Grace Lone Worker TPASS®3 AM Buddy System Package

It is this simple, when Buddy One's TPASS®3 AM Alarm Monitor goes into alarm - Buddy Two's TPASS®3 AM will alarm to alert the worker of their buddy in distress.

The TPASS®3 AM is a special model that includes the alarm monitoring feature. The typical application includes two devices, however, there is no limit to how many TPASS®3 that can be used. They can even be mixed with other Grace worn devices.

A SuperCELL® SC500 can be used to monitor multiple worn devices with the added feature of knowing who is in alarm on the display screen, we call this the Supervisor's System Package.

Grace Lone Worker Supervisor's System Package

It is simple, the SuperCELL SC500-SM Supervisor's Model is used to monitor and identify users of TPASS®3's and other SC500's.

You can mix combinations of all Grace products. Using the SC500, you can add Grace Locator Beacons assigned to indoor or outdoor locations. When a TPASS®3 or SC500 goes into alarm, the last logged Locator Beacon will also be displayed on the SC500.

Grace Lone Worker MS2000X System Package

The MS2000X Safety Monitor is used to notify others of a worker in distress.

The MS2000X is a fixed wall mounted device that can be combined with any mixed combination of Grace worn devices. It is available in 120/240VAC or 12-15VDC power configurations and offers optional Light and Siren, Heated Enclosure, and Automatic Telephone Dialer. Standard as four opto-isolated inputs to trigger PANIC, EVAC, Canned Message, or 16 character free form messages. Four output relays are provided to drive external devices. The Input/Output configuration is popular when interfacing with fire and security systems, plant processing equipment, and SCADA systems.

SMS Safety Monitoring EVAC System Package

The SMS Safety Monitor is a desktop or wall mounted monitor with a display of user names and locations (when used with the Grace Locator Beacon).

The system monitors for lack of motion and MAYDAY Panic Alarms from, and is also capable of sending the EVAC evacuation command, to worker worn TPASS® and SuperCELL® devices.

Like the MS2000X package, the SMS Safety Monitor includes an internal battery-backup, and can be combined and mixed with all Grace TPASS® and SuperCELL® worker worn devices.

The SMS allows the user to record a custom verbal message that is enunciated over an internal speaker and capable of driving external audio sources; useful in facilities with existing PA systems.

Buddy Package

Supervisor Package

TPASS®3 Lone Worker Devices

TP3-H-R-AM-xxx-xx	TPASS® Lone Worker Alarm Monitor - Buddy Alarm (-xxx = motion timing) (-xx = charger type)
TP3-H-R-xxx-xx	TPASS® Lone Worker - Standard Model (-xxx = motion timing) (-xx = charger type)

SuperCELL® SC500 Lone Worker and Supervisor Devices

SC500-H-SM-xx	SuperCELL® SC500 Supervisor's Model (-xxx = motion timing) (-xx = charger type)
SC500-H-LW-xxx-xx	SuperCELL® SC500 Lone Worker's Model (-xxx = motion timing) (-xx = charger type)

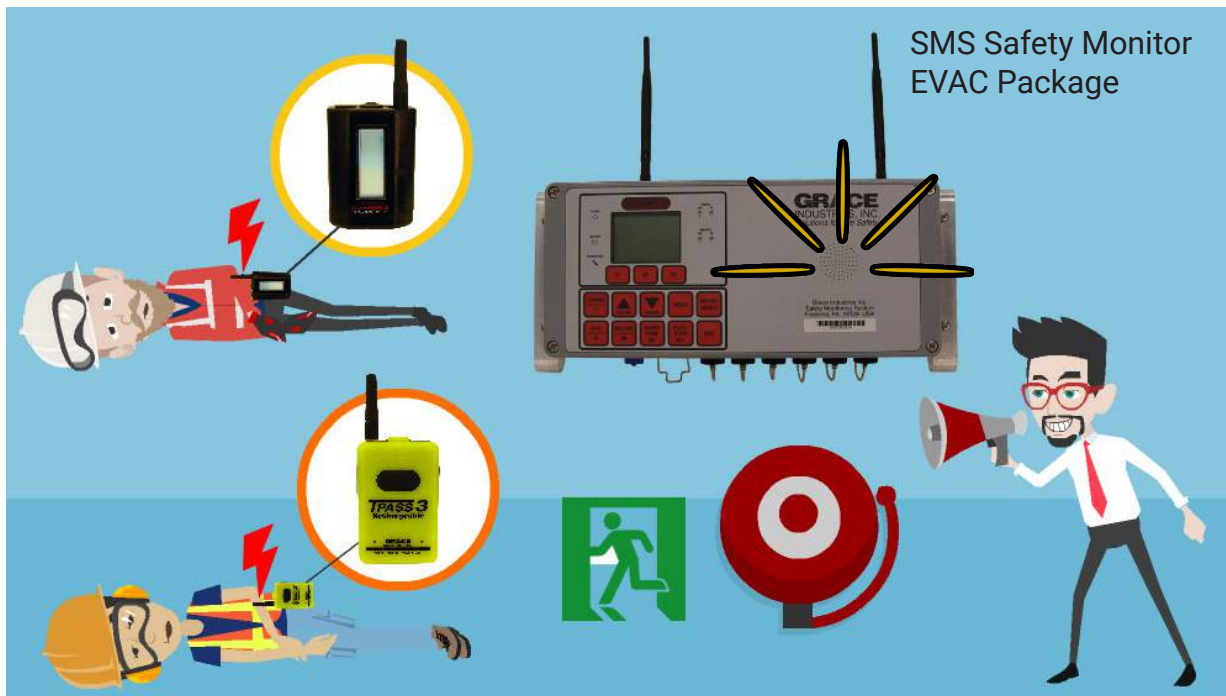| Features	TPASS®3		SuperCELL® SC500	
	TP3-H-R-AM -	TP3-H-R-	SC500-H-SM	SC500-H-LW
Receives EVAC Commands from Grace Monitoring Systems.	√	√	√	√
Receives PAR Check Commands from Grace Monitoring Systems.	√	√	√	√
Monitors Alarms from all other Grace devices.	√		√	√
Transmits Motion Sensing Panic Alarm.	√	√	√*	√
Transmits Manual Panic Alarm.	√	√	√*	√
Receives/Transmits Canned Messages from Grace Devices.			√	√
Capable of Disabling Motion Sensing			√*	
Capable of Selecting Custom Motion Timing			√*	
Manual Power On/Off.	√**	√**	√	
Auto Activation - Power On/Off Requires Accountability Key/ Powered Cradle.	√**	√**		√
Transmits Indoor Grace Locator Beacon Position Data. *	√	√	√	√
Displays Indoor Grace Locator Beacon Position Data *			√	√
Interfaces with existing Mobile Lone Worker Telematics Systems	√	√	√	√
Select Motion Timing when ordering - 060,090, or 120 second ** Changes require return to the factory and service charge	√**	√**		√**
Rechargeable Operation	√	√	√	√
Recharge Time - 6-8 Hours	80 hr	80 hr	40 hr	40 hr
Charger Types - 12VDC, 120VAC, or International - Select when ordering	√**	√**	√**	√**
Audio Sound Pressure (dBA)@10' when in PANIC/PAR/EVAC	92 dBA	92 dBA	75 dBA	75 dBA
Heavy Duty - IP67 Rated	√	√	√	√
Intrinsically Safe	√	√	√	√

√* User Configurable
√** Select Model When Ordering

* The indoor location feature requires Grace Locator Beacon and can be monitored by any model of the SuperCELL® SC500, SMS Monitoring System and Grace-Watch® Monitor System.

** Motion timing is the amount of time the TPASSS® or SuperCELL® senses a lack of motion. An audible pre-alert will sound within 15-18 seconds prior to full audio alarm and alarm transmission to a monitoring device. Be sure to consider the practical use of motion timing in your application. Long motion time settings reduce the potential of user generated false alarms. Changes to motion timings require a return to the factory with a service charge.

MS2000X Lone Worker Monitor - Used with any combination of Grace Worn Devices

Model	Description
MS2000X-H-X-DC	MS2000X - DC powered (12-15 VDC)
MS2000X-H-X-DC-B	MS2000X - DC powered (12-15 VDC) with Battery Back-up
MS2000X-H-X-AC	MS2000X - AC powered (120/240VAC)
MS2000X-H-X-AC-B	MS2000X - AC powered (120/240 VAC) with Battery Back-Up

Features	MS2000X-H-X-DC	MS2000X-H-X-DC-B	MS2000X-H-X-AC	MS2000X-H-X-AC-B
Input 1 (Opto- Isolated) Transmits - MAYDAY PANIC Commands to Grace Worn Devices and Grace Monitor Systems	√	√	√	√
Input 2 (Opto- Isolated) Transmits - EVAC ALL Command to Grace Worn Devices and Grace Monitor Systems	√	√	√	√
Input 3 (Opto- Isolated) * Transmits - Canned Message to Grace SuperCELL® and Grace-Watch® Monitor Systems (*Requires Custom Programming)	√*	√*	√*	√*
Input 4 (Opto- Isolated) * Transmits - 16 Character Free Form Text Message to Grace Worn SuperCELL®500 (*Requires Custom Programming)	√*	√*	√*	√*
Output Relay 1 (FORM C- 6A) Receives - MAYDAY PANIC Commands from Input 1 and/or Grace Worn Devices	√*	√*	√*	√*
Output Relay 2 (FORM C- 6A) Receives - EVAC ALL Command from Input 2 and/or Grace Monitor Systems	√	√	√	√
Output Relay 3* (FORM C- 6A) Receives - Canned Message from Input 3 and/or Grace SuperCELL® and Grace-Watch® Monitor Systems (*Requires Custom Programming)	√*	√*	√*	√*
Output Relay 4 (FORM C- 6A) contact closure with loss of AC input power - Loss of Power A message is also transmitted to SuperCELL® SC500		√		√
UL464 Siren with 11 user selectable output tones/pattern and - Sound Pressures vary by tone selected (55-87 dBA@10 ft) with audio output level settings (High/Mid/low). Activated with MAYDAY PANIC	√**	√**	√**	√**
Flashing Strobe - 3 selectable settings (15-35-60) Candela Activated with MAYDAY PANIC	√**	√**	√**	√**
Wall Mount Configuration	√	√	√	√
Signal Repeater - used in combination with Grace SuperCELL®, SMS and Grace-Watch® Monitor Systems to extend coverage areas	√	√	√	√
Battery Run Time		24 Hours 6 hours in alarm		24 Hours 6 hours in alarm
DC Power Input	12-15 VDC	13.3-15 VDC		
AC Power Input			120/240 VAC	120/240 VAC
DIMEMSIONS				
Pole Mounting Hardware - Optional - Order Separately	√		√	√
Automatic Telephone Dialer - Optional - Order Separately	√	√	√	√
Heated Enclosure - for operation below 32° F - Optional			√**	√**
External I/O Jack - Order with ATD Automatic Telephone Dialer - Dialer Ordered Separately	√**	√**	√**	√**

√* Requires Custom Configuration - Required at time of order

√** Select Option - Required at the time of order

SMS Safety Monitor EVAC Package

SMS Safety and EVAC Base Monitor - Used with any combination of Grace Worn Devices

SMS-H — SMS Safety and EVAC Base Monitor

RET-H — Requires the SMS Base - Remote Enhanced Transceiver- Powered by the SMS Base - used to extend signal coverage area - can be mounted up to 100' from the SMS Base

RET-H-HT — Requires the SMS Base - Remote Enhanced Transceiver- with Heated Enclosure- Powered by 120VAC- used to extend signal coverage area - can be mounted up to 100' from the SMS Base

Features	SMS-H	RET-H	RET-H-HT
Transmits - EVAC ALL Command to Grace Worn Devices and MS1000X	√	√*	√*
Receives - MAYDAY PANIC Commands from Grace Worn Devices and MS1000X	√	√*	√*
Receives and Displays Locator Beacon Information from Grace Worn Devices	√		
Displays up to 72 PASS with the ability to assign custom names	√		
16 open-collector configurable steering outputs	√		
Auxiliary Power Input -12VDC/1A	√		
Powered Telephone Dialer Port- for use with ATD Automatic Telephone Dialer	√**		
FORM C Relay Output 12VDC/5A	√		
Switched Output on Alarm 12VDC/1A	√		
PASS Device Programmer	√		
Event Logger - ships with PC download Utility for extracting log files	√		
Wall Mount/Desktop Configuration	√		
Wall Mount Standard/Pole Mount Option		√**	√**
Battery Run Time	24 Hours 6 hours in alarm		
AC Power Input 240VAC √**	120 VAC		120 VAC
Automatic Telephone Dialer - Optional - Order Separately	√		
Heated Enclosure - for operation below 32° F - Optional			√**
√* Requires SMS Base			
√** Order Separately			

This package brings monitoring all together in one place.

The Grace-Watch® Safety Monitor is a Grace software application that uses Win7/10 along with the Grace USB connected MX900-H hardware.

Grace-Watch® will monitor all users and when combined with Grace Locator Beacons will provide a display of the location of a worker in alarm. You use your own .jpeg overlay of a floorplan to identify beacon locations.

Grace-Watch® is capable of sending email and text notifications when receiving:
• Any Alarm
• Panic Alarm
• Motion Alarm
• No Signal
• Off Signal
• Low Battery
• Location (Geo-Fence)
• Canned Message

Geo-Fence Alarms are used with Grace Locator Beacons to set-up alarm conditions associated by user and location. When a user enters an unauthorized locator zone, a Geo-Fence email/text notification is sent. Use of the email/text notification feature requires and Internet/Network Connection.

GracePoints⏀GPS® adds a whole new dimension to location. The SuperCELL® SC500 with GracePoints⏀GPS® is equipped with a GPS receiver and used with Google Maps to plot outdoor locations of workers.

This is very popular for any application that requires outdoor location, such as, rooftops, large outdoor lots, or tank farms.

The SuperCELL® SC500 with GracePoints⏀GPS® can be used in combination with the Grace Locator Beacon to provide both indoor and outdoor location information.

The Grace-Watch® Safety Monitor and GracePoints⏀GPS®

Grace-Watch® Safety Monitoring Package for use with all Grace Worn Devices

Package contains Grace-Watch® Software and MX900-H Transceiver.
User provides Win7/10 OS computer with open USB port for connection to MX900-H Transceiver.

Software and Hardware Features	GWML-H
Receives and Displays MAYDAY Motion Panic and Manual Alarms from Grace TPASS®3 and SuperCELL® SC500	√
Transmits/Receives SEND CALL/EVACUATION Command from Grace TPASS®3 and SuperCELL® SC500	√°
Transmits/Receives REPORT IN Commands from Grace TPASS®3 and SuperCELL® SC500	√°°
Transmits Canned Messages to SC500's and MS1000 Safety Monitor.	√
Displays Grace Locator Beacon and worker locations. Beacons are overlayed on a user provided .jpeg floorplan image. When the TPASS® and/or SuperCELL® pass a Locator Beacon, the beacon number is picked up and transmited to the Grace-Watch® Monitor where it is labeled and displayed.	√
Capable of sending Text and Email Notifications (Requires Internet/Network Connection)	√
Displays Outdoor GPS location as it is transmitted from the special model of the SuperCELL®SC500 with GracePoints⏀GPS® feature. Alarm and Location of the worker are overlayed on a Google Map. Internet service with access to Google Maps is required.	√

√° - SEND CALL /EVAC (Evacuation)- When an SEND CALL command is transmitted from the Grace-Watch® system to a workers TPASS® and/or SuperCELL®, the worker receives a unique audio signal and responds by press the side buttons on the device to acknowledge the command displaying acknowledged status that on Grace-Watch®

√°° - REPORT IN command is transmitted from the Grace-Watch® System to a workers TPASS® and/or SuperCELL®, the worker receives a unique audio signal and responds by press the side buttons on the device to acknowledge the command with an "I'm OK" status that is received and displayed on Grace-Watch®.

SuperCELL® SC500 with GracePoints⏀GPS®

SC500-H-SG	Supervisor's Model with GracePoints⏀GPS®
SC500-H-LG	Lone Worker's Model with GracePoints⏀GPS®

Features	SC500-H-SG	SC500-H-LG
Receives EVACUATION Commands from Grace Monitoring Systems.	√	√
Receives PAR Check Commands from Grace Monitoring Systems.	√	√
Monitors Alarms from all other Grace devices.	√	√
Transmits Motion Sensing Panic Alarm.	√	√
Transmits Manual Panic Alarm.	√	√
Receives/Transmits Canned Messages from other SC500's and Grace-Watch® Safety Monitor.	√	√
Capable of Disabling Motion Sensing	√*	
Capable of Selecting Custom Motion Timing (Select 15 second increments)	√	
Manual Power On/Off.	√	
Auto Activation - Power On/Off Requires Powered Cradle.		√
Transmits Indoor Grace Locator Beacon Position Data	√	√
Displays Indoor Grace Locator Beacon Position Data on Grace-Watch® and other SC500's.	√	√
Interfaces with customer provided Automotive Telematics for Mobile Lone Worker Solutions	√	√
Transmits Outdoor GPS Position Data - Requires Grace-Watch® Monitor for display **	√	√
Select Motion Timing when ordering - Changes require USB-IRP Dongle for changes - Sold Separate		√**
Rechargeable 24 Hour Operation	√	√
Recharge Time - 6-8 Hours	√	√
Charger Types - 12VDC, 120VAC, or International - Select when ordering	√**	√**
Audio Sound Pressure (dBA)@10' at when in PANIC/PAR/EVAC	75 dBA	75 dBA
Heavy Duty - IP67 Rated	√	√
Intrinsically Safe	√	√
√* User Configurable		
√** Select Model When Ordering		

** The GPS outdoor location feature of GracePoints⏀GPS® is used with the Grace-Watch® Monitor System and requires an Internet connection to Google maps.

Grace Location Devices

1. **Grace Locator Beacons** – are placed in pre-planned strategic area of your facility. Beacons have five power settings to dial in the desired range of the beacon. The lowest power setting will typically set-up an average radius of 30 feet, while the highest setting will extend out to approximately 300 feet. Available in a lithium battery powered model (approximately 2 year battery) or Externally Powered with 120VAC wall transformer. Locator Beacons can be used to display location on the SC500, SMS and Grace-Watch® Safety Monitoring Systems.

2. **Grace-Watch® Software-MX900-H Safety Monitor and SuperCELL® SC500 with GracePointsɸGPS®** Install Grace-Watch® Software on your computer and plug the Grace-Watch® MX900-H montor into an open USB port. The MX-900-H is a wireless transceiver used to transmit ROLL CALL, SEND CALL (EVAC) and REPORT IN commands, as well as, receive command acknowledgments and manual and motion sensing MAYDAY Panic Alarms from the Lone Worker.

   Grace-Watch® software **receives real-time location updates** and are displayed as an overlay on a Google Map. Outdoor GPS location requires an Internet connection with access to Google Maps. This system relies on a wireless signal to and from the SC500 with GracePointsɸGPS® and MX900-H. This is great for any application that requires outdoor GPS location at a fixed facility. For example, tank farms, rooftops, outdoor lots. The SC500 with GracePointsɸGPS® can also be used to transmit Grace Locator Beacon information to display both indoor and outdoor locations on the Grace-Watch® Software.

Once a Lone Worker's TPASS®3 or SC500 goes into alarm, there are three methods of locating:

1. Listening for the Very Loud Audible Alarm of the TPASS®3 and/or SC500 will direct you to the location of the alarm

2. Grace Locator Beacon information can be displayed on any model of the SC500, SMS Safety Monitor and Grace-Watch® software. Beacon identifiers can be named and programmed into all of these monitors. Beacon Location on Alarm is displayed on the SC500 only when an alarm is received.

3. The SMS and Grace-Watch® Safety Systems receive real-time beacon location updates with, or without, an alarm . SC500 with GracePointsɸGPS® provides real-time outdoor GPS location displayed in Grace-Watch.

Grace-Watch®   SMS Safety Monitor   SC500

Testimonials and Case Studies

Lone Worker Application: Geothermal, Southeast US

Grace received an inquiry from an Electric Company in the Southeastern US. As a result of a risk assessment, the topic of Lone Workers….employees working alone or in remote areas came up as an item of concern.

Periodically, an employee would be working alone in one of their facilities. This was not the first attempt at addressing their concern. The company had already purchased a solution from another vendor. Their reason for contacting Grace was a concern surrounding the unreliability of their existing system. Employees complained of frequent dead batteries and false alarms.

Grace placed a call to A VAR (Value Added Reseller) to assess and recommend. The Value Added Reseller addressed their problem of dead batteries with a Grace 80 hour rechargeable TPASS3 with advanced accelerometer to eliminate the false alarms caused by tilt-type sensors. After demonstrating how the system worked it was decided that they would use it in all three of their facilities.

Now, when an employee is alone…and classified as a Lone Worker, they know that the Grace Industries device is part of their standard PPE with the same importance as their hard hat, gloves, shoes and safety glasses. Along with restored confidence in protecting their Lone Workers, they have the support of their local sales representative.

When asked if they would recommend this system to another company with Lone Workers…. the answer was …YES!

Confined Space Application: Railcar Manufacturer, Northwest Texas

There has been a Grace Industries' Lone Worker System used in a confined space application at a Railcar Manufacturer in Northwest Texas for over 15 years. Their EHS Manager explained how they started with the Grace portable GEMS system. When it was time to upgrade, there was no question that they would once again be relying on Grace Industries and a Value Added Reseller to recommend the best Grace system to protect their workers. The EHS Manager said, "This equipment has been proven many times in the past with fire departments, grain industry applications, and other high risk confined space entry operations…it was a no brainer."

Prior to having the man down system, a confined space "hole watch" or attendant, had to be assigned to each individual confined space entry; which meant every tank car or hopper car with a Confined Space Entry in progress required an attendant. Whether they're blasting, painting or lining the inside of the tank cars and hopper cars, this system has helped increase and enhance the level of Confined Space Worker protection while meeting the OSHA 1910.146 regulations and requirements. The GEMS system also meets the standard for the OSHA LOI (letter of interpretation) for electronic monitoring of employees in multiple confined spaces. The Grace Lone Worker/Confined Space Worker system is flexible, and has effectively increased confined space worker protection and operational efficiency.

The EHS Manager commented that employees love the system, train regularly with it, and use it to achieve rescue times of 4-7 minutes (or less), start to finish in certain areas. They have recommended the Grace System to a number of other companies across a wide array of industries and applications. The EHS Manager is very pleased with the service and expertise of Grace Industries and their Value Added Resellers.

Other Industries Using Grace Systems Include:
Freezer, Warehouse, Aviation, Aerospace, Waste Water, Food & Beverage, Pharmaceutical, Shipyards, Power Generation, & more

Read More Testimonials Online at www.GraceLoneWorker.com

Don't Rely on "Check–In" Systems, You Need a Grace Lone Worker Immediate Notification System.

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