joint mount, 4 battery packs to receive 12 AAA supplied alkaline batt., 110/220V mains power supply with international adaptors, 12/24V cable cigar lighter adaptor, straps with hooks, user manual. ALL stowed into a back pack (hard case in option).
<b>Option</b>	D11.06.023	External rechargeable NiMH battery (1 per laser). IP67. Comes with its cable
<b>Option</b>	D11.06.025	Charger for external rechargeable NiMH battery
<b>Option</b>	D11.06.021	Wireless remote control with integrated audio alarm (6AA alkaline cell batteries supplied)
<b>Option</b>	D11.06.026	Clutch bag for wireless remote control
<b>Option</b>	D11.06.024	Hard case. IP67. Sized for SENTRY Wireless DOUBLE models and Safety Dual Pack

ACCESSORIES



**Telescopic tripod** (comes as standard)  
Extended height up to 1.8m and comes with 3D attachment piece to orientate laser head in any direction. It integrates a hook underneath tripod top for hanging a ballast to ensure better stability.



**Adjustable strap** (comes as standard)  
Strap with hooks for attaching load or fixing the tripod to objects on ground to secure the stability.



**External rechargeable battery** (optional). This battery is NiMH type (no lithium, no transportation constraint!) and provides 45h run time. IP55. The 110/240V charger comes with international adaptors and must be ordered together with it.



**Remote control** (optional)  
Allows setting and stopping lasers at distance. Relays the audio triggered alarm of the lasers via the integrated speaker (80dB). Powered by 6 AA dry cell batteries providing 55h run time.



**Clutch bag** (optional)  
It allows to easily carry the remote control.



**Transport**  
1/ SENTRY SINGLE comes with a classic padded transportation bag.  
2/ SENTRY DOUBLE comes with a back pack to allow easy walking transportation on the field.  
3/ An optional hard case is available (shockproof, IP67) for SENTRY DOUBLE and SAFETY DUAL PACK.





# LEADER WASP: STRUCTURE STABILITY MONITORING SENSOR

## EARLY WARNING OF MOVEMENT FROM THE STRUCTURE IT IS ATTACHED TO

LEADER WASP is designed to protect emergency services workers and members of the public. This device is the world's first digital monitoring system created especially to assist emergency services crews and keep them safe in a variety of scenarios. The LEADER WASP, or Warning Alarm for Stability Protection, attaches to any surface in any position and provides an early warning of movement and vibration.

The LEADER WASP continuously detects slight movements and can detect rotational movement from 0.1° to 2.6° and/or vibration from 0.5Hz to 100Hz. Its magnetic base provides for quick and easy attachment to metal – and is supplied with a variety of attachments to provide fixings to glass, metal, concrete and other structures. Portable and lightweight with rapid deployment, it is simple. LEADER WASP triggers audio and visual alarms as soon as movement goes beyond selected threshold for any scenario.

Emergency services personnel can concentrate on the task working safely in areas of extreme pressure!

LEADER WASP provides protection from:

- Collapsed structures
- Road traffic collisions
- Trench rescues
- Movement of shoring systems
- Structural fires
- Internal breach operations
- Dangerous structures following fire / flood
- Other incidents



LEADER WASP

## FEATURES AND BENEFITS



### Intuitive control board

The WASP has only few buttons to set the Movement and Vibration alarms: 3 push buttons and 2 rotary dials. They can be set independently or simultaneously. A transparent protective shield prevents unwanted settings change during close operation.



### Set movement alarm

Adjustable movement sensors dial allows setting angle threshold from 0.1° to 2.6° to monitor movements accordingly.



### Set vibration alarm

Adjustable vibration sensor dial allows setting sensitivity threshold from 0.5Hz to 100Hz to monitor accordingly.



### Audio and Visual alarms

The WASP is armed with 8 red LED strobes to provide visual warning and an adjustable audible siren. They are triggered when movement or vibration goes beyond selected threshold to alert users. There is a comfort blink every 15 seconds to indicate device is working



### Built in magnetic base

The WASP integrates a magnetic base for easy and quick attachment to metal. The device will work in ANY position at ANY angle. It comes with other fixings with built in metal plate to allow attachment to glass, concrete, wood, strut and other structures (see accessories).



### Cell batteries power supply

Simple 4x C dry cell batteries power supply providing 1 week run time. Easy to find on the field and no transportation constraints compared to Lithium batteries.



## LEADER WASP FUNCTIONS



- 1 | Power On-Off
- 2 | Siren sound volume control button
- 3 | Set button: Allows engaging the alarms once Movement and / or Vibration thresholds are selected.
- 4 | Movement dial: Allows setting movement threshold from 0.1° to 2.6°
- 5 | Vibration dial: Allows setting vibration threshold from 0.5Hz to 100Hz

Device does not integrate any display for better robustness in harshest environments.

For giving battery level information, device will flash the letter 'B' in Morse code to indicate low battery.

For informing rescue crews that device is active, it will offer a comfort flash four times a minute to indicate that it is in monitoring phase.

Movement and Vibration thresholds can be selected at the same time for simultaneous monitoring.

## CHARACTERISTICS

<b>Fire and Rescue applications</b>	■	For use where crews are at work in confined space and outdoor situations	<b>Monitoring technology</b>	■	Accelerometers and Seismic sensor
<b>Design concept</b>	■	Portable sensor with integral magnet for quick fixing on metal + warning alarm	<b>Accurate</b>	■	Accuracy: +/-0.1mm - Resolution: +/-0.01mm
<b>Monitoring method</b>	■	Detects rotational movement and / or vibration	<b>Lightweight</b>	■	Unit: 3.1kg
<b>Implementation</b>	■	Attached to structure	<b>Compact</b>	■	Unit: H140 x D150 x W170 mm
<b>Positioning</b>	■	Rescuers get protection during operation close to monitored structure	<b>Strong material</b>	■	High impact resistant composite with integral transparent lid and magnetic contact pad
<b>Alert thresholds</b>	■	Angle from 0.1° to 2.6° (360° in 3 directions) and / or vibration from 0.5hz to 100hz	<b>Cell Batteries run time</b>	■	Alkaline (supplied): 1 week Lithium (not supplied): >1 week Rechargeable NiMH (not supplied): >1 week
<b>Visual alarm</b>	■	8 blinking red flash lights for 360 visibility	<b>Operating t°C range</b>	■	-
<b>Audible alarm</b>	■	78.5 dB alarm, choose volume levels, or Mute	<b>Storage t°C range</b>	■	-
<b>Calibration</b>	■	Need about 20 sec to calibrate VS environment	<b>Protection for carriage</b>	■	<b>Single:</b> IP67 hard case / H216 x D429 x L557 mm Full: 11.9kg
<b>Robust</b>	■	2m drop test onto gravels		■	<b>Double:</b> IP67 hard case / H224 x D505 x L638 mm Full: 19.1kg
<b>Water resistant</b>	■	IP66		■	<b>Dual:</b> Back pack / H225 x D440 x L575 mm Empty: 3.2kg / Full: 17.3kg Optional IP67 hard case: Empty: 7.3kg / Full: 24.6kg
<b>Dry cell batteries power supply</b>	■	4 x 1.5V C type cells	<b>Warranty</b>	■	24 months
<b>Wasp Single</b>	■	1 WASP in case with standard accessories	<b>Made in France</b>	■	Designed in the UK, manufactured in France
<b>Wasp Double</b>	■	2 WASP in case with standard accessories			
<b>Safety Dual Pack</b>	■	1 SENTRY + 1 WASP in back pack with standard accessories			

## AVAILABLE MODELS

<b>LEADER WASP SINGLE</b>	D11.06.030	1 Wasp unit, 4x C supplied alkaline batteries, Attachment accessories (1 Clamp, 1 Sucking pad, 1 Strut bracket, 1 Multi-purpose plate, 1 String with carabiners), 1 Delimitation tape, IP67 hard case, user manual
<b>LEADER WASP DOUBLE</b>	D11.06.031	2 Wasp units, 8x C supplied alkaline batteries, Attachment accessories (2 Clamps, 2 Sucking pads, 2 Strut brackets, 2 Multi-purpose plates, 2 Strings with carabiners), 1 Delimitation tape, IP67 hard case, user manual
<b>SAFETY DUAL PACK SENTRY + WASP</b>	D11.06.032	1 WASP unit, 4x C supplied alkaline batteries, Attachment accessories (1 Clamp, 1 Sucking pad, 1 Strut bracket, 1 Multi-purpose plate, 1 String with carabiners), user manual. + 1 SENTRY telemeter with telescope, tripod, ball-joint mount, 4 battery packs to receive 12 AAA supplied alkaline batt., 110/220V mains power supply with international adaptors, 12/24V cable cigar lighter adaptor, straps with hooks, user manual. ALL stowed into a back pack (hard case in option).

### LEGEND

- As standard
- Option adaptable afterward

## BRACKETS / ACCESSORIES

KEEP IN MIND THE WASP FEATURES A MAGNET AT ITS BASE TO ATTACH TO ALL ACCESSORIES



**Metal clamp** (comes as standard)  
The clamp is a toughened plastic bracket with a steel base. Thanks to its built in magnet the WASP will attach to the clamp. The WASP can be located in the area where the crews operate. It can be attached by the clamp directly to ladders, scaffolding, door frames...



**Sucking pads** (comes as standard)  
In conjunction with the clamp, the sucking pad will allow the WASP to be used on any non-metallic magnetic flat surfaces.



**Rescue strut bracket** (comes as standard)  
It consists of a bracket with strap and a steel plate. It enables to attach the WASP to circular objects including rescue struts and street furniture.



**Multi-purpose plate** (comes as standard)  
It is a steel plate which can be used as a nail plate and attached to wood shoring systems, or any wood elements. A ratchet strap (not provided) can also be used in conjunction with it to attach WASP on column or any other means.



**Carabiner with cord** (comes as standard)  
The multi-purpose plate can be used in conjunction with it to monitor areas at angles where the unit may slip.



**Delimitation tape** (comes as standard)  
It visually helps identifying a monitored area. Also helpful for restricting access to a dangerous zone.





# LEADER SAFETY MONITORING DEVICES

## SENTRY AND WASP COMPARISON

### TWO TECHNOLOGIES BUT SO COMPLEMENTARY FOR VARIOUS EMERGENCY SCENARIOS

These two devices will complement each other in many situations where safety monitoring will be required. LEADER WASP being attached to the nearby structure and LEADER SENTRY monitoring at distance. Thanks to these systems, fire and rescue crews can concentrate on the task working far safer in areas of extreme pressure.



LEADER WASP

LEADER SENTRY on tripod



LEADER SENTRY AND LEADER WASP TECHNICAL COMPARISON

BENEFITS		SENTRY WIRELESS		WASP	
Fire and Rescue applications	■	Designed for large indoor and outdoor areas	■	For use in the nearby of crews at work in confined space and outdoor situations	
Design concept	■	Laser head on tripod + warning alarm	■	Portable sensor + warning alarm with integral magnet for quick fixing on metal	
Monitoring method	■	Detects distance difference	■	Detects rotational movement and / or vibration	
Implementation	■	Placed at distance up to 50m from structure	■	Attached to structure	
Positioning	■	Safe and easy implementation because at distance from the structure	■	Rescuers get protection during operation close to structure	
Alert thresholds	■	7 thresholds: 2, 5, 10, 20, 40, 70, 100 mm (or inches)	■	Angle from 0.1° to 2.6° (360° in 3 directions) and / or vibration from 0.5hz to 100hz	
See live monitoring	■	Distance displayed at all time	-	No screen	
Visual alarm	■	3x 100 Lumens white flash lights for 360° visibility	■	8 blinking red flash lights for 360 visibility	
Audible alarm	■	105dB alarm or Mute	■	78.5 dB alarm, choose volume levels, or Mute	
Wireless connection	■	2.4GHz Zigbee technology / 100m range / 2 lasers + 1 optional remote control	-	-	
Alarm relay	■	Optional remote control integrating 80dB alarm. Output connection for remote loud speaker (not supplied).	-	-	
Calibration	-	No calibration required	■	Need about 20 sec to calibrate VS environment	
CHARACTERISTICS		SENTRY WIRELESS		WASP	
Monitoring technology	■	Telemeter laser beam	■	Accelerometers and Seismic sensor	
Accuracy	■	Accuracy: +/-1mm	■	Accuracy: +/-0.1mm - Resolution: +/-0.01mm	
Lightweight	■	Laser: 2kg and Tripod: 1.8kg	■	Unit: 3.1kg	
	●	Remote control : 550g	-	-	
	●	External rechargeable battery : 850g	-	-	
Robust	■	Suction pad : 300g	-	-	
	■	2m drop test onto concrete	■	2m drop test onto gravels	
Water resistant	■	IP 55	■	IP66	
Dry cell batteries power supply	■	12x 1.5V AAA type cells	■	4 x 1.5V C type cells	
Main power supply	■	110/240V transformer for use with mains plug, combined with 12-24V cable for use in cigar light plug (as standard).	-	-	
Battery power supply	●	External NiMH rechargeable battery (up to 45h run time)	-	-	
Compact	■	Laser: H182 x D165 x W241 mm Tripod: H1785 mm unfolded / H190 mm folded*	■	Unit: H140 x D150 x W170 mm	
	●	Remote control : H33 x D128 x L192 mm	-	-	
	●	External rechargeable battery : H70 x D95 x L175 mm	-	-	
	●	Suction pad : H120 x Ø98 mm	-	-	
Strong material	■	High impact resistant composite	■	High impact resistant composite with integral transparent lid and magnetic contact pad	
Run time with Cell Batteries	■	Alkaline (supplied): >6h Lithium (not supplied): >9h Rechargeable NiMH (not supplied): >7h	■	Alkaline (supplied): 1 week Lithium (not supplied): >1 week Rechargeable NiMH (not supplied): >1 week	
Remote control long run time	●	55h	-	-	
External battery run time	●	45h (charging time 5.5h)	-	-	
Operating t°C range	■	Laser: -10°C to +50°C. Remote control: -20°C to +50°C	■	-	
Storage t°C range	■	Laser and Remote control: -20°C to +50°C	■	-	
Protection for carriage	■	<b>Single:</b> Padded bag / H170 x D200 x L360 mm Empty: 1.3kg / Full: 6kg. No hard case. <b>Double:</b> Back pack / H225 x D440 x L575 mm Empty: 3.2kg / Full: 12.4kg Optional IP67 hard case: Empty: 7.3kg / Full: 19.7kg <b>Single Full:</b> Padded bag / H170 x D200 x L360 mm Empty: 1.3kg / Full: 8kg. No hard case. <b>Double Full:</b> IP67 hard case / H245 x D525 x L655 mm Empty: 7.3kg / Full: 22.5kg	■	<b>Single:</b> IP67 hard case / H216 x D429 x L557mm Full: 11.9kg <b>Double:</b> IP67 hard case / H224 x D505 x L638 mm Full: 19.1kg	
	■	<b>Dual:</b> Back pack / H225 x D440 x L575 mm / Empty: 3.2kg / Full: 17.3kg Optional IP67 hard case: Empty: 7.3kg / Full: 24.6kg			
Warranty	■	24 months	■	24 months	
Made in France	■	Designed and manufactured in France	■	Designed in the UK, manufactured in France	

LEGEND

■ As standard

● Option adaptable afterward

- Not applicable

AVAILABLE MODELS

MODELS	REF	SENTRY WIRELESS	REF	WASP
Single model	D11.06.020	1 SENTRY in transport bag with standard accessories	D11.06.030	1 WASP in case with standard accessories
Single model Full kit	D11.06.020F	1 SENTRY in transport bag with standard accessories + Remote control + External battery & charger	-	-
Double model	D11.06.022	2 SENTRY in back pack with standard accessories	D11.06.031	2 WASP in case with standard accessories
Double model Full kit	D11.06.022F	2 SENTRY in back pack with standard accessories + 1 Remote control + 2 External batteries & chargers + Hard transportation case	-	-
Safety Dual pack	D11.06.032	1 WASP + 1 SENTRY in back pack with standard accessories		
Option	D11.06.014	Suction pad mount with ball joint	-	-
Option	D11.06.023	External rechargeable NiMH battery (1 per laser). IP67. Supplied with cable	-	-
Option	D11.06.025	Charger of external rechargeable NiMH battery	-	-
Option	D11.06.021	Wireless remote control with integrated audio alarm (6AA alkaline cell batteries supplied)	-	-
Option	D11.06.026	Clutch bag for wireless remote control	-	-
Option	D11.06.024	Hard case. IP67. Designed for SENTRY Wireless DOUBLE models and Safety Dual Pack.	-	-







# LEADER VOLT: AC CURRENT DETECTOR

## SECURE THE AREA OF OPERATION FROM ELECTRICAL HASARD

LEADER VOLT is designed to prevent Fire and Rescue crews from alternating current (AC) risk. It triggers audio and visual warnings due to the presence of alternating current without even having contact with the power source. It is a safe and easy device to use. LEADER VOLT offers 3 detection modes (High sensitivity, Low sensitivity and Focus mode). Use the LEADER Volt to find voltages you did not expect, confirm proper power disconnect and monitor power shut down.

- Main applications :
- Urban Search and Rescue: Detects unknown sources of AC that are unprotected and dangerous.
  - Fire: During and after fire, construction work and inspection.

- Vehicle extraction: Rapid check of intervention site and vehicles in order to identify any AC-related hasard. Enables operator to check that electrical circuits are disconnected.
- Rescue in Confined Spaces: Allows operator to check that electrical power is off at the entrance of a site containing machinery or equipment that could be accidentally started up.
- Natural disasters: Rapid check of the extent of a power cut following an earthquake, storm, flood or snow storm. LEADER Volt enables operator to identify live wiring on roads or in spaces inside collapsed buildings or on flooded sites.
- Trench rescue: For locating potential sources of electrical hazards during rescue operations.



## FEATURES AND BENEFITS



**Easy to use**  
The stick is compact and simple to use. Simply turn the rotary ring button to select the wished mode.



**Audible and Visual alarms**  
The device is equipped with a red LED to provide visual warning and audible beeps. Beeping and LED flashing rhythm become shorter as the sensing section is brought closer to the source.



**High Sensitivity**  
The setting allows the detection of AC from the greatest distance for remote inspection. Use the setting until the general location and direction of unshielded AC voltage is determined. As the stick is brought closer to exposed area AC, the unit will start to beep and the LED to flash.



**Low Sensitivity**  
Once AC has been clearly detected and the stick beeps rapidly, select as needed the Low Sensitivity or the Front Focused mode to pinpoint the sources. The setting helps find the source of the current. In this position the overall sensitivity is reduced.



**Front focused mode**  
Precisely detects the current in the axial direction of the device. The sensor in the front is shielded from signals coming from the sides. This reduces the influence of other nearby cables such as high voltage wires overhead.



**Cell batteries power supply**  
Unique and simple power supply (4 x AA dry cells) providing 300 hours run time. Easy to find on the field and no transportation constraints compared to Lithium battery.



LEADER VOLT CHARACTERISTICS



LEADER VOLT AC DETECTOR	
Product reference	D11.03.000
Signal Indication	Audible (beep) and visual (LED). Beep rate will increase (or decrease) with proximity to conductor.
Frequency Detection Range	AC voltages 20 Hz to 100 Hz.
Self-Test	Built-in, 3-second self-test after turn-on.
Insulation	PVC plastic housing.
Note	Direct contact with high tension wires should be avoided.
Batteries	4x AA alkaline cell batteries (1 set supplied)
Battery Life continuous use	300 hours. One set of batteries gives one year of service.
Battery Check	Built-in low voltage warning.
Battery Change	Requires removal of lanyard.
Water Resistance	Splash water-proof.
Operating temperature	−30 to 50 °C
Storage temperature	−40 to 70 °C
Dimensions	Ø45 mm / length 521 mm
Weight	570 gr (including batteries)
Warranty	12 months

TYPICAL DETECTION DISTANCE

VOLTAGE	FREQUENCY	SETTINGS	DETECTION DISTANCE ADJUSTMENT		
			HIGH SENSITIVITY	LOW SENSITIVITY	FOCUS MODE
120 VAC 220 VAC	60 Hz 50 Hz	Single conductor (1.80m above ground)	4.6m	0.9m	150mm
120 VAC 220 VAC	60 Hz 50 Hz	Conductor on wet ground	0.9m	150mm	25mm
7.2 kV 16 kV	60 Hz 50 Hz	Overhead distribution line (single insulator)	65m	21m	6m
46 kV	60 Hz	Overhead transmission line (several insulators)	>150m	>60m	>20m



LEADER Volt detects only AC (Alternating Current) on damaged/stripped cables. Does not detect DC (Direct Current) such as underground railway train cables, tram cables, very high voltage cables and solar panels.





**SINCE 1985**, LEADER HAS DESIGNED AND MANUFACTURED HIGHER PERFORMING EQUIPMENT USED IN FIREFIGHTING, FIRE TRAINING AND SEARCH AND RESCUE APPLICATIONS AND PROPOSES THEM TO FIRE AND RESCUE SERVICES, CIVIL DEFENSE, HAZARDOUS INDUSTRIES, NGOS, MARITIME SERVICES, ETC. ON THE 5 CONTINENTS.



## A MAJOR AXIS: INNOVATION

**To meet the advancing challenges of fire hazards and search & rescue missions, equipment must continually evolve and adapt to be more effective while ensuring maximum safety for workers.**

To meet these challenges, LEADER is committed to constant innovation and new technologies and has its own in-house Research & Development team which works alongside end-users to design and develop the equipment that will be available tomorrow.

To test our equipment and assess its performance, we at LEADER continually invest in our own infrastructure:

- ▶ Water and High-Expansion Foam test room (400 sq m)
- ▶ Ventilation test room (400 sq m)
- ▶ Fire test area in fire container - Fire extinguishing equipment
- ▶ Casualty Search Equipment test area

## OUR COMMITMENT

When you choose LEADER equipment, you are assured of the quality and compliance of our products. These have been made in our workshops by our engineering and electronics specialists.

### ISO 9001 certified since 1999, LEADER:

- ▶ Carries out checks at every stage of the manufacturing process as well as on the finished products before dispatch,
- ▶ Provides continuous training for all its staff.

## GUARANTEED EQUIPMENT

Every LEADER product comes with a specific contractual guarantee.

## CLOSE TO OUR CUSTOMERS

Through its sales force, its subsidiaries (in Germany, Austria, China and the USA) and an international distribution network, LEADER is present worldwide, keeping us as close as possible to its customers.

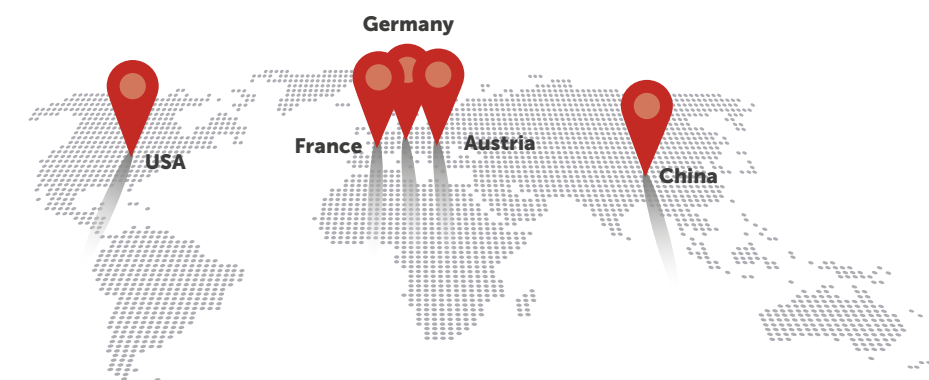


## ADAPTED TRAINING

For optimal and long-term use of the equipment you purchase, LEADER can propose suitable training on the handling, on the use and maintenance of the equipment. Training can be done at our site or at your own site.

## AN INTERNATIONAL PRESENCE

SUBSIDIARIES AND A STRONG RETAILER NETWORK





# LEADER GROUP



**MOBILE VENTILATION**



**LARGE-FLOW VENTILATION**



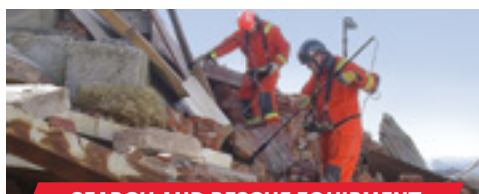
**THERMAL VISION**



**FIRE EXTINGUISHING**



**FIRE TRAINING DEVICES**



**SEARCH AND RESCUE EQUIPMENT**



**CHAINSaws**



**FIRE FOAM CONCENTRATES**

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