

## MOUNTING INSTRUCTIONS FOR TJ1100 SERIES INSWINGING DOORS

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

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

The TJ 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 # DL110031, elevation profile attached.

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

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. If not, jack nuts or equivalent must be used. Drill 1/2" diameter or larger wire hole in location(s) as shown on template.

Remove housing cover from lock. Attach mounting angle to face of header being sure to use proper screws and lock washers as provided.

Prepare door(s) for thru bolting Z-bracket(s). On single door applications, dimensions must be taken from one end of the Electro-Magnet assembly. On double pairs of doors all dimensions must be taken from the centerline.

Drill four 3/8" holes through door for supplied sex nuts. Mount Z-bracket on pull side of door using 1/4-20 flat head screws and sex nuts. 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.

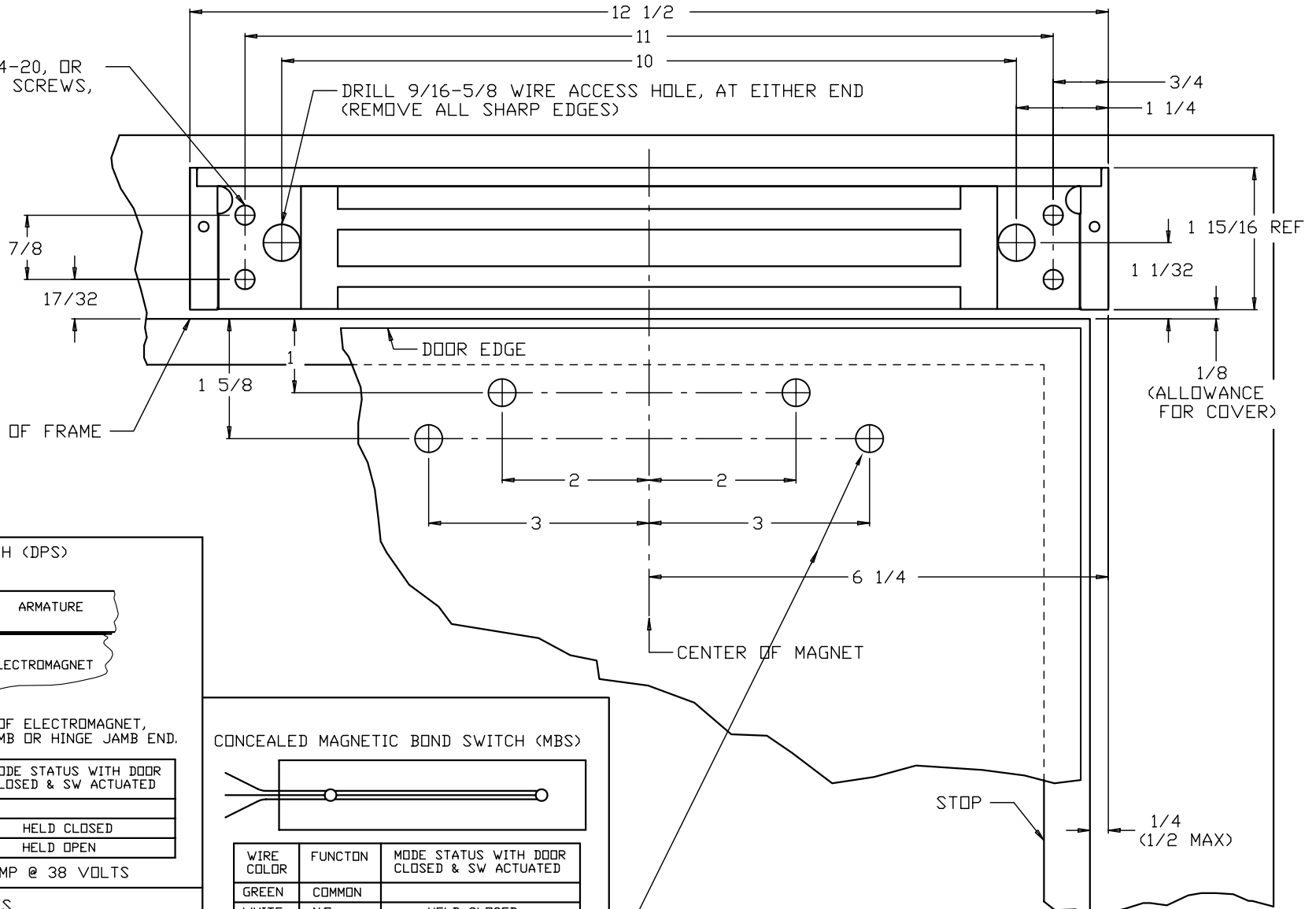
Inset one spring washer over the 5/16-18 shoulder screws and then insert screw thru armature. Add three spring washers and optional flat washer as illustrated in drawing #ML110031-1. Carefully mount armature/ shoulder screw assembly to the Z-bracket, which has a sex nut, pressed into place. Be sure that 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. \*(Refer to drawing #ML110031-1) If the door does not quite close, the one stop washer may be removed.

BEFORE INSTALLING, READ MOUNTING INSTRUCTIONS THOROUGHLY!

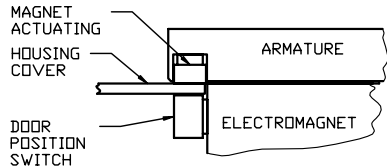
DRILL & TAP 1/4-20, OR #14 SHEETMETAL SCREWS, 4 PLACES

DRILL 9/16-5/8 WIRE ACCESS HOLE, AT EITHER END (REMOVE ALL SHARP EDGES)



**OPTIONS:**

**DOOR POSITION SWITCH (DPS)**



MAY BE AT EITHER END OF ELECTROMAGNET, AND ON EITHER LOCK JAMB OR HINGE JAMB END.

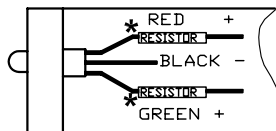
WIRE COLOR	FUNCTION	MODE STATUS WITH DOOR CLOSED & SW ACTUATED
BLACK	COMMON	
WHITE	N.D.	HELD CLOSED
RED	N.C.	HELD OPEN

SPEC: SPDT, .1 AMP @ 38 VOLTS

**LED INDICATOR LIGHTS**

LED COLOR CHOICE:

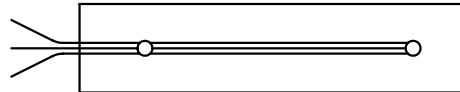
R - RED  
G - GREEN



INPUTS:  
12 TO 28 VOLTS DC  
.03 AMPS @ 24VDC

\* LED IS SET FOR 24VDC OPERATION. FOR 12VDC INPUT CUT OFF RESISTOR

**CONCEALED MAGNETIC BOND SWITCH (MBS)**



WIRE COLOR	FUNCTION	MODE STATUS WITH DOOR CLOSED & SW ACTUATED
GREEN	COMMON	
WHITE	N.D.	HELD CLOSED
RED	N.C.	HELD OPEN

SPEC: SPDT, .1 AMP @ 24 VOLTS

DRILL 3/8 DIA HOLE THRU DOOR FOR KNURLED SEX NUT, OR DRILL & TAP FOR 1/4-20 MACHINE SCREWS IN METAL REINFORCED DOOR, 4 PLACES FOR MOUNTING Z-BRACKET

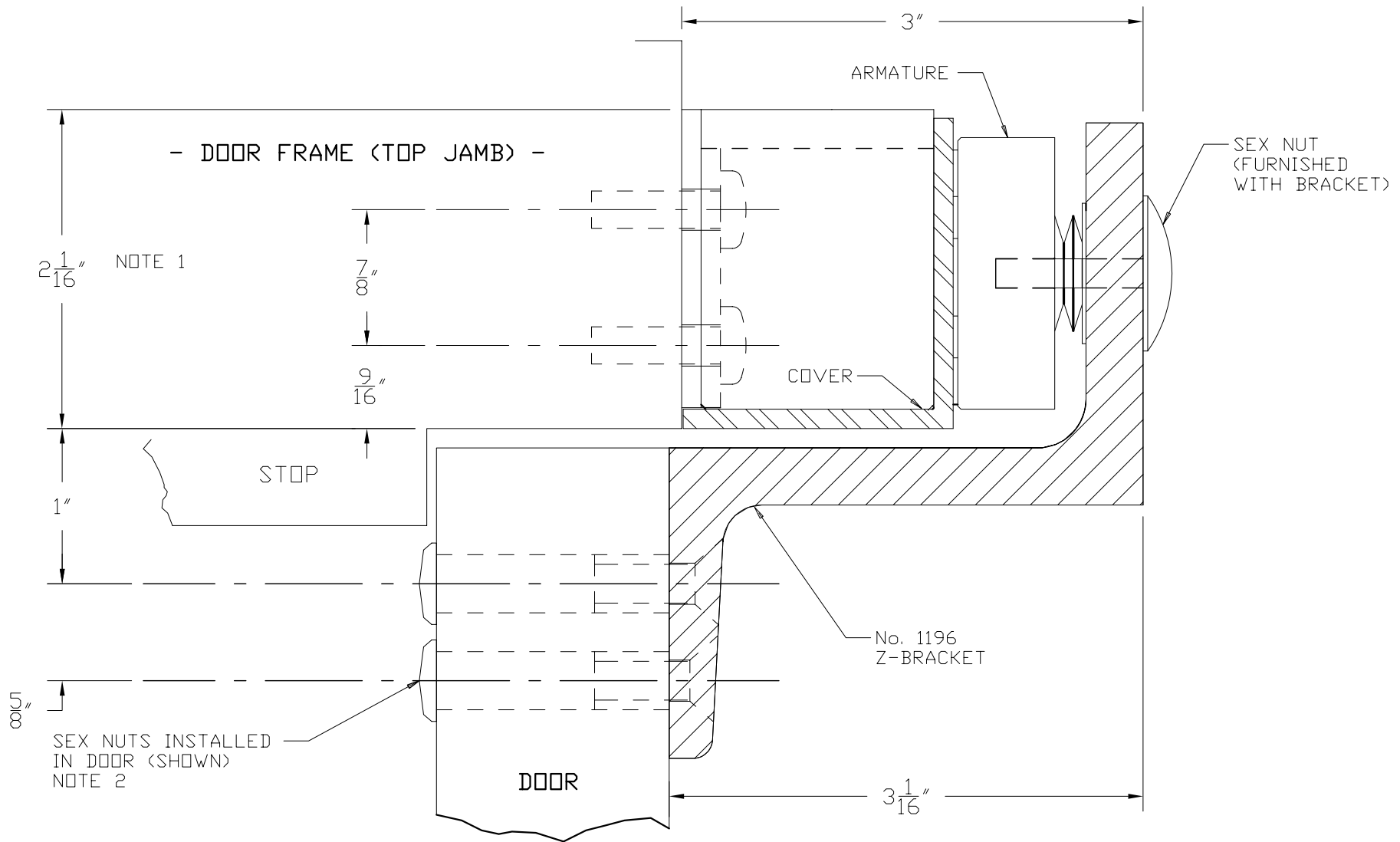
TITLE TJ1110 TOP JAMB MOUNT WITH 1196 Z-BRACKET FOR INSWINGING DOOR INSTALLATION



B	ADDED BI-COLOR LED	11/16/05
REV.	REVISION DESCRIPTION	DATE

DRAWN	GSG	DATE	7/14/00	SCALE	TO FIT	CAD FILE	T111031-1
APPR.	JTF	DATE	11/16/05	UNITS	INCHES	SHEET	1 OF 1
						SIZE	A

DWG. NO.	T111031-1	REV.	B
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NOTES:

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

TITLE ELEVATION VIEW: TJ1100 SERIES TOP JAMB MOUNT WITH #1196 Z-BRACKET FOR INSWINGING DOOR APPLICATION

 **DORTRONICS**  
SYSTEMS, INC.

A	NEW 1196, CORRECTED SPRING WASHERS	1/19/04	DRAWN GSG	DATE 7/14//00	SCALE TO FIT	CAD FILE DL110031-1	DWG. NO.	REV.
REV.	REVISION DESCRIPTION	DATE	APPR. XXX	DATE XX/XX/XX	UNITS INCHES	SHEET 1 OF 1	DL110031-1	A

DUAL VOLTAGE MAGNET:  
WIRING DETAIL / CURRENT DRAW

VERIFY MODEL BELOW

### 1106 SERIES

SPECS:  
245 mA MAX @ 24VDC  
480 mA MAX @ 12VDC

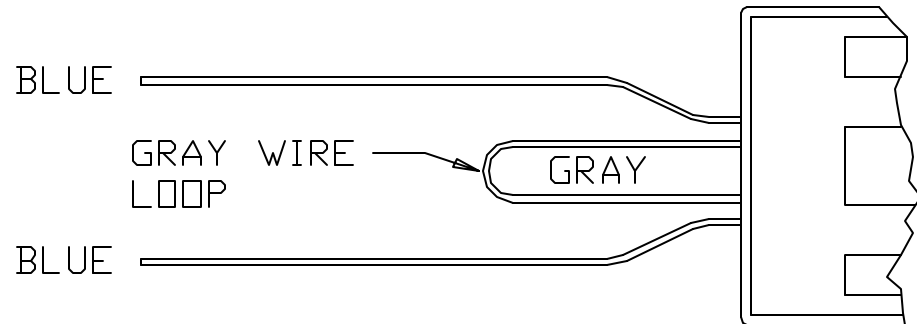
### 1115/1110 SERIES

SPECS:  
290 mA MAX @ 24VDC  
580 mA MAX @ 12VDC

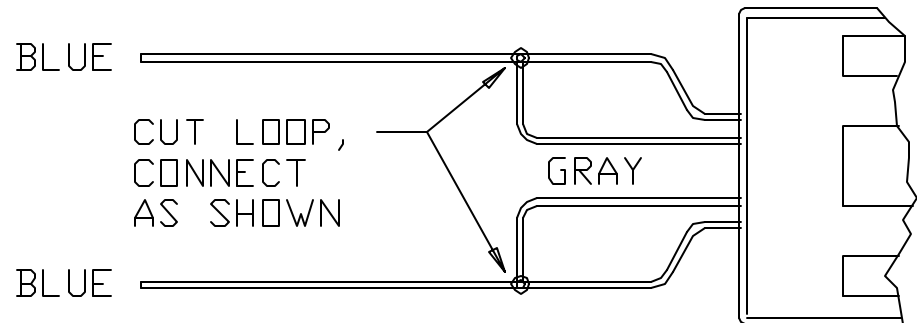
### 1120 SERIES

SPECS:  
580 mA MAX @ 24VDC  
1160 mA MAX @ 12VDC

24 VOLT CONNECTION (FROM FACTORY)



12 VOLT CONNECTION (FIELD MODIFIED)



TOLERANCES, (NON-ACCUM):  
(UNLESS SPECIFIED)  
.XXXXX : +/- .0025  
.XXXX : +/- .005  
.XXX : +/- .010  
.XX : +/- .015  
FRACT : +/- 1/64  
ANGLES : +/- 1/2 DEGREE

TITLE 1100 SERIES DUAL VOLTAGE



MATERIAL XXX

CAD FILE 1100 DUAL

FINISH XXX

SHEET 1 OF 1 SIZE A

DRAWN XXX

DATE XXX

SCALE TO FIT

DWG. NO.

REV.

APPR. XXX

DATE XX/XX/XX

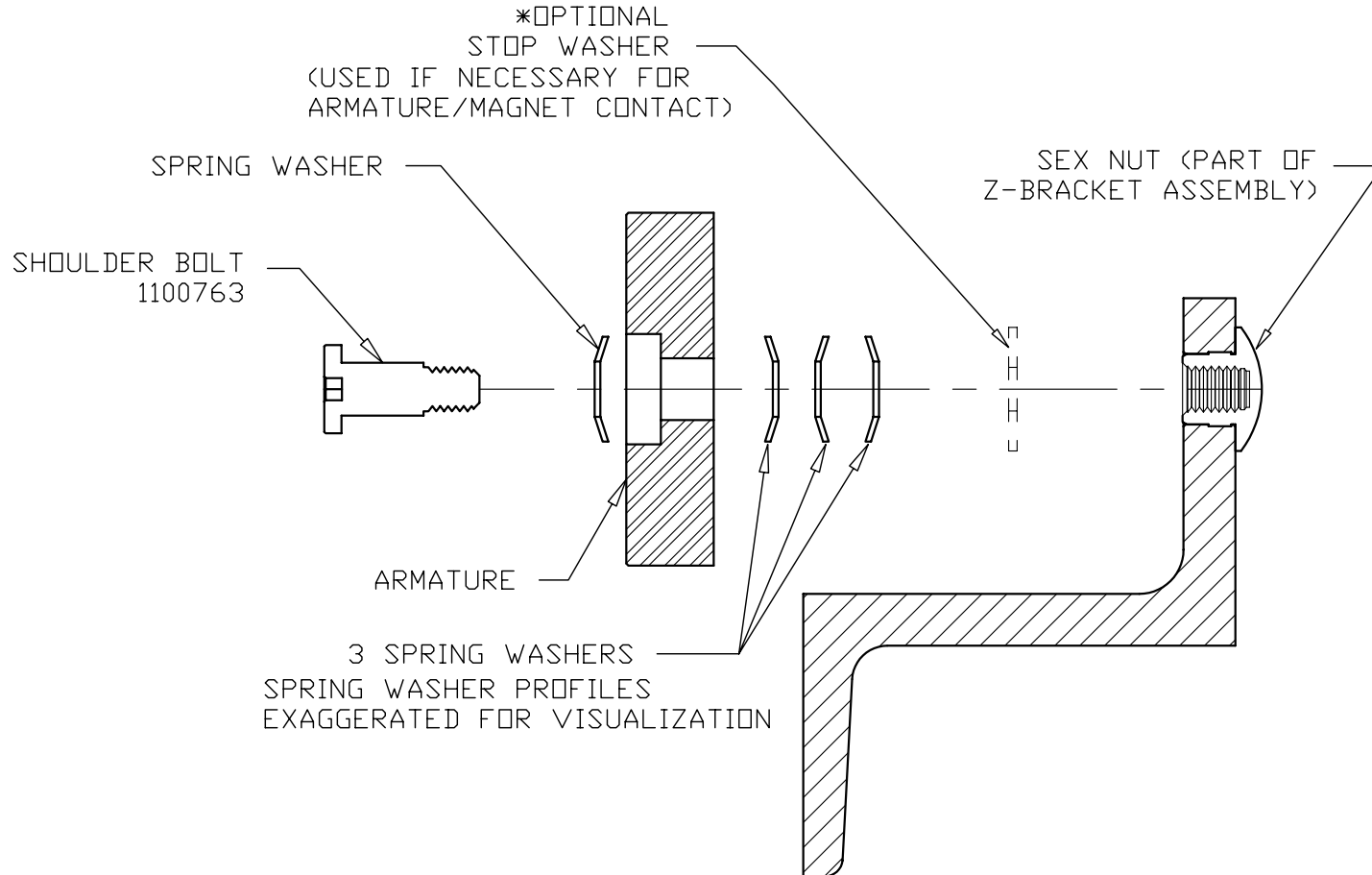
UNITS INCHES

1100 DUAL

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

DWG. NO.

ML110031-1

REV.

NC

REV. REVISION DESCRIPTION

DATE

SIZE A

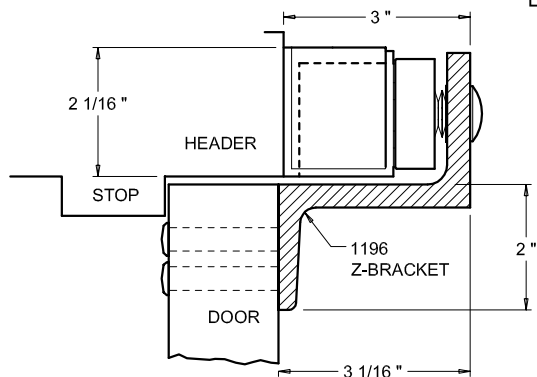
## 1100 SERIES ELEVATION PROFILES

AB1195\_6\_7\_1100\_P2

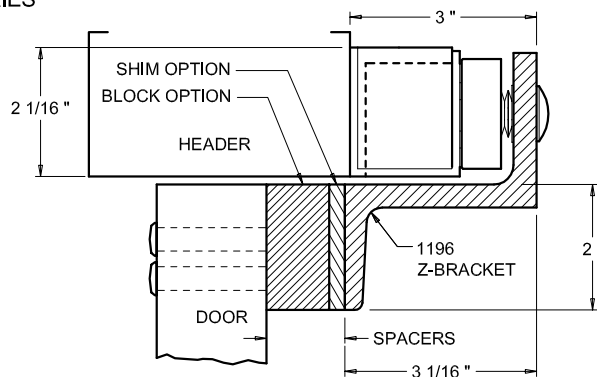
### TYPICAL INSWINGING DOOR APPLICATIONS

**A**

REFER TO THE APPLICATION BULLETIN FOR 1176 SERIES SPACERS



TOP JAMB MOUNT WITH STANDARD INSWINGING DOOR

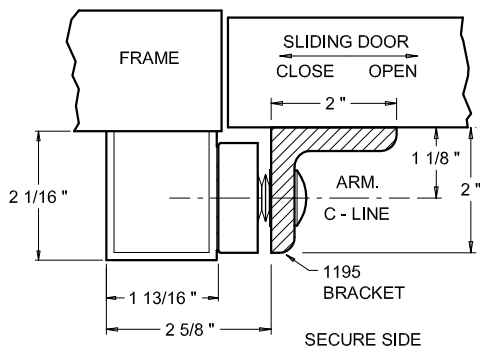


TOP JAMB MOUNT ON CENTER HUNG INSWINGING DOOR

### TYPICAL SINGLE & BI-PART SLIDING DOOR APPLICATIONS

**B**

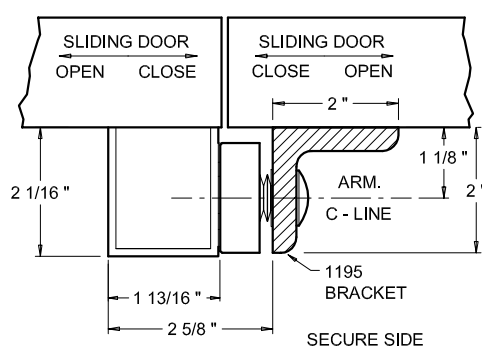
TRAFFIC SIDE



1195 ARMATURE BRACKET ON SINGLE SLIDER

**C**

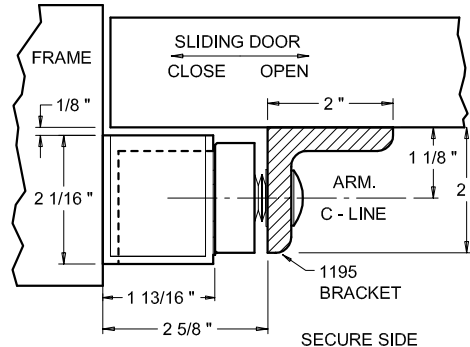
TRAFFIC SIDE



1195 ARMATURE BRACKET ON BI-PART SLIDERS

**D**

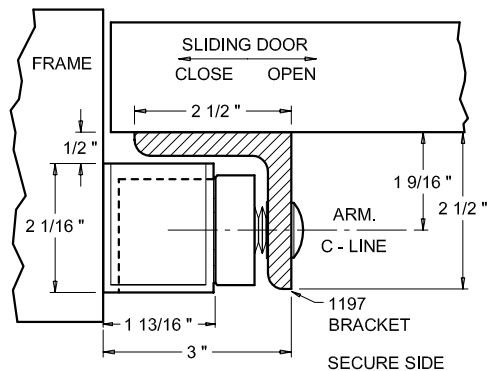
TRAFFIC SIDE



BACK MOUNT LOCK AND 1195 ARMATURE BRACKET ON SINGLE SLIDER

**E**

TRAFFIC SIDE



BACK MOUNT LOCK AND 1197 ARMATURE BRACKET ON SINGLE SLIDER



**DORTRONICS SYSTEMS, INC.**

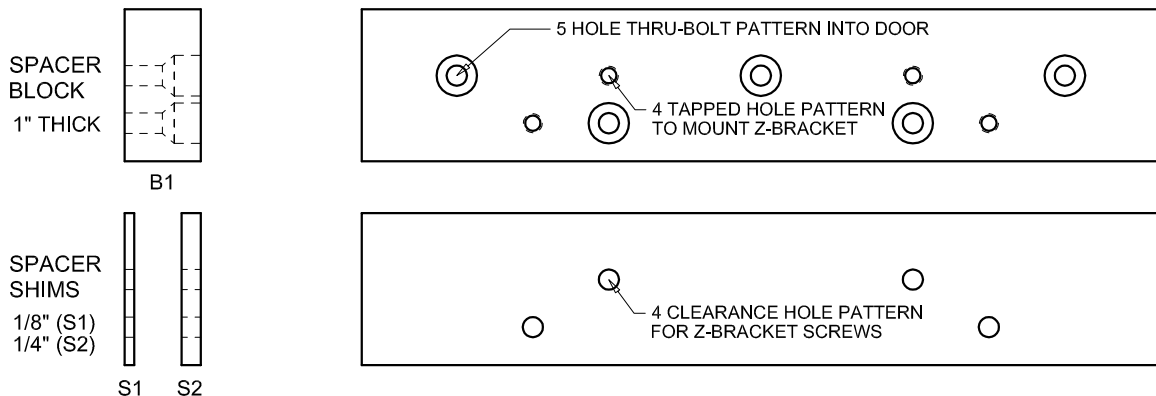
1668 SAG HARBOR TPKE., SAG HARBOR, NY 11963  
 TEL: (631) 725 0505 FAX: (631) 725 8148 TOLL FREE: 800 906 0137  
 WEBSITE: DORTRONICS.COM EMAIL: SALES@DORTRONICS.COM

## 1176 SERIES SPACERS WITH TJ1100 SERIES INSWINGING DOOR APPLICATIONS

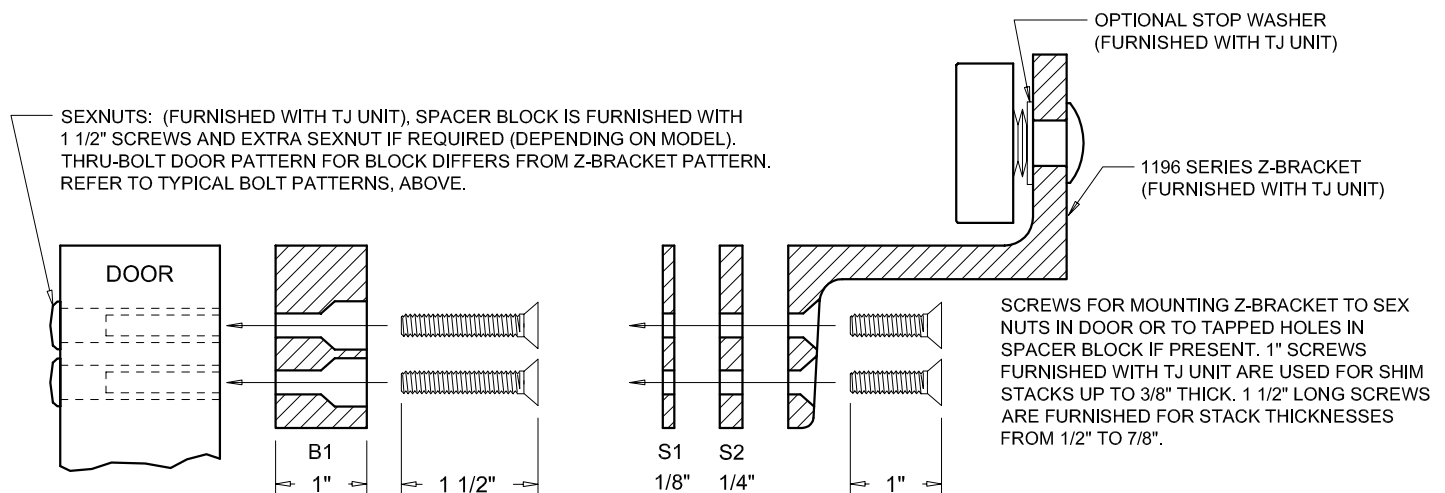
AB1176\_1100\_P1

**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

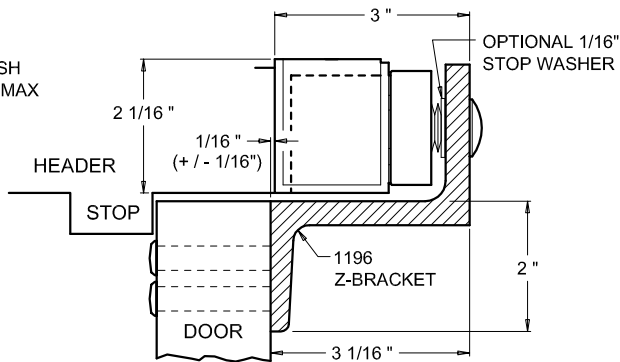


## 1176 SERIES SPACERS WITH TJ1100 SERIES INSWINGING DOOR APPLICATIONS

AB1176\_1100\_P2

**A**

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

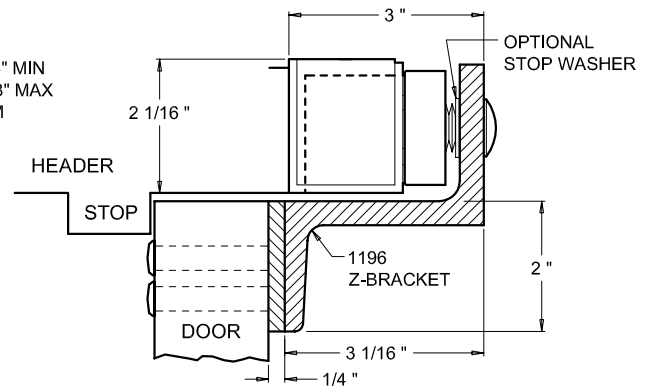


Z-BRACKET IS THRU-BOLTED TO DOOR USING THE Z-BRACKET TEMPLATE PATTERN.

TOP JAMB MOUNT WITH  
STANDARD INSWINGING DOOR

**B**

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

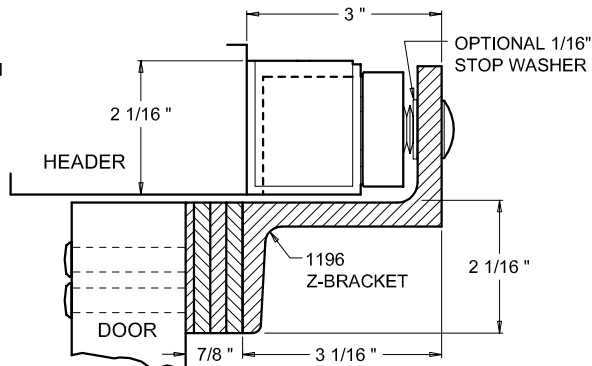


Z-BRACKET IS THRU-BOLTED TO DOOR USING THE Z-BRACKET TEMPLATE PATTERN. THE SCREWS PASS THROUGH THE SHIM.

TOP JAMB MOUNT WITH  
STANDARD INSWINGING DOOR

**C**

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

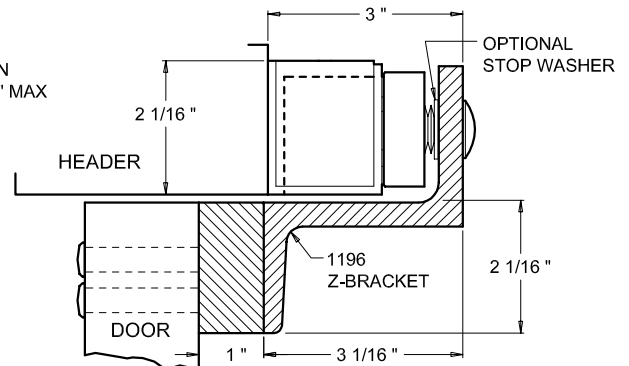


Z-BRACKET IS THRU-BOLTED TO DOOR USING THE Z-BRACKET TEMPLATE PATTERN. THE SCREWS PASS THROUGH THE SHIMS. SHIM STACKS OF 1/2" TO 7/8" USE LONGER 1 1/2" SCREWS FURNISHED WITH SHIMS.

TOP JAMB MOUNT ON  
CENTER HUNG INSWINGING DOOR

**D**

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

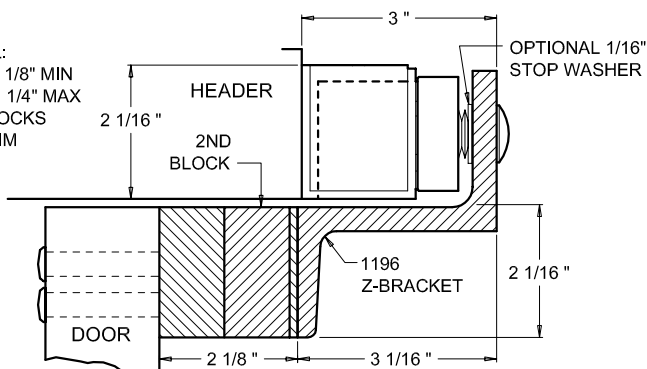


SPACER BLOCK IS THRU BOLTED TO DOOR USING THE BLOCK THRU BOLT PATTERN. Z-BRACKET IS THEN MOUNTED TO THE BLOCK, BY MEANS OF THE Z-BRACKET SCREWS AND THE TAPPED HOLES IN THE BLOCK.

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".

