



400 Power Track[®]

Electromechanical Closer-Holder



introduction

The Yale Power Track® Closer-Holders combine the functions of a single point electromechanical door holder with the proven reliability of a 400 Series Door Closer. The track assembly contains an arm slide and solenoid-operated hold open mechanism and is available with or without an integral smoke detector. The closer is mounted on the door. The *Power Track* is mounted to the frame face for pull side installations or the frame soffit for push side installations.

The *Power Track* is an aluminum extrusion which incorporates a solenoid-actuated cam that locks the arm slide in the track at a selected point. The degree of door hold open is selected by adjustment of the telescoping arm. When there is power to the unit, the door will hold open at the selected hold open point. Any power interruption will release the arm slide and the door will close. The door can be released manually at any time.

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functions

Master Unit

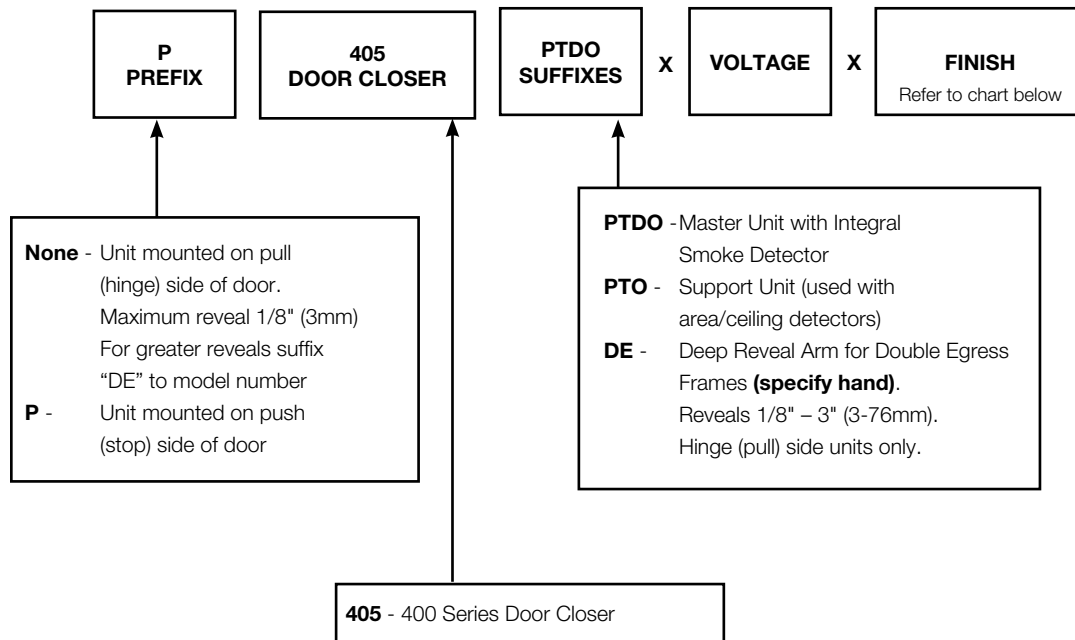
- Unit comprised of integral smoke detector and solenoid hold open mechanism in the slide track, a hook-up box and door closer.
- Can be used to control a single door or a pair of doors in conjunction with a Support Unit.
- **Suffix “PTDO” to model number.**

Support Unit

- Unit is comprised of a solenoid hold open mechanism in the slide track, hook-up box and a door closer.
- Units can be installed on a single door or a pair of doors when controlled by compatible UL listed detection equipment such as area ceiling detectors, pull stations, and remote alarm panels.
- Can also be used in conjunction with a Master Unit on a pair of doors. Support unit must be 24VDC.
- **Suffix “PTO” to model number.**



how to order



Note: Contact factory if door weight exceeds 250 lbs.

finishes

Sprayed Finishes			
Description	Specify Designation	Complements the following finishes	Old Designation
Aluminum	689	625, 628, 629, 630, 651, 652	SB
Statuary Bronze	690	640, 613, 695	STAT
Dull Bronze	691	612, 637, 639	BL
Black	693	315	315
Medium Amber	694	312	312
Gold	696	605, 606, 632, 633	GB
Prime Coat*	600	—	SRI

Product will be painted with a combination of waterborne acrylic and polyester powder coat.

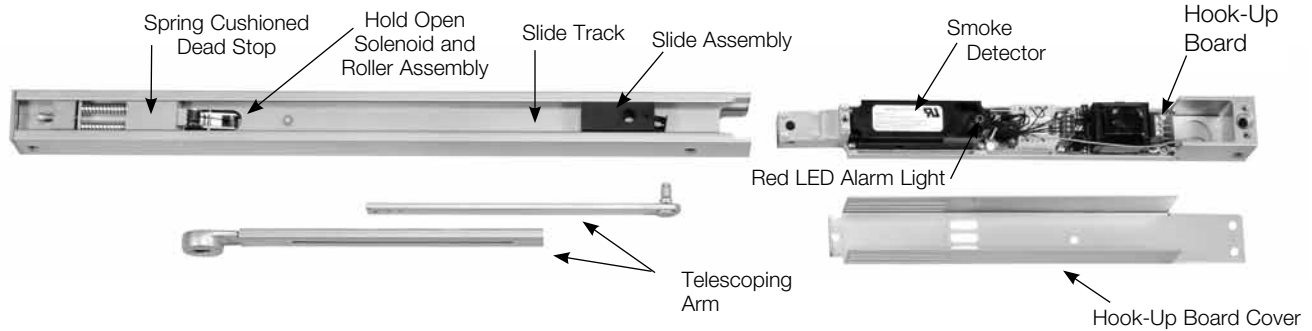
***600 is a special rust inhibiting prime coat. Closers can be ordered prime coat only (specify closer x 600). An additional charge applies if finish coat is required over prime coat (ex: 405PTDO x 600 x 689).**

compliance standards

Power Track® is ANSI/BHMA A156.15 certified. Power Track is listed by Underwriters Laboratories for labeled fire doors. The product is manufactured in an ISO 9001 facility. California State Fire Marshal Listing: 3550-0257:100, 3550-0257:101



overview



standard features

Selective Single-Point Hold Open:

The Power Track® has one template position. The single-point hold open position is selected by adjusting the telescoping arm with a hex drive set screw. Hold open range is 85° thru 110° in approximately 3° increments.

Non-Handed:

Units are non-handed except when ordered with Double Egress "DE" arms.

Pull/Push Installation:

No prefix indicates pull side application. Prefix "P" for push side installation.

Choice of Supply Voltage:

Available in 24VAC/DC or 120VAC, 60Hz. voltages. Power to these devices must be within a range of (+)10% (-)15% of the stated voltage.

Fail Safe:

In the event of a power outage, the *Power Track* solenoid will be de-energized and the closer/holder will then operate as a normal door closer.

Wiring Option:

Both pull and push side applications will accommodate either concealed or surface wiring. The hook-up box

will accept 3/4" (19mm) conduit.

Each *Power Track* is supplied with a thin-walled conduit nut to attach the conduit clamp. The hook-up box base is prepared for surface wiring. State and local building codes will dictate the type of wiring.

Spring Cushioned Dead Stop:

A spring loaded buffer block at the point of hold open prevents over travel of the arm slide and provides a cushioned dead stop. Use of an additional wall or floor stop is always recommended.

features - smoke detector

Photoelectric Sensing

Detector employs a photoelectric chamber to substantially reduce the probability of false alarms.

Fire/Smoke Control Circuit

Interprets the alarm signal from the detector and provides switching contacts to interrupt power to the hold open solenoid and divert it to activate optional audio/visual alarms.

Alarm (Relay) Contacts

Normally open in standby condition (energized, non-alarm state). These contacts close during an alarm condition (smoke detected) and switch power from the solenoid to an optional local alarm.

Trouble (Relay) Contacts

Normally closed in standby condition, these supervisory contacts monitor the continuity of power within the detector circuit. Any power interruption within the detector circuit will open these contacts. They can then be used to simultaneously indicate a trouble condition to the alarm panel on a separate trouble circuit.

Quick Disconnect Modules

Each component, solenoid coil, detector and control feature quick disconnect wiring for easy servicing and replacement.

Locked-In Alarm

When a unit alarms, it must be manually reset. This can be accomplished by remote control from the alarm console or by the reset button in the smoke detector. Reset button is accessible through the center louver in the underside of the track. Reset by rotating LED chamber using small flat blade screwdriver.

Indicator Lights

- Normal Mode: A red LED flashes once every eight (8) seconds.
- Clean Mode: A red LED flashes once every second.
- Alarm Mode: A red LED illuminates continuously.

ordering voltages

Type of Unit	Model	# of Power Input Lines	Choices of Voltage Input	Can be used with
Master	PTDO-24	1	24 VAC/DC	24V Support Model PTO
	PTDO-120		120 VAC, 60 Hz	
Support	PTO-24	1	24 VAC/DC	Area Smoke Detection System
	PTO-120		120 VAC, 60Hz	

Operating voltage for the control of fire/smoke doors are specified by the architect, electrical engineer and alarm system engineer and/or contractor. Consulting with these sources will verify which operating voltage should be ordered.

“PTDO” Master Units

- Two components require electrical power:
 - Integral smoke detector requires 24VDC input power
 - Hold open solenoid requires 24VDC input
- Hook-up box receives primary voltage input and distributes it to the smoke detector and hold open solenoid(s).
- Available with two voltage options:
 - **PTDO-24** suffix –
 - Accepts 24VAC or 24VDC power input.
 - A rectifier in the hook-up box will rectify alternating current to direct current for operation of both the smoke detector and hold open solenoid(s).
 - **PTDO-120** suffix –
 - Accepts 120VAC power input.
 - A 120VAC to 24VAC transformer in the hook-up box steps the input voltage down to 24VAC. It is then rectified to 24VDC for operation of both the smoke detector and the 24VDC hold open solenoid(s).

“PTO” Support Units

- Hold open solenoid requires electrical power
- Solenoid controlled by smoke detection equipment (ceiling detectors) or remote alarm panels
- Available for operation on 24VAC/DC or 120VAC, 60Hz.
- Hold open solenoid operates on direct current
- Contains built-in rectifier that converts alternating current to direct current.



405 Power Track®

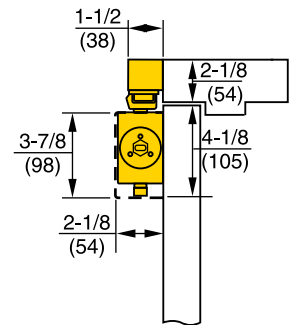
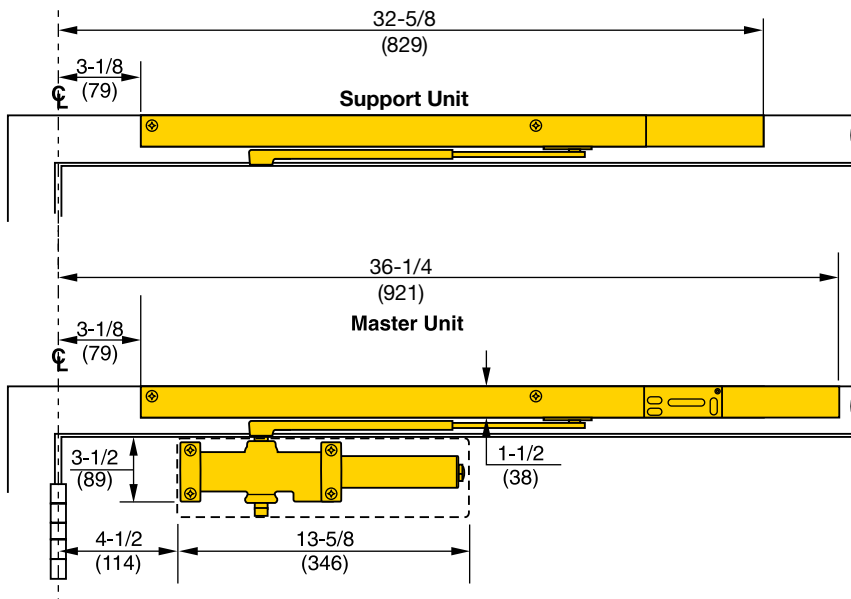
PULL (HINGE) SIDE MOUNTING



405PTDO Shown

Model #	Description
405PTDO	Master Unit Controlled by Integral Smoke Detector
405PTO	Support Unit Controlled by Remote Detection Equipment

technical details



Minimum Top Rail	
Without Drop Plate	With 486 Drop Plate
3-1/2" (89mm)	1-7/8" (48mm)

2-1/8" (54mm) minimum ceiling clearance required for *Power Track*.

door size

	Door(s) Opening Inches (cm)		Model Number & Type
	Max.*	Min.**	
Single Door	48" (122)	36" (91)	(1) 405PTDO Master Unit
	48" (122)	32" (81)	(1) 405PTO Support Unit
Pairs of Doors	96" (244)	68" (173)	(1) 405PTDO Master Unit and (1) 405PTO Support Unit
	96" (244)	64" (163)	(2) 405PTO Support Units (controlled by remote detection equipment)

* Maximum door size for door closer power.

** Minimum door opening for standard installation. Consult factory for door openings narrower than those shown.

Double Egress Doors: with reveals greater than 1/8" (3mm): a special handed arm for the pull (hinge) side *Power Track* is available. Accommodates reveals to 3" (76mm). Suffix "DE" to model number; specify hand.



P405 Power Track®

Model #	Description
P405PTDO	Master Unit Controlled by Integral Smoke Detector
P405PTO	Support Unit Controlled by Remote Detection Equipment

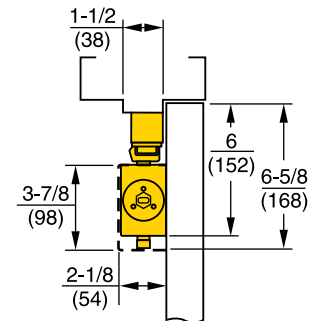
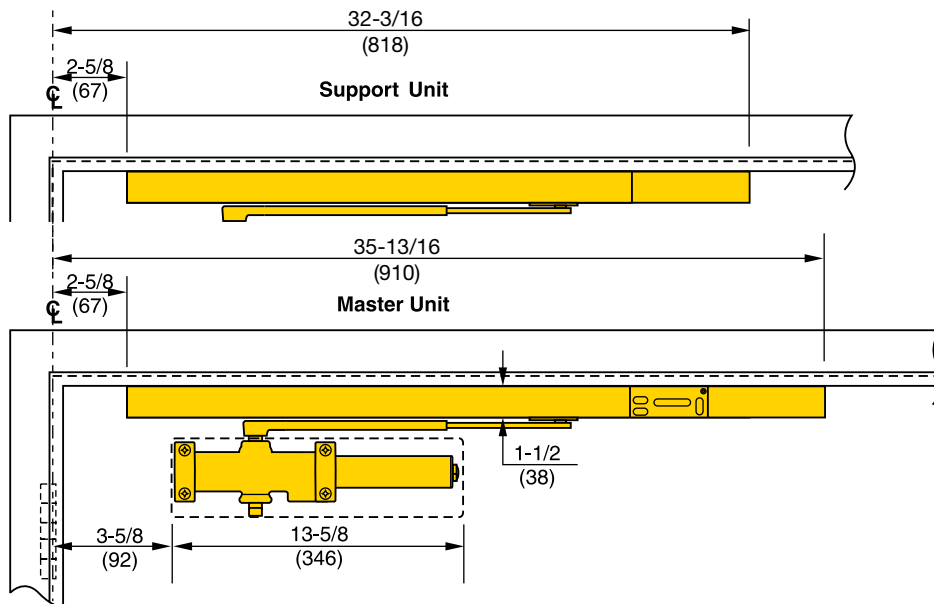
NOTE: Interference with other hardware such as vertical rod exit devices, magnetic locks, and door coordinators, etc. must be considered when selecting this product.

PUSH (STOP) SIDE MOUNTING



P405PTO Shown

technical details



Minimum Top Rail	
Without Drop Plate	With 488 Drop Plate
6" (152mm)	2-3/4" (70mm)

1-1/2" (38mm) minimum frame soffit required for *Power Track*.

door size

	Door(s) Opening Inches (cm)		Model Number & Type
	Max.*	Min.**	
Single Door	48" (122)	36" (91)	(1) P405PTDO Master Unit
	48" (122)	33" (84)	(1) P405PTO Support Unit
Pairs of Doors	96" (244)	68" (173)	(1) P405PTDO Master Unit and (1) P405PTO Support Unit
	96" (244)	64" (163)	(2) P405PTO Support Units

* Maximum door size for door closer power.
 ** Minimum door opening for standard installation. Consult factory for door openings narrower than those shown.



electrical information

	Model Number	No. Power Input Lines* (Pairs)	Operating Voltage	Amperage Draw		
				Smoke Detector		Solenoid Coil
				Standby	Alarm	
Master	405PTDO P405PTDO	1	24VAC/DC	.016 @ 24VDC	.035 @ 24VDC	.090 @ 24VDC
			120VAC, 60Hz			
Support	405PTO P405PTO		24VAC/DC	N/A	N/A	.090 @ 24VDC
			120VAC, 60Hz			.018 @ 120VAC

*Number of Input Lines (pairs) required to supply Operating Voltage(s). This does not include signal or control lines (pairs) to Alarm Panels.

suggested specifications

Closers for _____ doors shall be electromechanical closer-holder. Hold open to be achieved by electric solenoid locking of closer arm slide in its track. Track, arm, slide (and) solenoid (and integral smoke detector) to be contained in a single aluminum extrusion 1-1/2" (38mm) high, 1-1/2" (38mm) deep.

Closer shall be door mounted. Track and hold open mechanism shall be surface mounted to the frame face for application on the pull side of the door and frame soffit mounted for application on the push side of the door. Single point hold open shall be selective through a range of 85° to 110°. Hold open point to be achieved by adjustment of a telescoping closer arm.

Closer shall be hydraulic with full rack and pinion enclosed in a cast aluminum alloy shell. Hydraulic fluid shall be non-gumming and non-freezing. Closer shall have two non-critical valves to independently regulate sweep speed and latch speed. It shall have an adjustable backcheck cushioning valve (and an adjustable backcheck positioning valve). All valves shall be adjustable with a hex-key. (Closer shall have spring

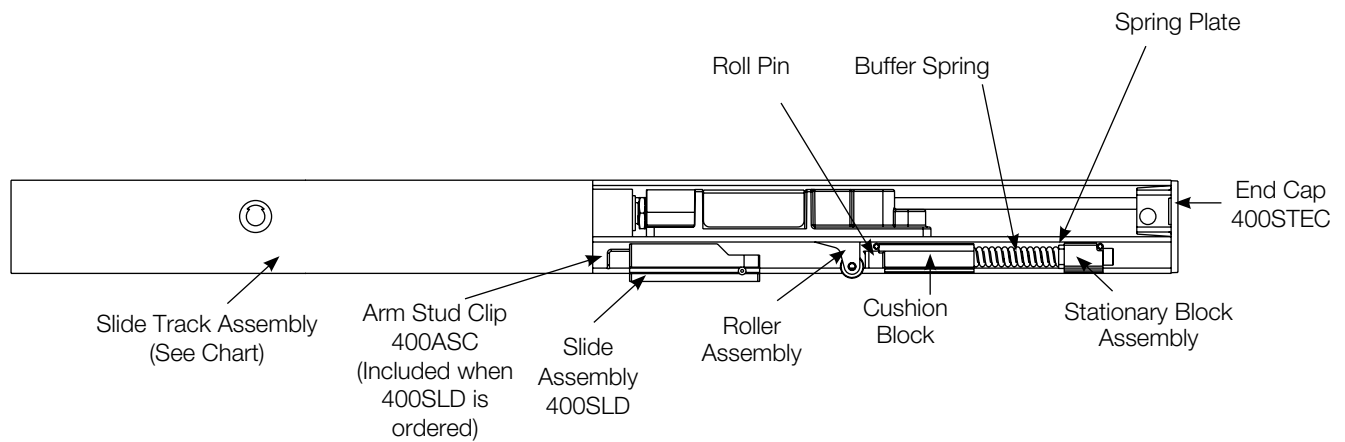
power adjustment to permit 50% increase in closing power.) Closer to be enclosed in a molded full cover. (Master units to have an integral smoke detector with photoelectric chamber. Master units integral smoke detector shall have latching alarm and reset switch.) (Support units to be controlled by U.L. Listed Smoke Detection Equipment.) Units to be fail safe and close the door during an interruption to the electrical power. The hold open solenoid coil shall have a maximum amperage draw of (.090 Amps at 24 volts) (.018 Amps at 120 volts). Unit shall have a switch to permit testing of the releasing device function without alarming the system.

All wiring connections shall be made without the need of wire nuts or soldering. Master unit(s) shall require a (24VAC/DC) (120VAC, 60Hz) power input. Support unit(s) shall require a (24VAC/DC) (120, 60Hz) power input. Supplier to coordinate electrical requirements with electrical and alarm system engineers. Wiring (and conduit) by others. Electromechanical Closer-Holder to be Yale® Power Track® [(P)400(PTO)(PTDO)].

track assemblies

Description	Voltage	Part Number^	
		Hinge Side	Stop Side
Master or Support	24V	YPT024	YPPT024

Master and Support Unit Track Assemblies include track, slider assembly and solenoid block assembly.



Hook-Up Box Cover Kit^	
Description	Part Number
Master	PTDOHBCOV
Support	PTOHBCOV

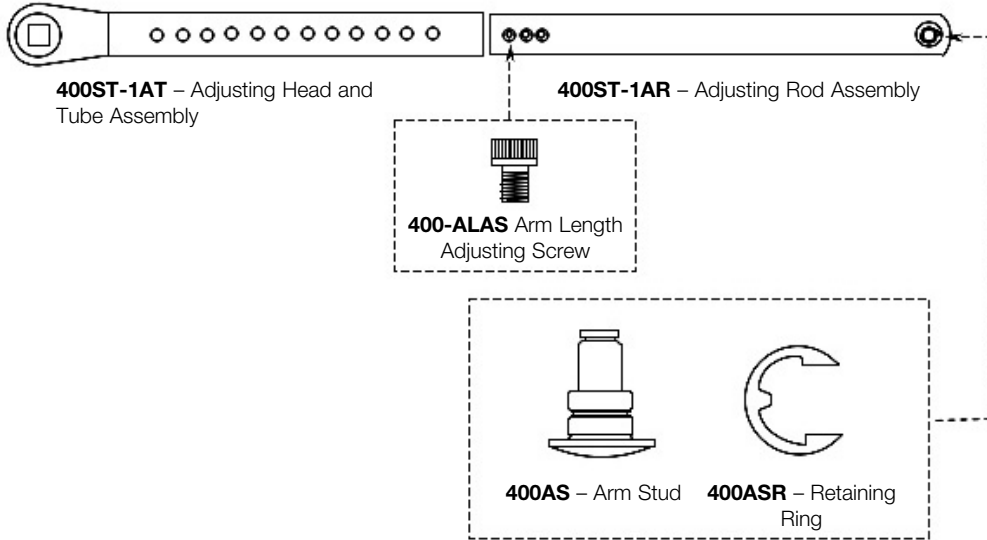
Hook-Up Boards^		
Description	Voltage	Part Number
Master or Support	24V	PTOPCB24
	120V	PTOPCB120

^ Not compatible with products manufactured prior to March 2009.

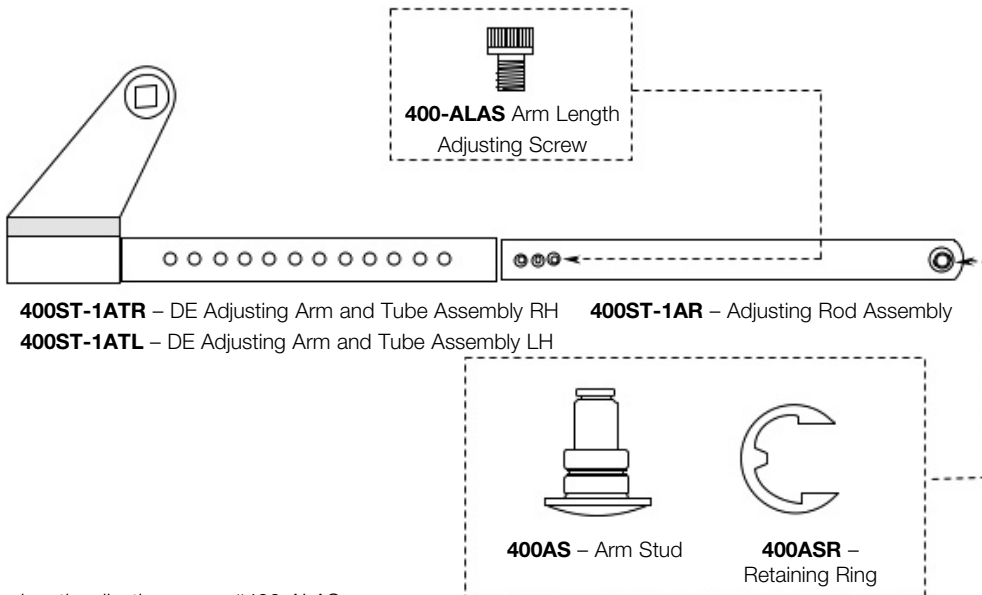


parts

STANDARD ARM ASSEMBLY
400ST-1A^{1,2}



DOUBLE EGRESS ARM ASSEMBLY
400PT-DE-1R (RIGHT HAND)^{1,2}
400PT-DE-1L (LEFT HAND)^{1,2}



- 1. Includes arm length adjusting screw #400-ALAS
- 2. Includes arm tube & adjusting rod assembly

NOTE: Mounting hardware included with all parts orders.

miscellaneous parts

Miscellaneous Parts	
Description	Part Number
Fuse^	PTO125V
Smoke Detector Board*^	MPDOSD24
Solenoid Block Assembly (24V)	PT24SOL

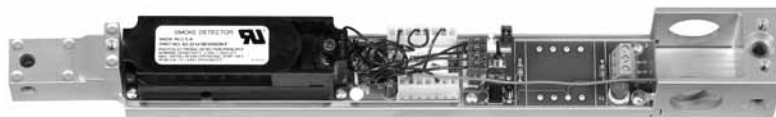
Description	Voltage	Hook-Up Boxes^	
		Hinge Side	Stop Side
Master Unit	24V	YPTDOHB24	YPPTDOHB24
	120V	YPTDOHB120	YPPTDOHB120
Support	24V	YPTOHB24	YPPTOHB24
	120V	YPTOHB120	YPPTOHB120

^ Not compatible with products manufactured prior to March 2009

* Same as Yale® 4200 Electromechanical Smoke Detector

hook-up box (shown less cover**)

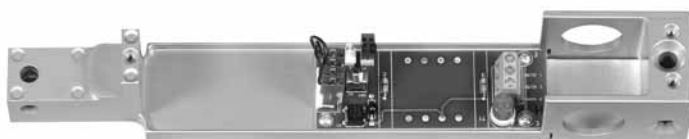
** For identification purposes only - box is only supplied with the cover.



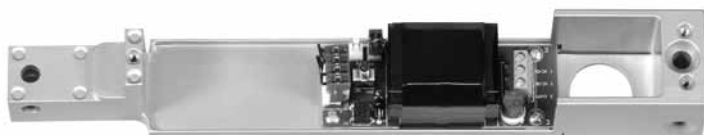
Master, 24V



Master, 120V



Support, 24V



Support, 120V



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