

## MOUNTING INSTRUCTIONS FOR TJ1000 SERIES INSWINGING DOORS

### \*\*\*\*\*READ THOROUGHLY BEFORE INSTALLING\*\*\*\*\*

Handle Electro-Magnets carefully. Any damage to the mating surface may significantly reduce the holding efficiency.

The TJ1000 Series Electro-Magnet assembly mounts firmly to the vertical face of the header on the flush or pull side of the door. The armature attaches to a Z-bracket, which is thru bolted to the door. See print # DL100031-1, elevation profile attached.

Mark door(s) and frame for drilling and tapping in accordance with applicable template and dimensions. MEASUREMENTS ARE TO BE MADE WITH THE DOOR IN THE CLOSED POSITION. BE SURE TO WORK FROM DIMENSIONS ON PROPER TEMPLATE.

If utilizing the xCF Conduit fitting option be sure to provide enough clearance between the lock and frame for conduit attachment.

Prepare header for Electro-Magnetic lock assembly by drilling for #14 sheet metal screws or drilling and tapping for 1/4-20 machine screws as shown on template. Be sure header is adequately reinforced to hold mounting screws. Drill 1/2" diameter or larger wire hole in location as shown on template.

Attach mounting angle to face of header being sure to use proper screws provided. Once the angle is mounted in place feed the wire through the hole and mount the magnet assembly to the angle bracket using the two 1/4 - 20 socket head cap screws and washers.

Prepare door for thru bolting Z-bracket, utilizing the template provided. All dimensions must be taken from one end of the Electro-Magnet assembly. Drill four 3/8" holes through door. Mount Z-bracket on pull side of door using 1/4-20 flat head screws and sex bolts. If door is metal and a reinforcing plate has been provided, drill and tap for 1/4-20 screws.

Prepare armature for mounting: Note that armature has two 3/16" dia. Holes open from the back only. Press the two spring pins provided into these holes. Tap pins gently until they are firmly seated in the holes, being careful not to mar the face of the armature. These pins will align with corresponding holes in the Z-Bracket.

Inset one spring washer over the 5/16-18 shoulder screw as illustrated in the mounting kit; then insert screw thru armature. Add three spring washers and \* (if required one flat washer see ML110031-1). Carefully mount armature/ shoulder screw assembly to the Z-bracket, which has a sex nut, pressed into place. Be sure that the two pins line up with the holes in the bracket and that the spring washers don't slip off of the shoulder screw.

Check that the armature mates properly with the face of the Electro-Magnet and that the door can close securely as desired. \*If the armature does not quite sit against the face of the magnet, a flat stop washer may be added. If the door does not quite close, the stop washer may be removed. (see ML110031-1).

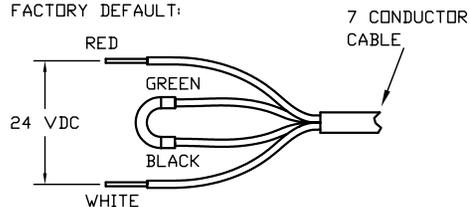
**BEFORE INSTALLING, READ MOUNTING INSTRUCTIONS THOROUGHLY!**

DRILL & TAP 1/4-20, OR DRILL FOR #14 SHEETMETAL SCREWS, 4 PLACES

**WIRING DETAIL:**

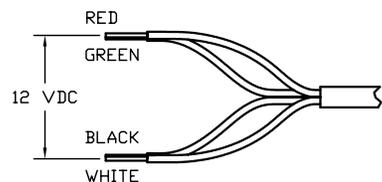
**DUAL VOLTAGE MAGNET**

**24 VDC @ 170 mA**  
FACTORY DEFAULT:



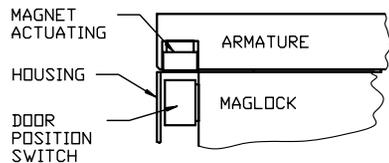
**12 VDC @ 340 mA**

CUT LOOP AND CONNECT GREEN TO RED, AND BLACK TO WHITE AS SHOWN:



**OPTIONS:**

**DOOR POSITION SWITCH (DPS)**

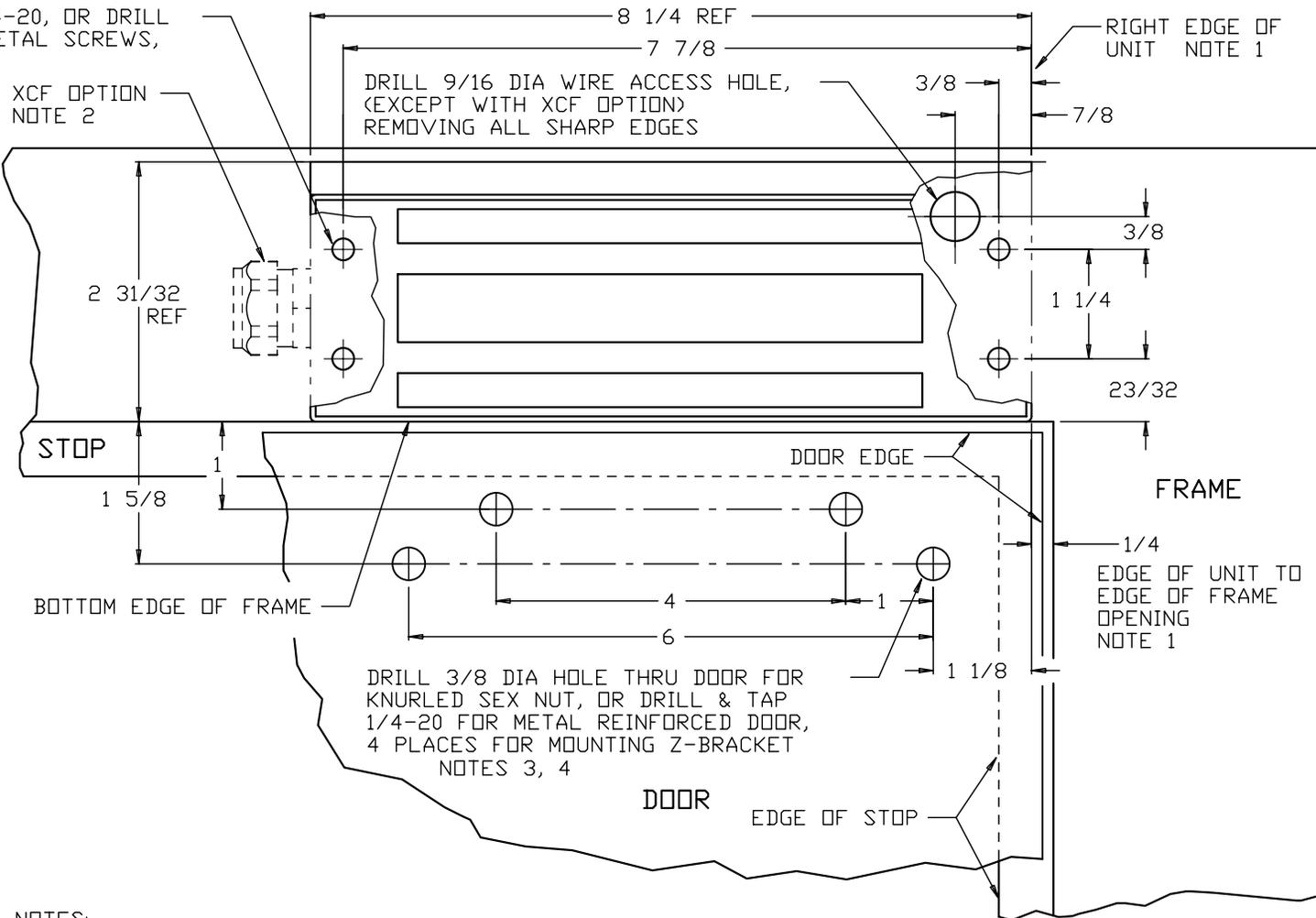


THE DPS SWITCH IS ALWAYS LOCATED ON THE WIRING ENTRY SIDE.



WIRE COLOR	FUNCTION	MODE STATUS WITH DOOR CLOSED & SW ACTUATED
BROWN	COMMON	
BLUE	N.O.	HELD CLOSED
ORANGE	N.C.	HELD OPEN

SPEC: SPDT, 100 mA @ 30 VDC



**NOTES:**

- FOR TYPICAL INSTALLATION, EDGE OF UNIT WILL BE POSITIONED FROM 1/4" TO 1" FROM THE FRAME OPENING VERTICAL EDGE. Z-BRACKET MOUNTING MUST ALWAYS BE CENTERED UNDER THE MAGNET HOUSING, AND SHOULD BE A MINIMUM OF 1/8" FROM THE VERTICAL EDGE OF DOOR. USE MOUNTING TEMPLATE PROVIDED. DPS OPTION IN ARMATURE MUST FACE WIRING SIDE OF MAGNET.
- CONDUIT FITTING, IF APPLICABLE. (MAGNET MAY BE MOUNTED WITH FITTING FACING EITHER END)
- REINFORCING AND STRUCTURING REQUIRED FOR 1200 LB LOAD.
- THE Z-BRACKET MOUNTING HARDWARE PROVIDED IS FOR A STANDARD 1 3/4" THICK DOOR ONLY. CONSULT FACTORY FOR MOUNTING ON EITHER A THICKER OR OTHERWISE NONSTANDARD DOOR.

TITLE TJ1000 TOP JAMB MOUNT WITH 1196 Z-BRACKET FOR INSWINGING DOOR INSTALLATION

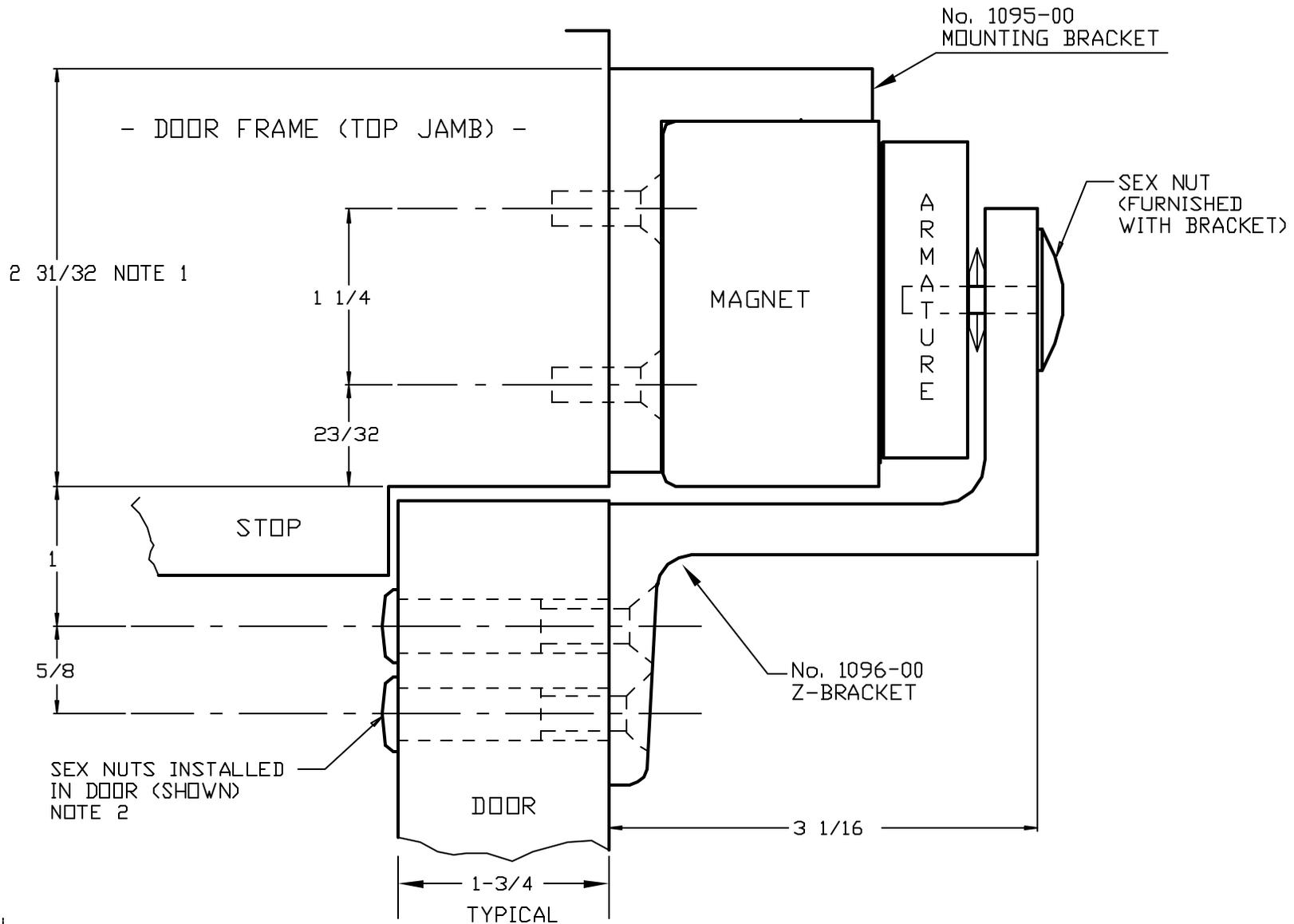


REV.	REVISION DESCRIPTION
A	ADDED DPS WIRING

DATE
12/13/06

DRAWN	GSG	DATE	7/15/03	SCALE	TO FIT	CAD FILE	T110031-1
APPR.	JTF	DATE	12/13/06	UNITS	INCHES	SHEET	1 OF 1
							SIZE A

DWG. NO.	REV.
T110031-1	A



NOTES:

1. IN TYPICAL INSTALLATION, BOTTOM OF MAGNET WILL BE FLUSH WITH BOTTOM OF TOP JAMB.
2. IN METAL REINFORCED DOOR (1/4" STEEL MIN), Z-BRACKET MAY BE MOUNTED BY DRILLING & TAPPING FOR 1/4-20 MACHINE SCREWS.

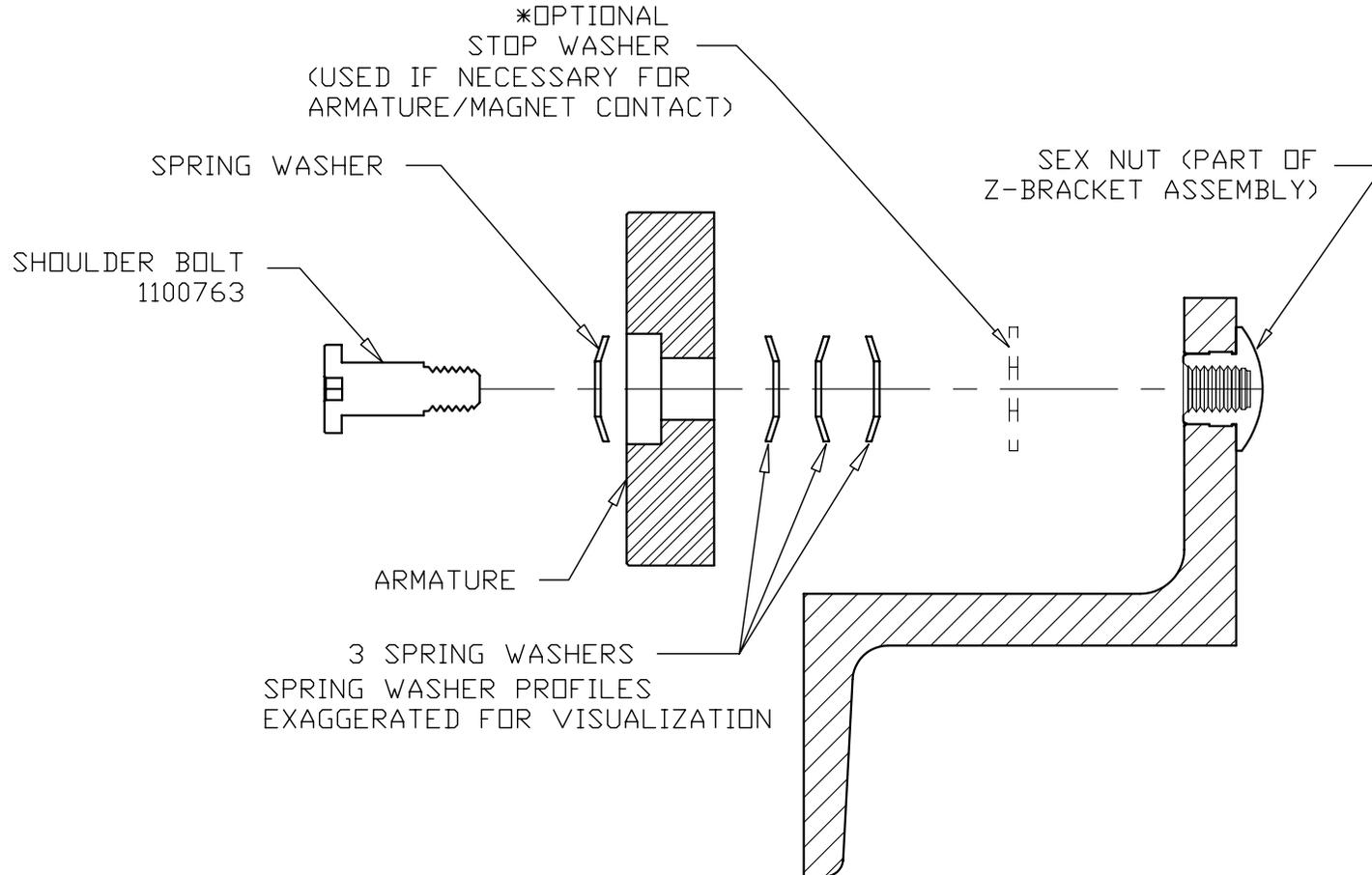
TITLE ELEVATION VIEW: TJ1000 SERIES TOP JAMB MOUNT WITH #1196 Z-BRACKET FOR INSWINGING DOOR APPLICATION					
DRAWN	GSG	DATE	7/14//00	SCALE	TO FIT
APPR.	XXX	DATE	XX/XX/XX	UNITS	INCHES
			CAD FILE	DL100031-1	
			SHEET	1 OF 1	SIZE A

 **DORTRONICS SYSTEMS, INC.**

DWG. NO. **DL100031-1** REV. **NC**

(NC)	(NC)	(NC)
REV.	REVISION DESCRIPTION	DATE

# ARMATURE & Z-BRACKET WASHER MOUNTING DETAIL



TITLE ELEVATION VIEW: TJ SERIES Z-BRACKET MOUNTING  
TO ARMATURE FOR INSWINGING DOOR APPLICATION



**DORTRONICS**  
SYSTEMS, INC.

(NC) (NC)

(NC)

DRAWN	GSG	DATE	4/10/02	SCALE	TO FIT	CAD FILE	Z-Bracket/Armt
APPR.	XXX	DATE	XX/XX/XX	UNITS	INCHES	SHEET	1 OF 1
						SIZE	A

DWG. NO.  
ML110031-1

REV.  
NC

REV. REVISION DESCRIPTION

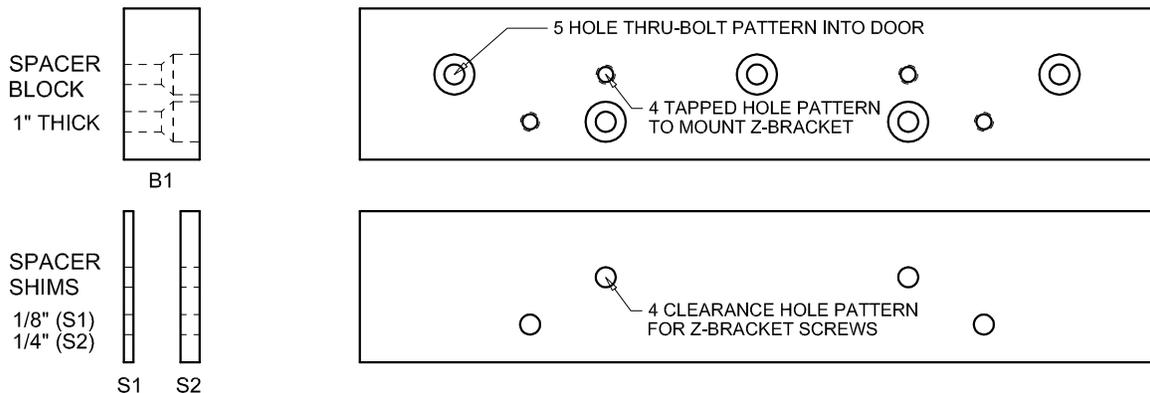
DATE

## 1176 SERIES SPACERS WITH TJ1100 SERIES INSWINGING DOOR APPLICATIONS

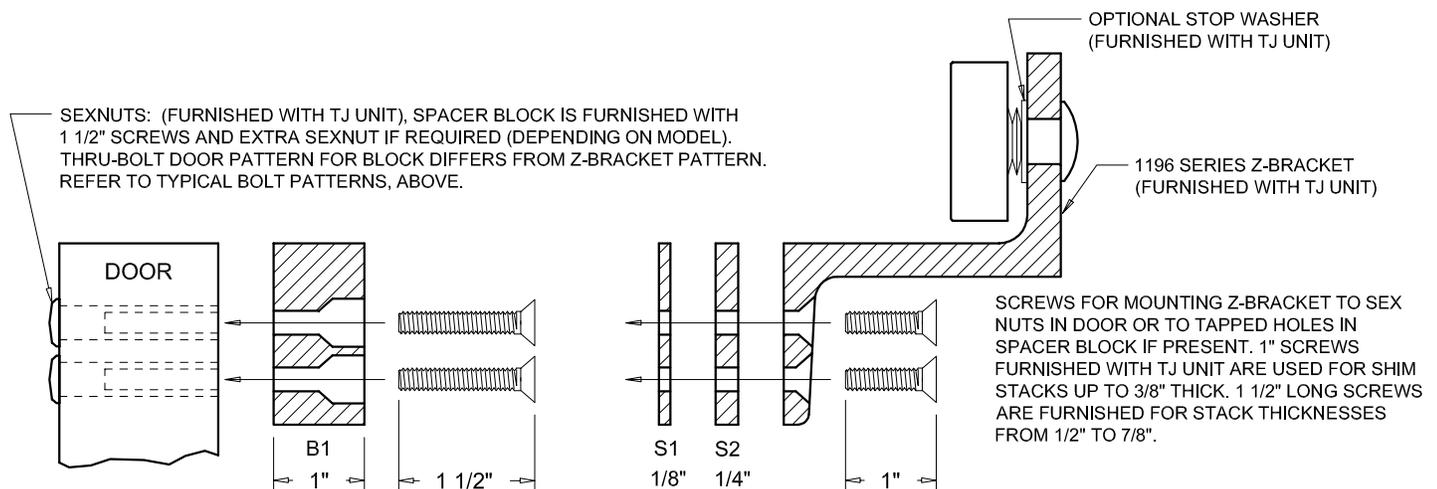
AB1176\_1100\_P1

**DORTRONICS SYSTEMS** has engineered the 1176 Series of Spacer Shims and a 1" thick Spacer Block for use with the 1196 Series Z-Brackets on inswinging doors with pull side reveals of up to 2 1/4". Shims are available in two thicknesses: 1/8" and 1/4", and may be used singly or in various combinations up to 7/8" thick, and for 1" and above, a Spacer Block is used alone or in combination with Shims to satisfy the particular door/frame conditions. For 2" and above, a second block is added.

Pattern for Models 1110/1150, other model sizes and patterns vary.



The one piece Z-Bracket for top jamb mounting on inswinging doors provides a neater, cleaner and more architecturally acceptable inswinging door installation. It has been designed for strength, durability, and to maximize the applied holding force of the electromagnetic locking device. It is intended to accommodate doors that are flush to 1/8" recessed. Adjustability is achieved by adding or removing Stop Washers in the armature mounting assembly. The 1176 Series of Spacer Shims and Blocks have been made available to properly and conveniently accommodate pull side reveals beyond 1/8" and provide for a firm, rigid, and reliable installation of the Z-Bracket. The Spacer Shims can be used alone or in combination for reveals from 1/8" to 7/8" and are designed to be installed between the door and the 1196 Z-Bracket which will then be thru-bolted to the door with the appropriate length screws (1 1/2" or longer flathead screws are furnished with the Shims). The Spacer Block can be used alone or in combination with one or more Shims, for reveals of from 1" to 1 7/8" and has been designed to be thru-bolted directly to the door. Two (2) spacer blocks may be combined for reveals of 2" and beyond. Tapped holes are provided in the Block for mounting the Z-Bracket and any Shims to the Block. 1/16" thick Stop Washers for optional use are included in the Z-Bracket mounting pack to assure proper mating of armature and magnet. The Sex Nut for a 1 3/4" thick door is standard. Sex Nuts are available for other door thicknesses. For larger reveals consult the factory.



ALL MOUNTING SCREWS ARE 1/4-20 FH MS

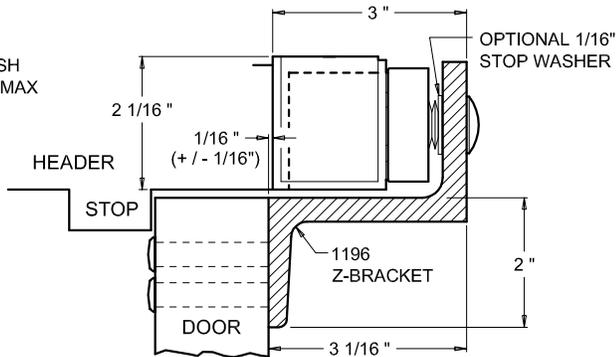


## 1176 SERIES SPACERS WITH TJ1100 SERIES INSWINGING DOOR APPLICATIONS

AB1176\_1100\_P2

**A**

REVEAL:  
FROM FLUSH  
UP TO 1/8" MAX  
NO SHIMS

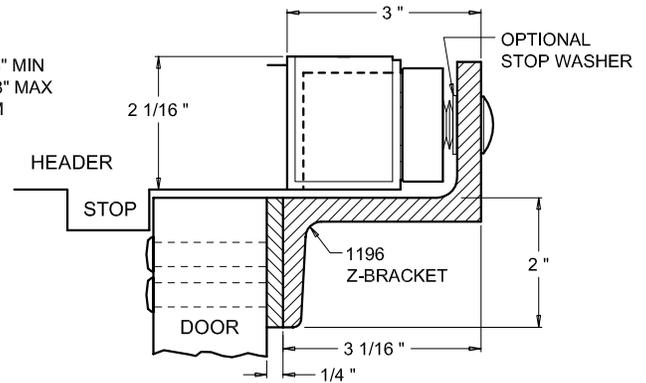


Z-BRACKET IS THRU-BOLTED TO DOOR USING THE Z-BRACKET TEMPLATE PATTERN.

TOP JAMB MOUNT WITH  
STANDARD INSWINGING DOOR

**B**

REVEAL:  
FROM 1/4" MIN  
UP TO 3/8" MAX  
1 S2 SHIM

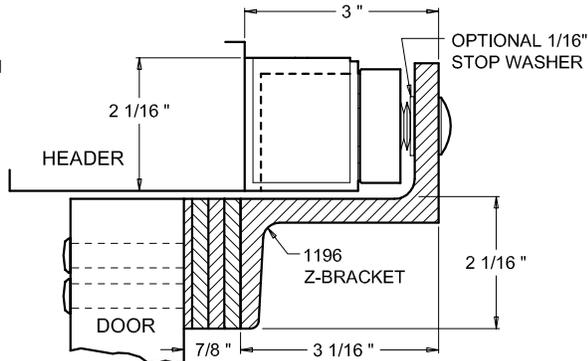


Z-BRACKET IS THRU-BOLTED TO DOOR USING THE Z-BRACKET TEMPLATE PATTERN. THE SCREWS PASS THROUGH THE SHIM.

TOP JAMB MOUNT WITH  
STANDARD INSWINGING DOOR

**C**

REVEAL:  
FROM 7/8" MIN  
UP TO 1" MAX  
1 S1 SHIM  
3 S2 SHIMS

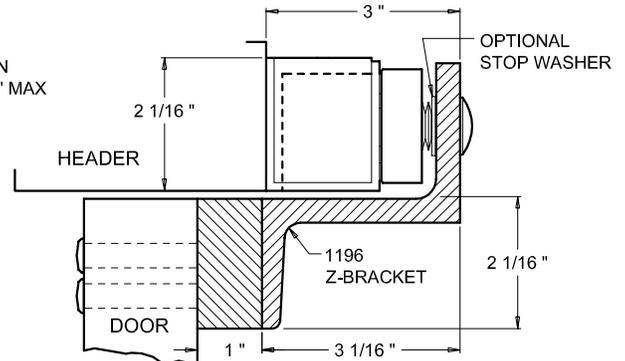


Z-BRACKET IS THRU-BOLTED TO DOOR USING THE Z-BRACKET TEMPLATE PATTERN. THE SCREWS PASS THROUGH THE SHIMS. SHIM STACKS OF 1/2" TO 7/8" USE LONGER 1 1/2" SCREWS FURNISHED WITH SHIMS.

TOP JAMB MOUNT ON  
CENTER HUNG INSWINGING DOOR

**D**

REVEAL:  
FROM 1" MIN  
UP TO 1 1/8" MAX  
1 B1 BLOCK

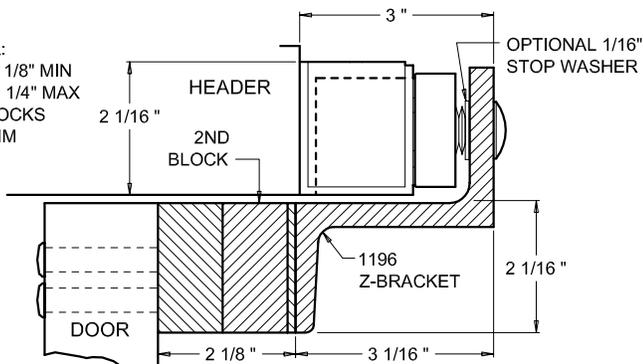


SPACER BLOCK IS THRU BOLTED TO DOOR USING THE BLOCK THRU BOLT PATTERN. Z-BRACKET IS THEN MOUNTED TO THE BLOCK, BY MEANS OF THE Z-BRACKET SCREWS AND THE TAPPED HOLES IN THE BLOCK.

TOP JAMB MOUNT ON  
CENTER HUNG INSWINGING DOOR

**E**

REVEAL:  
FROM 2 1/8" MIN  
UP TO 2 1/4" MAX  
2 B1 BLOCKS  
1 S1 SHIM



THE SECOND SPACER BLOCK IS THRU BOLTED TO DOOR USING THE BLOCK THRU BOLT PATTERN, WITH THE SCREWS PASSING THROUGH THE FIRST BLOCK. Z-BRACKET IS THEN MOUNTED TO THE SECOND BLOCK, USING THE TAPPED HOLES, WITH THE APPROPRIATE LENGTH SCREWS PASSING THROUGH THE SHIM.

TOP JAMB MOUNT ON  
CENTER HUNG INSWINGING DOOR

**APPLICATION NOTES:**

THE Z-BRACKET ASSEMBLY IS ADJUSTABLE OVER A 1/8" RANGE OF REVEALS BY THE ADDITION OR REMOVAL OF STOP WASHERS IN THE ARMATURE MOUNTING. A MAXIMUM OF TWO (2) 1/16" STOP WASHERS MAY BE USED WHICH CORRESPONDS TO THE MINIMUM REVEAL MEASUREMENT (APPROXIMATELY FLUSH). THE ASSEMBLY IS SHOWN WITH ONE (1) 1/16" STOPWASHER INSTALLED.

TO SELECT SPACER SHIMS AND/OR BLOCKS, CAREFULLY DETERMINE THE REVEAL BY MEASURING THE DISTANCE BETWEEN THE DOOR FACE AND A STRAIGHT EDGE PLACED AGAINST THE FACE OF THE TOP JAMB WHERE THE MAGNET WILL MOUNT. ROUND ANY MEASUREMENTS BETWEEN 8THS UP TO THE NEXT 1/8", THEN SUBTRACT 1/8". THE RESULT IS THE AMOUNT TO BE MADE UP WITH SHIMS AND/OR BLOCKS.

EXAMPLE: 5/32" (MIDWAY BETWEEN 1/8" AND 3/16") ROUNDS UP TO 1/4". SUBTRACTING 1/8" YIELDS A SHIM REQUIREMENT OF 1/8".

