HALCO PRODUCTS COMPANY
100 N. Gordon St. Elk Grove Village, IL 60007-1193
Phone (847) 956-1600 Fax (847) 956-0595
E-mail: info@halco-products.com
Website: www.halco-products.com

INSTALLATION, OPERATION, & MAINTANANCE MANUAL

PT1818-18-SS-FD-EI-SP

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CHAPTER 1

HALCO PRODUCTS COMPANY
100 N. Gordon Street - Elk Grove Village, IL 60007-1193
Tel: 847-956-1600 - Fax: 847-956-0595
E-Mail: Info@Halco-Products.com
Website: www.Halco-Products.com

HALCO PRODUCT INFORMATION
300.1000

CLEANROOM PASS-THRU

Where contamination control is critically important, a pass-thru system is essential. Models are available in dozens of sizes and in many different materials.

Complete ease of operation is but one of the outstanding features. Designed with simplicity in mind either door is easily actuated with slight hand or thumb pressure.

Either the mechanical or electrical interlock allows for positive latching. Only one door can be opened at a time. This feature guarantees the integrity of the clean room since the room is under positive pressure all air evacuation is outward. BSL-3/4 seals available as an option.

CONSTRUCTION MATERIALS AVAILABLE

- Standard laminated
- Steel (painted or unpainted)
- Stainless 304/316 steel
- Plastic

DOORS:
The doors are polished Plexiglass. Safety plate or amber (gold color) are also available on special order.

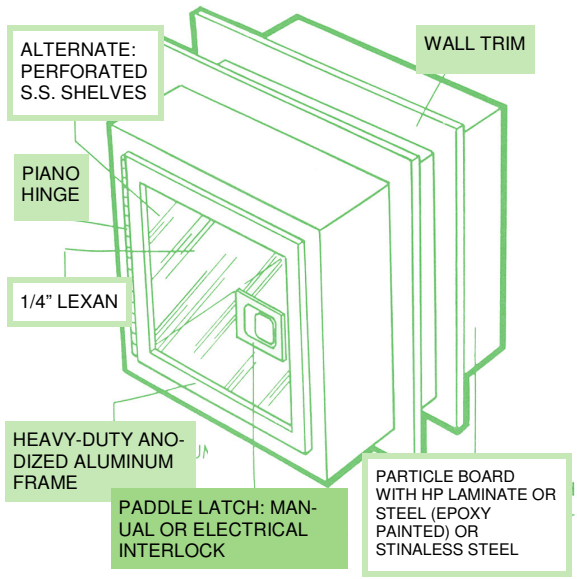
HARDWARE:
Unit is hinged and framed in anodized aluminum with inserted vinyl bulb seal.

INTERLOCK:
The mechanical or electrically operated interlock system has a specially concealed latch that allows for only one door to be opened at a time. This guarantees the integrity of the clean room.

- Mechanical Interlock
- Electrical Interlock

INSTALLATION:
The pass-thru is flush to the clean room wall side. Insert the pass-thru into a rough wall opening and hold in place with anodized aluminum or stainless steel angle.

SPECIFICATIONS



OPTIONS:

- **Fire Rated**
- Solid 304/316 stainless steel construction
- Adjustable stainless steel shelves (solid or perforated)
- 304/316 stainless steel laminated interior
- Fluorescent/UV lights
- Polypropylene construction (other plastics available)
- Aluminum construction
- Talk-thru installed in doors
- Multiple doors
- Inert gas purge

Inside Dimensions

Model No.	A	B	C
1818PT	18"	18"	18"
2424PT	24"	24"	24"
2430PT	4"	30"	24"
3024PT	30"	24"	24"

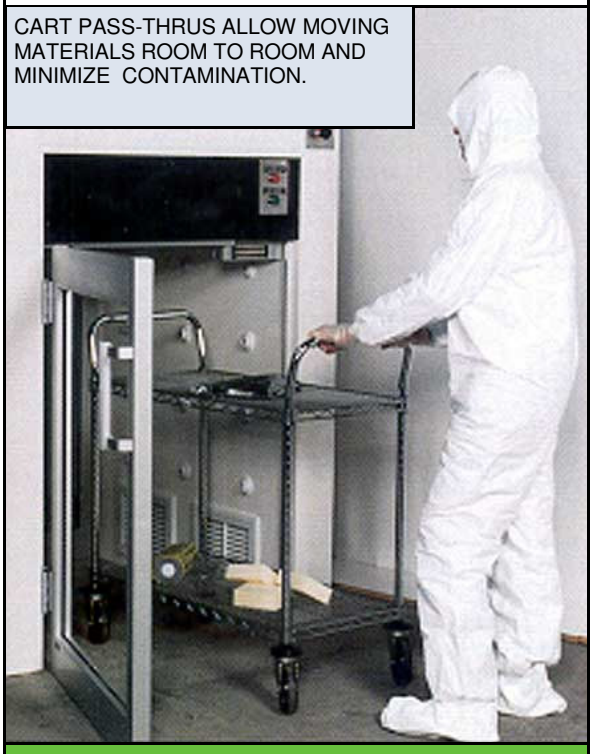
**Other sizes available upon request*

CART PASS-THRU

Units provide dedicated isolation and decon-tamination

- *Auto Doors*
- *Interlocks*
- *Floor and Trays*
- *Safety Glass*
- *Exhaust Connection*
- *UV Lamps*
- *Wall Bumpers*
- *Amber Glass*

CART PASS-THRUS ALLOW MOVING MATERIALS ROOM TO ROOM AND MINIMIZE CONTAMINATION.



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REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	AS-BUILT, ADD LEVER LATCH	07/08/10	SM

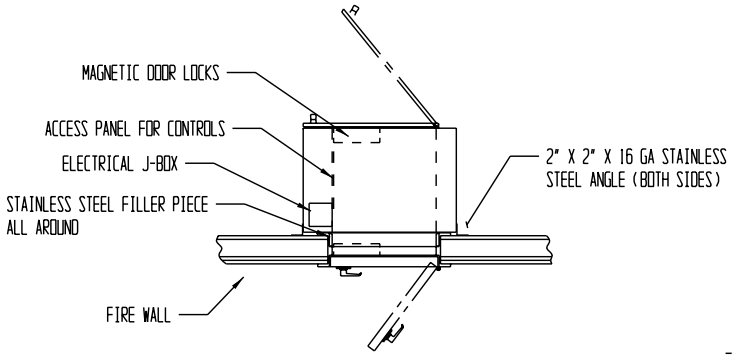
NOTES:

- UNIT FABRACATION TO BE DOUBLE WALL, CONSTRUCTED OF 16 GA. 304 STAINLESS STEEL WITH A NO. 4 FINISH

- (1) NON-RATED DOOR TO BE CONSTRUCTED OF 20 GA. TYPE 304 STAINLESS STEEL WITH 1/4" THK. WIRE GLASS GLAZING, PIVOT HINGES AND QUARTER TURN CHROME PLATED HANDLE. DOOR TO BE 3/4" THK, DOUBLE WALL CONSTRUCTED

- (1) FIRE RATED DOOR AND FOUR SIDED FRAME, 19" HIGH X 19" WIDE X 1 3/4", TO BE 16 GA. TYPE 304 STAINLESS STEEL, 1 1/2 HOUR RATED, UL "B" LABELED. FIRE DOOR TO BE SUPPLIED WITH STAINLESS STEEL KNOB SET, SPRING LOADED BUTT HINGES AND 8 X 8 WIRE GLASS WINDOW

- DOOR GASKET TO BE NON-PARTICULATING TYPE



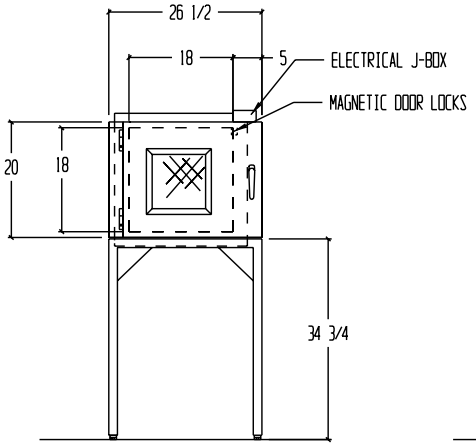
PLAN VIEW

- UNIT TO BE SUPPLIED WITH 2" X 2" X 16 GA. 304 STAINLESS STEEL MOUNTING (TO BE FIELD INSTALLED)

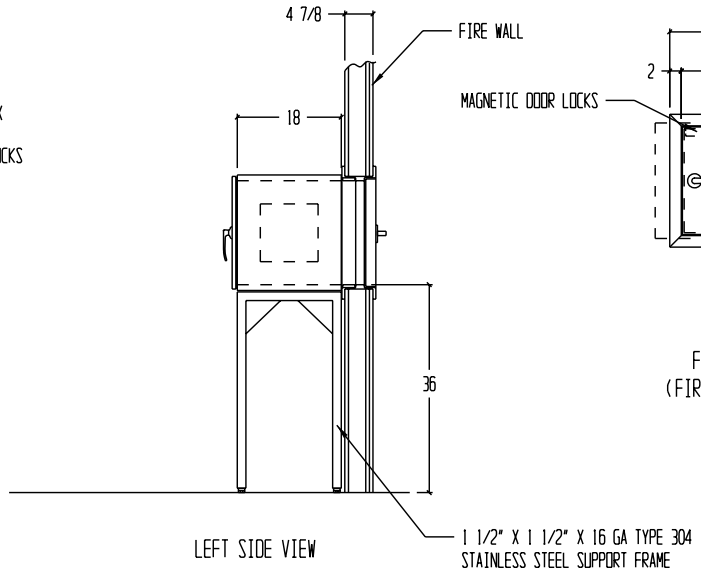
- ROUGH OPENING IN WALL TO BE FIELD DETERMINED

- CUSTOMER MUST STATE FIRE WALL THICKNESS

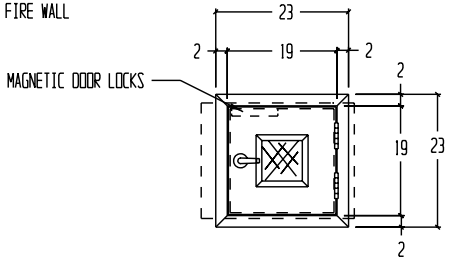
- UNIT SUPPLIED WITH ELECTRICAL INTERLOCK SYSTEM



REAR VIEW
(FACING NON RATED DOOR)



LEFT SIDE VIEW



FRONT VIEW
(FIRE RATED DOOR)

(1) UNIT REQUIRED, AS SHOWN

DRAWN FOR: NY DOWNTOWN HOSPITAL NY, NY	HALCO PRODUCTS COMPANY 100 NORTH GORDON ST, ELK GROVE, ILLINOIS 60007			
	TITLE: PASS THRU - PT1818-18 SS/FD/EI/SP			
DRAWN BY: TM	SIZE	JOB NO. 12434	DWG NO. 1516161BA	REV A
APPROVED BY	SCALE 1/2"=1'-0"	DATE 5-19-10	SHEET	

CHAPTER 2

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PASS-THRU OPERATIONAL PROTOCOL

1) With Pass-Thru at rest and both doors latched either door may be opened.

2) Opening of one door is established by turning the handle ¼-turn toward the hinge side of the Pass-Thru to a horizontal position.

3) At this point the door may be pulled open as long as opposite door is closed and latched.

4) Once door is opened the opposite door shall be mechanically interlocked.

5) **WARNING!! If pin is depressed to by-pass the mechanical interlock, damage may occur to Pass thro and VOIDS ANY WARRANTIES.**

6) Materials shall be loaded into Pass-Thru.

7) The door should then be closed making sure the handle is in the horizontal position, slightly compress the gasket & turn the handle down into a vertical position to latch the door closed.

8) Opening opposite door is established by turning the handle ¼-turn toward the hinge side of the Pass-Thru to a horizontal position.

9) At this point the door may be pulled open as long as opposite door is closed and latched.

10) Once door is opened the opposite door shall be mechanically interlocked.

11) Materials should be unloaded from Pass-Thru.

12) The door should then be closed making sure the handle is engaged and gasket is slightly compressed.

Note: Any tampering with mechanical interlock may cause damage and will void all warranties.

IMPORTANT SAFETY INSTRUCTIONS

READ AND SAVE THESE INSTRUCTIONS

- Read all of the instructions before operating this equipment.
- Pay particular attention to all safety precautions.
- Retain the instructions for future reference.

WARNING- TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:

a) Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer.

b) Before servicing or cleaning unit, switch power off at service panel and lock the service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.

WARNING- TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:

a) Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction.

b) Sufficient air is needed for proper combustion and exhausting of gases through The flue (chimney) of fuel burning equipment to prevent backdrafting. Follow the heating equipment manufacturer's guideline and safety standards such as those published by the National Fire Protection Association (NFPA), and the American Society for Heating, Refrigeration and Air Conditioning Engineers (ASHRAE), and the local code authorities.

c) When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the manual accompanying the unit.

PASS THRU SPECIFICATIONS

GENERAL:

The Pass-Thru shall provide an air lock for optimum retention and prevention of cross-contamination of the controlled atmosphere within the cleanroom area.

CONSTRUCTION:

The Pass Thru general construction shall appear architecturally pleasing, and the engineering, workmanship, and materials shall be of the highest quality.

The Pass Thru shall be constructed of 16-ga., type 304, stainless steel with a #4 polished finish, double wall construction. The **non-rated door** to be constructed of 20-ga. type 304 stainless steel, with 1/4" thick wire glass window, pivot hinge and ¼ turn chrome plated handle. The **fire rated door** to be constructed of 16-ga., type 304, stainless steel, 1-1/2 hour rated, UL “B” labeled and supplied with stainless steel knob set, spring-loaded butt hinge and wire glass window. The door gasket to be of a non-particulating type. The units to include an electrical interlock system. Unit supplied with mounting angle to be field installed.

INTERLOCK SYSTEM:

The interlock system consists of magnetic locks, which are mounted in the doorframe. The actuator for the lock is normally closed magnetic reed switch, which is installed in the doorframe and is activated by a magnet mounted in the door. This circuit is a fail-safe system, which will de-energize and unlocks the doors in the event of a power failure. **Note:** Doors must be pushed in tight to complete seal.

INSTALLATION:

- The opening in the wall should be *1/4" larger than the o.d. size of the unit.
- Attach the angle trim, (provided) to one side of unit.
- Place the unit into the opening and position as required.
- Shim and square, as needed.
- Attach the angle trim, (provided) to opposite side, sandwiching unit into wall.
- Install gussets/brackets if provided.
- The customer shall supply a single source of power, which is 115 volts, 1 phase, 60 hertz, 1.0 fla (amps at full load). Manufacturer recommends a 15-amp service. Refer to the electrical tag to verify proper voltage, hertz and amperage.
- The Pass Thru is now ready for use.

*Refer to unit drawing to verify.

Note: the Pass Thru may be shipped with a squaring board inside unit to keep the unit square during shipment. This board should be kept in place, until after unit is installed.

ELECTRICAL:
The electrical wiring to meet the latest NEC standards. Customer to supply electrical power source of 115 volts, 1 phase, 60 hertz, 1.0 fla (amps at full load). Manufacturer recommends a 15-amp service. Refer to the electrical tag to verify proper voltage, hertz and amperage.

SEQUENCE OF OPERATION:

- With Pass-Thru at rest either door may be opened.
- Opening of one door is established by turning lifting up on the handle.
- Once door is opened the opposite door shall be electrically interlocked.
- Materials shall be loaded into Pass-Thru.
- The door should then be closed.
- Opening of opposite door is established by lifting up on the handle.
- Once door is opened the opposite door shall be electrically interlocked.
- Materials should be unloaded from Pass-Thru.
- The door should then be closed.
- In the event of a power failure the Pass Thru will de-energize and unlock the doors.

GENERAL MAINTENANCE:

This model requires virtually no maintenance. The few elements, which do require attention, are readily accessible and take a minimum amount of time. After years of dependable service customer need only check that all hardware is tightened as needed.

 **WARNING:** Always disconnect primary power source before inspection or servicing unit.

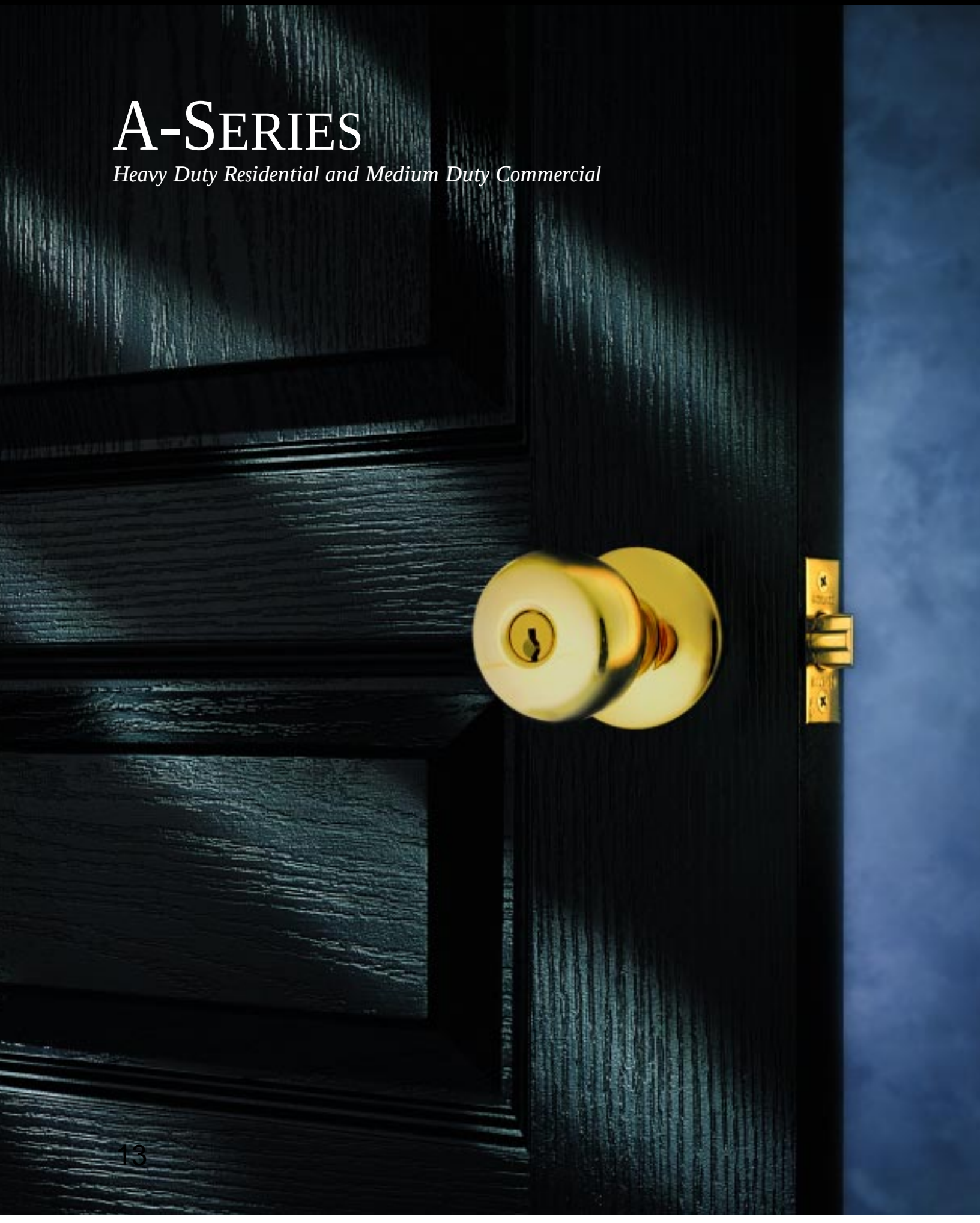
PASS THRU ▪ PARTS LIST
MODEL# PT1818-18 SS/FD/EI/SP
SERIAL# 12434-1

PART DESCRIPTION	PART NO.	MFG.	QTY.
Exit Latch Lever	A25D-LEV 626	Schlage	1
L- Latch Handle	92-32-121	Southco Inc.	1
Bullet Hinges	96-10-572	Southco Inc.	2
Power Supply 24VDC	PS24-050D	Auto. Direct	1
Circuit Breaker 1P, 1A	WMS1C01	Cutler-Hammer	1
Circuit Breaker 1P, 2A	WMS1C02	Cutler-Hammer	1
Magnetic Door Lock	320DSM	Schlage	2

CHAPTER 3

A-Series

Heavy Duty Residential and Medium Duty Commercial



Heavy Duty Residential and Medium Duty Commercial

For interior doors of multi-family dwellings and military facilities. Also ideal for exterior doors of fine homes.

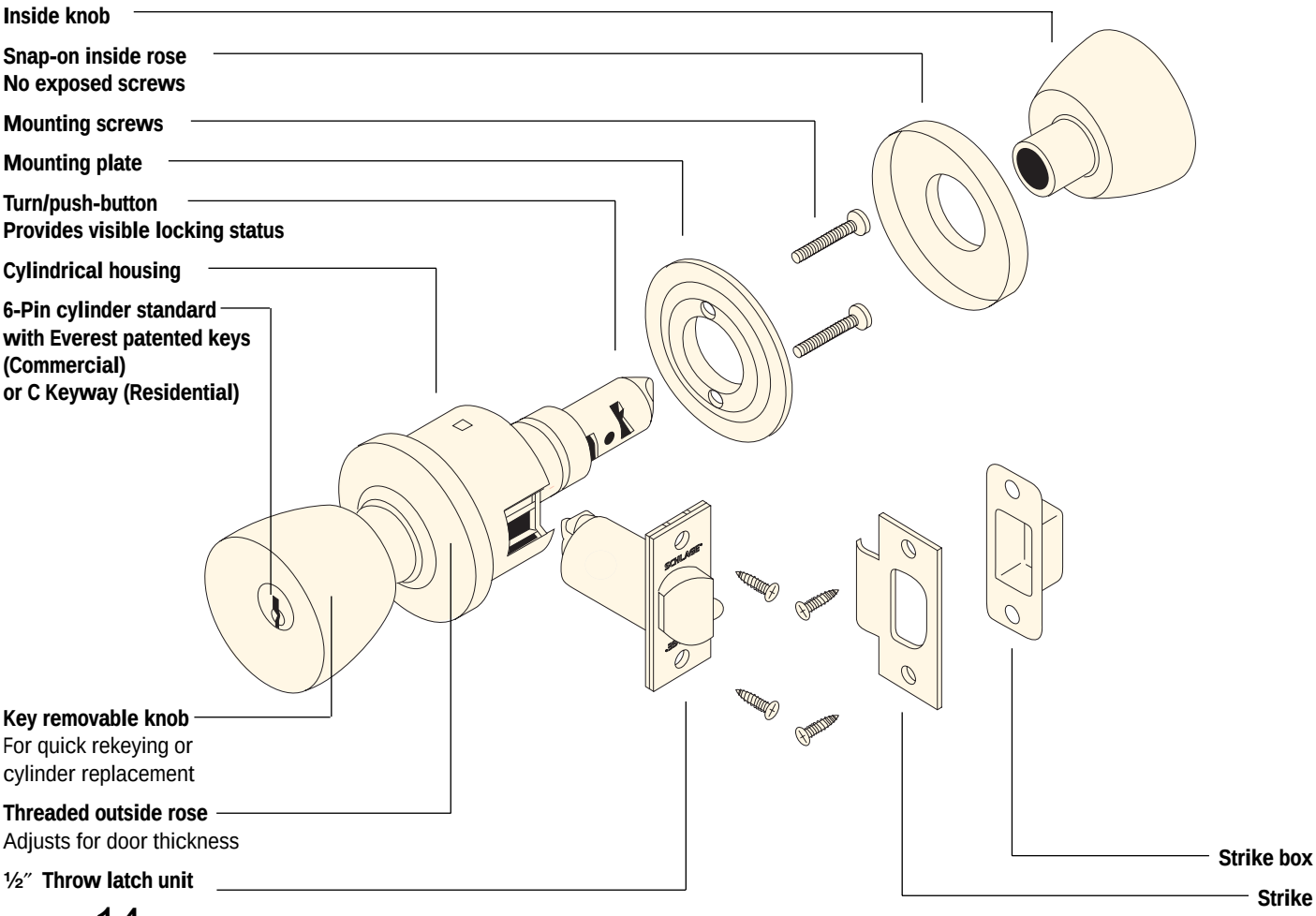
Performance Features

Cold rolled steel, machined, threaded hubs and locking nuts prevent loosening of the lockset by bolting chassis to the door.

Heavy duty cast mounting plate with specially tapped holes keeps lockset tight on door. Large diameter of mounting plate and rose covers new ANSI hollow metal door cutout.

Patented door range adjuster allows quick and easy adjustment of the AL-Series for 1⅜″ to 1⅞″ (35 mm to 48 mm) thick doors.

Exploded View



On our cover, the A-Series PLYMOUTH in Bright Brass.

Specifications

Handing:
Keyed functions are reversible. Non-keyed functions are not handed.

Door Thickness:
1⅜″ to 1⅞″ (35 mm to 48 mm) standard.
2″ (51 mm) to 2½″ (64 mm) optional extended inside.

Backset:
2⅜″ (60 mm) standard. 2¾″ (70 mm), 3¾″ (95 mm) and 5″ (127 mm) optional.

Front:
Steel. 1⅛″ x 2¼″ square corner, beveled, for 2¾″ backset standard. Optional 1″ square corner, 1″ radius corner, and non-UL drive-in / round face. For availability with specific backsets, see page 6.

Lock Chassis:
Steel, zinc dichromate plated for corrosion resistance.

Latch Bolt:
Brass, chrome plated, ½″ throw, deadlocking on keyed and exterior functions.

Exposed Trim:
Wrought brass, bronze or stainless steel. Levers are pressure cast zinc, plated to match finish symbols.

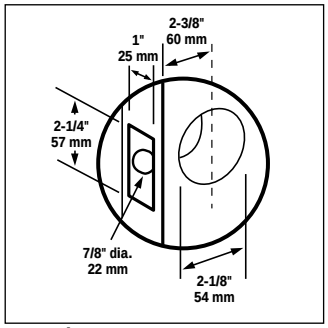
Strike:
T-strike 1⅛″ x 2¾″ (29 mm x 70 mm) x 1⅛″ (29 mm) lip to center with box standard. Optional strikes, lip lengths and ANSI strike box available. See page 7.

Cylinder & Keys:
Commercial: 6-pin patented Everest C123 keyway standard with two nickel silver keys per lock.
Residential: 6-pin C keyway, keyed 5-pin.

Keying Options:
Interchangeable core and Primus® high security cylinders. Master keying, grand master keying, and construction keying.

Warranty:
Commercial: three-year limited.
Residential: Full mechanical lifetime.

Door Preparation



15

Certifications

ANSI
Meets or exceeds A156.2 Series 4000, Grade 2 strength and operational requirements.

Federal
Meets FF-H-106C.

California State Reference Code
(Formerly Title 19, California State Fire Marshal Standard)
All levers with returns comply; levers return to within ½″ of door face.

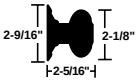
UL / ULC:
All locks listed for A label single doors, 4′ x 8′.
Letter F and UL symbol on latch front indicate listing.
UL437 Listed locking cylinder optional: specify Primus 20-500 Series cylinder.

Designs & Finishes

GEORGIAN

Symbol: GEO
Material: Wrought brass
Finishes: 605, 606, 609, 610, 625, 626

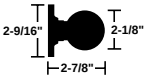
609



ORBIT

Symbol: ORB
Material: Wrought brass or bronze
Finishes: 605, 606, 609, 610, 611, 612, 613, 616, 625, 626

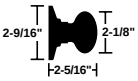
613



PLYMOUTH

Symbol: PLY
Material: Wrought brass, bronze, or stainless steel
Finishes: 605, 606, 609, 610, 611, 612, 613, 616, 625, 626, 629, 630

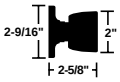
605



TULIP

Symbol: TUL
Material: Wrought brass
Finishes: 605, 606, 609, 610, 625, 626

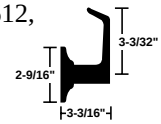
626



LEVON

Symbol: LEV
Material: Pressure cast zinc lever; wrought brass or bronze rose
Finishes: 605, 612, 613, 626

605



Note: Levon available as inside trim only on deadlatch functions. Specify complete trim application and door handing when ordering with deadlatch functions.

Finishes

605 Bright Brass
606 Satin Brass
609 Antique Brass
610 Bright Brass, Blackened
611 Bright Bronze
612 Satin Bronze
613 Oil Rubbed Bronze
616 Antique Bronze
625 Bright Chromium Plated
626 Satin Chromium Plated
629 Bright Stainless Steel
630 Satin Stainless Steel

Keyed functions available with full size interchangeable core option for Orbit design.

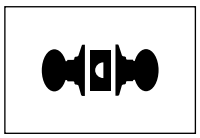
Functions

ANSI A156.2 Series 4000 Grade 2

Non-Keyed Functions

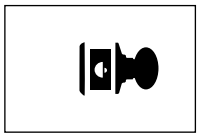
SCHLAGE ANSI

A10S F75 — **Passage Latch**



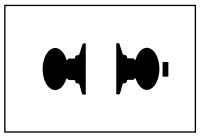
Both knobs always unlocked.

A25D — **Exit Lock**



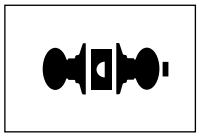
Blank plate outside. Inside knob always unlocked. Specify door thickness, 1⅜″ or 1¾″.

A30D F77 — **Patio Lock**



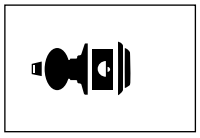
Push-button locking. Turning inside knob or closing door releases button, preventing lock-out.

A40S F76 — **Bath/Bedroom Privacy Lock**



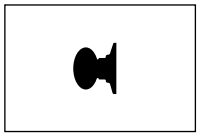
Push-button locking. Can be opened from outside with small screwdriver. Turning inside knob or closing door releases button.

A43D F79 — **Communicating Lock**



Turn-button in outer knob locks and unlocks knob and inside thumbturn.

A170 — **Single Dummy Trim**

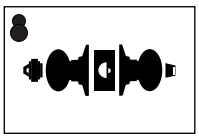


Dummy trim for one side of door. Used for door pull or as matching inactive trim.

Keyed Functions

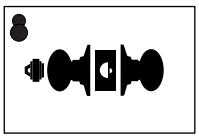
SCHLAGE ANSI

A53PD F109 — **Entrance Lock**



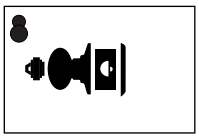
Turn/push-button locking: pushing and turning button locks outside knob requiring use of key until button is manually unlocked. Push-button locking: pushing button locks outside knob until unlocked by key or by turning inside knob.

A70PD F84 — **Classroom Lock**



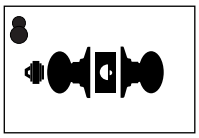
Outside knob locked and unlocked by key. Inside knob always unlocked.

A79PD — **Communicating Lock**



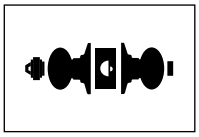
Locked or unlocked by key from outside. Blank plate inside.

A80PD F86 — **Storeroom Lock**



Outside knob fixed. Entrance by key only. Inside knob always unlocked.

A85PD F93 — **Hotel/Motel Lock**



Outside knob fixed. Entrance by key only. Push-button in inside knob activates visual occupancy indicator, allowing only emergency masterkey to operate. Rotation of inside spanner-button provides lock-out feature by keeping indicator thrown.

Keyed functions available with full size interchangeable core option for Orbit design.

Standard Cylinders

Schlage® locks are provided with cylinders precision built to extremely close tolerances and the highest standards of accuracy. Using only solid brass plugs, extruded brass shells, phosphor bronze springs, nickel silver keys and pins, ensures long life and ease of operation. For complete listing of cylinder parts, refer to the A-Series Service Manual.

Conventional cylinders are available in Classic keyways or in the newly patented Everest® keyways. Specify keyway to differentiate between Everest and Classic. Example: C (Classic) vs. C123 (Everest).

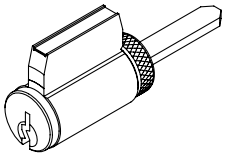
Primus® High Security Cylinders

Primus high security cylinders are available to add patented key control and varying degrees of geographical exclusivity to most Schlage 6-pin key systems, whether Everest or Classic keyways.

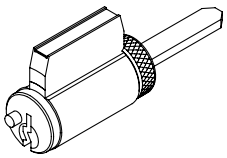
In addition to a conventional pin tumbler mechanism, Primus cylinders incorporate a patented finger pin and sidebar design providing a “dual-locking” cylinder that is virtually pick-proof. Resistance to drilling and other physical attack is optional by specifying 20-500 Series UL437 Listed cylinders.

Classic Primus cylinders are recommended for upgrading existing Classic key systems. Due to its extended patent life, the newly designed Everest Primus is recommended for new key systems and for upgrading existing Everest® key systems. Specify keyway to differentiate between Everest and Classic. Example: CP (Classic) vs. C123 (Everest).

Cylinder for Most Functions



Hotel Function Indicator Cylinder



Standard Cylinders

Number		
Orbit Design	Other Designs	Description
21-002-122	21-002	6-Pin conventional (standard)
20-724-122	20-724	Primus high security
20-524-122	20-524	Primus UL437 Listed high security
21-003-168	21-003	Hotel Function (A85) with indicator

Available 606 and 626 finish only. Everest C123 keyway standard for Commercial; C keyway standard for residential.

Interchangeable Core

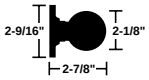
Schlage® figure-8 interchangeable core (IC) locksets allow immediate rekeying at the door simply by using the special *control key* to replace the core in seconds.

IC locksets are available in Orbit design only.

626

ORBIT

Symbol: ORB
Material: Wrought brass or bronze
Finishes: 605, 606, 612, 613, 625, 626



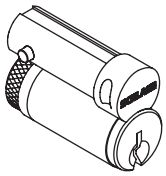
Full size interchangeable cores can be integrated into any 5 or 6-pin Schlage key with no adverse affects on keying capacity.

To order complete locks with full size cores, change suffix from PD to RD. Example: A53RD. To order locks less core, change suffix to JD. To order with full size construction core, change suffix to TD.

Note: Hotel function A85PD is not available with interchangeable cores.

Cores Only

Full Size Core

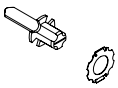


Full Size Interchangeable Cores (For JD Suffix Locksets)

Number	Description
23-030	Conventional core
20-740	Primus high security core

Available 606 and 626 finish only. Everest C123 keyway standard for Commercial; C keyway standard for residential.

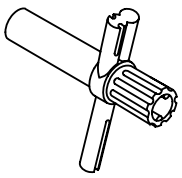
Driver and Retainer
01-053



Required for upgrading IC locks manufactured before 1992 to accept Everest and Primus cores.

IC Installation Tool

This tool is used to install the driver and retainer for full size IC in the A-Series and other Schlage cylindrical locksets. Its other ends are designed to install and remove mortise cylinder housings and test mortise cylinder cam action for both small format and full size interchangeable core cylinders.

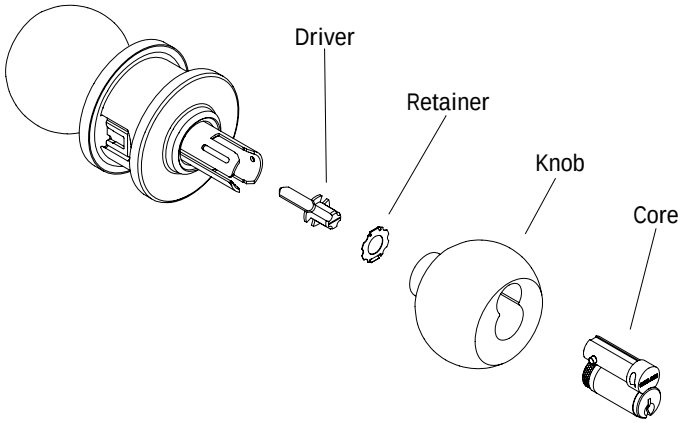


M504-413
(Order separately.)

IC Conversion Kits

It is easy to convert standard A-Series locksets to accept Schlage full size interchangeable cores by changing the knob and adding the parts shown.

Full Size IC Conversion



Interchangeable Core Components

Number	Description
01-054 ORB	Conversion kit: Driver, retainer, knob, core
01-025 ORB	Conversion kit: Driver, retainer, knob
01-026 ORB	Knob only (Orbit)

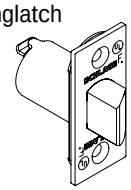
Specify finish.

Latches

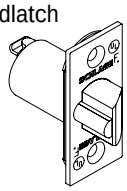
A-Series latches are adjustable for flat or beveled edge doors. Latches and strikes are furnished in brass, bronze, or chrome finishes compatible with lock trim. When ordering separately, specify quantity, part number, and finish.

Square Corner Latches

Springlatch

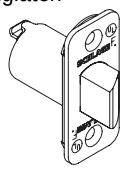


Deadlatch

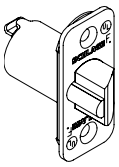


Round Corner Latches

Springlatch

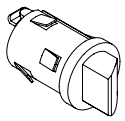


Deadlatch



Drive-In Latches

Springlatch



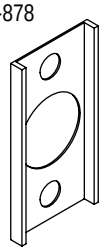
Deadlatch

Latches

Backset	Faceplate Description	Hsg Dia	Springlatch ½″ (13mm) Throw	Deadlatch ½″ (13mm) Throw
2⅜″ (60mm)	1″ x 2¼″ (25mm x 57mm) square corner, **standard**	⅞″ (22mm)	**11-068**	**11-085**
	1″ x 2¼″ (25mm x 57mm) ¼″ (6mm) radius rnd. cnr.	⅞″ (22mm)	11-069	11-088
	1″ (25mm) circular drive-in (non-U.L.)	1″ (25mm)	11-110	11-104
2¾″ (70mm)	1″ x 2¼″ (25mm x 57mm) square corner	⅞″ (22mm)	11-111	11-091
	1⅛″ x 2¼″ (29mm x 57mm) square corner	1″ (25mm)	11-116	11-096
	1″ x 2¼″ (25mm x 57mm) ¼″ (6mm) radius rnd. cnr.	⅞″ (22mm)	11-112	11-092
	1″ (25mm) circular drive-in (non-U.L.)	1″ (25mm)	11-113	11-105
3¾″ (95mm)	1⅛″ x 2¼″ (29mm x 57mm) square corner	1″ (25mm)	11-118	11-103

Latch Front Adapter

A501-878



Used to convert 1″ wide square front faceplates for 1⅛″ wide door preparations. Furnished in black plastic. Order in units of 100 each.

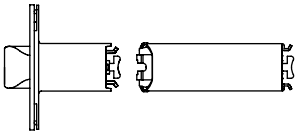
Long Backsets

Backsets 5″ and over require extension links. AL-Series locks with long backsets are normally furnished with 1″ faceplates and ⅞″ housings. Links installed in 1″ latch holes require one G506-815 sleeve (order separately) to join latch and link. Backsets over 5″ require an additional sleeve placed ⅛″ from lock chasis. Information on longer backsets is available upon request.

5" Extension Link

41-005

(add to 2 3/8″ backset latch)



Sleeve

G506-815

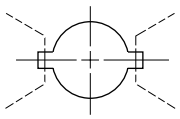
(Order separately)

Door Reinforcement

Schlage® 37-001 reinforcing unit is used to reinforce and help prevent the collapse of hollow metal doors when locksets are tightly mounted.

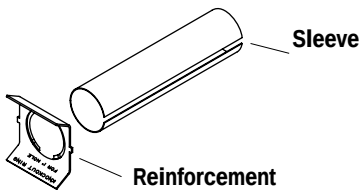
This kit should be used with long backsets for A-Series lock installations in hollow metal doors to prevent lateral movement of the latchbolt. Specify door thickness, 1⅜″ (35mm) or 1¾″ (44mm), when ordering reinforcement kits.

Door Prep



Reinforcement Kit

37-001



A501-566

1¾″ (44mm) Doors

A501-565

1⅜″ (35mm) Doors

Strikes

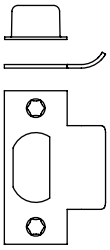
All Schlage strikes are furnished complete with screws. The 10-001 standard A-Series strike has a 1⅛″ (29 mm) lip. When ordering separately, specify quantity, product number, finish, and lip length.

Strikes

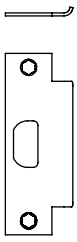
Number	Lip Length	Description
10-001	1″, 1⅛″ (std), 1¼″, 1½″, 1¾″, 2″ (25 mm, 29 mm, 32 mm, 38 mm, 44 mm, 51 mm)	1⅛″ x 2¾″ (29 mm x 70 mm) Square corner, **standard**
10-004	1⅛″ (29 mm)	1⅛″ x 2¾″ (29 mm x 70 mm) ⅛″ (3 mm) Radius, round cnr.
10-025	1³⁄₁₆″, 1⅜″ (30 mm, 35 mm)	1¼″ x 4⅞″ (32 mm x 124 mm) ANSI
10-026	1⅛″ (29 mm)	1⅝″ x 2¼″ (41 mm x 57 mm) Full lip, square corner
10-027	1⅛″ (29 mm)	1⅝″ x 2¼″ (41 mm x 57 mm) Full lip, ¼″ (6 mm) radius, round corner
10-058	1⁷⁄₃₂″ (31 mm)	1¾″ (44 mm) Circular, adjustable
K510-066	—	Box, ANSI
39-030*	—	Rabbeted door adapter kit

*Use with 2¾″ square corner strikes only.

T-Strike – Standard
10-001
1⅛″ x 2¾″ x ³⁄₃₂″
(29 mm x 70 mm x 2 mm)

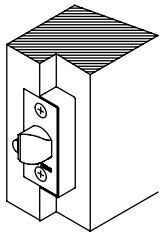


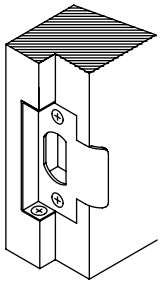
ANSI Strike
10-025
1¼″ x 4⅞″ x ³⁄₃₂″
(32 mm x 124 mm x 2 mm)



Rabbeted Latch and Strike Kit
Rabbeted latch and strike kit finishes: 605, 626.
This kit adapts square corner latches and strikes for ½″ (13 mm) rabbeted door and frame preparations.

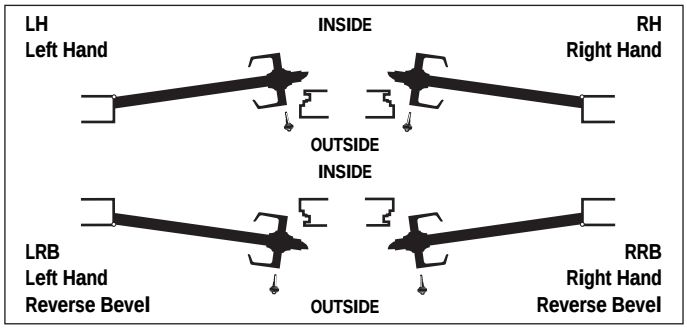
Rabbeted Latch and Strike Kit
39-030





Door Handing

All Schlage locks are reversible. Hand information is necessary to ensure proper cylinder orientation in keyed functions, and finish of latchbolt and strike for locks that are to be installed on reverse bevel doors. Follow the diagram to correctly determine the hand of the door.



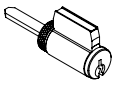
How to Order

To order Schlage products, descriptive data should be in the same sequence as shown.

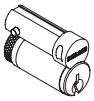
Line Item	Qty	Product	Outside		Inside		Hand	Latch	Strike	DR Thk	Ext	Dim	Additional Details
			Des	Fin	Des	Fin							
1	2	3	4	5	6	7	8	9	10	11	12	13	14

1 Line item number
2 Quantity
3 Complete model number with function and cylinder type

To order cylinder options, change "PD" at the end of the model number as follows:



A53PD	Standard
A53LD	Less standard cylinder (For Primus cylinder, specify this option and order Primus cylinder separately.)



A53JD	Prepared for full size interchangeable core, less core
A53RD	With full size conventional interchangeable core installed. Order control keys separately.
A53TD	With full size (temporary) construction core installed. Order all keys separately.

4 / 5 Outside design / finish.
6 / 7 Inside design / finish. Leave blank if same as outside.
8 Hand
9 Latch. Leave blank for standard or specify part number for optional latch. LLL=Less Latch.
10 Strike. Leave blank for standard or specify part number for optional strike. LLL=Less Strike.
11 Door thickness, if non-standard. Example: 200 = 2″.
12 Dimension for strike lip lengths. See strike page for availability of specific dimensions with specific strikes.
100 = 1″
118 = 1⅛″
114 = 1¼″
138 = 1⅜″
112 = 1½″
134 = 1¾″
200 = 2″
13 Keying detail (e.g. key symbol, keyway, bitting) and other special requirements.

EXAMPLE

Line Item	Qty	Product	Outside		Inside		Hand	Latch	Strike	Dr Thk	Ext	Dim	Additional Details
			Des	Fin	Des	Fin							
1	100	A53PD	PLY	626			RH	11-096	10-025				1AA-100AA
2	200	A53LD	PLY	626				11-096	10-025				Less Cylinder
3	200	20-724		626									1AA-200AA

Note: Schlage order forms are available at no charge by contacting your IR Security & Safety Consultant or Customer Service.

Administrative Offices
1915 Jamboree Drive, Suite 165
Colorado Springs, CO 80920
(719) 264-5300
FAX (719) 264-5382

Commercial Customer Service
2315 Briargate Parkway, Suite 700
Colorado Springs, CO 80920
(800) 847-1864
FAX (800) 452-0663
Order Entry
FAX (800) 452-0665

Residential Customer Service
P.O. Box 1210
Olathe, KS 66051
(800) 847-1864
FAX (800) 366-3625

International Division
Ingersoll-Rand Architectural Hardware
1076 Lakeshore Road East
Mississauga, Ontario, L5E 1E4, Canada
(905) 278-6128
FAX (905) 278-1413

Internet
http://www.schlage.com

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IR Security & Safety Americas
111 Congressional Boulevard
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800-847-1864
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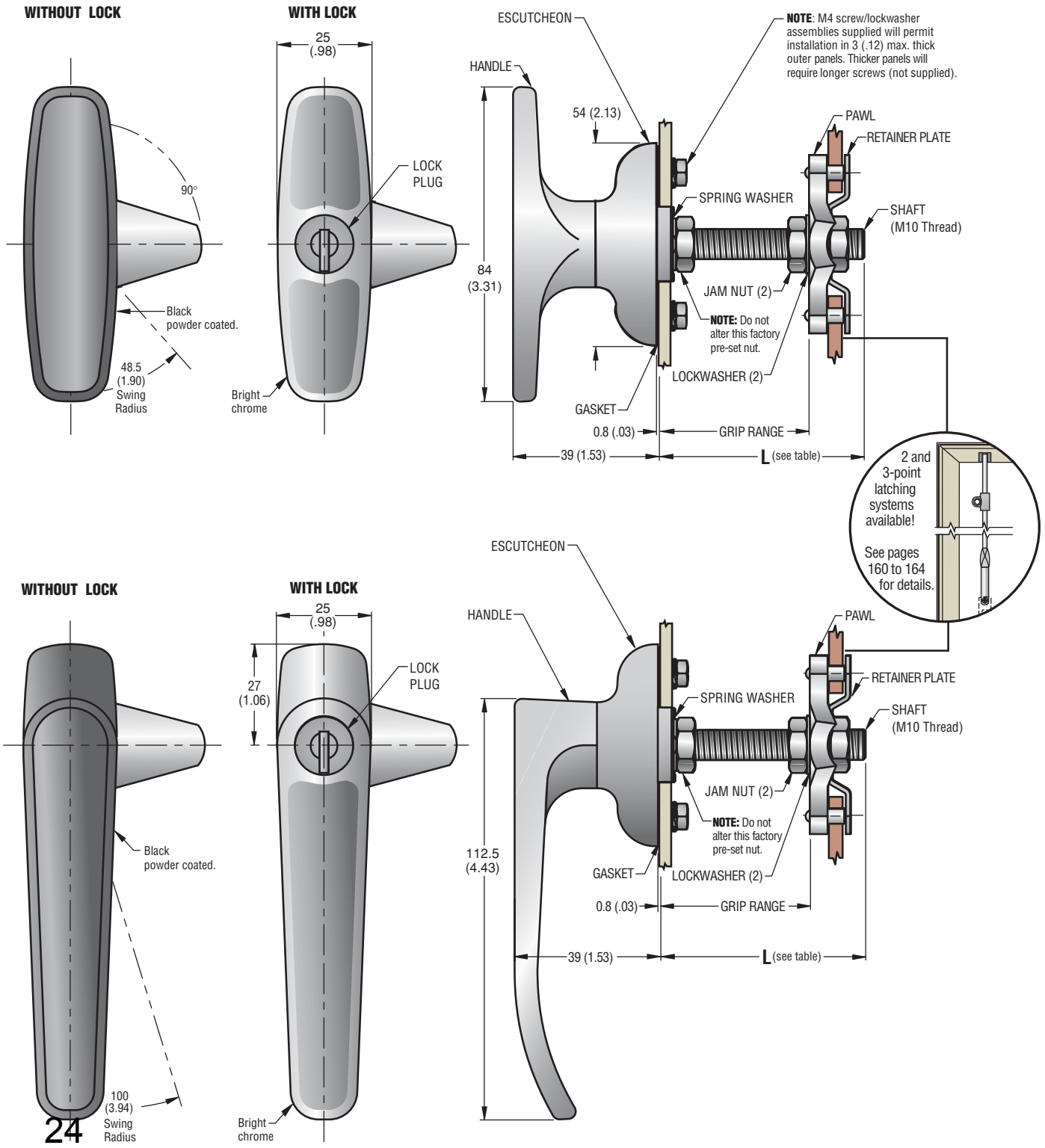
Southco® Pawl/Cam Action Latches

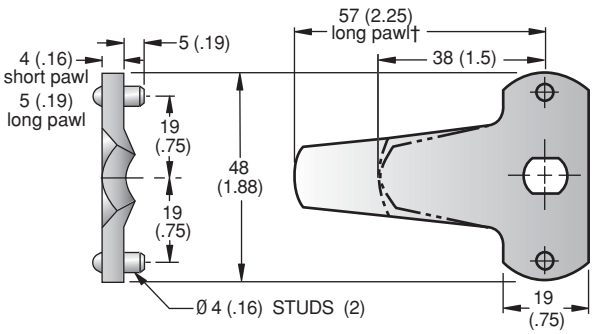
T- and L-handle Style

- **Detents in full open and closed position**
- **Use in single, 2- or 3-point latching (See pages 160 to 164)**
- **Locking/non-locking, left- or right-hand operation available**
- **Two pawl lengths accommodate different panel/frame configurations**

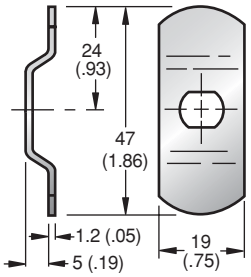


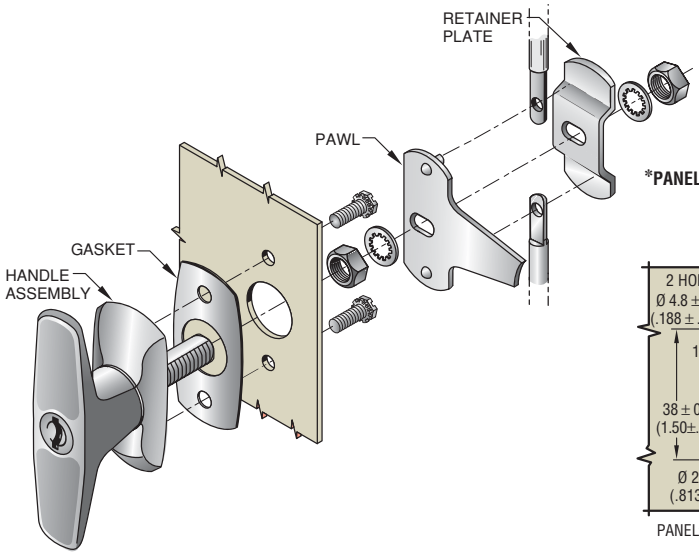
24

PAWL



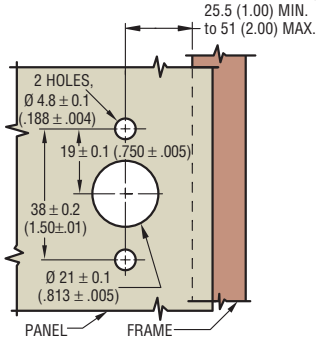
RETAINER PLATE

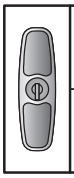
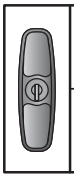
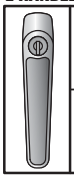
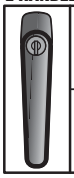




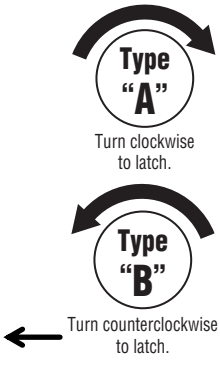
***PANEL PREPARATION**

† FOR SHORT PAWL, 25.5 (1.00) MIN. to 32 (1.25) MAX.
FOR LONG PAWL, 25.5 (1.00) MIN. to 51 (2.00) MAX.



HANDLE	STYLE	L	GRIP RANGE MIN.	GRIP RANGE MAX.	ASSEMBLY PART NUMBERS (Short Pawl)* Type "A"	ASSEMBLY PART NUMBERS (Short Pawl)* Type "B"
T HANDLE STYLE	**Bright chrome**					
	With Lock	32 (1.25)	16 (.63)	19 (.75)	92-21-**111** •	92-22-**111**
		44.5 (1.75)	16 (.63)	32 (1.25)	92-21-**121** •	92-22-**121** •
		57.5 (2.25)	16 (.63)	44.5 (1.75)	92-21-**131** •	92-22-**131**
	Without Lock	32 (1.25)	16 (.63)	19 (.75)	92-11-**111** •	92-12-**111** •
		44.5 (1.75)	16 (.63)	32 (1.25)	92-11-**121** •	92-12-**121** •
		57.5 (2.25)	16 (.63)	44.5 (1.75)	92-11-**131** •	92-12-**131** •
T HANDLE STYLE	**Black powder coated**					
	With Lock	32 (1.25)	16 (.63)	19 (.75)	92-21-**511** •	92-22-**511**
		44.5 (1.75)	16 (.63)	32 (1.25)	92-21-**521** •	92-22-**521** •
		57.5 (2.25)	16 (.63)	44.5 (1.75)	92-21-**531** •	92-22-**531** •
	Without Lock	32 (1.25)	16 (.63)	19 (.75)	92-11-**511** •	92-12-**511** •
		44.5 (1.75)	16 (.63)	32 (1.25)	92-11-**521** •	92-12-**521**
		57.5 (2.25)	16 (.63)	44.5 (1.75)	92-11-**531** •	92-12-**531** •
L HANDLE STYLE	**Bright chrome**					
	With Lock	32 (1.25)	16 (.63)	19 (.75)	92-41-**111** •	92-42-**111**
		44.5 (1.75)	16 (.63)	32 (1.25)	92-41-**121** •	92-42-**121** •
		57.5 (2.25)	16 (.63)	44.5 (1.75)	92-41-**131** •	92-42-**131** •
	Without Lock	32 (1.25)	16 (.63)	19 (.75)	92-31-**111** •	92-32-**111**
		44.5 (1.75)	16 (.63)	32 (1.25)	92-31-**121** •	92-32-**121** •
		57.5 (2.25)	16 (.63)	44.5 (1.75)	92-31-**131** •	92-32-**131** •
L HANDLE STYLE	**Black powder coated**					
	With Lock	32 (1.25)	16 (.63)	19 (.75)	92-41-**511** •	92-42-**511** •
		44.5 (1.75)	16 (.63)	32 (1.25)	92-41-**521** •	92-42-**521** •
		57.5 (2.25)	16 (.63)	44.5 (1.75)	92-41-**531** •	92-42-**531** •
	Without Lock	32 (1.25)	16 (.63)	19 (.75)	92-31-**511** •	92-32-**511** •
		44.5 (1.75)	16 (.63)	32 (1.25)	92-31-**521** •	92-32-**521** •
		57.5 (2.25)	16 (.63)	44.5 (1.75)	92-31-**531** •	92-32-**531** •

* Latch Assembly part numbers shown are supplied with a short pawl. To order latches with a long pawl, as shown above, change last digit of part number to a 2.
Example : 92-21-11**2**



Material and Finish

HANDLE AND ESCUTCHEON: Die cast zinc, bright chrome plated or black powder coated. SHAFT, NUTS, MOUNTING SCREWS, RETAINER PLATE AND PAWL: Low carbon steel, zinc plate, chromate plus sealer. LOCKWASHERS: Spring steel, zinc plate, chromate plus sealer. GASKET: SBR rubber with fiber, natural. SPRING WASHER: 300 series stainless steel, passivated. O-RING: Buna-N rubber, natural. PIN: 1008 steel, zinc plated plus yellow chromate dip. LOCKSLIDE: Die cast zinc with chemical protective film. LOCKPLUG: Die cast zinc, bright stainless steel scalp or black powder coated on head. KEYS: Brass, nickel plated.
Latches are shipped one unit per package.

Installation

1. Prepare panel.
2. Assemble hardware as shown.
3. Move pawl assembly to desired grip position and tighten jam nuts against pawl assembly with 2 wrenches.

NOTE: For 3-point latching, install rods on studs before tightening jam nuts.

Product Strength Guidelines

(To assist in your product selection; samples are available for your evaluation.)

Maximum working load:
Short pawl 400 N (90 lbs.)
Long pawl 200 N (45 lbs.)

Average ultimate load:
Short pawl 1440 N (325 lbs.)
Long pawl 840 N (190 lbs.)

millimeter (inch)
millimeter
(inch)
Dimensions without tolerances are for reference only.

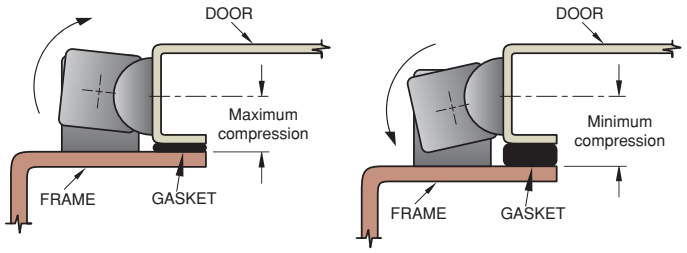
Southco® Hinges

Adjustable Compression

- **Adjustable compression for the hinge side of the door**
- **Allows the door to be removed from the hinge side**
- **Accommodates application and gasket variances**
- **Front and concealed mounting**
- **Door can also be permanently installed**

How it works:

These hinges provide 5 mm (.20 in) of total adjustment.

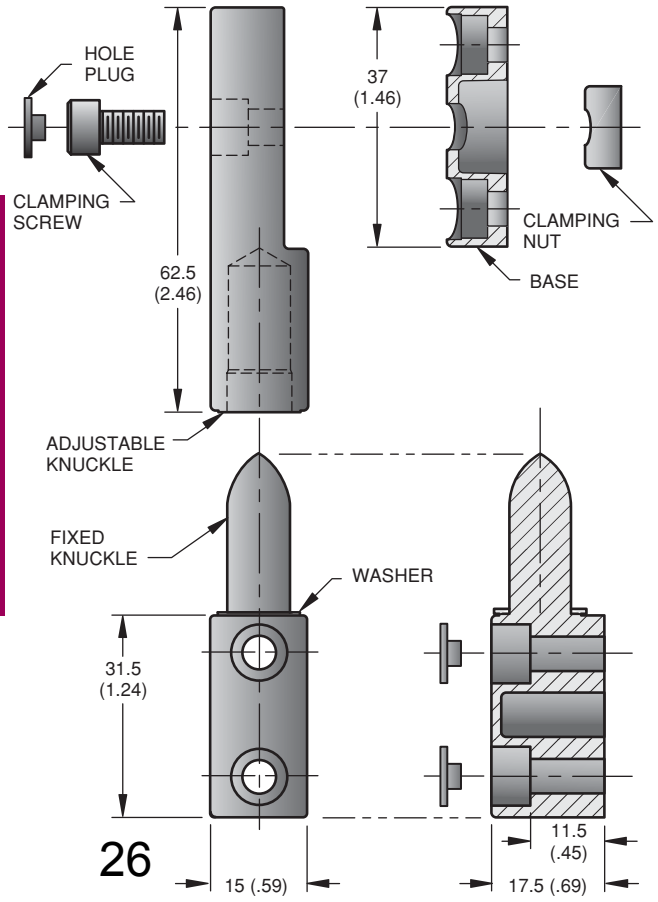


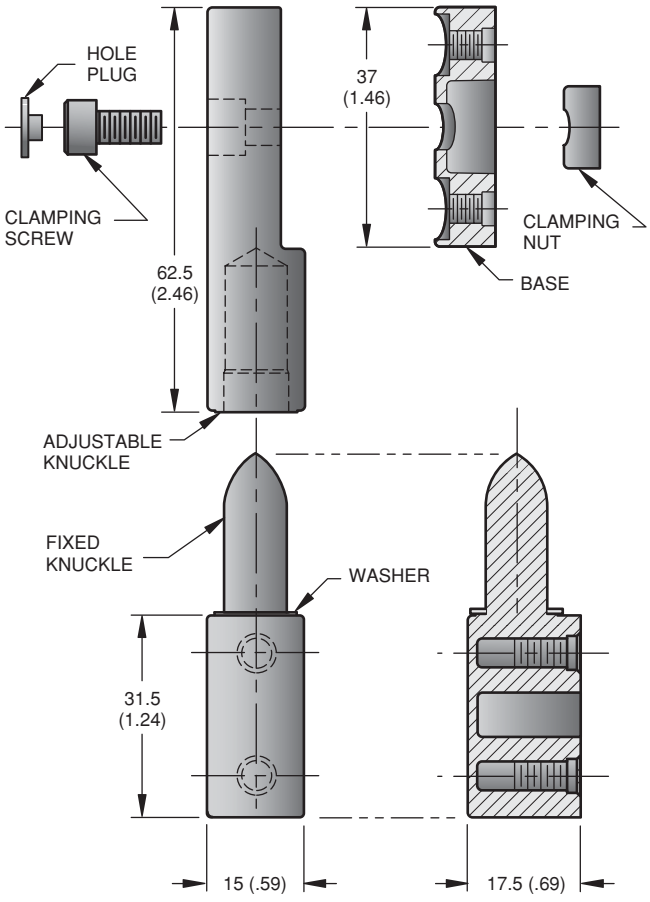
Front-mount hinge

Thread size	Part number
No. 10 or M5	96-10-572 •

Concealed-mount hinge

Thread size	Part number
10-32 UNF-2B	96-10-570 •
M5x0.8 6H	96-50-570 •





Hinges Lift-off

 • Products identified with this symbol are stocked subject to prior sale in one or more of our global locations. If unavailable from our facility nearest you, allow for shipping time from another facility. southco

Product Strength Guidelines

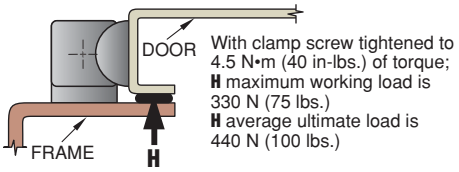
(To assist in your product selection; samples are available for your evaluation.)

RADIAL

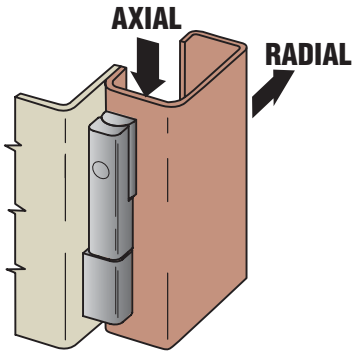
Maximum working load = 1000 N (225 lbs.)
Average ultimate load = 1550 N (350 lbs.)

AXIAL

Maximum working load = 2200 N (500 lbs.)
Average ultimate load = 14,000 N (3200 lbs.)



With clamp screw tightened to 4.5 N•m (40 in-lbs.) of torque;
H maximum working load is 330 N (75 lbs.)
H average ultimate load is 440 N (100 lbs.)



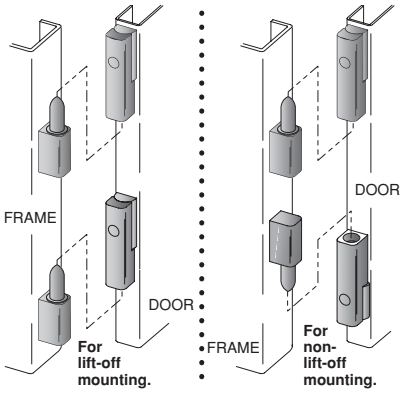
Maximum recommended tightening torque of mounting screws: 4.5 N•m (40 in-lbs.)

Material and Finish

KNUCKLES and BASE: Die-cast zinc, black powder coated.
WASHER: Nylon, black.
HOLE PLUG: Thermoplastic Elastomer, black.
CLAMPING SCREW: Stainless steel, black oxide.
CLAMPING NUT: Low carbon steel, zinc plate, chromate plus coricone sealer.

To assure lift-off capability, the pin of the fixed knuckles must point up when installed on frame.

For non-lift-off mounting, the pin of one fixed knuckle must point in a direction opposite the other(s) when mounted to frame. One of the fixed knuckles must be installed *AFTER* door is hung.



These hinges can be mounted on either side of door.

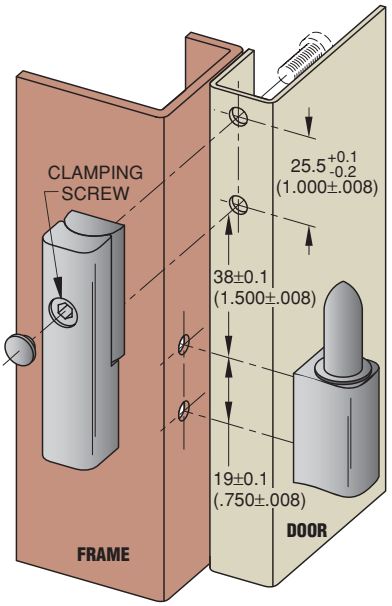
Concealed-mount hinge

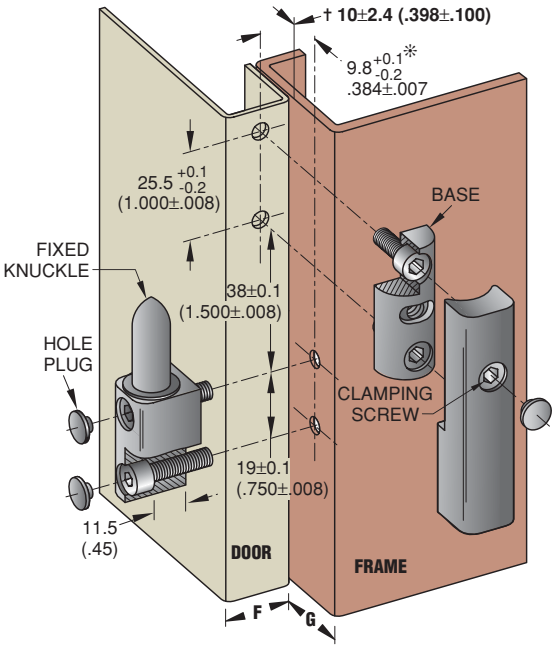
Screw length = frame thickness plus 7.5 mm (.30 in.)

Front-mount hinge

No. 10 or M5 socket head cap screws must be used to attach front-mount hinge assemblies.

Mounting screws are ***not*** supplied.





NOTES: Either **F** Dimension or **G** dimension must be less than 19.8 (.78) for the door to open a full 180°. ✻ Dimension will vary as † dimension is adjusted through its range. The door and frame design must allow for this variation.

Installation and Adjustment

- ❑ Adjustable knuckles must always be mounted to the door.
- ❑ Front mounted adjustable knuckles must be disassembled before installation.
- ❑ Use hole plugs to deter unnecessary adjustment and enhance appearance. Hole plugs press into screw sockets with thumb pressure.
- ❑ **To adjust hinges**: Pivot adjustable knuckle with respect to the base to desired position, then tighten knuckle in place with a 4 mm or (5/32) hex wrench. Recommended tightening torque of clamping screw is 4.5 N•m (40 in.-lbs.)

millimeter (inch)
millimeter
(inch)
Dimensions without tolerances are for reference only.

PS Series 12 VDC and 24 VDC Power Supplies

Switching power supplies at linear supply prices

AUTOMATIONDIRECT offers the most practical industrial control power supplies available. The PS Series power supplies give you consistent, reliable, switched DC power at linear power supply prices.

These power supplies use efficient switching technology to produce the most power in the smallest space, while generating a minimum amount of heat. The constant-current short circuit protection limits the output current as the voltage is reduced to safely protect your control components from direct shorts and device failures. Once the short is corrected, the PS Series power supplies automatically resume supplying full-voltage power. Precisely regulated output power is suitable for battery charging applications. Extra-sturdy DIN rail mounts and removable plug connections make installation a breeze.

Meeting UL/cUL 60950, 508 and 1604* (Class I, Div. 2), our PS_D power supplies meet the standards required for practically any industrial control application.

Removable plug terminals:
- Easy to install and disconnect wiring

Sturdy DIN rail mounting:
- Easy to mount and remove, but still secure

Power ON LED:
- Quick visual check for troubleshooting

Durable metal case:
- A reliable industrial duty package

Constant current protection with auto-recovery:
- No current spikes to damage powered devices due to miswiring or a powered device failure

Efficient switching technology:
- Smaller size and less heat generated results in less wasted space and energy

Features

- 2 - 24 A at 24 VDC, 3.5 A at 12 VDC
- Regulated switch mode type
- Easy DIN rail mounting
- Constant-current short circuit protection
- Low ripple and noise
- Selectable input voltage (115/230 VAC)
- High EMC immunity
- EMI meets EN 55011-B and FCC Part 15, Level B
- Worldwide safety approvals: UL/cUL 508, 60950 and 1604* (Class I, Div. 2) CE (see Note on following page about IEC 61000-3-2)
- Low profile case

** PS12-050D, PS24-050D and PS24-500D do not meet UL 1604 Class I Div 2.*

Part numbering system

PS 24-050D

- D: DIN Rail Mounting
- Output Watts
- Output Volts
- PS: Series Name

Note: All specifications are valid at nominal input voltage, full load and +25°C after warmup time, unless otherwise stated.

PS Series Power Supplies Specifications

PS12-050D / PS24-050D ←

PS12-075D / PS24-075D

PS24-150D

PS24-300D

PS24-500D

PS24-600D

Replacement terminal blocks are available. See price list.

Input Specifications

Part Number	Input Voltage Range	Input Frequency Range	Input Current (Typical)		Inrush Current (<2mS)		Effi-ciency (Typ.)
			115 VAC	230 VAC	115 VAC	230 VAC	
PS12-050D	93-264 VAC	47-63 Hz	1.2 A	0.7 A	<15 A	<30 A	84%
→ PS24-050D	93-264 VAC		1.2 A	0.7 A			87%
PS12-075D	93-132 VAC 187-264 VAC (switch selectable)		1.7 A	0.9 A	<16.5 A	<33 A	83%
PS24-075D			1.7A	0.9 A			85%
PS24-150D			3.0 A	1.7 A	<35 A	<70 A	84%
PS24-300D			5.4 A	3.3 A			87%
PS24-500D	93-132 VAC		9.5 A	N/A	<50 A	N/A	87%
PS24-600D	93-132 VAC 187-264 VAC (switch selectable)		10.5 A	6.4 A	<70 A	<80 A	88%

General Specifications

Temperature	Operating (ambient) -25°C to + 70°C max Derating above 50°C 2%/C Storage (non-operating) -25°C to + 85°C max Temperature drift 0.02%/C
Humidity	95% (non-condensing) relative humidity max
Switching Frequency	80 kHz typical (PWM)
Isolation	According to IEC/EN 60950, UL 60950, UL 508
Output Regulation	Input variation: ± 0.2% max Load variation: 50 W, 75 W, 150 W models: ± 1% max 300 W, 500 W, 600 W models: ± 0.3% max
Output Voltage Ripple	< 50 mV peak-peak (20 MHz bandwidth)
Output Protection	Current limit: 110% maximum output rating Voltage limit: 140% Vout nom
Vibration	1gn 20 sweeps each axis
Shock	15gn, 11mS each axis
Enclosure Rating	IP 20
Enclosure Material	Aluminum (chassis) / stainless steel (cover)
Mounting	Snap-on with self-locking spring for 35mm DIN rails
Connection	Removable screw terminals for 22-10 AWG
Agency* Approvals	UL/cUL 60950 recognized UL/cUL 508 listed UL/cUL 1604 listed (Class I, Div 2, groups A,B,C, and D hazardous locations), except PSxx-050 and PS24-500D, which are not UL/cUL1604 listed. CE (See IEC 61000-3-2 Ntote below)
Note: All specifications are valid at nominal input voltage, full load and +25°C after warmup time, unless otherwise stated.	

** PS12-050D, PS24-050D and PS24-500D do not meet UL 1604 (Class I, Div. 2).*

Note: IEC 61000-3-2 Power Factor Correction

The IEC 61000-3-2 standard is intended to reduce the amount of disturbance a device feeds back into its power source. AutomationDirect power supplies all carry the CE mark. Normally, 61000-3-2 is met or does not apply. Only our PS24-150D and PS24-300D could potentially be used in a manner not compliant with the 61000-3-2 standard.The IEC 61000-3-2 standard is intended to reduce the amount of disturbance a device feeds back into its power source. AutomationDirect power supplies all carry the CE mark. Normally, 61000-3-2 is met or does not apply. Only our PS24-150D and PS24-300D could potentially be used in a manner not compliant with the 61000-3-2 standard.

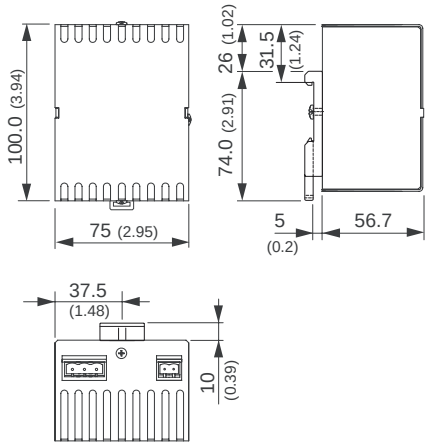
Output Specifications

Part Number	Price	Output Voltage	Output Voltage Adj. Range	Output Current (Max.)	Output Power (Max.)	Output Voltage Regulation*	Hold-Up Time		MTBF (IEC 1709 @ 25°C)
							115 VAC	230 VAC	
PS12-050D	check	12 VDC	12-14 VDC	3.5 A	50 W	1%	25 mS	30 mS	2,992,000 hours
PS24-050D	check	24 VDC	24-28 VDC	2.0 A	50 W				
PS12-075D	check	12 VDC	12-14 VDC	6.0 A	75 W				1,800,000 hours
PS24-075D	check	24 VDC	24-28 VDC	3.0 A	75 W				
PS24-150D	check			6.0 A	150 W				1,939,000 hours
PS24-300D	check			12.0 A	300 W	0.3%			1,913,000 hours
PS24-500D	check			20.0 A	500 W		20 mS	N/A	1,467,000 hours
PS24-600D	check			24.0 A	600 W		15 mS	25 mS	1,434,000 hours
*Load variation (10-90%)				*Notes: Output current characteristic suitable for battery charging applications. Not recommended for redundancy or parallel operation.*					

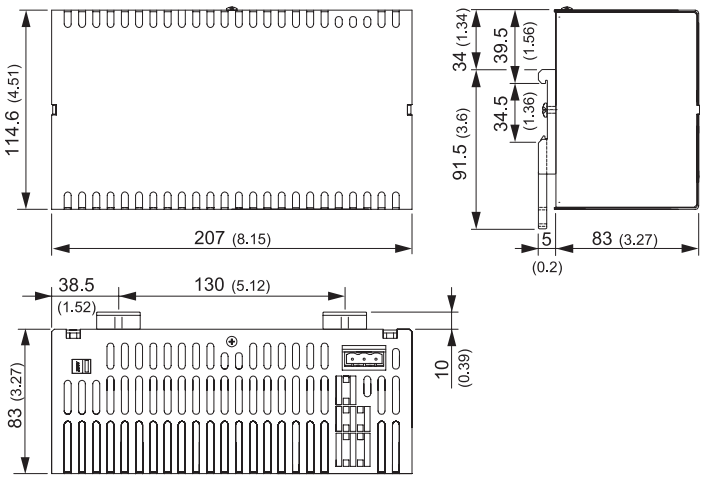
PS Series Power Supplies Dimensions

Note: All dimensions are in millimeters (inches).
Tolerances ±0.5mm

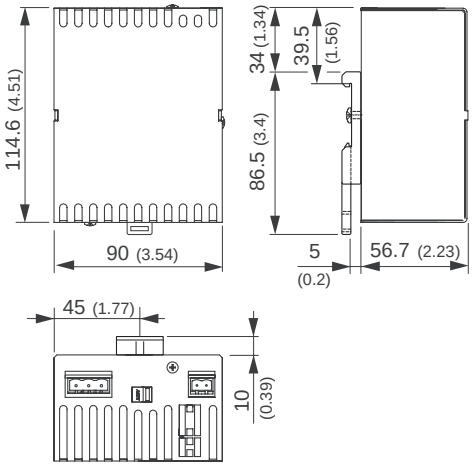
PS12-050D, PS24-050D



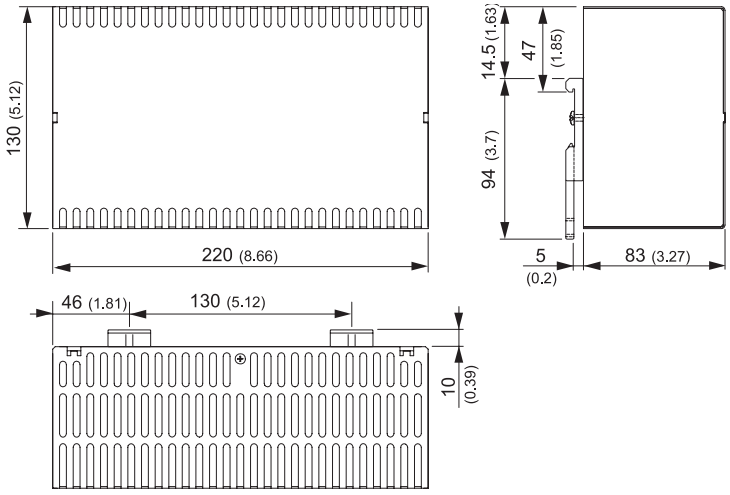
PS24-300D



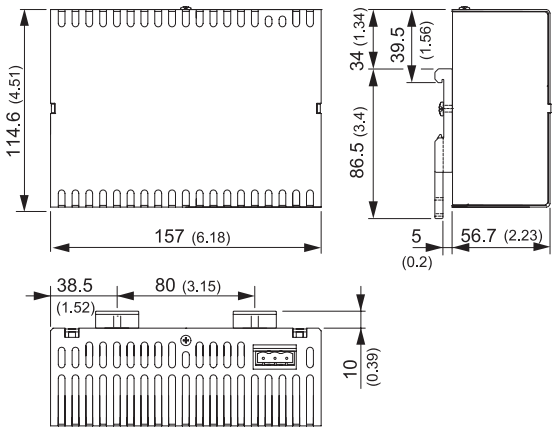
PS12-075D, PS24-075D



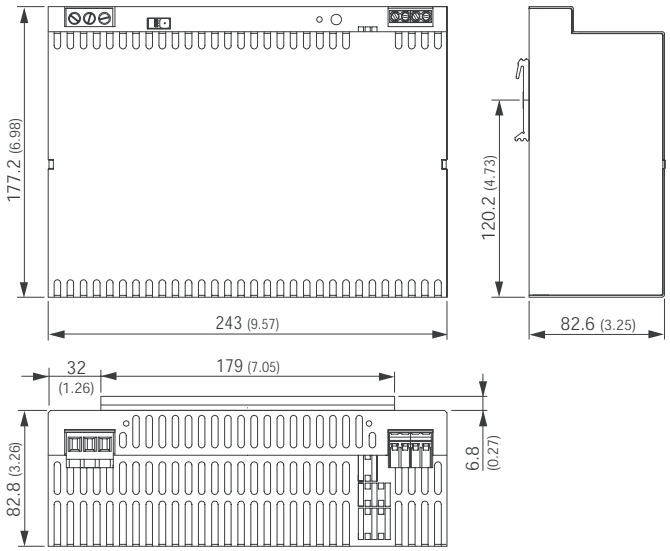
PS24-500D



PS24-150D



PS24-600D



INSTALLATION INSTRUCTIONS

PS Series Industrial Power Supply

Part Number	AC-Input Voltage Range	Output Power max.	Output	* Output Voltage Adjustment Range	Recommended Circuit Breaker (Characteristic C)
PS12-050D	93 – 264VAC Universal Input	50 Watt	**12.0VDC / 3.5A**	12.0 – 14.0VDC	5A
PS24-050D			**24.0VDC / 2.0A**	24.0 – 28.0VDC	
PS12-075D	115VAC/230VAC selectable 93 – 132VAC 187 – 264VAC 50 / 60Hz	75 Watt	**12.0VDC / 6.0A**	12.0 – 14.0VDC	
PS24-075D			**24.0VDC / 3.0A**	24.0 – 28.0VDC	
PS24-150D **		150 Watt	**24.0VDC / 6.0A**	24.0 – 28.0VDC	10A
PS24-300D **		300 Watt	**24.0VDC / 12.0A**	24.0 – 28.0VDC	16A
PS24-600D		600 Watt	**24.0VDC / 24.0A**	24.0 – 28.0VDC	20A
PS24-500D	115VAC 93 – 132VAC	500 Watt	**24.0VDC / 20.0A**	24.0 – 28.0VDC	

* Adjustable by potentiometer with a screwdriver.

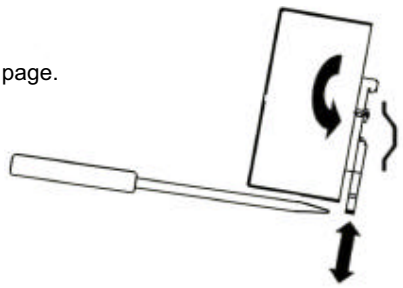
** For CE compliance to EN 61000-3-2 (PFHC: Power Factor Harmonic Current) use on 115VAC or with a transformer providing isolation from the public power mains)

Operating temperature range: Natural Air Convection Cooling	-25°C - +70°C max -13°F - +158°F max	Free Space Requirements: Top and Bottom: 3.15 in (80 mm) Both Sides: 1.97in (50mm)
Output Power Derating:	above +50°C (122°F) ➔ 2%/°C	Ambient air temperature measured 0.39in (10mm) below power supply
Storage temperature range:	-25°C – +85°C max -13°F – +185°F max	
Connections:	Plugable screw type terminal COMBICON. 22-10 AWG (0.5-6.0mm^2) wire Recommended tightening torque 0.5 to 0.7Nm (4.5 to 6.2lb.in.) Use all terminals. Use a screwdriver with 0.1378 (3.5 mm) blade width (***Automationdirect.com***™ part DN-SS3).	
Case material:	Aluminium (chassis) and Zinc-plated steel (cover)	

Input current:	@ Vin=115VAC	@ Vin=230VAC	**Power Consumption**	@ Vin=115VAC	@ Vin=230VAC
➢ **PSxx-050D**	1.2A typ.	0.7A typ.	➢ **PSxx-050D**	62 Watt typ.	60 Watt typ.
➢ **PSxx-075D**	1.7A typ.	0.9A typ.	➢ **PSxx-075D**	87 Watt typ.	86 Watt typ.
➢ **PS24-150D**	3.0A typ.	1.7A typ.	➢ **PS24-150D**	168 Watt typ.	165 Watt typ.
➢ **PS24-300D**	5.4A typ.	3.3A typ.	➢ **PS24-300D**	338 Watt typ.	330 Watt typ.
➢ **PS24-500D**	9.5A typ.	N/A	➢ **PS24-500D**	545 Watt typ.	N/A
➢ **PS24-600D**	10.5A typ.	6.4A typ.	➢ **PS24-600D**	660 Watt typ.	652 Watt typ.

To Install:

1. Read and follow Safety and Installation Instructions on the back of this page.
2. Hook top of power supply's DIN rail clip on DIN rail.
3. Use Screwdriver to extend lower portion of DIN rail clip.
4. Rotate power supply into DIN rail and release lower portion of clip.
5. Verify the DIN rail clip is securely fastened on DIN rail.
6. Connect wires as indicated on power supply.



Safety Instructions:

- Before installation read these instructions carefully and completely. These installation instructions cannot cover every possible installation, operation or maintenance situation. Further information can be obtained from the product data sheets, which can be downloaded, from the Internet at http://www.automationdirect.com.
- The power supplies are constructed in accordance with the safety requirements of IEC/EN60950, UL 19950, UL508 and UL 1604. They are approved (BG-mark) in accordance with EN60950, EN50178 and fulfill the requirements of the Low Voltage Directive (LVD). They are UL and cUL approved in accordance to UL1950 (recognized), UL508 (listed) and UL1604 class I, Div. 2 Groups A, B, C and D hazardous locations (listed)
- Before any installation, maintenance or modification work ensure that power source is off and properly secured to remain off. Touching of any live components or improper handling of this power supply can result in death, severe personal injury or substantial property damage. Safe operation is dependent on proper storage, handling, installation and operation.
- Compliance with the relevant national regulations (in the USA, Europe or other countries) must be ensured. Before operation is started the following conditions must be ensured:
  - Connections to mains supply in compliance with national regulations (NEC, NEMA, VDE0100 and EN50178).
  - Use of stranded wires; all strands must be fastened in the terminal blocks (Potential danger of contact with the case).
  - Power supply and mains cables must be sufficiently fused.
  - Degree of protection I to IEC536. The non-fused protective earth connection must be connected to the FG terminal.
  - All output wires must be rated for the power supply output current and must be connected with the correct polarity.
  - Sufficient cooling must be ensured.
- ***Never work on the power supply if power is applied!*** Risk of electric arcs and electrical shock, which can cause death, severe personal injury or substantial property damage.
- **Warning:** Hazardous voltages and components storing a very substantial amount of energy are present in this power supply during normal operating conditions. However, these are inaccessible. Improper handling may result in an electric shock or serious burns! ***Do not open the power supply until at least 5 minutes after it has been disconnected from the mains on all poles.***
  - Only trained personnel may open the power supply.
  - Do not introduce any objects into the power supply. The output voltage adjustment potentiometer may only be actuated using an insulated screwdriver.
  - Keep away from fire and water

Installation Instructions:

- This power supply is designed for professional indoor systems. In operation the power supply must not be accessible. It may be installed and put into service by qualified personnel only.
- Do not operate without Protective Earth (PE) connection! To comply with EMC and safety standards (CE mark, approvals) the power supply must be operated only if PE terminal is connected to the non-fused earth conductor.
- The correct mounting position for optimal cooling performance must be observed. ***Do not cover any ventilation holes.*** Observe free space requirements and power derating as specified on the front of this sheet.
- The internal fuse is not accessible. It is not to be replaced by the user. If this internal fuse has blown, the power supply has an internal defect and, for safety reasons, must be discarded or, if under warranty, returned. For continued protection against risk of fire, do not replace internal fuse with a fuse of different type or rating.
- ***Recycling:*** The unit contains elements that are suitable for recycling, and components that need special disposal. You are therefore requested to make sure that the power supply will be recycled at the end of its service life.
- ***WARNING:*** To minimize the risk of potential safety problems, follow all applicable local and national codes that regulate the installation and operation of your equipment. These codes vary from area to area and it is your responsibility to determine which codes should be followed, and to verify that the equipment, installation, and operation are in compliance with the latest revision of these codes.
  - Equipment damage or serious injury to personnel can result from the failure to follow all applicable codes and standards. We do not guarantee the products described in this publication are suitable for your particular application, nor do we assume any responsibility for your product design, installation, or operation.
  - If you have any questions concerning the installation or operation of this equipment, or if you need additional information, please call us at 770-844-4200.
  - This publication is based on information that was available at the time it was printed. At ***Automationdirect.com***™, we constantly strive to improve our products and services, so we reserve the right to make changes to the products and/or publications at any time without notice and without any obligation. This publication may also discuss features that may not be available in certain revisions of the product.

Catalog References

Rating (A)	Single Pole			Rating (A)	Double Pole		
	B Curve 3 to 5 I_n	C Curve 5 to 10 I_n	D Curve 10 to 20 I_n		B Curve 3 to 5 I_n	C Curve 5 to 10 I_n	D Curve 10 to 20 I_n
0.5	–	WMS1C00	WMS1D00	0.5	–	WMS2C00	WMS2D00
1	–	WMS1C01	WMS1D01	1	–	WMS2C01	WMS2D01
2	–	WMS1C02	WMS1D02	2	–	WMS2C02	WMS2D02
3	–	WMS1C03	WMS1D03	3	–	WMS2C03	WMS2D03
4	–	WMS1C04	WMS1D04	4	–	WMS2C04	WMS2D04
5	–	WMS1C05	WMS1D05	5	–	WMS2C05	WMS2D05
6	WMS1B06	WMS1C06	WMS1D06	6	WMS2B06	WMS2C06	WMS2D06
7	WMS1B07	WMS1C07	WMS1D07	7	WMS2B07	WMS2C07	WMS2D07
8	WMS1B08	WMS1C08	WMS1D08	8	WMS2B08	WMS2C08	WMS2D08
10	WMS1B10	WMS1C10	WMS1D10	10	WMS2B10	WMS2C10	WMS2D10
13	WMS1B13	WMS1C13	WMS1D13	13	WMS2B13	WMS2C13	WMS2D13
15	WMS1B15	WMS1C15	WMS1D15	15	WMS2B15	WMS2C15	WMS2D15
16	WMS1B16	WMS1C16	WMS1D16	16	WMS2B16	WMS2C16	WMS2D16
20	WMS1B20	WMS1C20	WMS1D20	20	WMS2B20	WMS2C20	WMS2D20
25	WMS1B25	WMS1C25	WMS1D25	25	WMS2B25	WMS2C25	WMS2D25
30	WMS1B30	WMS1C30	WMS1D30	30	WMS2B30	WMS2C30	WMS2D30
32	WMS1B32	WMS1C32	WMS1D32	32	WMS2B32	WMS2C32	WMS2D32
40	WMS1B40	WMS1C40	WMS1D40	40	WMS2B40	WMS2C40	WMS2D40
50	WMS1B50	WMS1C50	–	50	WMS2B50	WMS2C50	–
60	WMS1B60	WMS1C60	–	60	WMS2B60	WMS2C60	–

Rating (A)	Triple Pole			Rating (A)	Four Pole		
	B Curve 3 to 5 I_n	C Curve 5 to 10 I_n	D Curve 10 to 20 I_n		B Curve 3 to 5 I_n	C Curve 5 to 10 I_n	D Curve 10 to 20 I_n
0.5	–	WMS3C00	WMS3D00	0.5	–	WMS4C00	WMS4D00
1	–	WMS3C01	WMS3D01	1	–	WMS4C01	WMS4D01
2	–	WMS3C02	WMS3D02	2	–	WMS4C02	WMS4D02
3	–	WMS3C03	WMS3D03	3	–	WMS4C03	WMS4D03
4	–	WMS3C04	WMS3D04	4	–	WMS4C04	WMS4D04
5	–	WMS3C05	WMS3D05	5	–	WMS4C05	WMS4D05
6	WMS3B06	WMS3C06	WMS3D06	6	WMS4B06	WMS4C06	WMS4D06
7	WMS3B07	WMS3C07	WMS3D07	7	WMS4B07	WMS4C07	WMS4D07
8	WMS3B08	WMS3C08	WMS3D08	8	WMS4B08	WMS4C08	WMS4D08
10	WMS3B10	WMS3C10	WMS3D10	10	WMS4B10	WMS4C10	WMS4D10
13	WMS3B13	WMS3C13	WMS3D13	13	WMS4B13	WMS4C13	WMS4D13
15	WMS3B15	WMS3C15	WMS3D15	15	WMS4B15	WMS4C15	WMS4D15
16	WMS3B16	WMS3C16	WMS3D16	16	WMS4B16	WMS4C16	WMS4D16
20	WMS3B20	WMS3C20	WMS3D20	20	WMS4B20	WMS4C20	WMS4D20
25	WMS3B25	WMS3C25	WMS3D25	25	WMS4B25	WMS4C25	WMS4D25
30	WMS3B30	WMS3C30	WMS3D30	30	WMS4B30	WMS4C30	WMS4D30
32	WMS3B32	WMS3C32	WMS3D32	32	WMS4B32	WMS4C32	WMS4D32
40	WMS3B40	WMS3C40	WMS3D40	40	WMS4B40	WMS4C40	WMS4D40
50	WMS3B50	WMS3C50	–	50	WMS4B50	WMS4C50	–
60	WMS3B60	WMS3C60	–	60	WMS4B60	WMS4C60	–

Accessories

Shunt Trip

Voltage	Module Width	Catalog Reference
110/220 Vac	1	WST220A
240/415 Vac	1	WST415A
12/48 Vdc	1	WST48D

Auxiliary Switch

No. Contacts	Module Width	Catalog Reference
1A/1B	1/2	WAX1A1B

Description	Catalog Reference
Padlocking Attachment	WPLK
Padlock Key	WPKEY
Ring Tung Interphase Barriers①	WRTIB②

① Recommended when using Ring Tung Connectors.
② 18 pieces per pack.

Under Voltage Release

Voltage	Module Width	Catalog Reference
240 Vac	1	WUVR240A
48 Vdc	1	WUVR48D

Alarm Switch

No. Contacts	Module Width	Catalog Reference
1A/1B	1/2	WAL1A1B

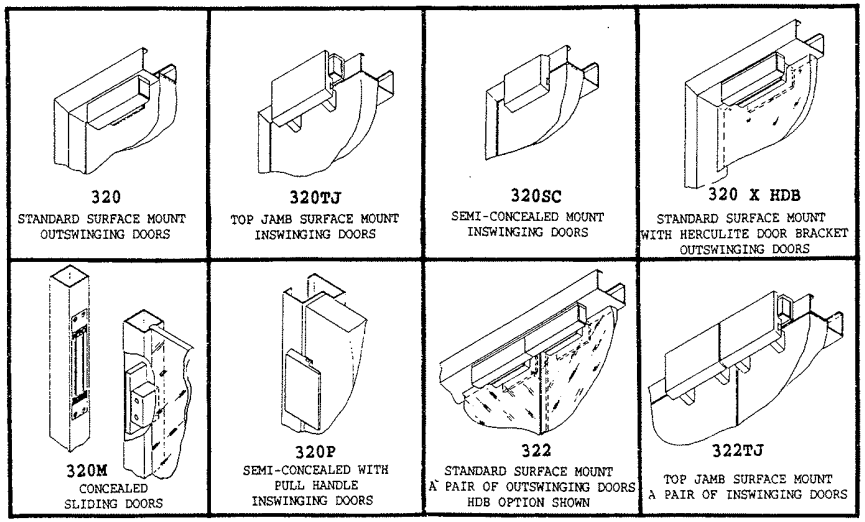
Description	Catalog Reference
Identification Labels	WIDL

320 AND 322 SERIES LOCKS

GT GRAPHICS • (860) 589-4310

FORM# 30020
REV D 9/06

320 AND 322 SERIES LOCKS
GENERAL INFORMATION



320
STANDARD SURFACE MOUNT
OUTSWINGING DOORS

320TJ
TOP JAMB SURFACE MOUNT
INSWINGING DOORS

320SC
SEMI-CONCEALED MOUNT
INSWINGING DOORS

320 X HDB
STANDARD SURFACE MOUNT
WITH HERCULITE DOOR BRACKET
OUTSWINGING DOORS

320M
CONCEALED
SLIDING DOORS

320P
SEMI-CONCEALED WITH
PULL HANDLE
INSWINGING DOORS

322
STANDARD SURFACE MOUNT
A PAIR OF OUTSWINGING DOORS
HDB OPTION SHOWN

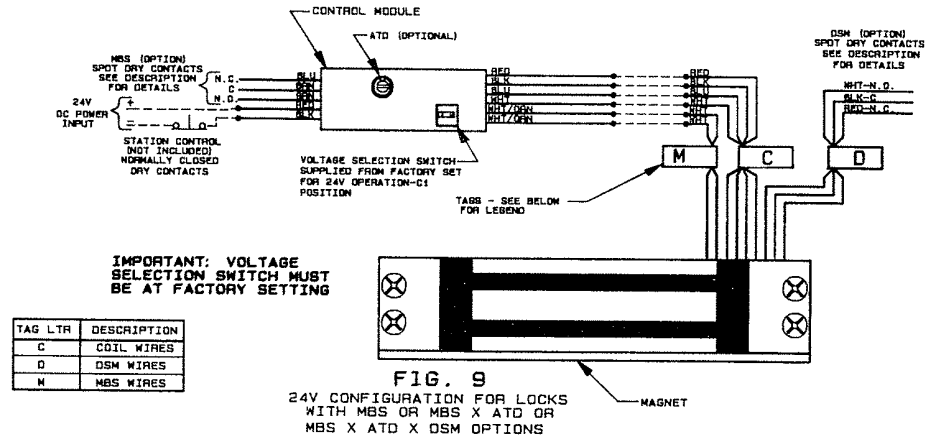
322TJ
TOP JAMB SURFACE MOUNT
A PAIR OF INSWINGING DOORS

THE 320 AND 322 SERIES LOCKS ARE MEDIUM SECURITY, HIGH PERFORMANCE LOCKING DEVICES, WHEN PROPERLY MOUNTED ON A QUALITY DOOR AND FRAME WILL WITHSTAND UP TO 650 LBS OF DIRECT FORCE. ANY OTHER CONDITIONS (IE: WEAK HEADER) MAY REQUIRE REINFORCEMENT.

HOLDING FORCE:
320 SERIES: 500 LBS @ 12V, 650 LBS @ 24V
322 SERIES: 500 LBS PER DOOR @ 12V
650 LBS PER DOOR @ 24V

INDEX

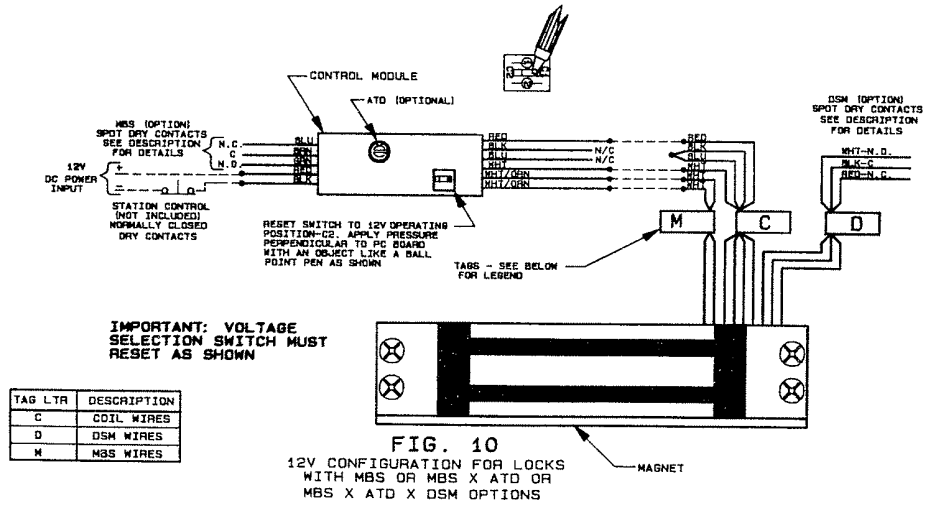
320 SERIES LOCKS
WIRING DETAILS
ALL MODELS



IMPORTANT: VOLTAGE SELECTION SWITCH MUST BE AT FACTORY SETTING

TAG LTR	DESCRIPTION
C	COIL WIRES
D	DSM WIRES
M	MBS WIRES

FIG. 9
24V CONFIGURATION FOR LOCKS
WITH MBS OR MBS X ATD OR
MBS X ATD X DSM OPTIONS



IMPORTANT: VOLTAGE SELECTION SWITCH MUST RESET AS SHOWN

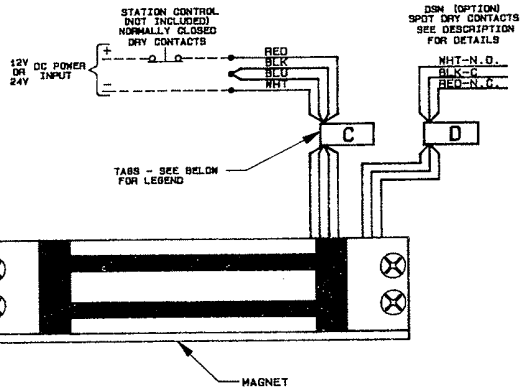
TAG LTR	DESCRIPTION
C	COIL WIRES
D	DSM WIRES
M	MBS WIRES

FIG. 10
12V CONFIGURATION FOR LOCKS
WITH MBS OR MBS X ATD OR
MBS X ATD X DSM OPTIONS

320 SERIES LOCKS

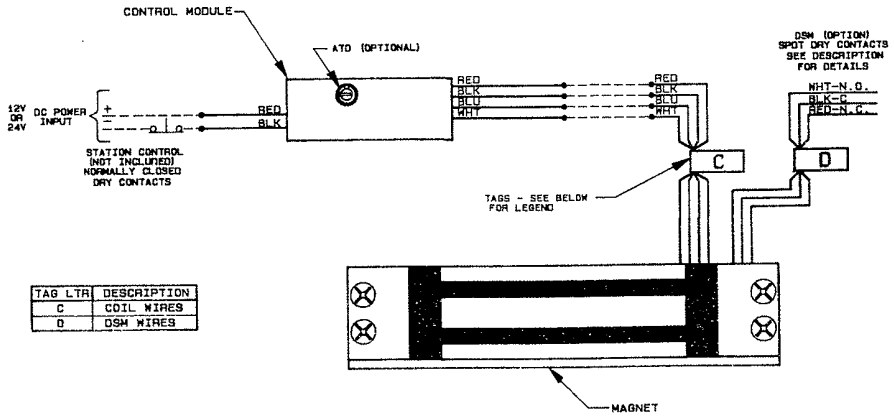
WIRING DETAILS

ALL MODELS



TAG LTR	DESCRIPTION
C	COIL WIRES
D	DSM WIRES

FIG. 7
12V OR 24V CONFIGURATION FOR
LOCKS WITHOUT OPTIONS OR LOCKS
WITH DSM OPTION



TAG LTR	DESCRIPTION
C	COIL WIRES
D	DSM WIRES

FIG. 8
12V OR 24V CONFIGURATION FOR
LOCKS WITH ATD AND ATD X DSM OPTIONS

320 AND 322 SERIES LOCKS

INSTALLATION INSTRUCTIONS

PLEASE READ ALL INSTRUCTIONS PRIOR TO INSTALLING THE ELECTROMAGNETIC LOCK

GENERAL INFORMATION:

* Handle the equipment carefully. Damaging the mating surfaces of the electromagnet or the armature may reduce locking efficiency.

* The electromagnet mounts rigidly to the door frame header. The armature mounts to the door and is designed to pivot about it's center compensating for door misalignment.

* When installing an electromagnetic lock with the DSM option, care must be used to be certain that the end of the armature holding the permanent magnet will be directly opposite the DSM magnetic switch in the magnet assembly.

CAUTION:
FAILURE TO SECURE THE ARMATURE TO THE DOOR MAY RESULT IN SERIOUS INJURY TO DOOR USER. FOR PROPER OPERATION, SAFETY AND SECURITY, SEX NUT/BOLT ASSEMBLY, WASHERS AND SPACERS MUST BE ASSEMBLED IN THE ORDER ILLUSTRATED AND SECURELY TIGHTENED 1/8 TO 1/4 TURN PAST HAND TIGHT.

MAINTENANCE:

* The electromagnet and armature are plated for corrosion resistance and require little maintenance. for maximum performance, occasional cleaning and an application of a protective coating to the electromagnet and the armature is recommended.

  The following service should be done to both the armature and the electromagnet as required:

  1. Clean the functional surfaces of the electromagnet and the armature by applying a light coating of silicon lubricant and wipe with a clean dry cloth.

320 AND 322 SERIES LOCKS
INSTALLATION INSTRUCTIONS

MODELS: 320, 320 X HDB, 322 AND 322 X HDB ONLY

NOTE: Hardware provided is for 1-3/4" door. If door thickness exceeds 1-3/4", an alternate sex nut is required. Order P/N - 399025 for 2" doors
- 399026 for 2-1/4" doors
or if additional information is required, consult factory.

1.0 Prep door and frame according to the appropriate template drawing. When using paper template, follow instructions on the template.

1.1 Install armature(s). Refer to Figures 2, 3 and 4 on page 12 and exploded views on pages 4, and 9 for parts identification.

1.2 Install the adjustable mounting plate onto frame, placing screws through the slots and into the holes "A" prepped for #10 screws.

1.3 With the door fully closed and latched, check the alignment of the magnet mounting plate with the armature as shown in Figure 1, below. When the magnet mounting plate and the armature are in the correct alignment, firmly tighten the screws. Using the mounting plate as a template, drill the remaining mounting holes "C". WARNING: INSTALLATION OF THE REMAINING HARDWARE IS NECESSARY TO MAINTAIN ALIGNMENT.

1.4 Refer to exploded views on pages 4 and 9 to complete mechanical installation.

1.5 Go to All Models, paragraph 3.0.

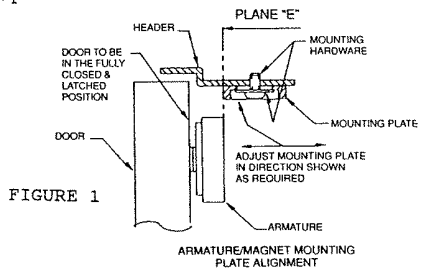


FIGURE 1

ARMATURE/MAGNET MOUNTING PLATE ALIGNMENT

MODELS: 320TJ, 320M, 320P AND 322TJ ONLY

2.0 Prep door and frame according to the appropriate template drawing. When using paper template, follow instructions on the template.

2.1 Refer to exploded views on pages 5, 6, 7, 8 and 10 to complete mechanical installation.

ALL MODELS

3.0 See wiring instructions on pages 15, 16, 17 and 18 and other applicable instructions to complete full installation.

320 SERIES LOCKS
SPECIFICATION AND ELECTRICAL OPTIONS
ALL MODELS

DOOR STATUS SWITCH (DSM) OPTION:

The DSM provides a signal to indicate whether the door is open or closed. The lock mounting instructions should be followed closely to ensure reliable performance of this option. The DSM provides a signal via a set of form "C" dry contacts rated 100mA resistive at 24VDC. These contacts are accessed by the red, black and white wires. The contacts are labeled in the door opened condition which are: white-N.O. (normally open), black-C (common) and red-N.C. (normally closed). Closing the door causes the contacts across the black and white wires to close and the black and red wires to open. See Figures 1, 2 and 3 below.

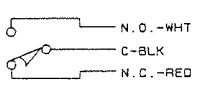


FIG. 1
CONTACT CONFIGURATION WHEN DOOR IS OPEN

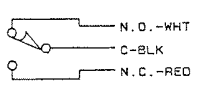


FIG. 2
CONTACT CONFIGURATION WHEN DOOR IS CLOSED

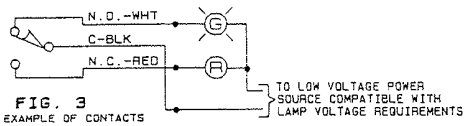


FIG. 3
WIRING EXAMPLE OF CONTACTS USED TO SWITCH EXTERNAL INDICATORS (NOT INCLUDED). SHOWN DOOR CLOSED, GREEN INDICATOR LIT

MAGNETIC BOND SENSOR (MBS) OPTION:

The MBS senses whether sufficient magnetic holding force exists to ensure adequate locking. It will respond to low line voltage, foreign materials in the magnetic gap, damage or dirty surfaces of the lock and/or armature. The MBS option provides a signal via a set of form "C" dry contacts rated 1 amp at 30VDC resistive load maximum. The dry contacts are accessed by three (3) wires which are green, blue and brown. They are labeled in a deenergized/no bond condition which are green-N.O. (normally open) and blue-N.C. (normally closed) and brown-C (common). Once the lock is energized and the magnet and armature are properly bonded, the contacts will switch, at which time the common (brown wire lead) and the normally open (green wire lead) will be closed contacts. See Figures 4, 5 and 6 below.

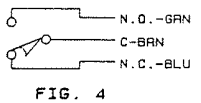


FIG. 4
CONTACT CONFIGURATION WHEN INSUFFICIENT OR NO BOND EXISTS

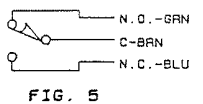


FIG. 5
CONTACT CONFIGURATION WHEN GOOD BOND EXISTS

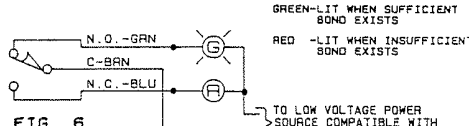


FIG. 6
WIRING EXAMPLE OF CONTACTS USED TO SWITCH EXTERNAL INDICATORS (NOT INCLUDED). SHOWN DOOR CLOSED, GREEN INDICATOR LIT

320 SERIES LOCKS
SPECIFICATION AND ELECTRICAL OPTIONS ALL MODELS

SPECIFICATIONS:

VOLTAGE: 12V OR 24V FIELD SELECTABLE

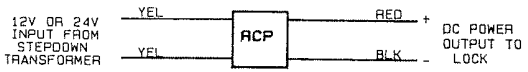
CURRENT: .225 AMP @ 12V
.450 AMP @ 24V

RATED HOLDING FORCE;
500 lbs @ 12v
650 lbs @ 24v

ELECTRICAL OPTIONS:

RECTIFIER (RCP) OPTION:

The RCP option allows operation of a direct current (DC) lock from a low voltage alternating current (AC) supply, such as a 12 or 24 volt transformer. The RCP Module converts the AC voltage to DC voltage supplied to the lock. One (1) RC Module should be used for each lock. The RCP Module has four (4) leads. The two yellow wires are the low voltage AC input. The are connected to the low voltage side of the transformer. The red lead is the positive (+) DC output. It is connected to the positive (+) lock input. The black lead is the negative (-) DC output. It is connected to the negative (-) lock input.

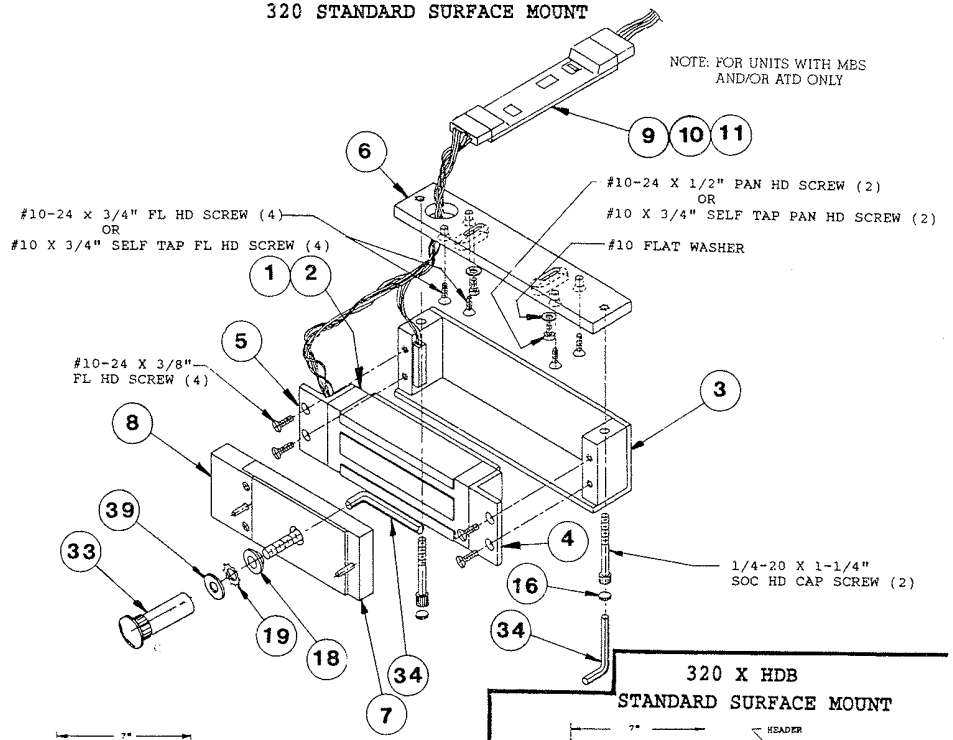


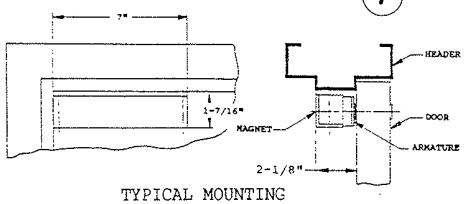
ADJUSTABLE TIME DELAY (ATD) OPTION:

The ATD can be set to delay the relock from 0 to 30 seconds. To increase time, turn adjustment potentiometer clockwise. To decrease time, turn potentiometer counter-clockwise. The ATD will operate whenever input power is interrupted and then reapplied. For location of potentiometer, see Figures 8, 9 and 10.

320 AND 322 SERIES LOCKS
EXPLODED VIEW

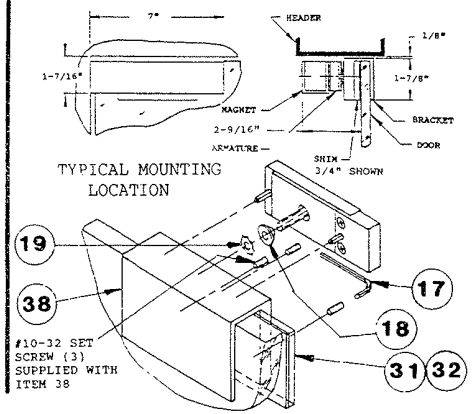
320 STANDARD SURFACE MOUNT





TYPICAL MOUNTING LOCATION

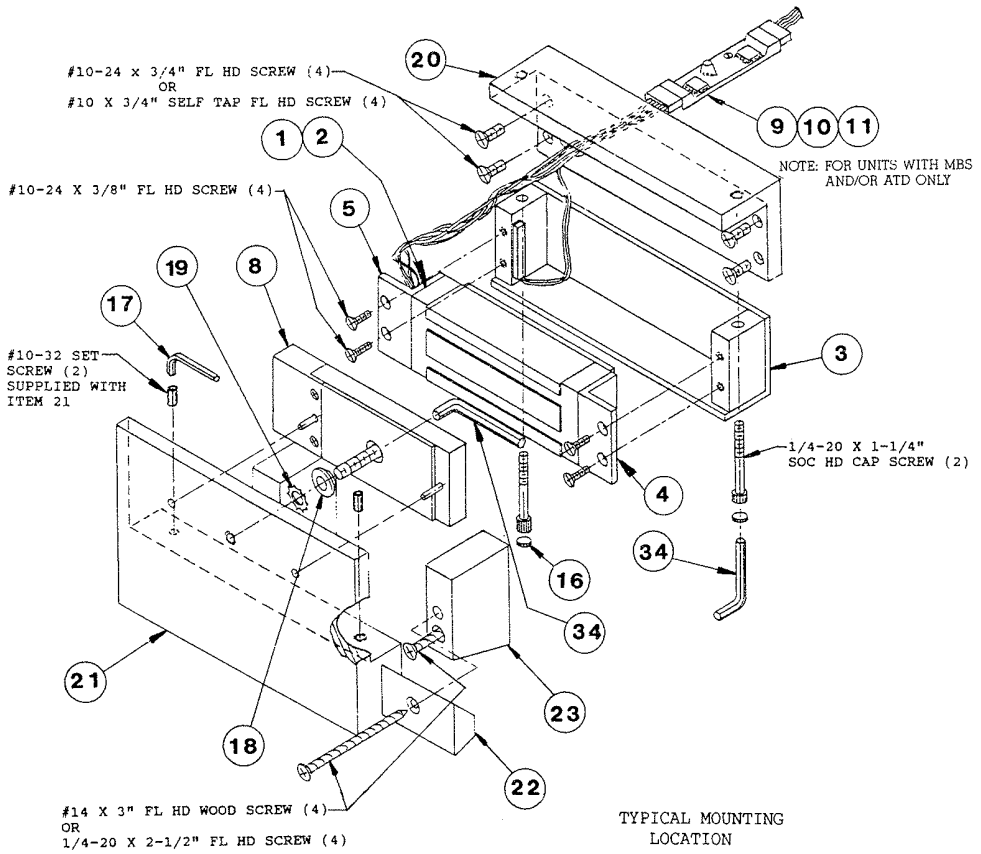
320 X HDB
STANDARD SURFACE MOUNT



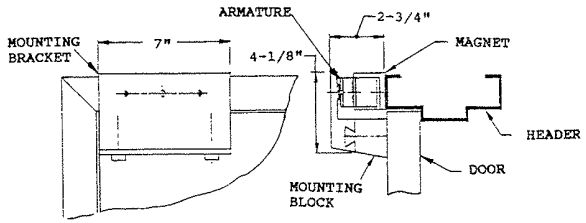
TYPICAL MOUNTING LOCATION

320 AND 322 SERIES LOCKS
EXPLODED VIEW

320TJ SERIES

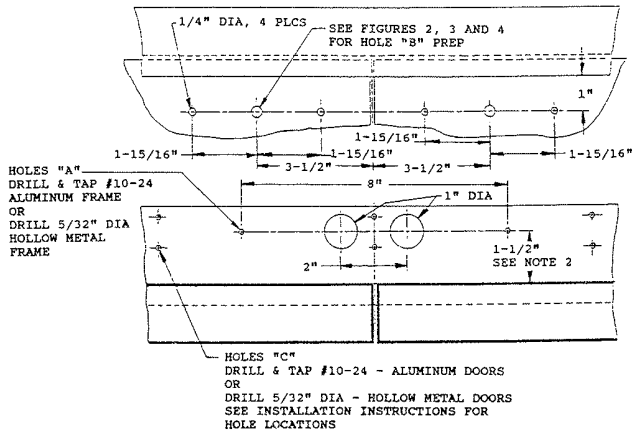


TYPICAL MOUNTING LOCATION



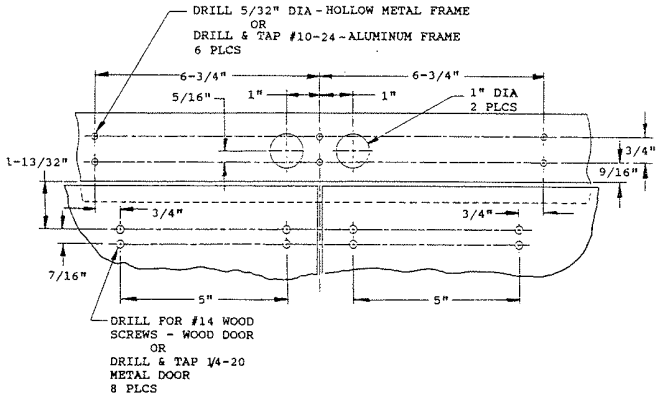
320 AND 322 SERIES LOCKS
TEMPLATE DRAWING

322 AND 322 X HDB TEMPLATE DRAWING



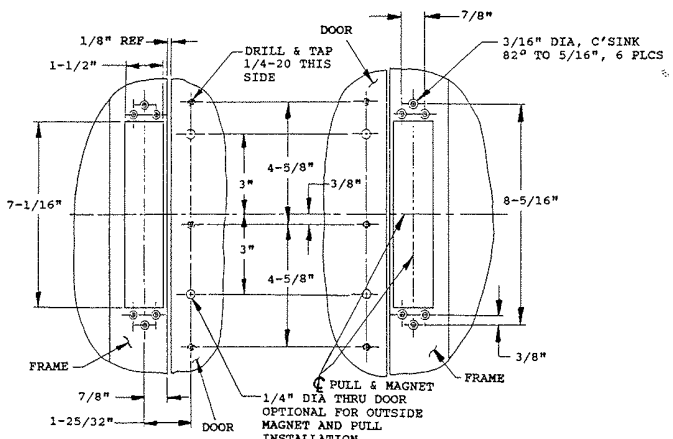
NOTES:
1. MODEL 322 X HDB REQUIRES FRAME PREP ONLY
2. FOR MODEL 322 X HDB 1-1/2" DIMENSION IS FROM ARMATURE BRACKET

322TJ TEMPLATE DRAWING

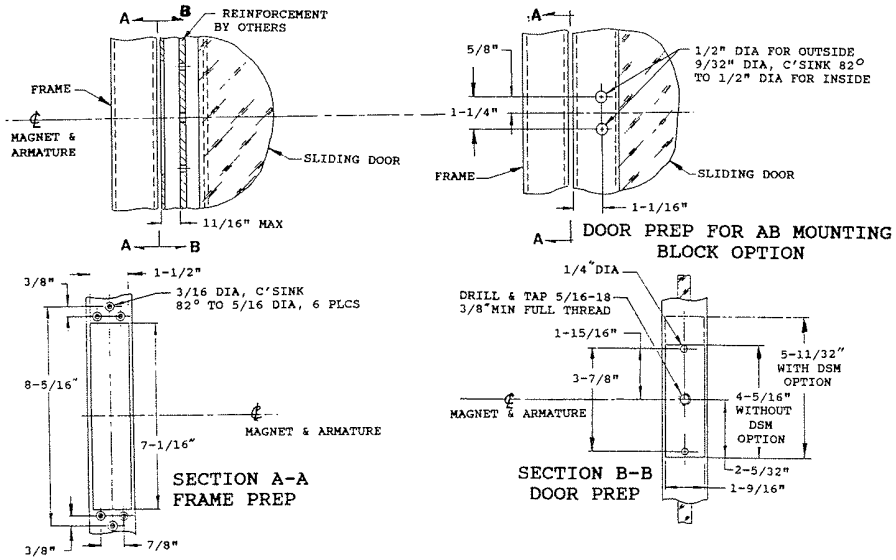


320 AND 322 SERIES LOCKS
TEMPLATE DRAWING

320P TEMPLATE DRAWING

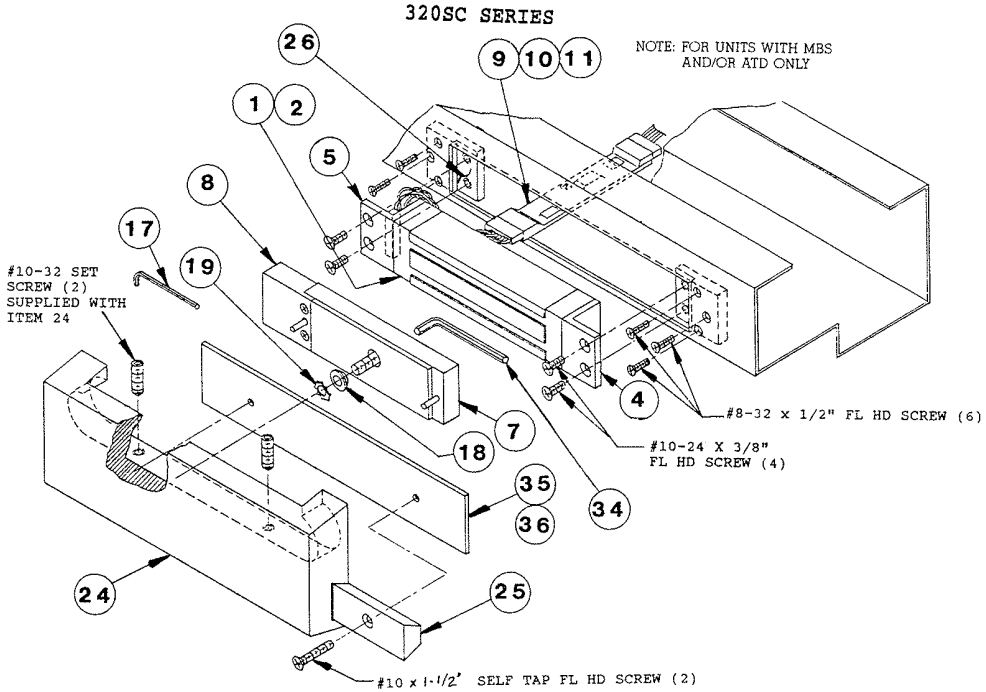


320M TEMPLATE DRAWING

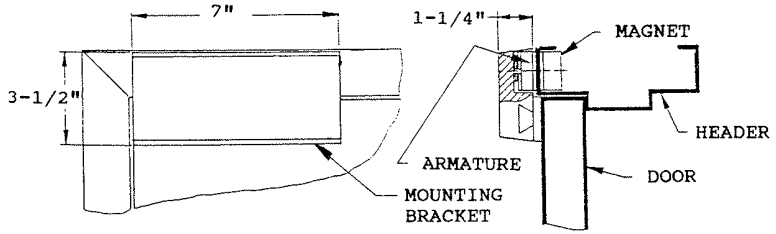


320 AND 322 SERIES LOCKS
EXPLODED VIEW

320SC SERIES

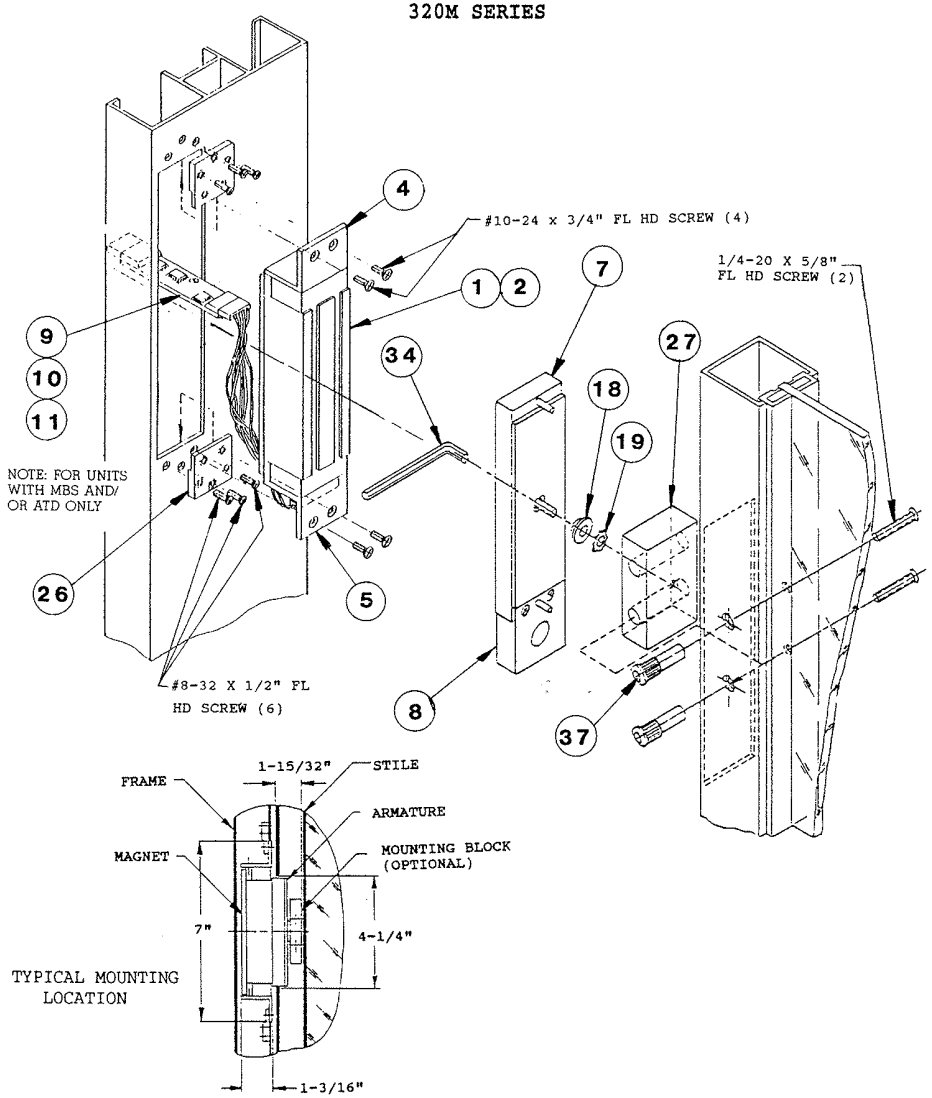


TYPICAL MOUNTING LOCATION



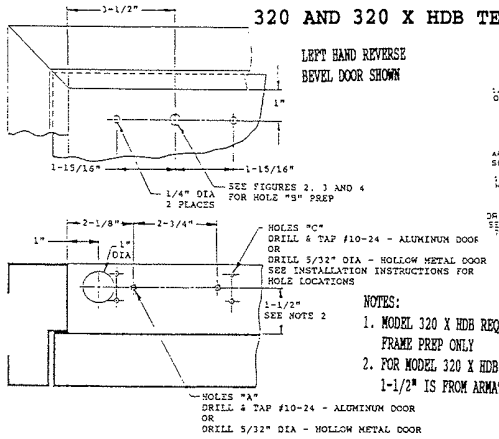
320 AND 322 SERIES LOCKS
EXPLODED VIEW

320M SERIES



320 AND 322 SERIES LOCKS
TEMPLATE DRAWING

320 AND 320 X HDB TEMPLATE DRAWING



NOTES:
1. MODEL 320 X HDB REQUIRES FRAME PREP ONLY
2. FOR MODEL 320 X HDB DIMENSION 1-1/2" IS FROM ARMATURE BRACKET

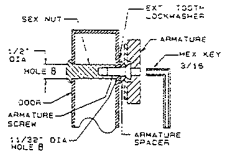


FIGURE 1

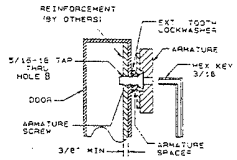


FIGURE 2

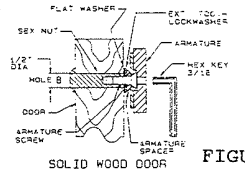
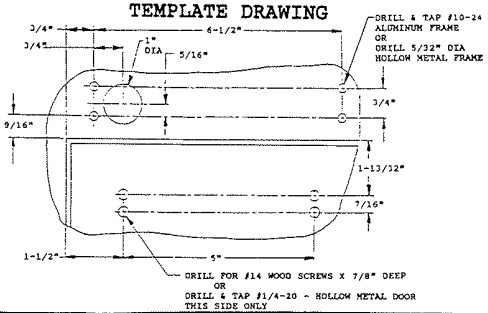


FIGURE 3

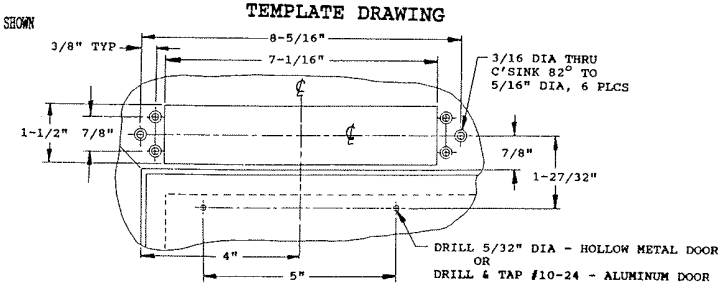
320TJ TEMPLATE DRAWING

LEFT HAND DOOR SHOWN



320SC TEMPLATE DRAWING

LEFT HAND DOOR SHOWN



SCHLAGE 320 AND 322 SERIES LOCKS

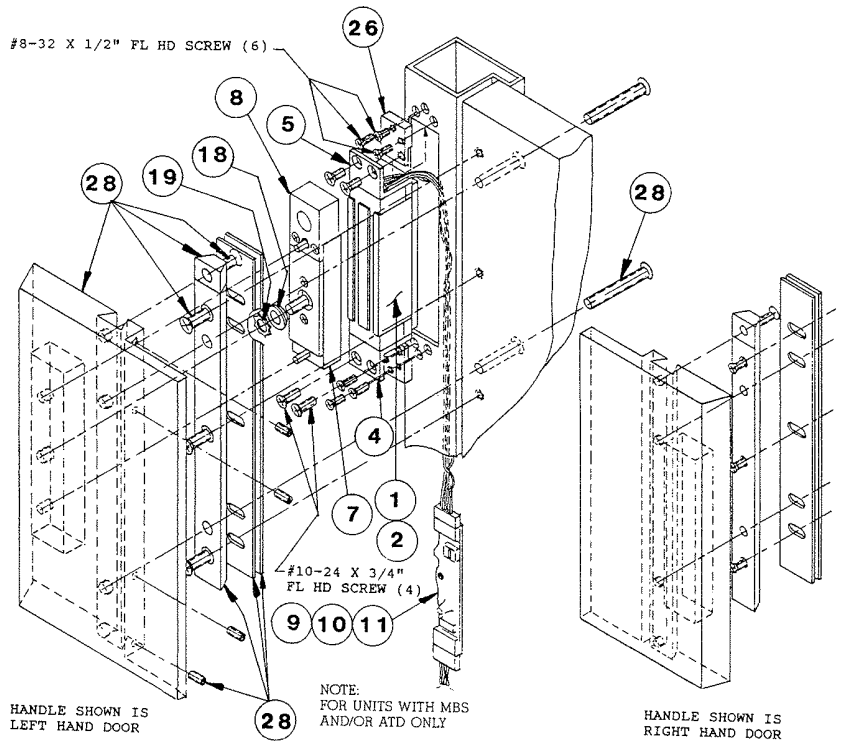
PARTS LIST

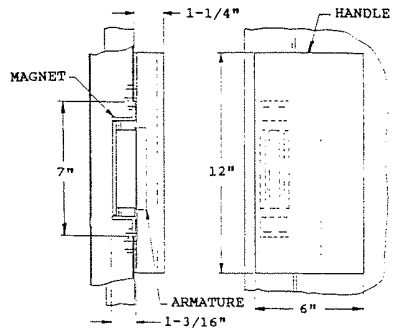
ITEM	PART NO.	DESCRIPTION	MODEL								
			320	320 HDB	320 TJ	320 SC	320 M	320 P	322	322 HDB	322 TJ
1	320096	ELECTROMAGNET ASSY NO MBS	1	1	1	1	1	1	2	2	2
2	320118	ELECTROMAGNET ASSY MBS	1	1	1	1	1	1	2	2	2
3	CONSULT FACTORY	HOUSING-MAGNET	1	1	1	–	–	–	2	2	2
4	320106	BRACKET-MOUNTING MAGNET	1	1	1	1	1	1	2	2	2
5	320105	BRACKET-MOUNTING MAGNET	1	1	1	1	1	1	2	2	2
6	320107	PLATE-MOUNTING	1	1	–	–	–	–	–	–	–
7	320109	ARMATURE ASSY	1	1	1	1	1	1	2	2	2
8	320115	BLOCK-DSM, ARMATURE	1	1	1	1	1	1	2	2	2
9	320208	CONTROL MODULE MBS	1	1	1	1	1	1	2	2	2
10	320209	CONTROL MODULE ATD	1	1	1	1	1	1	2	2	2
11	320210	CONTROL MODULE ATD X MBS	1	1	1	1	1	1	2	2	2
12											
13											
14											
15											
16	390022	ANTI-TAMPER PLUG	2	2	2	–	–	–	4	4	4
17	270076	HEX WRENCH-3/32	1	1	1	1	–	–	1	1	1
18	390255	SPACER-ARMATURE	1	1	1	1	1	1	2	2	2
19	990185	LOCKWASHER-EXT TH	1	1	1	1	1	1	2	2	2
20	320128	BRACKET-MTG, TJ MAGNET	–	–	1	–	–	–	–	–	–
21	320130	BRACKET-MTG, TJ ARMATURE	–	–	1	–	–	–	–	–	2
22	320170	DOVETAIL-TJ ARMATURE	–	–	1	–	–	–	–	–	2
23	320172	BLOCK-MTG, TJ ARMATURE	–	–	2	–	–	–	–	–	4
24	320168	BRACKET-MTG, SC ARMATURE	–	–	–	1	–	–	–	–	–
25	320171	DOVETAIL-SC ARMATURE	–	–	–	1	–	–	–	–	–
26	280006	MOUNTING TAB	–	–	–	2	2	2	–	–	–
27	320177	MTG BLOCK, ARMATURE	–	–	–	–	1	–	–	–	–
28	320191	HANDLE-PULL KIT	–	–	–	–	–	1	–	–	–
29	320108	PLATE-MOUNTING	–	–	–	–	–	–	1	–	–
30	320129	BRACKET-MTG, TJ MAGNET	–	–	–	–	–	–	–	–	1
31	320145	SHIM ASSY-3/4 DOOR	–	1	–	–	–	–	–	2	–
32	320129	SHIM ASSY-1/2 DOOR	–	1	–	–	–	–	–	2	–
33	390498	SEX NUT, 1-3/4 DOOR	1	–	–	–	–	–	2	–	–
34	270078	HEX WRENCH-3/16	1	1	1	1	1	1	1	1	1
35	320174	SHIM-MTG, .187 THK	–	–	–	1	–	–	–	–	–
36	320173	SHIM-MTG, .093 THK	–	–	–	1	–	–	–	–	–
37	290014	SEX NUT, 1-3/4 DOOR	–	–	–	–	2	–	–	–	–
38	320147	HDB ASSY	–	1	–	–	–	–	–	2	–
39	990183	FLAT WASHER-5/16	1	–	–	–	–	–	2	–	–

SCHLAGE 320 AND 322 SERIES LOCKS

EXPLODED VIEW

320P SERIES

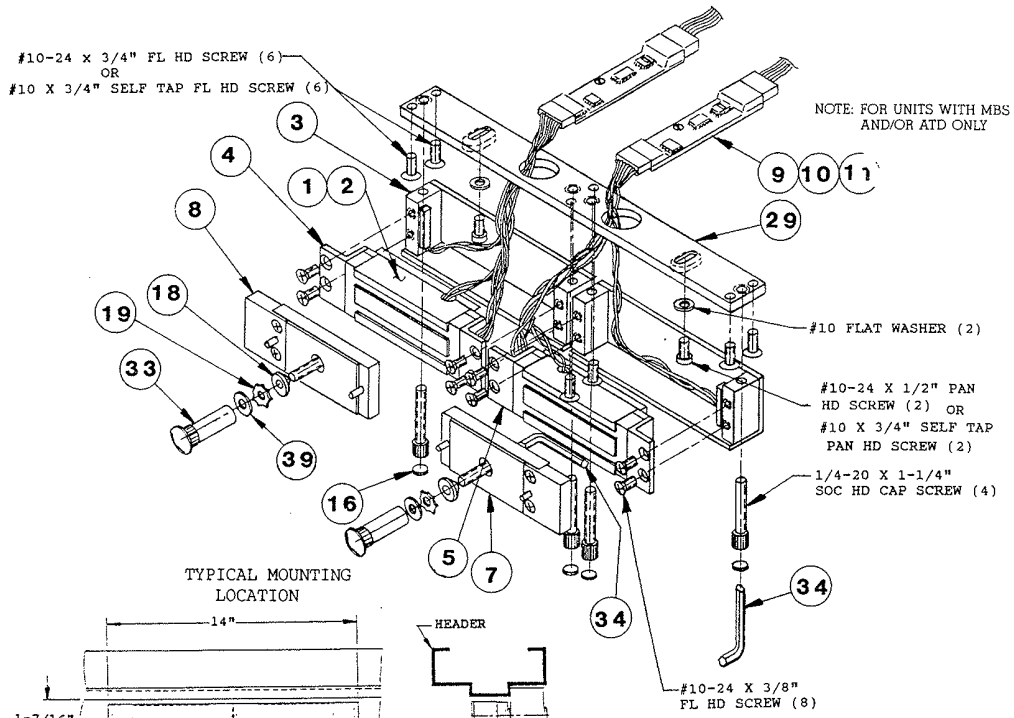




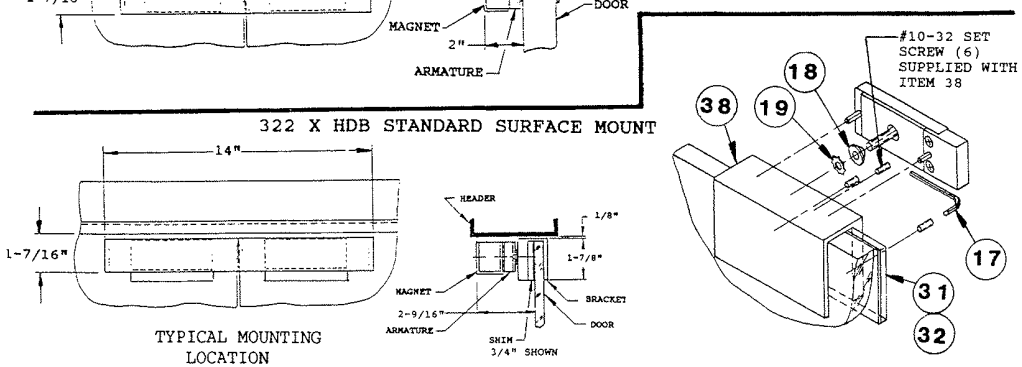
TYPICAL MOUNTING LOCATION

SCHLAGE 320 AND 322 SERIES LOCKS
EXPLODED VIEW

322 STANDARD SURFACE MOUNT

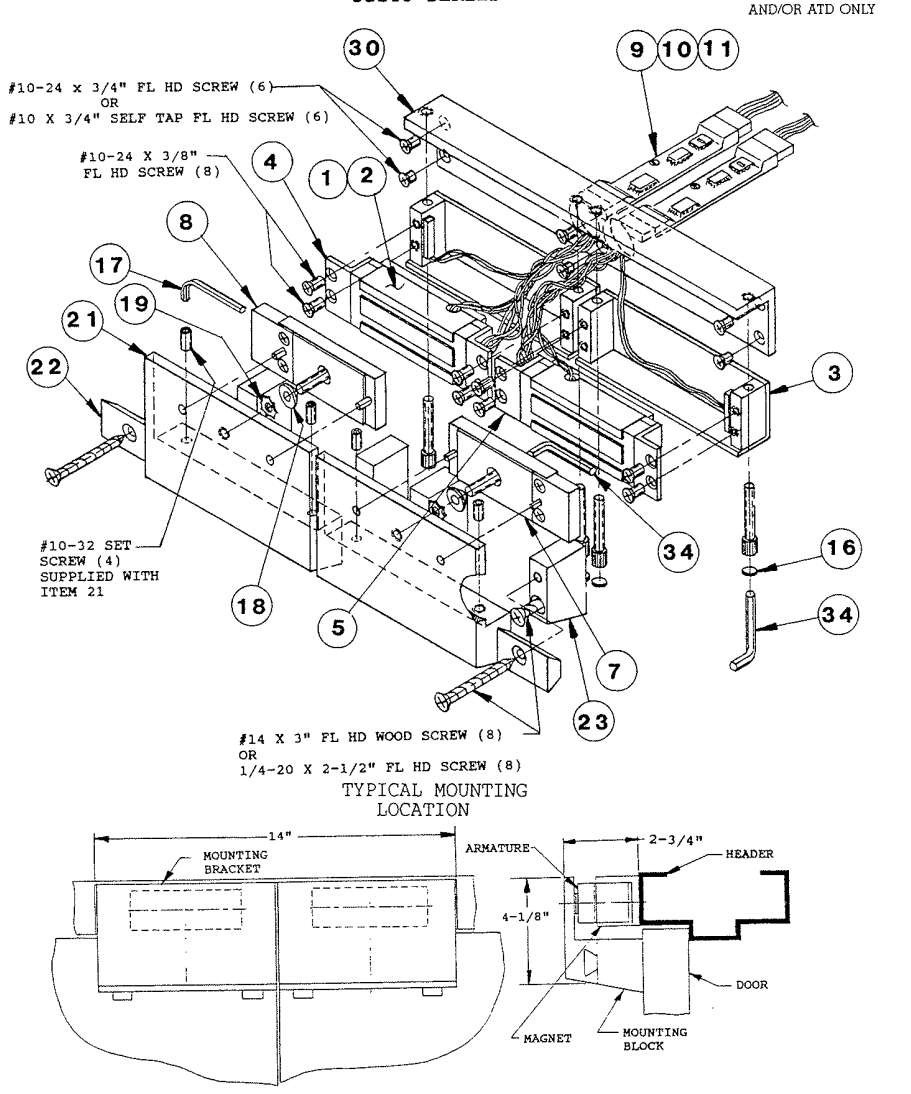


322 X HDB STANDARD SURFACE MOUNT



SCHLAGE 320 AND 322 SERIES LOCKS
EXPLODED VIEW

322TJ SERIES



CHAPTER 4

HALCO PRODUCTS COMPANY

100 N. Gordon St. Elk Grove Village, IL 60007-1193
Phone (847) 956-1600 Fax (847) 956-0595
E-mail: info@halco-products.com
Website: www.halco-products.com

WARRANTY

HALCO PRODUCTS COMPANY warrants that the workmanship, materials, and construction of this item is free of manufacturing defects. This item and its associated systems are such that if operated and maintained in accordance with the manual supplied by **HALCO PRODUCTS COMPANY**, it will meet all contract specifications for a period of one (1) year from date of delivery. This warranty shall not apply to replaceable items such as filters or light bulbs, or if the equipment is subject to misuse, accident, negligence, or lack of proper maintenance. Electrical motors and blowers and pre-manufactured items are subject to manufacturers' guarantees.

CUSTOMER: _____

ADDRESS: _____

_____

P.O. # : _____ INVOICE # :_____SERIAL #: _____

MODEL #: _____ SIZE: _____

START-UP DATE: _____ INSPECTED BY: _____ DATE: _____

WARRANTY REGISTRATION CARD

Please return this card within 30 days of delivery

Customer:_____

Address:_____

_____

P.O.#: _____ Invoice #: _____ Serial #: _____

Model #: _____ Start-Up Date: _____

Sizes: _____ Customer Inspector: _____ Date: _____