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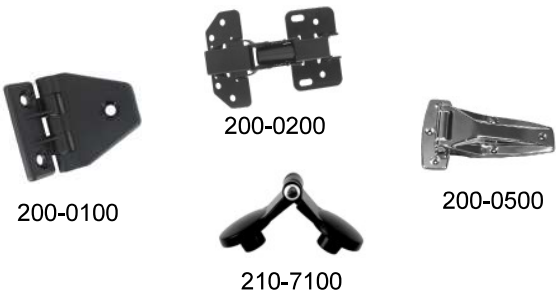

Hinges

Electrical/Electronic

Radio Frequency (RF)

Keypad

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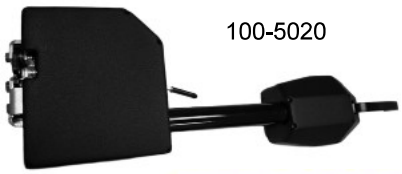
500-1300

550-0100

610-0100



100-5020

COMMANDoor
Intuitive Motion Control System

Door Systems

Accessories

070-0100

070-0125

070-0200

070-0400

070-0201

070-0300

070-7100

100-0400

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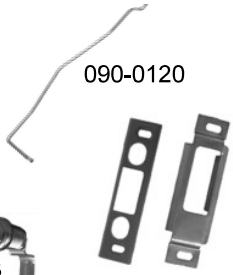
100-0410



090-0120

110-0403

100-0500

090-0105

100-0800

010-7200

Miscellaneous

500-1000 e-*ASK* System

Components for this system are sold separately:

Tri*Mark*'s top level e-*ASK* system consists of a selection of compatible components that allow for complete keyless entry for on or off-highway vehicle applications. The incorporation of keyless-entry into Tri*Mark* mechanical latches, handles and systems provides additional security and convenience for access door systems. This system includes both a touch pad and remote fob transmitter for the ultimate in end user convenience and functionality.

FEATURES/BENEFITS:

- Easy and intuitive to operate
- Rugged and durable construction
- Compliant to on-road, off-road, and industrial environmental requirements
- Increased vehicle security with multiple triggers and outputs
- I/O module with on-board locking and unlocking relays
- Can control up to 20+ entry/compartment doors (expandable)
- Independent control of multiple door zones
- Staggered door control for minimized current draw
- J1939, RV-C communications
- Locking/unlocking confirmation
- Lighting and auxiliary output control
- Ability to provide four OEM definable functions from keypad, including ability to unlock one side of motor home baggage doors at a time
- Three security system inputs (ability to sense entry door(s) and baggage door(s), and other security system devices such as glass break and motion detectors)
- Variable timed light activation output (porch, compartment or interior lighting)

AVAILABLE:

- Standard kit make up includes: Two pre-trained RF remote fob transmitters, I/O module, and manual
- Optional kit can include: any wiring harnesses for all connection points of system, extra relays, switches, door contacts, actuators, mounting hardware, mounting brackets, door latches, and door paddle handles
- Fob transmitters with independent entry and compartment control
- Fob transmitters with control of auxiliary features
- Vertical and horizontal keypad
- Customized wire harnesses
- Additional fob transmitters
- Two different programming functions; standard mode, and cargo mode. Standard mode allows for the lock/unlocking of doors plus panic mode and one auxiliary output (controls lighting, opens compartment etc.). Cargo mode allows for the lock/unlocking of main personnel doors plus independent control of many cargo/compartment doors.

INSTALLATION:

- Standard 12 VDC power
- I/O module is easily installed with (2) 1/4 or M6 screws (not included) and can be mounted in a concealed location

Control Module and e-*FOB* should be selected

500-1100

OR

510-0100

OR

510-0250

A keypad may be selected

540-0100

OR

540-0200

Not all components are compatible. Please contact Tri*Mark* with questions.

This product is covered by one or more of the following:
U.S. Patent No. 6,789,003 / 7,034,655 / 7,119,709 / 8,350,669
U.S. Design Patent No. D486,376 / D563,097

All dimensions are for reference only. For more information visit www.trimarkcorp.com

500-1100 e-*FOB* System

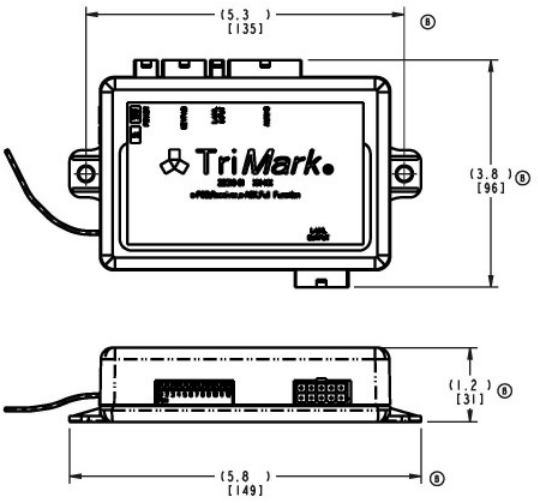
This cost-effective, simple, and integrated system offers increased security, convenience and functionality with reduced system installation and lower installation costs for demanding users of RVs, heavy trucks, emergency vehicles, agricultural and construction equipment.

Base system provides added convenience and security via a standard remote radio frequency (RF) transmitter providing automotive convenience to your vehicle.

FEATURES/BENEFITS:

- Keyless-entry security and convenience for access door systems through an electrical interface that includes both a touch pad and remote fob transmitter for the ultimate in end user convenience and functionality
- Easy and intuitive to operate
- Rugged and durable construction
- Compliant to on-road, off-road, and industrial environmental requirements
- Increased vehicle security with multiple triggers and outputs
- I/O module with on-board locking and unlocking relays
- Can control up to 20+ entry/compartment doors (expandable)
- Independent control of multiple door zones
- Staggered door control for minimized current draw
- Multiplexing communications
- Locking/unlocking confirmation
- Ignition controlled auto-locking control
- Starter deactivation available for increased security
- Lighting and auxiliary output control
- Ability to provide five OEM definable functions from keypad, including ability to unlock one side of motor home baggage doors at a time
- Three security system inputs (ability to sense entry door(s) and baggage door(s), and other security system devices such as glass break and motion detectors)
- Three variable timed light activation output (porch, compartment or interior lighting)

U.S. Patent No. 8,350,669
U.S. Design Patent No.D563,097 / D590,780 / D589,000



All dimensions are for reference only. For more information visit www.trimarkcorp.com

AVAILABLE:

- Standard kit make up includes: (2) pre-trained RF remote fob transmitters, RF receiver, (14) wire harness, (10) wire harness, (2) wire harness, push button switch, and LED assembly key rings and manual
- Optional kits can include: any wiring harness for all connection points of system, extra relays, switches, door contacts, actuators, mounting hardware, mounting brackets, door latches, and door paddle handles
- With security system integration
- Customized wire harnesses
- Multiplexed or discrete communications
- Two different functions; standard and cargo mode. Modes provide customized remote fob transmitter use. Standard mode allows for the lock/unlocking of doors plus panic mode and one auxiliary output (controls lighting, opens compartment etc). Cargo mode allows for the lock/unlocking of main personnel doors plus independent control of many cargo/ compartment doors. Sustained mode allows for the lock/unlocking of doors plus continuous output control with lower buttons pressing.

e-FOB

- Reliable radio frequency (RF) transmission
- High security with code hopping technology
- Compliant to FCC-Part 15 and EU RF requirements
- 4-button standard fob (other configurations available)
- Customized graphics possible (buttons and logos)
- Can add up to 4 fob transmitters to vehicle

INSTALLATION:

- Standard 12 VDC power
- e-FOB receiver is easily installed with (2) #6 or M3 screws (not included) and can be mounted in a concealed location

e-*ASK*:
RF
132

510-0250 e-*ASK* CAN IO and RF Module

Keyless-entry security and convenience for access door systems through an electrical interface that includes both a keypad and remote fob transmitter for the ultimate in end-user convenience and functionality.

DESIGNED FOR:

- Tri*Mark*'s e-*ASK* systems consist of a selection of compatible components that allow for complete keyless entry for on and off-highway vehicle applications
- Incorporation into Tri*Mark* mechanical latches and handles by providing keyless entry, security and convenience for access door systems through a RF remote fob electronics
- Integration to existing or independent SAE J1939 or other CAN based multiplexing buses
- SAE J1939 and other multiplexing protocols

FEATURES/BENEFITS:

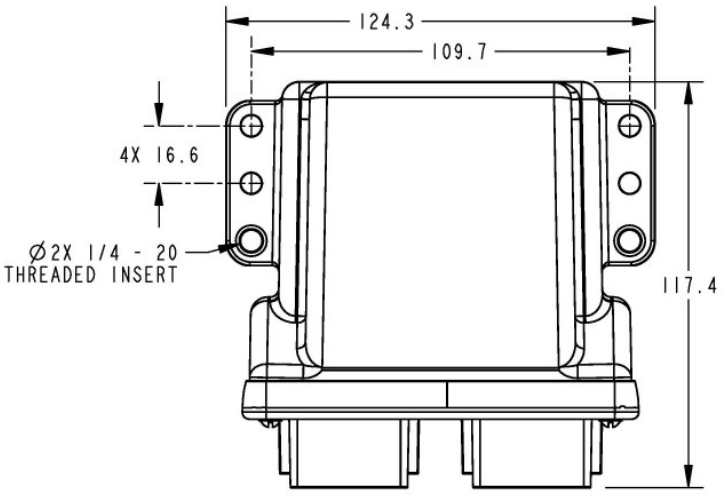
- Rugged and durable construction
- Compliant to on-road, off-road, and industrial environmental requirements
- Designed with on-board relays
- Variations for single or multiple door control
- Staggered outputs for minimized current draw
- Water proof (IP 67) and non-water proof versions available
- Compatible with 433 MHz Radio frequency (RF) remote transmitter fob
- Compliant to FCC, IC, and EU RF requirements
- Available with security system, lighting control, keypad connectivity, ignition connectivity, and other auxiliary device control
- Customizable via various hardware configurations or software modifications

AVAILABLE:

- Customized kits can include water proof door modules, dash mount IO modules, keypads, RF transmitter, wiring, power lock actuators and other security system accessories

Compliant to SAE J1939 CAN and other multiplexing protocols

U.S. Patent No. 6,789,003 / 7,034,655 / 7,119,709 / 8,350,669



All dimensions are for reference only. For more information visit www.trimarkcorp.com

530-0100 e-*FOB* Transmitter

DESIGNED FOR:

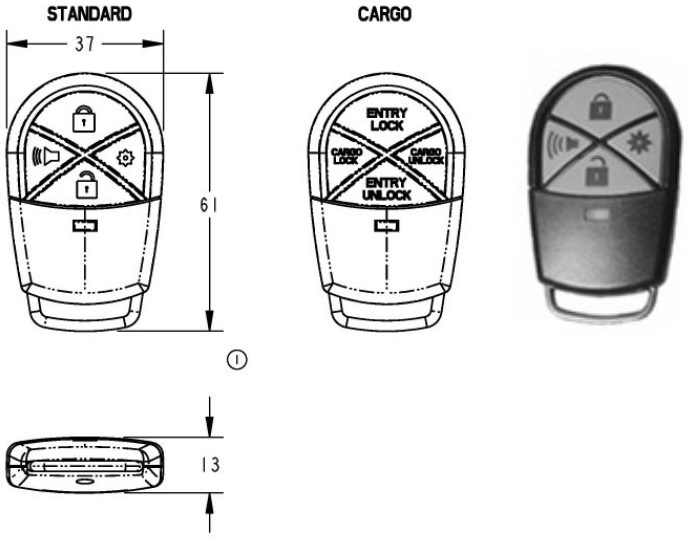
- Replacement components of Tri*Mark*'s e-*ASK* systems

INSTALLATION:

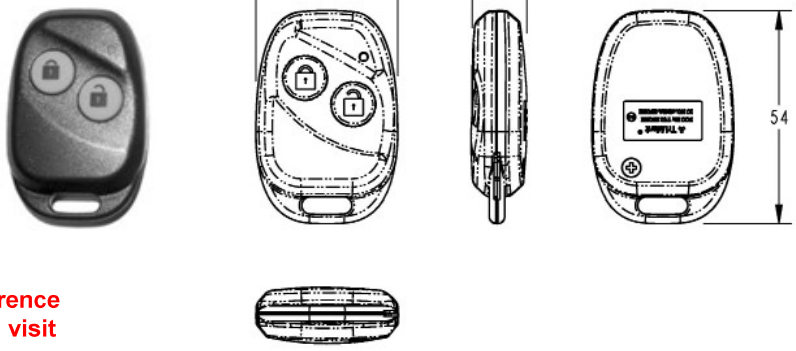
- e-*FOB* receiver is easily installed with (2) #6 or M3 screws (not included) and can be mounted in a concealed location
- Standard 12 VDC power

AVAILABLE:

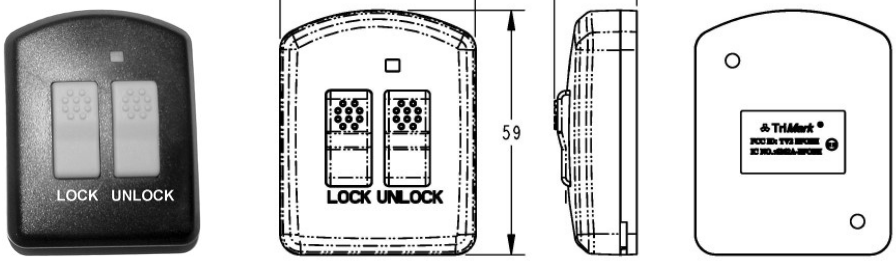
- Three different programming functions; standard mode, cargo mode and sustained mode. Modes provide customized remote fob transmitter use.
  - ◊ Standard mode allows for the lock/unlocking of doors plus panic mode and one auxiliary output (controls lighting, opens compartment etc.).
  - ◊ Cargo mode allows for the lock/unlocking of main personnel doors plus independent control of many cargo/compartment doors.
  - ◊ Sustained mode allows for the lock/unlocking of doors plus continuous output control with lower buttons pressing.
- 4-button standard and cargo fob, 2-button fob, and wall mount
- Customized graphics possible (buttons and logos - please inquire)



U.S. Design Patent No. D563,097 / D590,780 / D589,000



All dimensions are for reference only. For more information visit www.trimarkcorp.com



e-*ASK*:
RF
134

540-0100 e-*PAD* Keypad

This cost-effective, simple, and integrated system offers increased security, convenience and functionality with reduced system installation complexity and lower installation costs for demanding users of RVs, heavy trucks, emergency vehicles, agricultural and construction equipment.

- Tri*Mark*'s e-*ASK* systems consist of a selection of compatible components that allow for complete keyless entry for on or off-highway vehicle applications
- Incorporation into Tri*Mark* mechanical latches, handles and systems by providing keyless-entry, security, and convenience for access door systems through a touch pad electronics interface

FEATURES/BENEFITS:

- Increased end user convenience
- Easy and intuitive to operate
- Rugged and durable construction
- Compliant to on-road, off-road, and industrial environmental requirements
- Can control numerous entry/compartment doors
- Independent control of multiple door zones
- Tactile, visual, and audio feedback
- Over 3000 code combinations with tamper lock-out feature
- Lighted keypad for more effective night time usage
- Vertical and horizontal orientations
- Five user codes can be assigned
- Multiple layer code control

AVAILABLE:

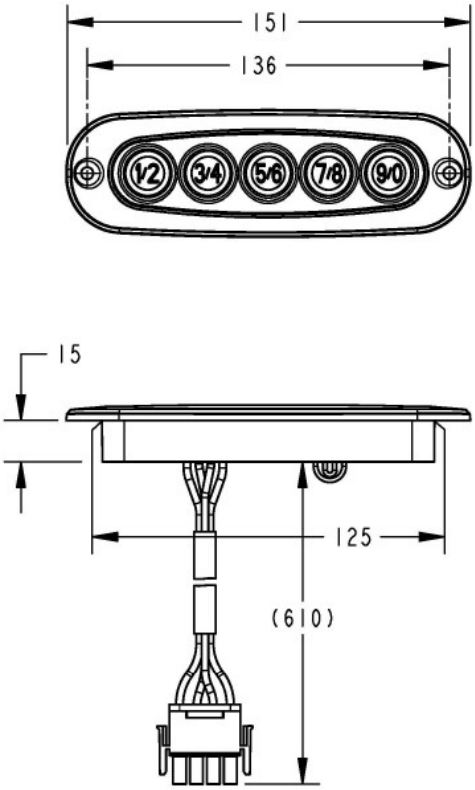
- With e-*FOB* remote transmitter integration
- With security system integration
- Vertical and horizontal keypad
- Complete kit with wire harnesses and other accessories
- Customized wire harnesses
- Multiplexed or discrete communications protocol

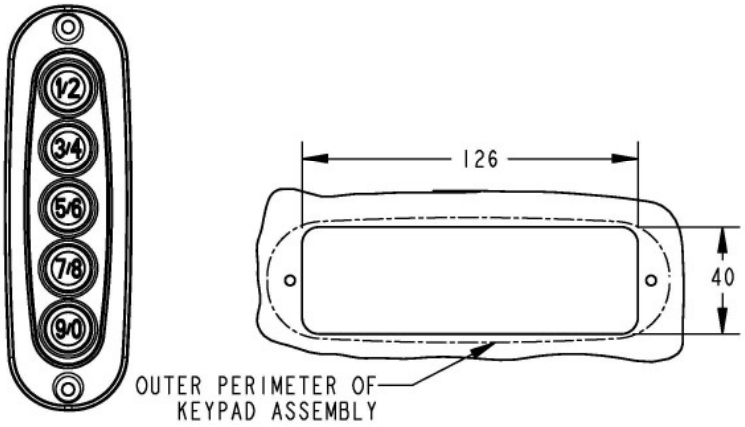
INSTALLATION:

- Keypad is easy to install with (2) #8 or M4 flat head screws (not included)
- Can be installed in a wide range of locations in door - either horizontal or vertical orientation
- Standard 12 VDC power

U.S. Design Patent No. D486,376
U.S. Patent No. 7,034,655

All dimensions are for reference only. For more information visit www.trimarkcorp.com





RECOMMENDED KEYPAD CLEARANCE CUTOUT

540-0125 e-*PAD* Keypad With Relays

This stand alone keypad provides cost-effective and simple power door lock/unlock and unlatch control. The keypad, with on-board relays, provides increased security and convenience to minimize system and installation cost. Demanding users in the travel trailer, tool box, utility truck and low end motorized RV market will appreciate the high-end functionality at a value price.

FEATURES/BENEFITS:

- 12V high current relay outputs
- Easy and intuitive to operate
- Rugged and durable construction
- Compliant to on-road environmental requirements
- Tactile and audio feedback
- Over 3000 code combinations with tamper lock-out feature
- Vertical and horizontal orientations
- Five user codes can be assigned
- Multiple layer code control
- Stand-alone keypad

AVAILABLE:

- Vertical and horizontal keypad
- Lighted keypad - optional
- Complete kit with wire harnesses and other accessories
- Customized wire harnesses

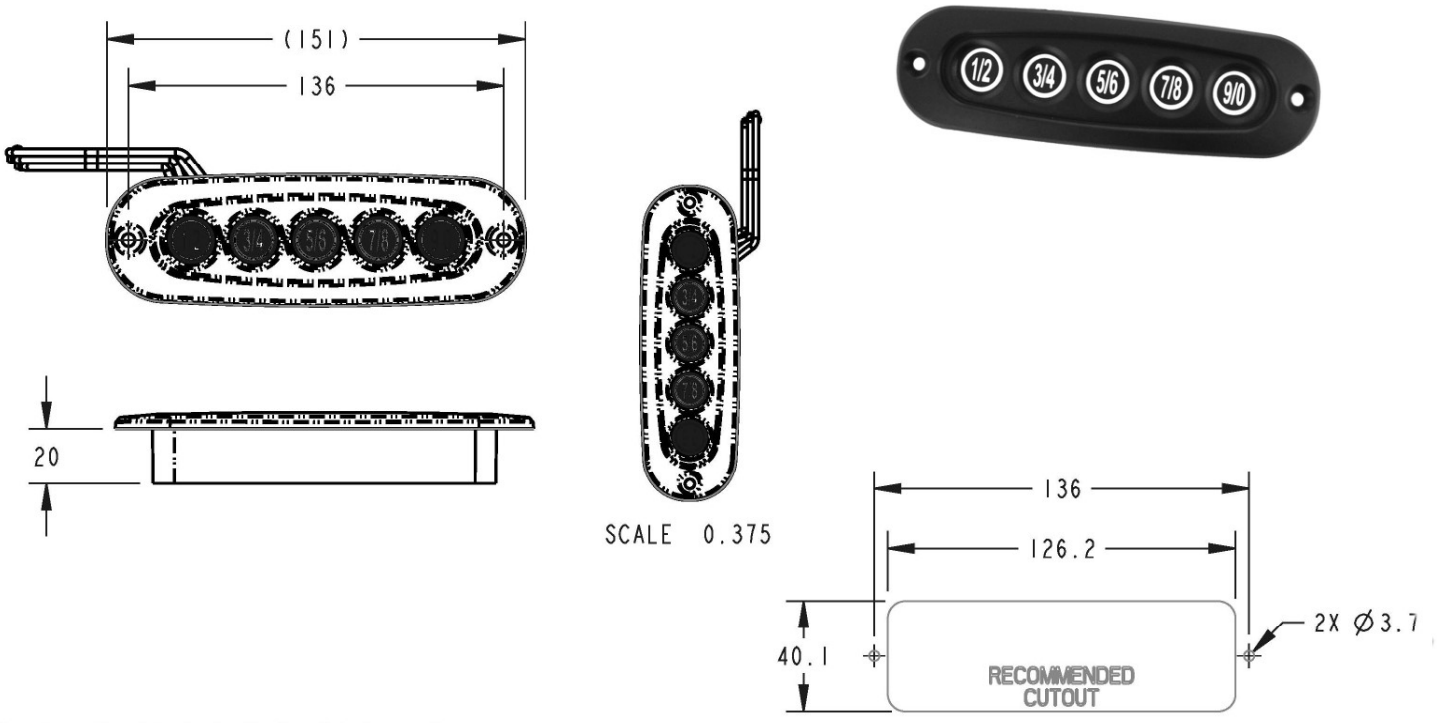
INSTALLATION:

- Keypad is easy to install with (2) #8 or M4 flat head screws (not included)
- Can be installed in a wide range of locations in door - either horizontal or vertical orientation
- Standard 12 VDC power
- Gasket provided

U.S. Design Patent No. D486,376

Caution: This product is not intended for use in wet locations where the backside is exposed to moisture.

All dimensions are for reference only. For more information visit www.trimarkcorp.com



NOTES: UNLESS OTHERWISE SPECIFIED:

(2) 1. POWER WIRES: 1/4" MALE SPADE TERMINAL, 250 mm
(2) 2. OUTPUT WIRES: .156" FEMALE BULLET TERMINAL, 250 mm

e-*ASK*:
Keypad 136

540-0200 Lighted Grab Handle With Keypad (e-*GRAB*)

This product incorporates Tri*Mark*'s e-*ASK* keypad into a stylish entry assist handle for RV coaches, motor homes and travel trailers. Offering increased end user convenience with high end look and feel, the grab handle provides keyless entry, security, and convenience through a keypad electronic interface.

- Incorporation with Tri*Mark* mechanical latches, handles and systems

FEATURES/BENEFITS:

- Increased end user convenience
- Offers modern styling with high end look and feel
- Rugged and durable construction is environmentally sealed for long life
- Lighted keypad and handle rod for more effective night time usage
- Tactile, visual and audio feedback with the ability to control the handle rod LED light also
- Can control numerous entry/compartment doors with independent control of multiple door zones

All dimensions are for reference only. For more information visit www.trimarkcorp.com

AVAILABLE:

- CAN multi-plex or discrete e-*PAD* Keypad (reference platforms 540-0100 and 500-1000 for additional information)
- With or without door bell feature
- Handle rod can be personalized with manufacturer name, model, logo etched
- Complete kit with wire harnesses and other accessories
- With e-*FOB* remote transmitter integration
- With security system integration

FINISH:

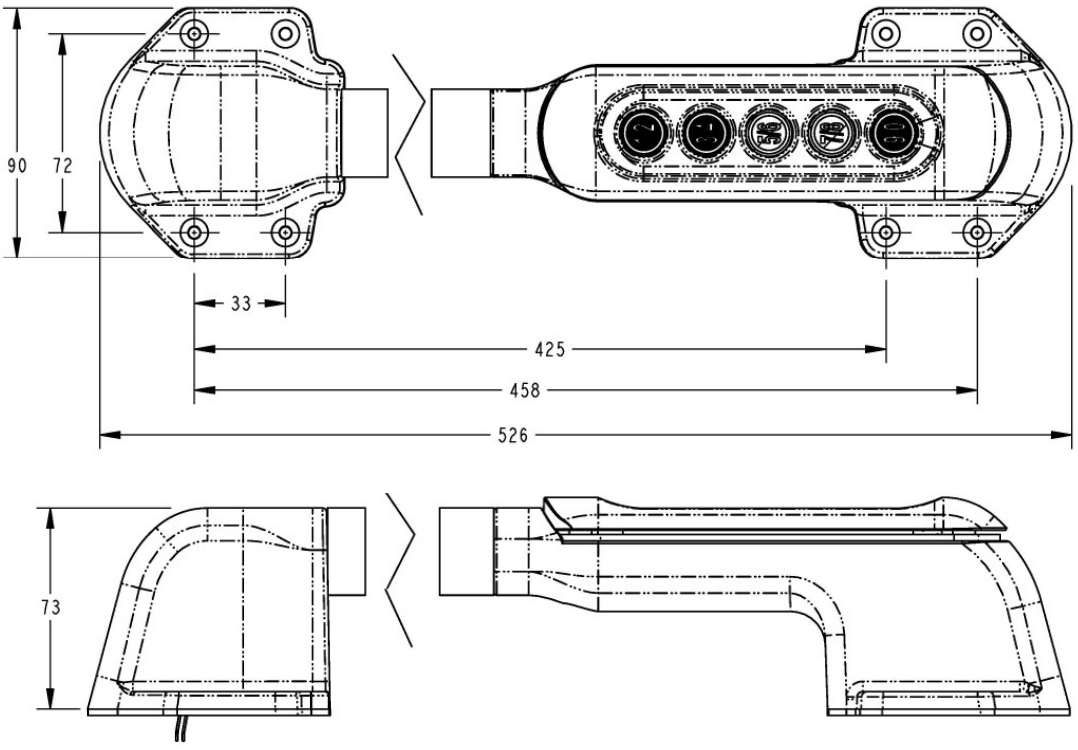
- High quality polished copper-nickel-nickel chrome is durable and stylish

MATERIAL:

- Sturdy zinc die cast alloy housing, cover and end cap
- Cast acrylic rod in clear or frosted finish

INSTALLATION:

- Easy to install with (8) #8 or M4 fasteners (not supplied)
- Cost effective modular handle requires fewer holes in sidewall than separate components for ease of installation



e-*ASK*:
Keypad 137

500-1300 e-*ASK* PKE System (Passive Keyless Entry)

Tri*Mark*'s third generation of e-*ASK* Systems consists of a selection of compatible components that allow for complete keyless entry for on- or off-highway vehicle applications. It features Passive Keyless Entry (PKE) and offers optional vehicle mobilization/immobilization and keyless push button start. These are the same 'state of the art' electronics that are featured on higher end automobiles and is now available for integration on your vehicles.

This new generation of Remote Keyless Entry not only brings expanded vehicle convenience and security to the end consumer, it also adds value to the Original Equipment Manufacturer (OEM) by incorporating the Passive Keyless Entry (PKE), immobilization and keyless start into a single package.

How does passive keyless entry/start work?
Passive entry: No button presses are required. Simply placing a hand near the door handle or within range (30 mm) of the external capacitive sensing 'puck' will wake up the PKE controller. The controller sends a low-frequency (LF) signal, all FOBs within range respond with their serial numbers using a radio frequency (RF) signal. The controller compares the serial numbers against a stored list of authorized FOBs. The LF messaging also uses a random numbering scheme to prevent intercepting attacks. If an authorized FOB has responded, the door unlocks in less than one second.

RF entry: The FOBs also have typical lock/unlock buttons that can be used from up to 50 meters using RF signals with encrypted messaging. The FOB must decrypt the message and send back an appropriate response before the PKE controller will unlock the door.

The engine can be started by simply pressing the start button. The system uses the LF/RF messaging a second time to ensure an authorized FOB is within range inside the vehicle using the same protocol. The controller then communicates to another J1939 device that it's appropriate to mobilize the vehicle also using encrypted messages. The combination of LF challenge and RF response delivers low power consumption and long battery life.

This system allows for single standardized hardware architecture to be configured for many different user interfaces and many different applications. The resulting hardware includes a common controller and other peripheral modules. This hardware is already tested and validated and can be utilized to other applications with a high level of confidence.

Furthermore, common software development can support future applications adoption, controlling the I/O control module and communications (J1939 250k, J1939 500k or RV-C).

DESIGNED FOR:
Tri*Mark*'s comprehensive matched component selection allows for complete keyless entry, security, and ignition control for varied levels of sophistication of on- or off-highway vehicles, machine, or other equipment. Standard electronic controls are available for immediate integration, but also software adaptations can be provided for specific OEM and customer requirements.

FEATURES/BENEFITS:
- Keyless-entry security and convenience for access door systems through a 'state of the art' electronic interface for the ultimate in end user convenience, functionality and security
- Passive Keyless Entry (PKE) provides for 'hands free' unlocking
  - ◊ When the user's hand enters the field under the handle portion, the system wakes up
  - ◊ This activity energizes the exterior antenna. FOBs in range will respond with their serial numbers combined in a data packet sent via 433 MHz using a radio signal frequency (RF)
  - ◊ If the FOBs respond with serial numbers that match an authorized list, the control module will pulse the unlock motor for 1/2 second to unlock the handle
- Easy and intuitive to operate
- Rugged and durable construction—compliant to on-road, off-road, and industrial environmental requirements
- Independent control of multiple door zones
- CAN J1939 (250k/500k) or RV-C communications
- Locking/unlocking confirmation
- Lighting and auxiliary output control
- Emphasizes a new modular approach for multiple user interfaces and enables adoption of new technologies such as wireless communications protocols that are more common in automotive and smart phone usage, namely remote passive entry and Bluetooth/WiFi protocols (coming soon)

e-FOB:
- Stylish 4-button PKE FOB - operates at 125 kHZ (PKE) and 433 kHZ (RF) transmission (compliant to FCC-Part 15 and EU RF requirements)
  - ◊ 4-button FOB can be used for other functions such as illumination of work lights as you approach the machine for safe entry or service of the machine
  - ◊ The key FOB can also be used as a normal RF keyless entry so unlocking via button presses is possible
  - ◊ RF range is approximately 100 meters

- High security with random numbering scheme between the FOB(s) and controller to prevent attacks/hacking

500-1300 continued

- Customized graphics possible (buttons and logos)
- Can sync up to 4 FOB transmitters to vehicle
- Passive Start - FOB needs to be located inside the vehicle to allow Passive Start
- Immobilization – if the correct FOB is not within range of the internal antenna, the vehicle cannot be started

e-CONTROLLER:

- Waterproof enclosure with high quality Deutsch connectors – (2) 12 pin connectors or unsealed enclosure with AMP Duac connectors
- Enables distributed functionality, such as multiple door control and ignition immobilization, via vehicle multiplex communication

AVAILABLE:

- Standard kit make up includes: 2 pre-paired PKE remote FOB transmitters, IO module, external antenna and manual
- Multiplex or discrete communications
- Can add Tri*Mark*'s 540-0100 e-*PAD* Keypad for true keyless operation
- Customized wire harnesses
- Optional kits can include: any wiring harnesses for all connection points of system, extra relays, switches, door contacts, actuators, mounting hardware, mounting brackets, door latches, and exterior door handles

ANTENNA:

- RFID Antenna (125 kHZ) - 1 external for cab entry (PKE) and 1-2 for interior; immobilization and push to start
- Potted construction ensures environmental protection and durability performance – can be used in exterior or interior locations
- Custom mounting brackets available

REMOTE START:

- Optional Remote Start available with select engines. Custom software required to communicate with Engine Control Unit (ECU)

USE WITH:

- Tri*Mark* 510-0300 PKE Module
- Tri*Mark* 530-0400 PKE FOB
- Tri*Mark* 590-1200 PKE Antenna
- Tri*Mark* 020-0870 Power Locking Pull Handle with Capacitive Sensor for PKE
- Tri*Mark* puck with Capacitive Sensor for PKE
- Tri*Mark* 540-0200 Lighted Grab Handle with Keypad (e-GRAB)

INSTALLATION:

- Standard 12 VDC power
- I/O module is easily installed with (2) 1/4 or M6 screws (not included) and can be mounted in a concealed location

U.S. Patent No. 8,350,669
U.S. Patent Design No. D803,792

550-0100 Power Lock Actuators

Tri*Mark*'s new Power Lock Actuator has been tested and validated to meet stringent performance requirements thus insuring a long life of trouble operation

DESIGNED FOR:

- Tri*Mark* handles and latches equipped to accept a power lock actuator that provides a push/pull function and a clutch that allows for manual override with a key

FEATURES/BENEFITS:

- Reliable and durable to high cycle counts in various environmental extremes
- High impact case design
- Long travel distance - .83" (21mm)
- Each actuator is tested to 10.0 lbs./44.5N - maximum output force is 13.5 lbs./60N. It is recommended that a minimum load of 2.5 lbs./11N be applied in the application for maximum product life.
- Motor is equipped with 12V thermal protection for excessive heating due to extreme usage such as rapid, frequent operations or sustained activation, which can cause premature motor failing or motor seizing
- Motor varistor for electrical transient noise reduction
- Actuator is equipped with a clutch mechanism for soft starts/stops and allows for manual override with key
- Includes a rotatable/detachable tip for ease of application
- 20 gauge, UL 1007 compliant

AVAILABLE:

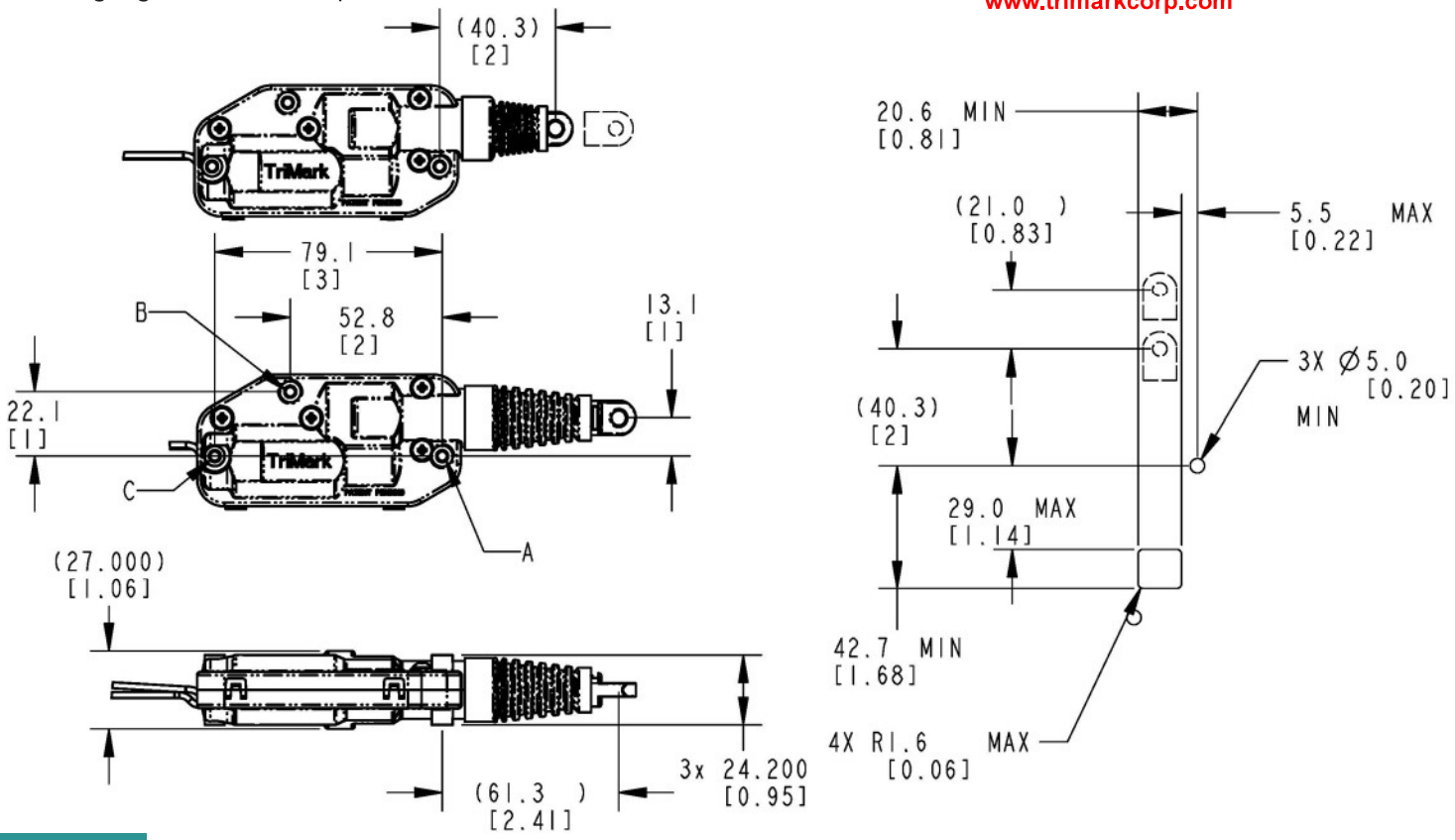
- Wiring options: blunt ends, bullet connectors, spade or Delphi connectors (please inquire)
- Possible customization available to include special connectors, custom wire length and kitting options. Please contact Tri*Mark* for more information.

INSTALLATION:

- Tri*Mark* power actuators are easy to install either by integrating or mounting directly into available Tri*Mark* latches or handles
- 12 volt supply (9-16 VDC)
- Each actuator can draw up to 4.0A (nominal) of current - proper sized and located circuit protection is required at triggering device (switch/relay) that controls the actuator

Patent Pending

All dimensions are for reference only. For more information visit www.trimarkcorp.com



610-0100 Ignition Switch

Tri*Mark*'s ignition switches satisfy the toughest customers in the roughest environments with superior performance and reliability. Further enhancement is now available by offering a heavy duty ignition switch for on or off-highway applications with KeyOne™ Plus modular locking system providing "One Key - One Vehicle" convenience.

FEATURES/BENEFITS:

- Contact rating: 50 Amp at 12 VDC continuous (battery)
  - ◊ Ignition - 20 Amps
  - ◊ Accessory - 30 Amps (inductive)
  - ◊ Start -.33 Amps
- Standard positions: Accessory, Off, On (ignition/ accessory) and Start
- Rugged and durable construction is environmentally sealed for long life
- Standard brass Packard Electronic Connectors (#56)

AVAILABLE:

- KeyOne™ Plus for a single-key system, keyed alike or keyed random
- In a wide variety of codes which allows the customer flexibility in keying a unit alike or differently
- Custom terminal configurations (please inquire)
- Custom function and positions (please inquire)

FINISH:

- Retaining nut: Black or bright chrome
- Housing: Satin nickel

MATERIAL:

- Sturdy zinc die cast alloy housing and retaining nut
- Base: engineered plastic
- Terminals and contacts: tin plated brass

INSTALLATION:

- Standard 1.00" (25.8mm) mounting hole
- Recommended panel thickness; .115-.225" (2.9-5.7mm)
- Knurled retaining nut is included. Recommended torque in 10 ft-lbs. (13.3 N-m)

All dimensions are for reference only. For more information visit www.trimarkcorp.com