EXODUS

PEDESTRIAN EGRESS GATES

TECHNICAL PRODUCT SUPPORT: 855-526-6847

READ ALL AMERISTAR AND TORXUN INSTRUCTIONS BEFORE INSTALLING, OPERATING OR SERVICING

FOR MAIN POWER CONNECTION, REFER TO "TORXUN AUTOPED OPERATOR INSTALLATION MANUAL", SECTION VI (PAGE 29)
*****MAIN POWER TO BE CONNECTED BY A LICENSED ELECTRICIAN, 115 VAC POWER SOURCE*****
ONLY USE WATER TIGHT CONDUIT CONNECTIONS

REFER TO TORXUN PROGRAMMING INSTRUCTIONS SECTION XI (PAGE 42) IN THE "TORXUN AUTOPED OPERATOR INSTALLATION MANUAL" FOR PROGRAMMING OPTIONS. MANY OPTIONS ARE SITE SPECIFIC, FOR THE AMERISTAR EXODUS AUTOMATIC RECOMMENDED SETTINGS, SEE PAGE 5 OF "EXODUS AUTOMATIC PEDESTRIAN GATE OPENER INSTALLATION"

WARNING: THIS OPENER IS TO ONLY BE OPERATED IN "LOW ENERGY", ANSI 156.19. IT IS THE RESPONSIBILITY OF THE INSTALLING PARTY TO ADHERE TO ANSI 156.19 STANDARDS AS WELL AS FEDERAL, STATE, AND LOCAL CODES.

UNLESS OTHERWISE SPECIFIED TOLERANCES	
X.X	± .06
X.XX	± .03
X.XXX	± .02
ANGLES	± 0.5°
FRACTIONS	± 1/8
SURFACE FINISH	63

DRAWING COMPLIES WITH ASME Y14.5M - 1994
INCH
MM
THIRD ANGLE PROJECTION

ASSA ABLOY

EXODUS AUTOMATIC PEDESTRIAN GATE OPENER INSTALLATION

DATE CREATED	DRAWN BY	DESIGNED BY
9/23/2022	nathan	nathan

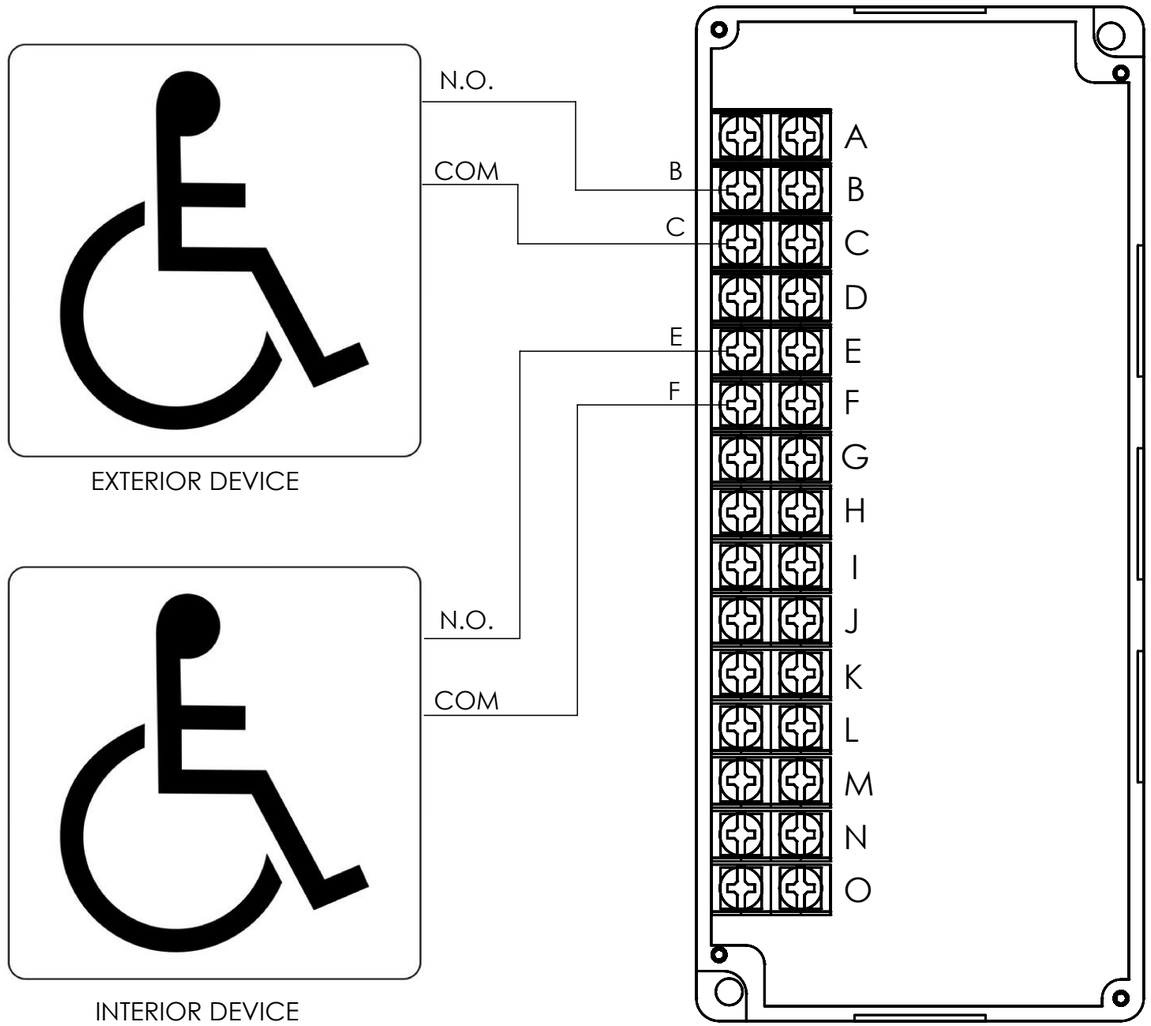
DOCUMENT ID | SIZE B

LEGACY ID

WIRING SCHEMATIC DIAGRAMS

NOTE: Do not exceed 2A 24V draw from the Board. TORXUN recommends one board powered accessory only. Others should be powered by independent power supplies.

NON-POWERED ACTIVATION DEVICES

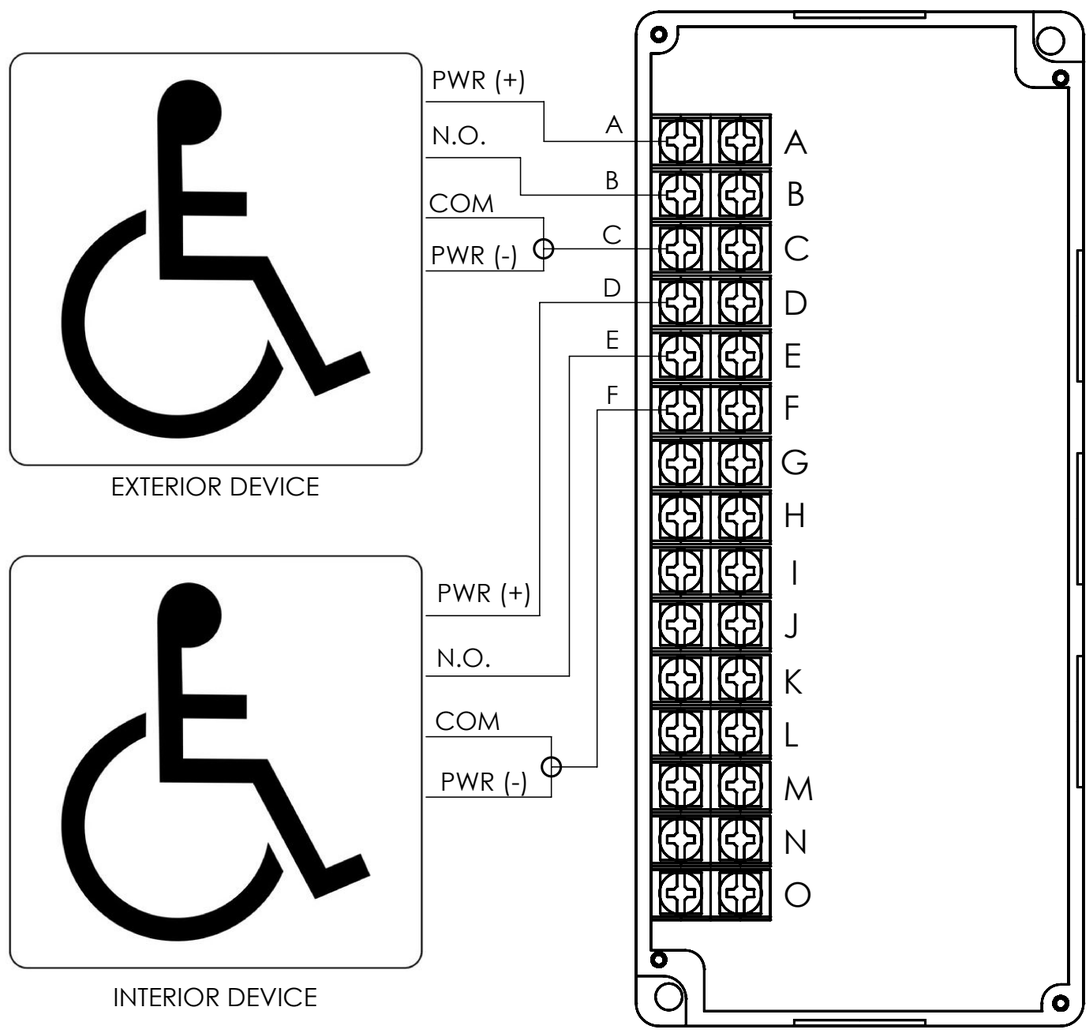


EXTERIOR DEVICE

INTERIOR DEVICE

AMERISTAR LOW VOLTAGE TERMINAL BLOCK

POWERED ACTIVATION DEVICES



EXTERIOR DEVICE

INTERIOR DEVICE

AMERISTAR LOW VOLTAGE TERMINAL BLOCK

UNLESS OTHERWISE SPECIFIED TOLERANCES	
X.X	± .06
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SURFACE FINISH	63

DRAWING COMPLIES WITH ASME Y14.5M - 1994

INCH / MM

THIRD ANGLE PROJECTION

ASSA ABLOY
Ameristar Perimeter Security USA Inc
Tulsa

EXODUS AUTOMATIC PEDESTRIAN GATE OPENER INSTALLATION

DATE CREATED	DRAWN BY	DESIGNED BY
9/23/2022	nathan	nathan

DOCUMENT ID

SIZE B

LEGACY ID

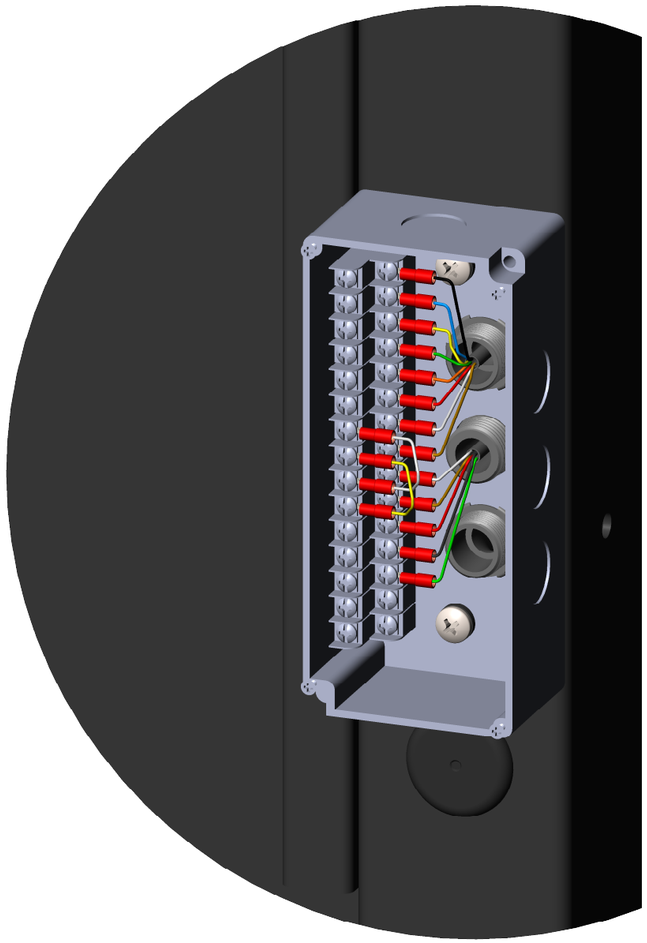
COMPLETE WIRE HARNESS ASSEMBLY DETAIL REFERENCE

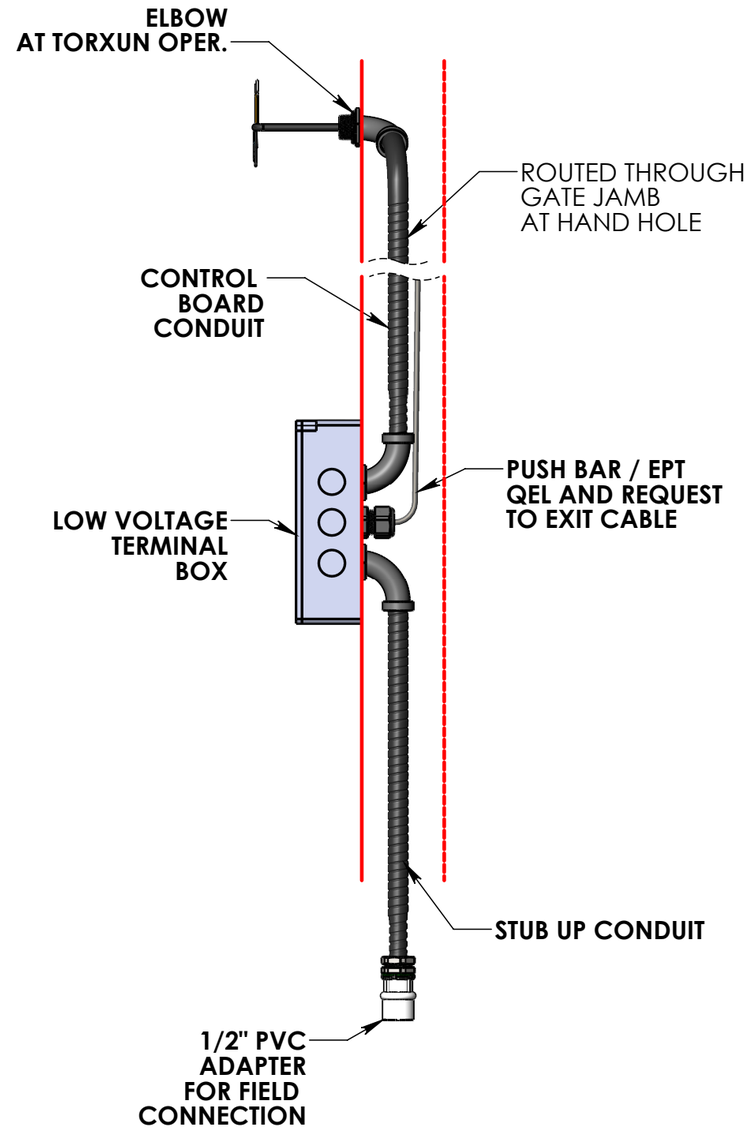
4CEL Terminal Block (Powered Activation Device)					
Cable 1 (Torxun Oper.)	A	Black	Torxun Board - X101 #8	PWR (+)	Powered Activation Device
	B	Blue	Torxun Board - X101 #9	N.O.	Powered Activation Device
	C	Yellow	Torxun Board - X101 #10	Common/PWR (-)	Powered Activation Device
	D	Green	Torxun Board - X101 #11	PWR (+)	Powered Activation Device
	E	Orange	Torxun Board - X101 #12	N.O.	Powered Activation Device
	F	Red	Torxun Board - X101 #13	Common/PWR (-)	Powered Activation Device
	G	White	Torxun Board - X108 #27	Fail Secure Lock	Electric Strike
	H	Brown	Torxun Board - X108 #30	Fail Secure Lock	Electric Strike
Cable 2 (Von Duprin 99)	I	White	Quiet Elec. Latch Retraction	N.O.	QEL
	J	Brown	Quiet Elec. Latch Retraction	Common	QEL
	K	Red	Not used		Not used
	L	Black	Not used		Not used
	M	Green	Not used		Not used
	N	Blank	-		
	O	Blank	-		

4CEL Terminal Block (Non-Powered Activation Device)					
Cable 1 (Torxun Oper.)	A	Black	Torxun Board - X101 #8	Not used	
	B	Blue	Torxun Board - X101 #9	N.O.	Non-Powered Activation Device
	C	Yellow	Torxun Board - X101 #10	Common	Non-Powered Activation Device
	D	Green	Torxun Board - X101 #11	Not used	
	E	Orange	Torxun Board - X101 #12	N.O.	Non-Powered Activation Device
	F	Red	Torxun Board - X101 #13	Common	Non-Powered Activation Device
	G	White	Torxun Board - X108 #27	Fail Secure Lock	Electric Strike
	H	Brown	Torxun Board - X108 #30	Fail Secure Lock	Electric Strike
Cable 2 (Von Duprin 99)	I	White	Quiet Elec. Latch Retraction	N.O.	QEL
	J	Brown	Quiet Elec. Latch Retraction	Common	QEL
	K	Red	Not used		Not used
	L	Black	Not used		Not used
	M	Green	Not used		Not used
	N	Blank	-		
	O	Blank	-		

3EL Terminal Block (Power Activated Device)					
Cable 1 (Torxun Oper.)	A	Black	Torxun Board - X101 #8	PWR (+)	Powered Activation Device
	B	Blue	Torxun Board - X101 #9	N.O.	Powered Activation Device
	C	Yellow	Torxun Board - X101 #10	Common/PWR (-)	Powered Activation Device
	D	Green	Torxun Board - X101 #11	PWR (+)	Powered Activation Device
	E	Orange	Torxun Board - X101 #12	N.O.	Powered Activation Device
	F	Red	Torxun Board - X101 #13	Common/PWR (-)	Powered Activation Device
	G	White	Torxun Board - X108 #27	Fail Secure Lock	Electric Strike
	H	Brown	Torxun Board - X108 #30	Fail Secure Lock	Electric Strike
Cable 2 (Detex A40)	I	White	Electric Latch Retraction	N.O.	QEL
	J	Brown	Electric Latch Retraction	Common	QEL
	K	Red	Detex Request to Exit		Request to Exit
	L	Black	Detex Request to Exit		Request to Exit
	M	Green	Detex Request to Exit		Request to Exit
	N	Blank	-		
	O	Blank	-		

3EL Terminal Block (Non-Powered Activation Device)					
Cable 1 (Torxun Oper.)	A	Black	Torxun Board - X101 #8	Not used	
	B	Blue	Torxun Board - X101 #9	N.O.	Non-Powered Activation Device
	C	Yellow	Torxun Board - X101 #10	Common	Non-Powered Activation Device
	D	Green	Torxun Board - X101 #11	Not used	
	E	Orange	Torxun Board - X101 #12	N.O.	Non-Powered Activation Device
	F	Red	Torxun Board - X101 #13	Common	Non-Powered Activation Device
	G	White	Torxun Board - X108 #27	Fail Secure Lock	Electric Strike
	H	Brown	Torxun Board - X108 #30	Fail Secure Lock	Electric Strike
Cable 2 (Detex A40)	I	White	Electric Latch Retraction	N.O.	QEL
	J	Brown	Electric Latch Retraction	Common	QEL
	K	Red	Detex Request to Exit		Request to Exit
	L	Black	Detex Request to Exit		Request to Exit
	M	Green	Detex Request to Exit		Request to Exit
	N	Blank	-		
	O	Blank	-		





UNLESS OTHERWISE SPECIFIED TOLERANCES
X.X ± .06
X.XX ± .03
X.XXX ± .02
ANGLES ± 0.5°
FRACTIONS ± 1/8
SURFACE FINISH 63

DRAWING COMPLIES WITH ASME Y14.5M - 1994
INCH
MM
THIRD ANGLE PROJECTION

ASSA ABLOY
Ameristar Perimeter Security USA Inc
Tulsa

EXODUS AUTOMATIC PEDESTRIAN GATE OPENER INSTALLATION

DATE CREATED	DRAWN BY	DESIGNED BY	SIZE
9/23/2022	nathan	nathan	B

LEGACY ID

COMPLETE WIRE HARNESS ASSEMBLY AT OPER. DETAIL REFERENCE

WIRE COLOR DIAGRAM:

ACTIVATION DEVICE TERMINAL BLOCK X101

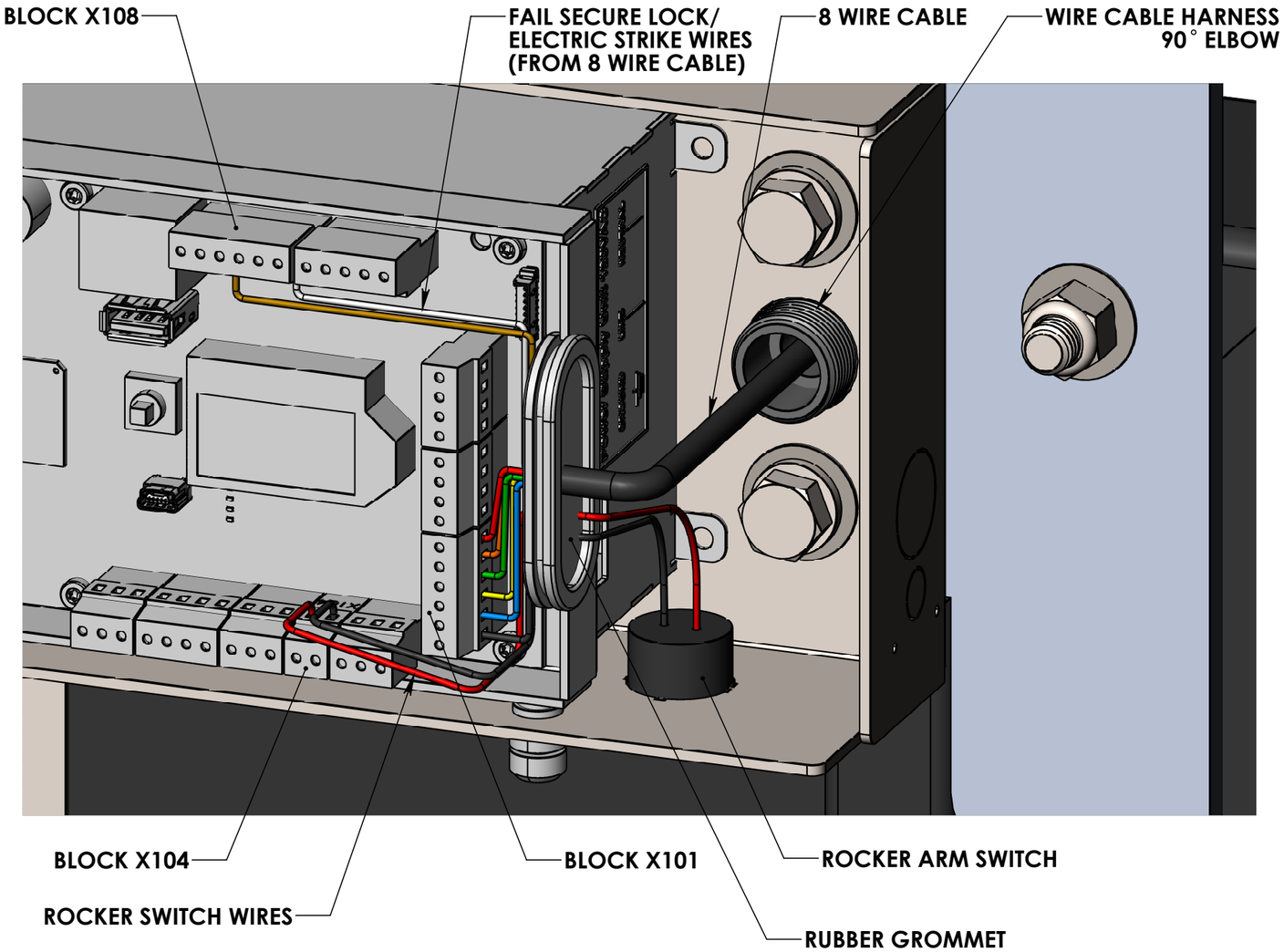
COLOR	TERMINAL
BLACK	8
BLUE	9
BROWN	10
GREEN	11
ORANGE	12
RED	13

ELEC. LATCH TERMINAL BLOCK X108

COLOR	TERMINAL
WHITE	27
YELLOW	30

ROCKER ARM BLOCK X104

COLOR	TERMINAL
BLACK	5
RED	4



UNLESS OTHERWISE SPECIFIED TOLERANCES

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THIRD ANGLE PROJECTION

ASSA ABLOY
Ameristar Perimeter Security USA Inc
Tulsa

EXODUS AUTOMATIC PEDESTRIAN GATE OPENER INSTALLATION

DATE CREATED	DRAWN BY	DESIGNED BY	SIZE
9/23/2022	nathan	nathan	B

LEGACY ID

AMERISTAR EXODUS AUTOMATIC RECOMMENDED SETTINGS

AMERISTAR RECOMMENDS THE FOLLOWING SETTINGS TO OPERATE. SOME OPTIONS MAY CHANGE DUE TO SITE SPECIFIC REASONS. REFER TO THE TORXUN PROGRAMMING INSTRUCTIONS SECTION XI (PAGE 42) FOR DETAILED INFORMATION ON SPECIFIC SETTINGS. AMERISTAR ALSO RECOMMENDS A "TEACH" COMMAND AFTER ANY CHANGES ARE MADE TO THE PARAMETERS AND/OR CONFIGURATIONS.

CONTROL BOARD IS PASSWORD PROTECTED USING THE TOGGLE.
PASSWORD: *LEFT, LEFT, LEFT, RIGHT, RIGHT, RIGHT*
IN THE EVENT END USER CHANGES PASSWORD, END USER MUST KEEP RECORDS OF SUCH CHANGES.

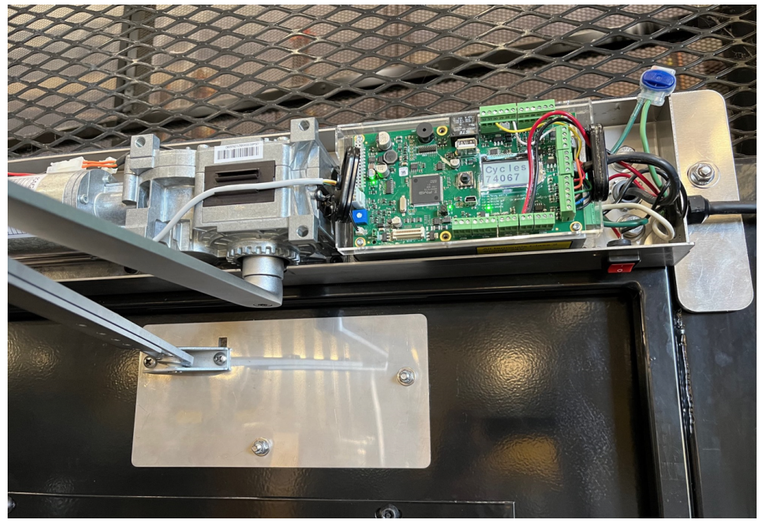
WARNING: THIS OPENER IS TO ONLY BE OPERATED IN "LOW ENERGY", ANSI 156.19.
IT IS THE RESPONSIBILITY OF THE INSTALLING PARTY TO ADHERE TO ANSI 156.19 STANDARDS AS WELL AS FEDERAL, STATE, AND LOCAL CODES.

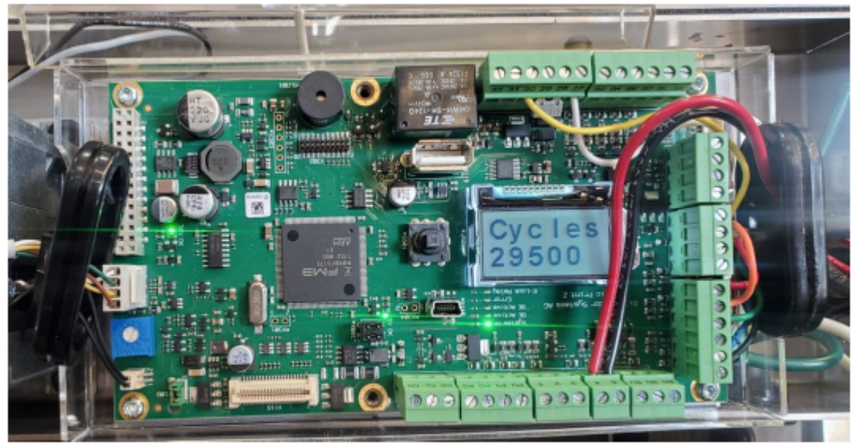
CONFIGURATION SETTINGS:

Step	Device	SETTING
1	APuGo	5
2	ASES	95
3	ASER	0
4	SESClo	Inactive
5	EMY-In	CL-SPR
6	OExSTp	Key
7	Unlock	Impulse
8	EL-Fb	Off
9	LCDir	1
10	MovCon	Off
11	OexMan	On
12	PreSen	Off

PARAMETER SETTINGS:

Step	Device	Setting
1	Region	5
2	Vo	9
3	Vc	9
4	ToEx	5s
5	TKey	5s
6	TPugo	3
7	TDelay	0.8
8	FDelay	Off
9	TLock	.5s
10	FLock	2.0A
11	FSlam	3
12	FWind	Off
13	Fo	9
14	Fc	9
15	Foh	5
16	Fch	0.0A
17	LowEn	On
18	Width	45
19	Weight	275
20	Ao	115
21	Rod	STD-PH
22	Inverse	Off
23	dAxis	4"





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EXODUS AUTOMATIC PEDESTRIAN GATE OPENER INSTALLATION

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9/23/2022			B

LEGACY ID

AUTOPED™ OPERATOR
INSTALLATION MANUAL

LISTED

TABLE OF CONTENTS

The above QR code will take you to a video demonstration of an AutoPed installation performed by Torxun.
The video demonstrates a basic installation with a Standard Push Arm Assembly (P/N: M10S.0028).

Welcome - thank you for your purchase! Our commitment to quality and innovation will become evident as you become familiar with the features, performance, and easy installation of this expertly engineered AutoPed heavy duty pedestrian swing Door/Gate operator.

Some of its features are:

- Fully outdoor rated
- Built for continuous, heavy duty use for gates up to 250 lbs and 63" wide
- UL 325 listed and designed to meet ANSI 156.19 low energy operated swinging door standards
- A single model works for left and right-hand door/gates and push and pull applications

Installers - I love you folks! I have been installing gate systems for decades. We have organized these instructions to keep things simple. This manual contains the instructions to install the AutoPed on a variety of header structures. You will find a "Quick Start Programming" in Section XI to get the AutoPed up and running its basic functions. When you need the AutoPed to perform its more complex functions and features, this manual provides you the additional "Menus and Programming" in Section XII. Throughout, we will point you right to the section to which you need to refer.

Be safe! - think about your own safety during the installation. Also think about the safety of the public who will be using this automated gate for years to come. You NEED to be familiar with ANSI 156.19 standards. It is your responsibility to install and program the AutoPed to comply with these standards which include the velocity of the gate-in-motion, the force of the gate panel and the safety/warning labels. This manual will remind you of these responsibilities, but at the end of the day, you are the one in the field and are responsible for the publics' safety!

Options - some installations will require optional parts that you will need to order from your distributor to complete your installation. Refer to Section XV for AutoPed's standard and optional parts components before you head out to install to confirm you have what you need.

Owner/User - you are in for a treat! This operator is going to bring the satisfaction of automation to your property making residents and users happy that life has gotten just a little easier. Safety first! Please make sure that someone is responsible for daily checks of the gate system. For service, use only qualified and trained technicians.

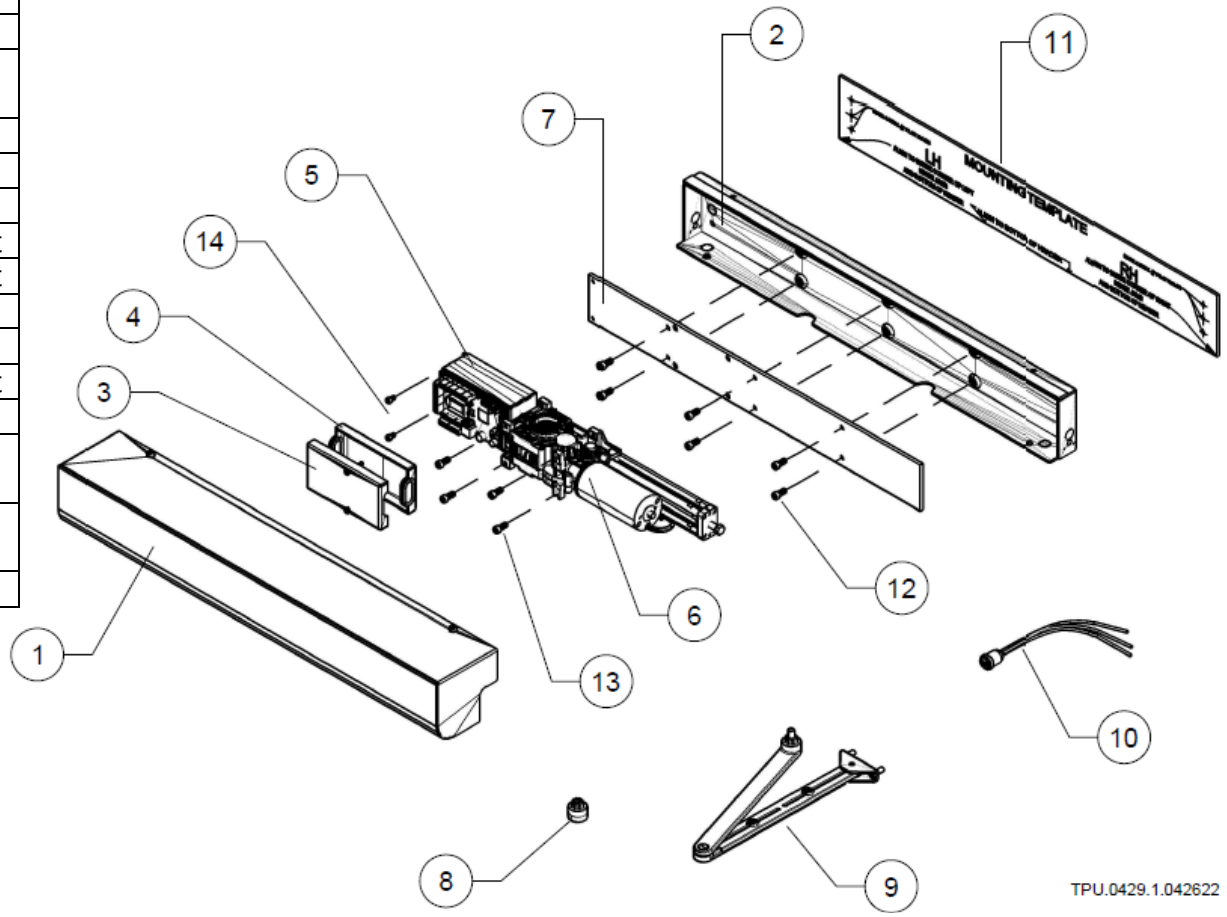
I want you to love this AutoPed Operator. I have been in this industry since 1976 and have never stopped trying to make products better. So let me know what you would like improved… AND what you appreciate.

Art Hird, President

TORXUN
VEHICLE ACCESS TECHNOLOGIES

AUTOPED OPERATOR STANDARD PARTS AND COMPONENTS

Item	Description	Qty
1	Enclosure - Front Cover	1
2	Enclosure - Rear Cover (Chassis)	1
3	Control Unit Cover - Front	1
4	Control Unit Cover - Rear	1
5	Control Unit	1
6	Motor-Gearbox Assembly	1 set
7	Assembly Plate	1 set
8	Spindle Extension; 20MM	1
9	Standard Arm Assembly	1
10	3-Function Rocker Switch	1 set
11	Mounting Template	1
12	Assembly Plate Mounting Screws	6
13	Motor-Gearbox Assembly Mounting Screws	4
14	Control Unit Mounting Screws	2



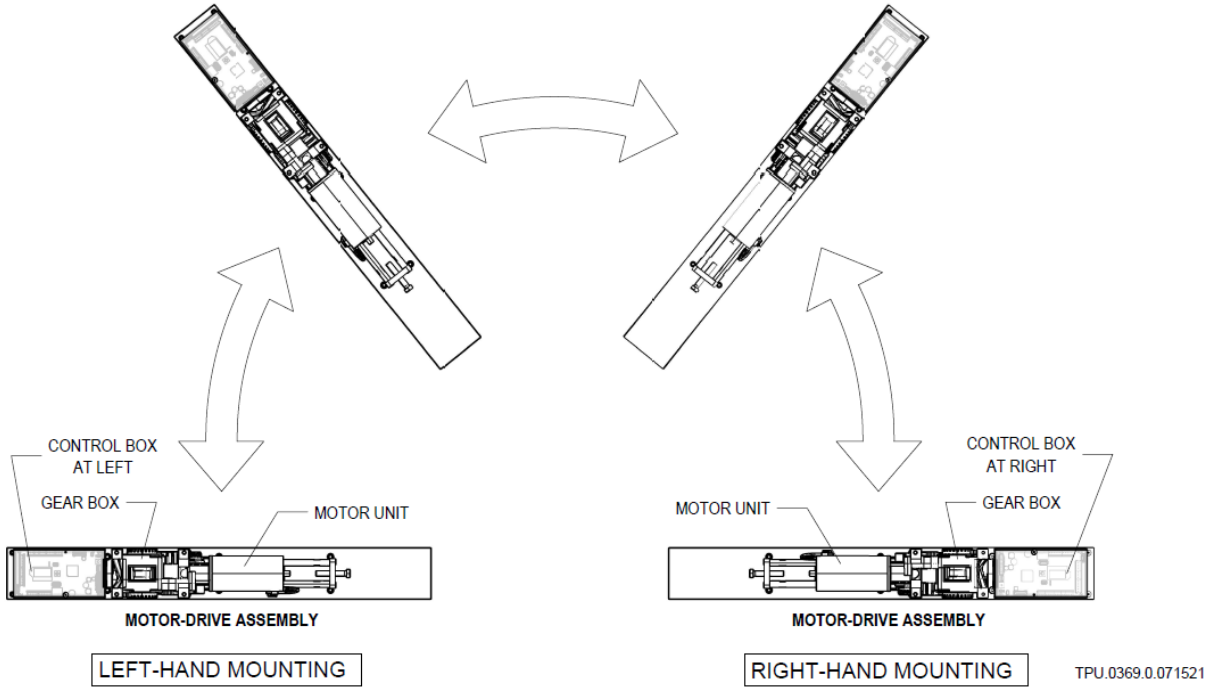
IMPORTANT INSTALLATION NOTES

A. CONVERSION: LEFT-HAND INSTALLATION TO RIGHT-HAND INSTALLATION (or vice versa)

The AutoPed operator can be used in a left-hand or right-hand, push or pull door/gate system application without need for conversion adapters or modification. To change the Hand of the Operator Installation:

- Remove the motor-drive assembly attached to the assembly plate from the chassis by removing the six (6) M6x12 bolts; Fig 1
- Rotate the assembly plate with the motor-drive clockwise or counter-clockwise to facilitate either left- or – right-hand installation.
- Chassis is neutral, Orientation is the same for left- or right- hand installation
- Left-hand operator installation: Control unit is to the left of the motor-drive
- Right-hand operator installation: Control unit is to the right of the motor-drive

Fig I.1 Changing Operator Installation: Left-hand to Right-hand or vice versa



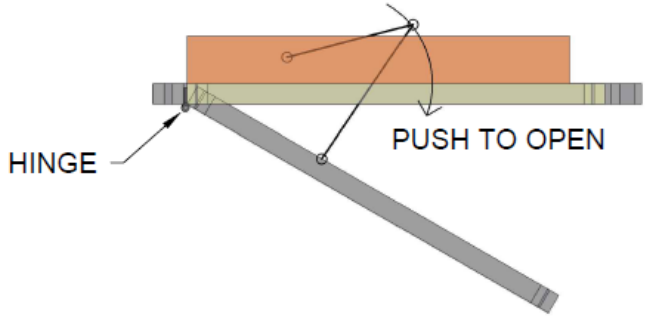
B. AUTOPED ARM TYPES: PUSH ACTION (STANDARD ARM); PULL ACTION (TRACK ARM)

B.1 Push Action – Standard Arm Assembly; P/N M10S.0028

If the required operation is “push open” the Door/Gate, the AutoPed is fitted with a Standard Arm; Fig B.1

Note that in this configuration, the door hinge is located on the side of the door frame opposite the location of the AutoPed. When the AutoPed is energized, the Standard Arm “pushes” to swing the door or gate open away from the AutoPed.

Fig B.1 Standard Arm

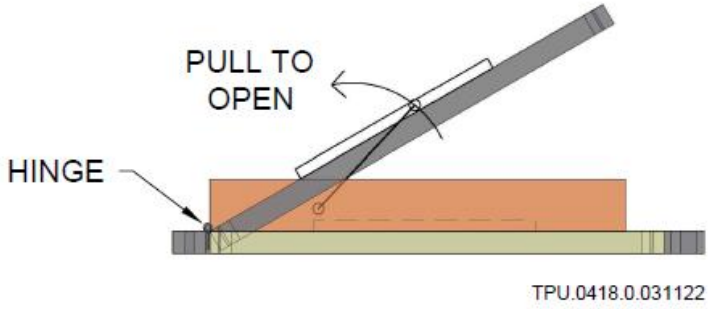


B.2 Pull Action – Track Arm Assembly; P/N M10S.0039

If the required operation is to “pull open” the Door/Gate, the AutoPed is fitted with the Track Arm; Fig B.2

Note that in this configuration, the door hinge and the AutoPed are both located on the same side of the door frame. When the AutoPed is energized, the Track Arm “pulls” to swing the door or gate open from under the AutoPed.

Fig B.2 Track Arm



C. GENERAL REQUIREMENTS FOR INSTALLING THE AUTOPED

1. **Important**: The AutoPed requires that the Door/Gate rest against some type of actual stop in the closed position. The unit will self-check the closed limits by attempting to close past the closed limit. If the unit does not sense the resistance of a stop, a locking device, or a door jamb, etc., the AutoPed will go into a soft shutdown.
2. The AutoPed cannot be installed on a Double acting door: a door that swings both in and out.
3. TORXUN recommends installing the AutoPed on Door/Gate headers measuring four inches (4”) or more in height.
4. For installation on headers less than four inches (4”) in height, TORXUN requires the use of the StiffenerPlate or equivalent to add rigidity to the installation of the operator; refer to Sections II.1 and II.2.

D. RECOMMENDED TOOLS FOR INSTALLATION

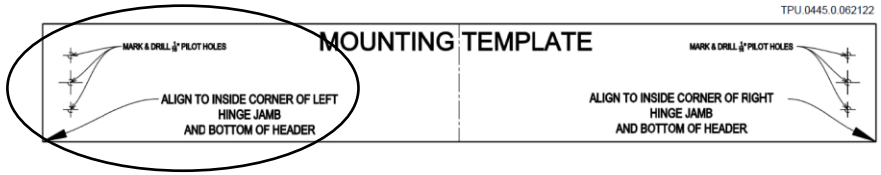
- Hammer
- Center punch set
- Portable power drill and bits (1/16”, 1/8”)
- Micro flat head screwdriver
- Flat head screwdriver (2mm)
- Philips head screwdriver #1
- 3mm Allen key
- 5mm Allen key
- 6mm Allen key
- Wire stripper
- Level gauge
- Wire nuts 22~14 gauge
- Masking tape
- Ladder or step stool
- Zip ties

SECTION I

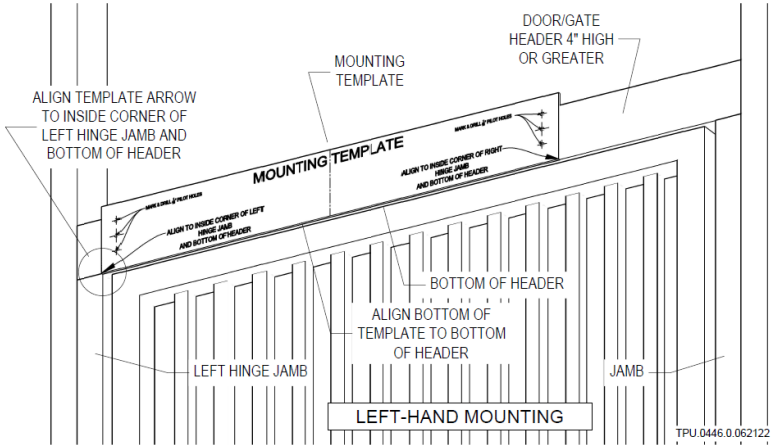
INSTALLING THE AUTOPED ON HEADERS 4” OR BIGGER

I.1 INSTALLATION: LEFT-HAND MOUNTED AUTOPED ON HEADERS 4” OR BIGGER

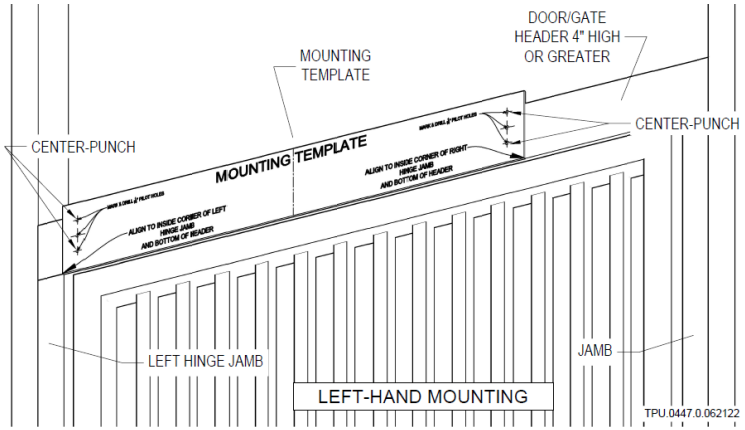
STEP 1 Use left-hand side of Mounting Template



STEP 2 Align arrow to inside corner of left hinge jamb and bottom of header

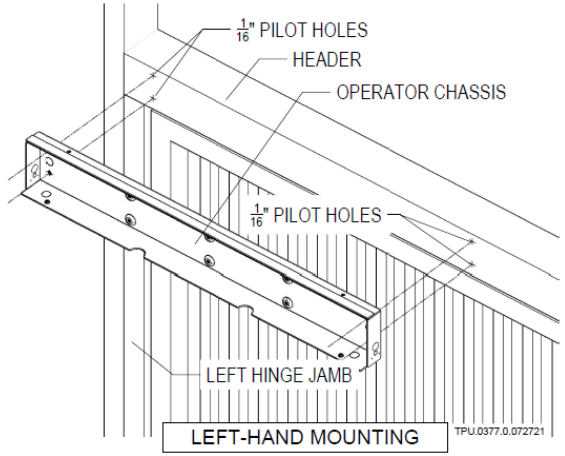


STEP 3 Center-punch mounting holes through Template

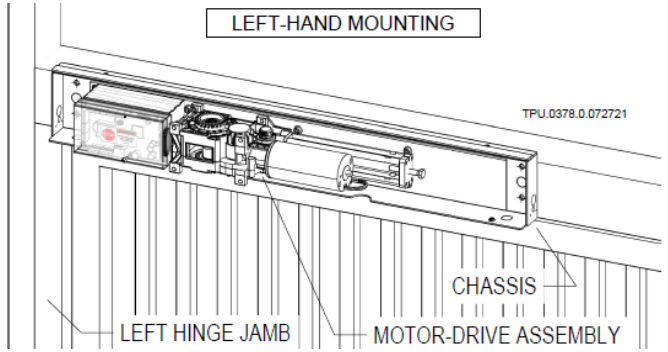


STEP 4 Drill 1/16” pilot holes on header through Template

STEP 5 Mount[1] operator Chassis directly to header



STEP 6 Mount[2] Motor-Drive assembly to operator Chassis



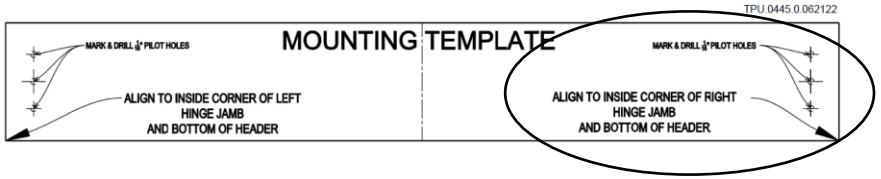
STEP 7 Proceed to Section III or IV to continue installation of the swing arm assembly

[1] Type, size and material of fastener by installer

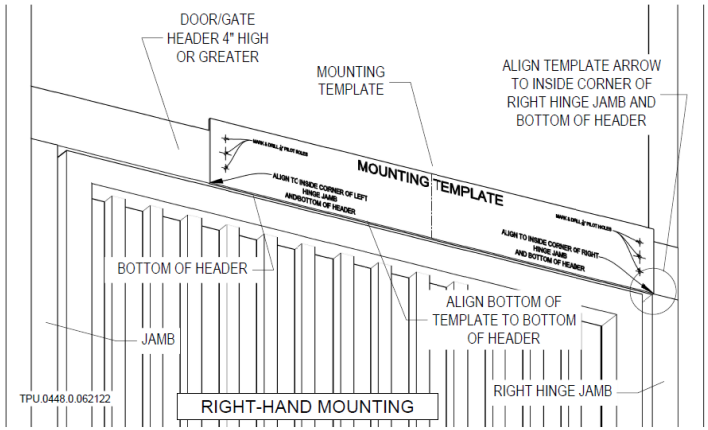
[2] Use Screw M6 x 1.0 x 12 included in kit

I.2 INSTALLATION: RIGHT-HAND MOUNTED AUTOPED ON HEADERS 4” OR BIGGER

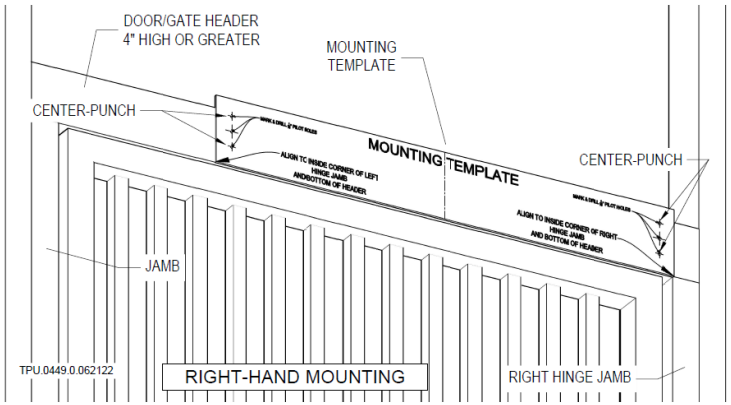
STEP 1 Use right-hand side of Mounting Template



STEP 2 Align arrow to inside corner of right hinge jamb and bottom of header

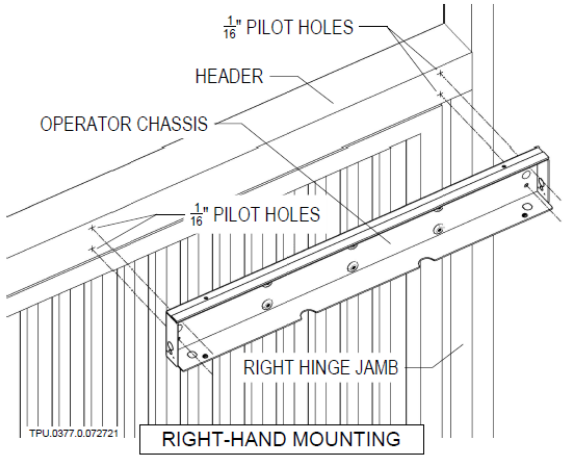


STEP 3 Center-punch mounting holes through Template

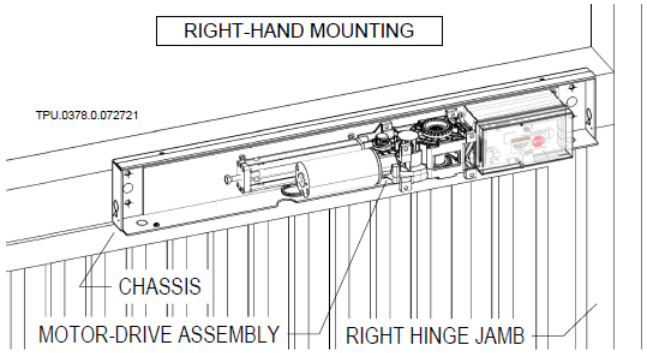


STEP 4 Drill 1/16” pilot holes on header through Template

STEP 5 Mount[3] operator Chassis directly to header



STEP 6 Mount[4] Motor-Drive assembly to operator Chassis



STEP 7 Proceed to Section III or IV to continue installation of the swing arm assembly

[3] Type, size and material of fastener by installer

[4] Use Screw M6 x 1.0 x 12 included in kit

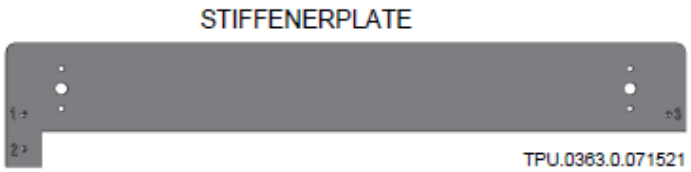
SECTION II

INSTALLING THE AUTOPED ON HEADERS SMALLER THAN 4”

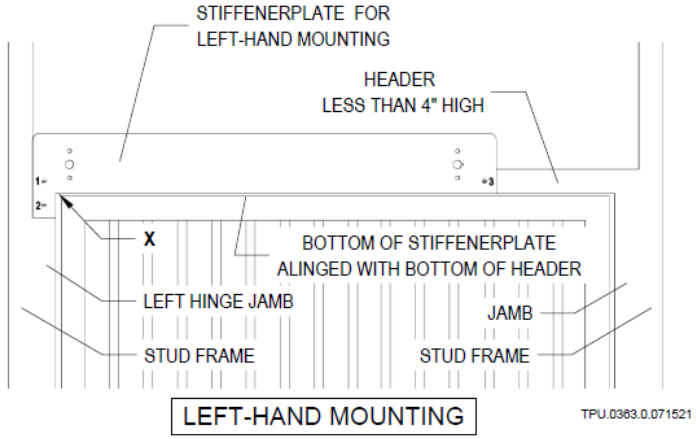
For installation of the AutoPed on headers less than four inches (4”) in height, TORXUN requires the use of the StiffenerPlate (P/N: M10S.011) or its equivalent to add rigidity to the installation of the operator.

II.1 INSTALLATION: LEFT-HAND MOUNTED AUTOPED ON HEADERS LESS THAN 4”

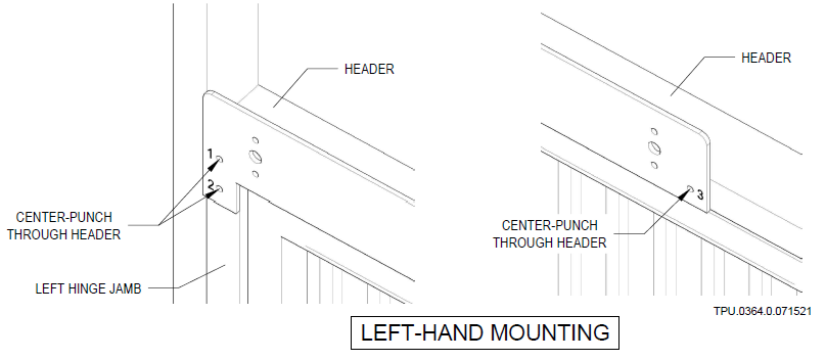
STEP 1 Put up the StiffenerPlate on the header



STEP 2 Align the StiffenerPlate to the corner of the left hinge jamb and bottom of header; marked **“X”** on the drawing



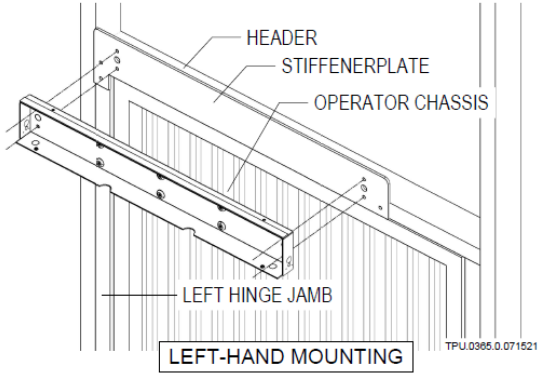
STEP 3 Center-punch pilot holes 1,2,3



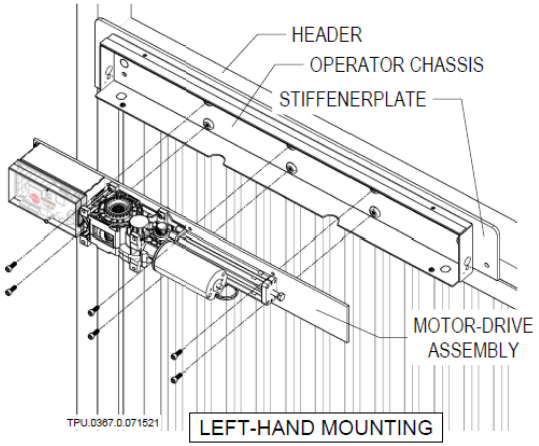
STEP 4 Drill 1/16” pilot holes 1,2,3

STEP 5 Fasten[5] StiffenerPlate through holes 1,2,3

STEP 6 Mount[6] operator Chassis to StiffenerPlate



STEP 7 Mount[7] Motor-Drive assembly to operator Chassis

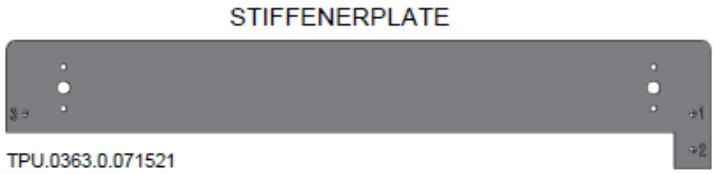


STEP 8 Proceed to Section III or IV to continue installation of the swing arm assembly

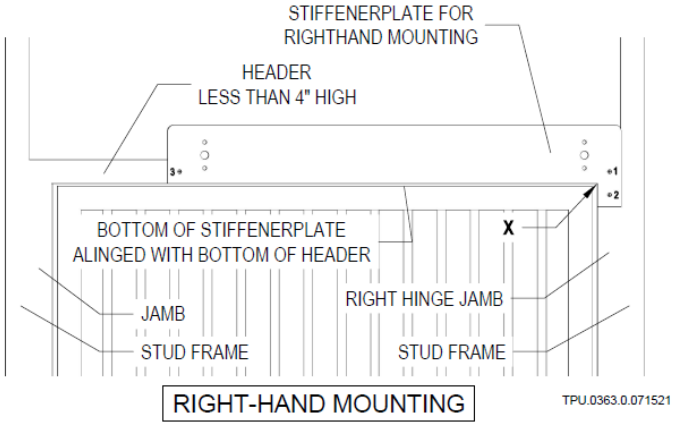
[5] Type, size, and material of fasteners by installer
[6] Use screws NF 7/16 x 20 x 3/4 included in kit to mount
[7] Use screws M6 x 1.0 x 12 included in kit to mount

II.2 INSTALLATION: RIGHT-HAND MOUNTED AUTOPED ON HEADERS LESS THAN 4”

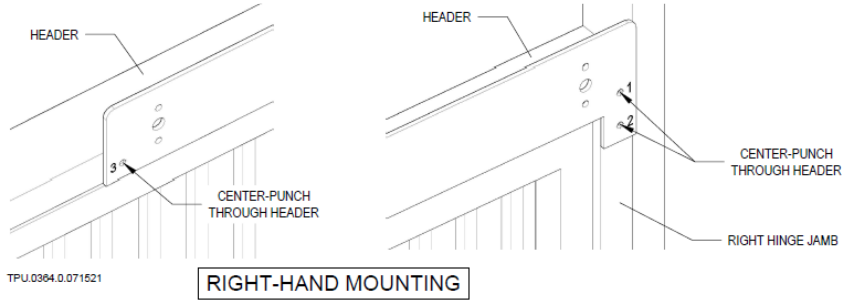
STEP 1 Put up the StiffenerPlate on the header



STEP 2 Align the StiffenerPlate to the corner of the right hinge jamb and bottom of header; marked **“X”** on the drawing



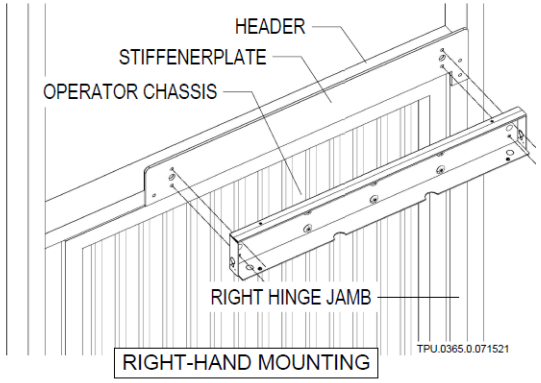
STEP 3 Center-punch pilot holes 1,2,3



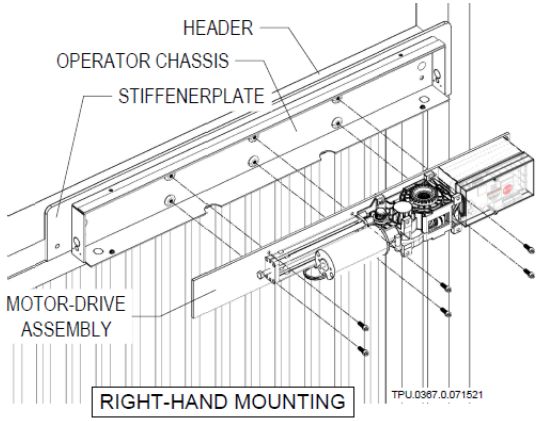
STEP 4 Drill 1/16” pilot holes 1,2,3

STEP 5 Fasten[8] StiffenerPlate through holes 1,2,3

STEP 6 Mount[9] operator Chassis to StiffenerPlate



STEP 7 Mount[10] Motor-Drive assembly to operator Chassis



STEP 8 Proceed to Section III or IV to continue installation of the swing arm assembly

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[8] Type, size, and material of fasteners by installer

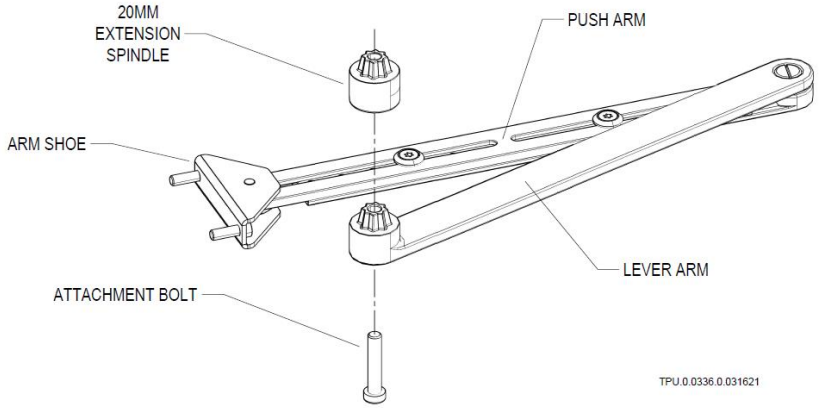
[9] Use screws NF 7/16 x 20 x 3/4 included in kit to mount

[10] Use screws M6 x 1.0 x 12 included in kit to mount

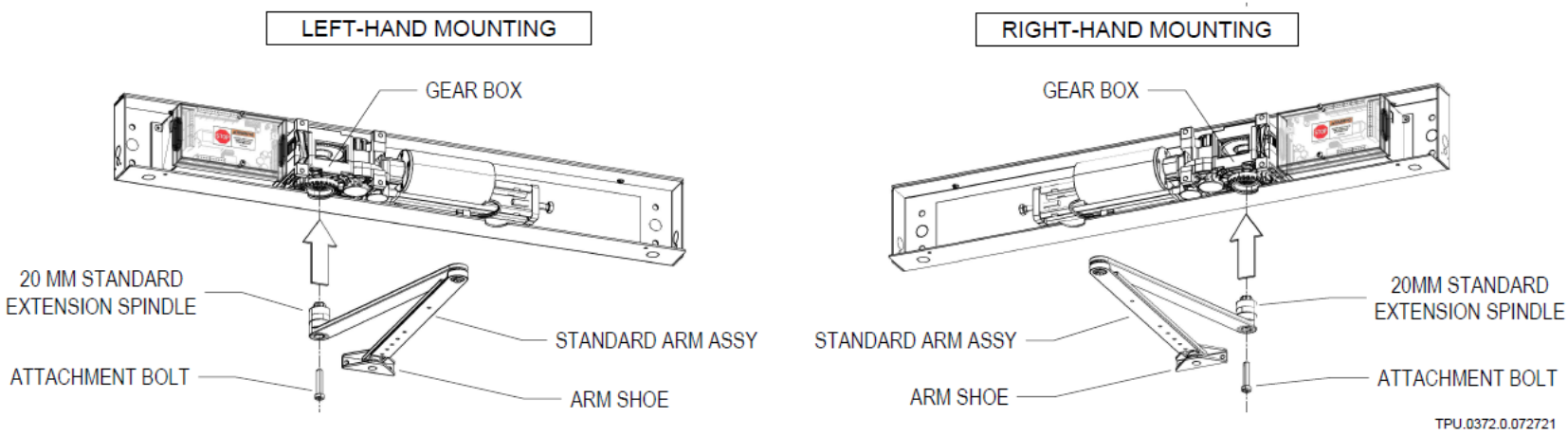
SECTION III
INSTALLING THE
STANDARD ARM ASSEMBLY
(PUSH ACTION OPERATION)
P/N: M10S.0028

III.1 INSTALLATION: STANDARD ARM ASSEMBLY

STEP 1 Assemble the Standard Arm Assembly



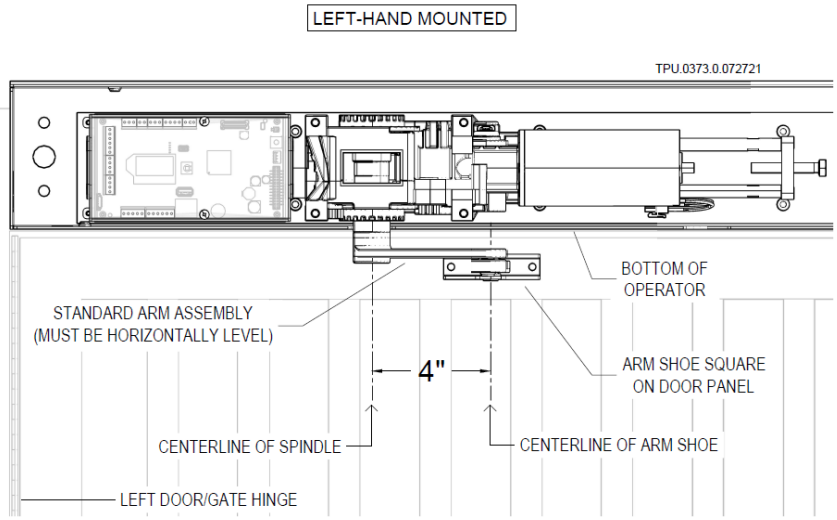
STEP 2 Insert Standard Arm assembly with 20MM standard Extension Spindle to the Operator Gear Box



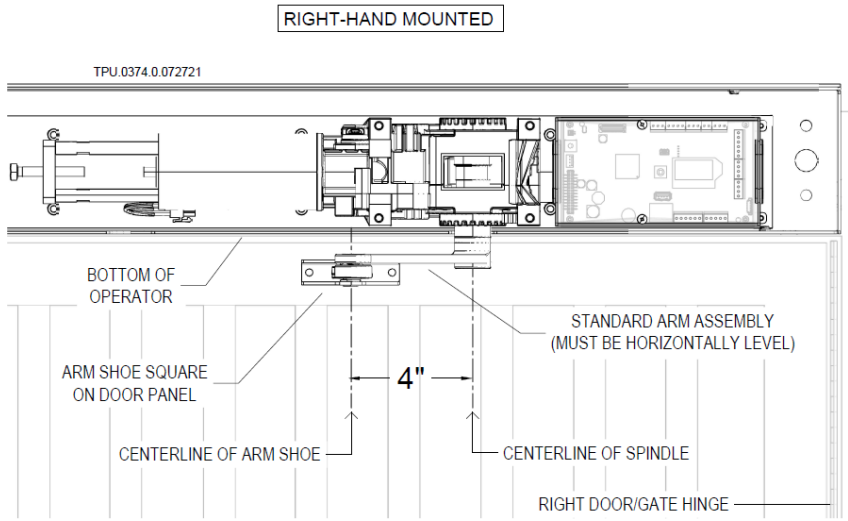
NOTE: 30mm (M10S.0018) and 50mm (M10S.0055) Spindle Extension are available as optional parts ordered separately. If needed, it may be used instead of the 20mm to lower further the Standard Arm assembly to accommodate wider clearance/gap between bottom of AutoPed operator and top of Arm Shoe.

STEP 3 Sit the Arm Shoe squarely on the face of the Door/Gate frame (or panel)

STEP 4 For a left-hand mounted AutoPed, place centerline of Arm Shoe 4” to the right of the centerline of spindle.

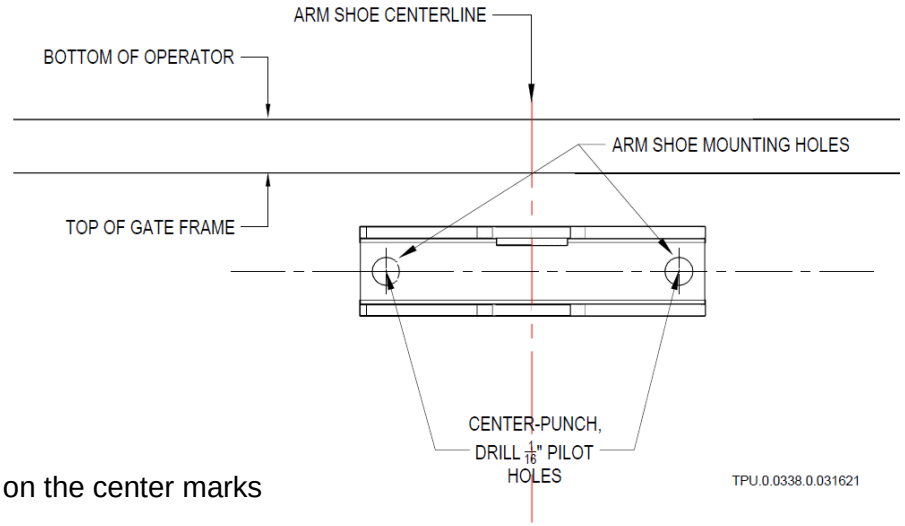


For a right-hand mounted AutoPed, place centerline of Arm Shoe 4” to the left of the centerline of spindle.



NOTE: Make sure the Standard Arm is inserted to the Gear Box snugly and installed level.

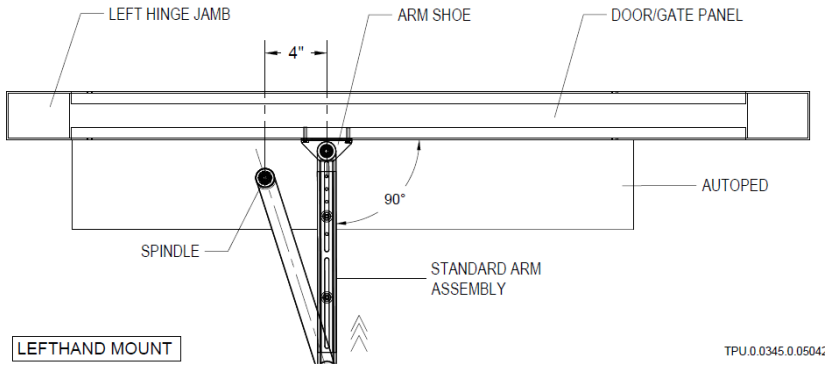
STEP 5 Use Arm Shoe mounting holes as template; mark the holes and center-punch through Door/Gate frame

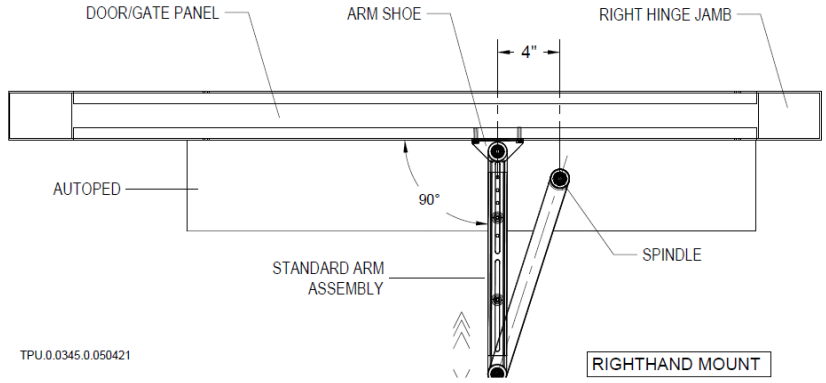


STEP 6 Drill 1/16” pilot holes on the center marks

STEP 7 Use the appropriate fasteners[11] to mount the Arm Shoe on the Door/Gate panel

STEP 8 Loosen lock screws on Standard Arm assembly; adjust length of arm to form 90º between Standard Arm and Door/Gate panel





STEP 9 Tighten the spindle bolt, mounting screws, set screws on the Arm Shoe and Standard Arm assembly respectively to complete the installation.

STEP 10 Proceed to Section V to install the Rocker Switch (or Key Switch).

[11] Type, size, and material of fasteners by installer

SECTION IV
INSTALLING THE
TRACK ARM ASSEMBLY
(PULL ACTION OPERATION)
P/N: M10S.0039

IV.1 INSTALLATION: CONFIGURING THE AUTOPED FOR PULL ACTION

The AutoPed is shipped out wired for a “push action” operation; Fig IV.1

Switch the AutoPed to “pull action” by following the steps below:

1. Remove the AutoPed’s Front Cover to expose the motor and wiring
2. Disconnect the ***orange*** pair of wire connector from the Motor input wire connector (with red and black wires) by pressing down on the lock tab on the connectors and pulling the connectors apart; see orange arrow in Fig IV.1
3. Push the plastic connector of the ***green*** pair of wires into the Motor input wire connector, see green arrow in Fig IV.2
4. The AutoPed is now configured for Pull action operation.

Fig IV.1 Push action configuration

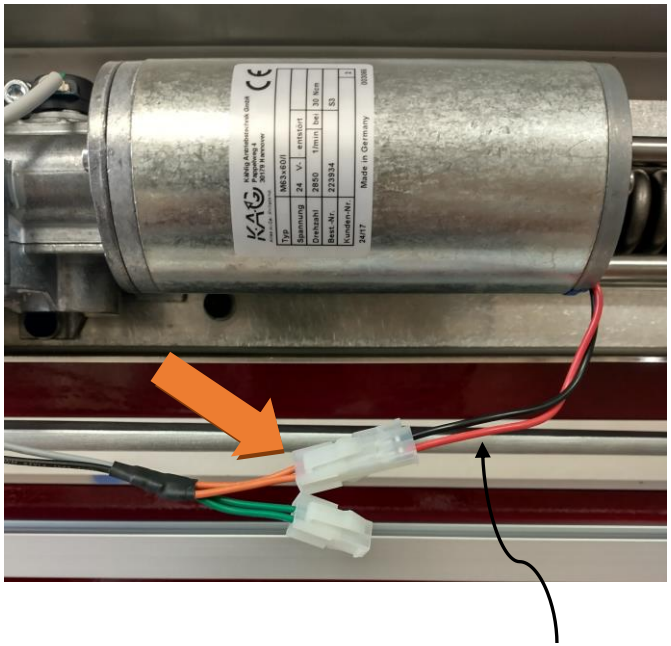


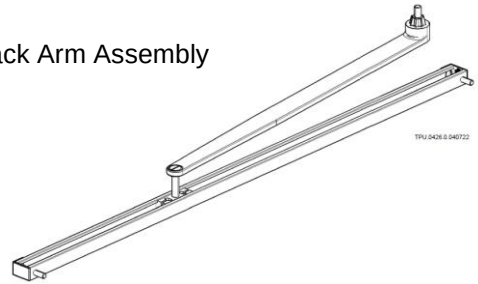
Fig IV.2 Pull action configuration

IV.2 INSTALLATION: TRACK ARM ASSEMBLY

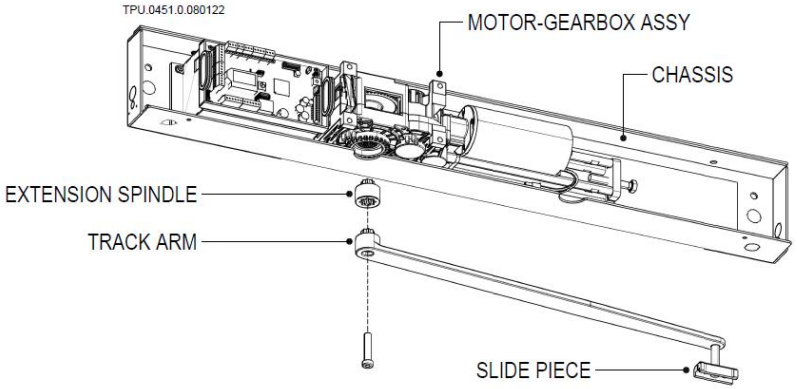
NOTE:

- Use the Track Arm with a standard 20mm Spindle Extension.
- If the 20mm Spindle Extension is not sufficient to extend the Track Arm down to the Door/Gate frame, use the optional 30mm or 50mm extensions
- Make sure that the swing of the Track Arm clears the top of the gate frame by at least 1/2” and that the Door/Gate swing is unobstructed by the Track Arm assembly

Fig IV.3 Track Arm Assembly

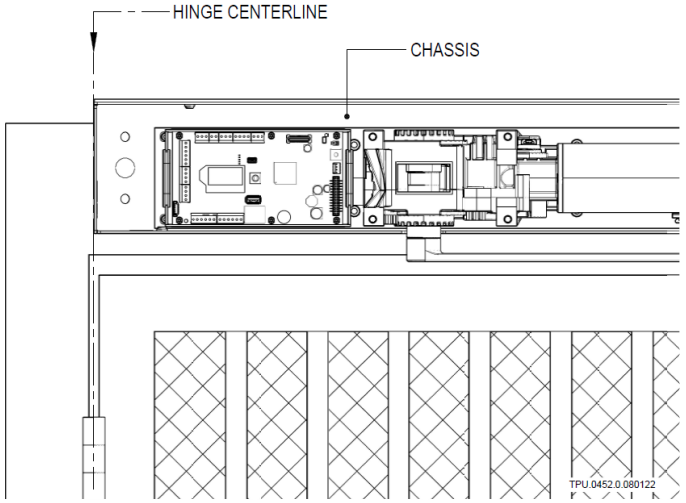


STEP 1 Assemble the Track Arm to the AutoPed

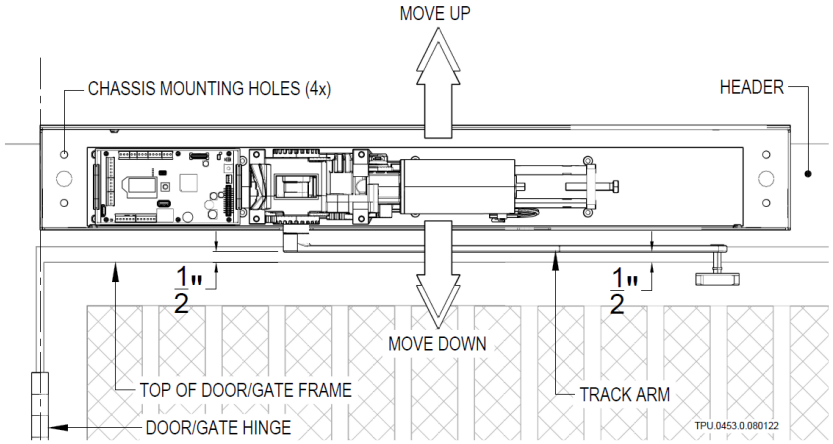


STEP 2 Place the AutoPed up onto the Header

STEP 3 Align the AutoPed Chassis to the Hinge Centerline



STEP 4 Move the AutoPed up or down (↕) until bottom of Track Arm clears the top of the Door/Gate frame by a minimum gap of ½” throughout the top of the Gate Frame

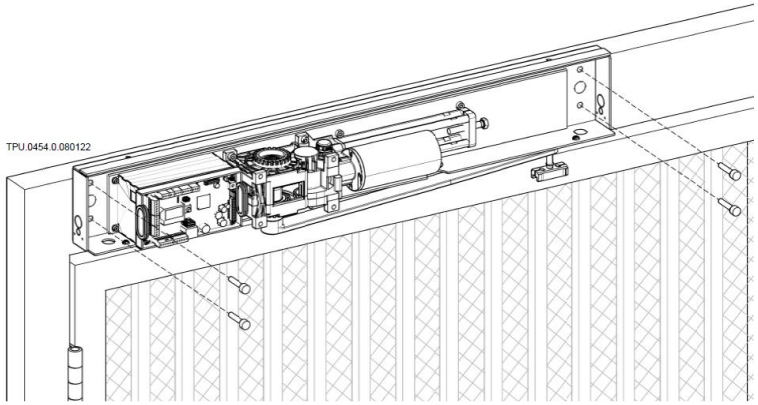


STEP 5 Mark the mounting holes of the Chassis on the Header

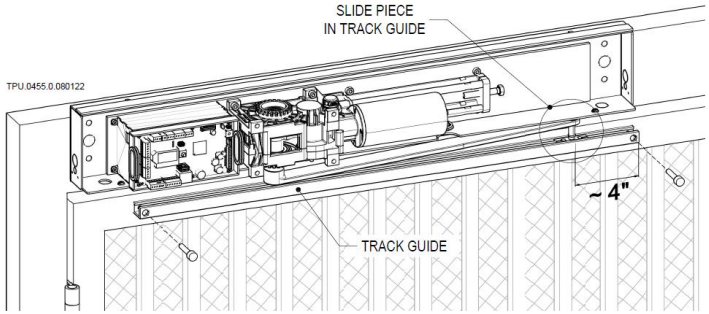
STEP 6 Take down the Chassis with the assemblies

STEP 7 Drill pilot holes for Chassis mounting on the Header

STEP 8 Mount[12] the Chassis with assemblies on the Header



STEP 9 Mount the Track Guide on the Door/Gate Frame



- Insert the Slide Piece in the Track Guide
- Place the Track Guide on the Door/Gate Frame
- Move the end of the Track Guide about 4” from the Slide Piece, (see illustration above)

STEP 10 Perform the following check:

a. Manually open and close the Door/Gate to check for a smooth and unobstructed swing of the Door/Gate panel.

b. Check that the Slider piece glides smoothly inside the Track Guide.

STEP 11 Replace the left and right endcaps of the Track Guide.

STEP 12 Proceed to Section V to install the Rocker Switch (or Key Switch).

NOTE:
All the preceding installation steps also apply to a **Right-hand mounted operator**. Note that the measure of 4” in **Step 9** will be on the opposite side of the illustration for a Right-hand install.

[12] Type, size, and material of fasteners by installer

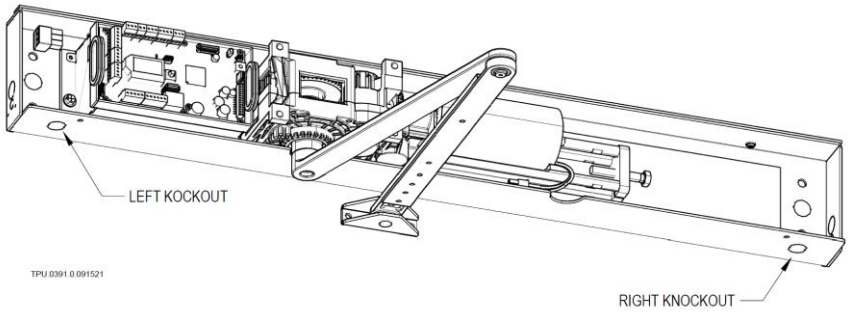
SECTION V
INSTALLING THE
3-FUNCTION ROCKER SWITCH
(OR OPTIONAL KEY SWITCH, P/N: M10S.0083)

V.1 INSTALLATION: 3-FUNCTION ROCKER SWITCH (see next section for the optional Key Switch)

Provided with your operator is a 3-function switch that switches the operator and door/gate function to one of three modes:

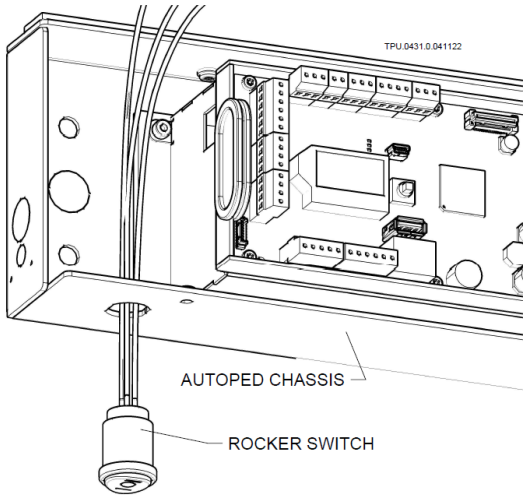
a. Manual mode – door/gate has no automation; gate can be manually operated by pushing or pulling
b. Normal mode – door/gate opens and closes automatically based on activation inputs and programming
c. Hold mode – door/gate opens and stays open allowing for continuous access

NOTE: The Switch can be installed at the bottom left or right of the AutoPed operator; knockouts are provided at both ends

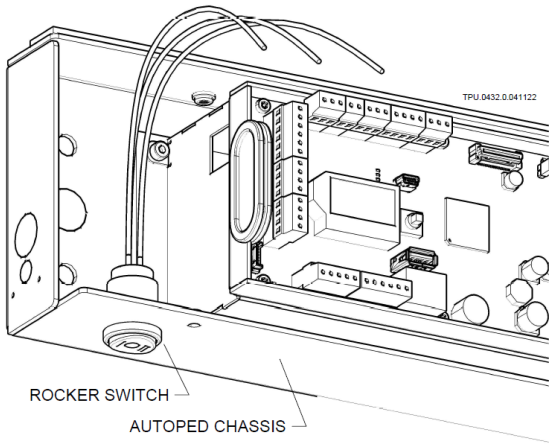


STEP 1 Choose and punch out one knockout at the bottom of the AutoPed chassis (NOTE: The following illustrations show the use of the left knockout)

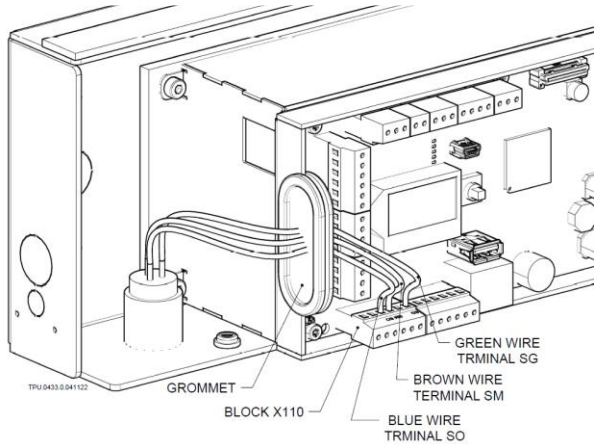
STEP 2 Feed the switch wires through the knockout



STEP 3 Sit the switch body squarely on the chassis



STEP 4 Feed the switch wires through the rubber grommet; connect to Block X110 as shown in drawing below; (see schematic circuit in Fig 1.7b in the following page)



NOTE: Optional 3-Function Key Switch (P/N M10S.0083)

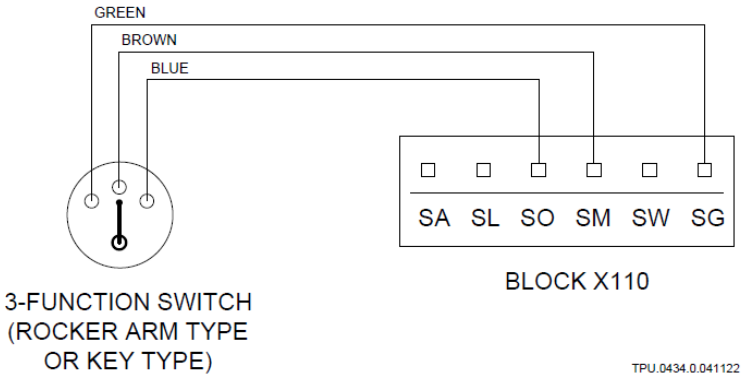
For more secure applications, an alternate to the Rocker Switch is the Key Switch, an option that can be purchased from TORXUN distributors. The Key Switch has the same 3-Function feature as the Rocker Arm Switch and has a spring-loaded cap/cover to protect the key cylinder.

⚠ When installing the key switch on a pull application gate; be aware of the clearance between the top of the gate panel and the switch with a key in it. It is possible for the gate panel to strike the key while opening.

Install the Key Switch in the same way the Rocker Switch is installed; see Section V.1, p.27 Installation: 3-Function Rocker Switch.

Fig V.1a 3-Function Key Switch

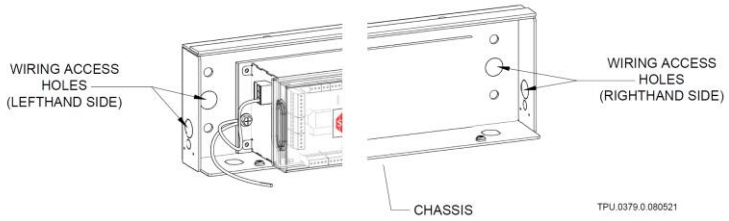
Fig V.1b Rocker or Key Switch Schematic



SECTION VI
CONNECTING THE AUTOPED TO AC POWER SOURCE
(115 VAC)

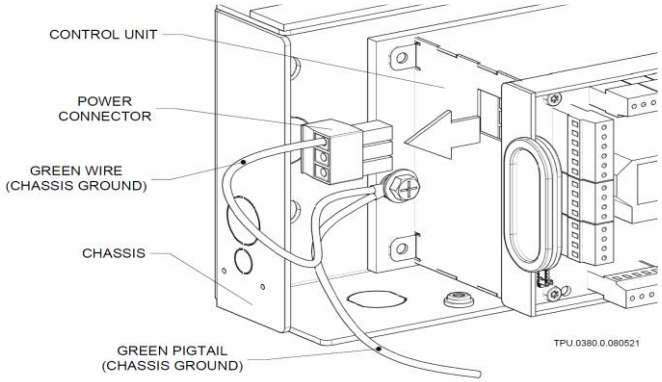
VI.1 CONNECTING TO 115 VAC POWER SOURCE

NOTE: The Chassis has Wire Access Holes on either end to feed through a 115 VAC supply line

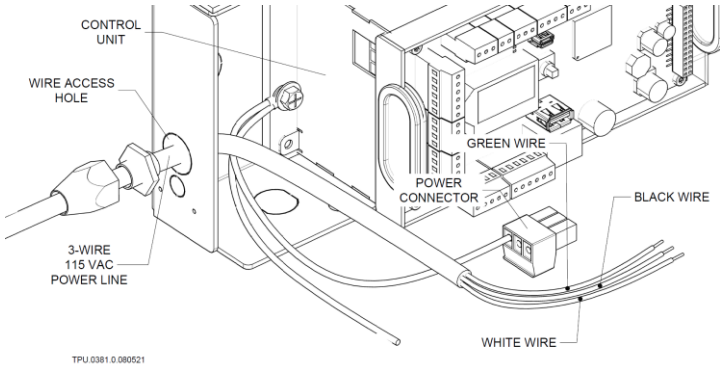


STEP 1 Shut off 115 VAC power to Operator

STEP 2 Pull out Power Connector from Control Unit

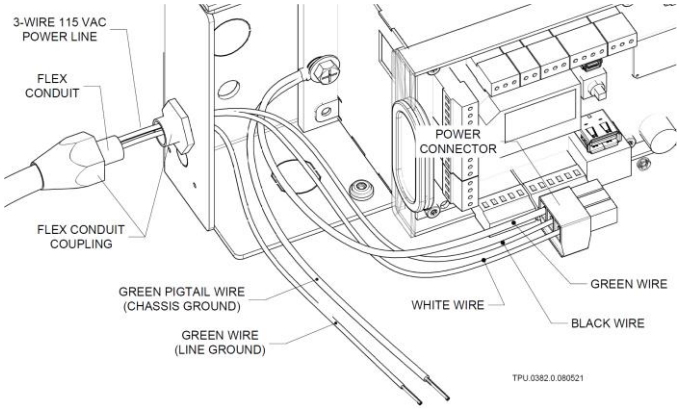


STEP 3 Feed the 115 VAC line through a Wire Access Hole

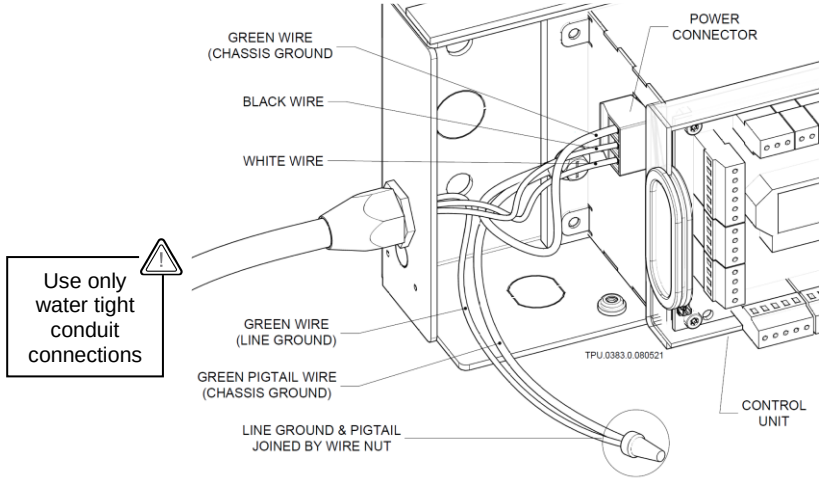


⚠ **<u>Do not</u> cut into the operator front cover or chassis. <u>Use only</u> the cut-outs provided to route wirings.**

STEP 4 Connect the 115 VAC wires to the Power Connector



STEP 5 Use wire nut to connect Line Ground and Green Pigtail wires together

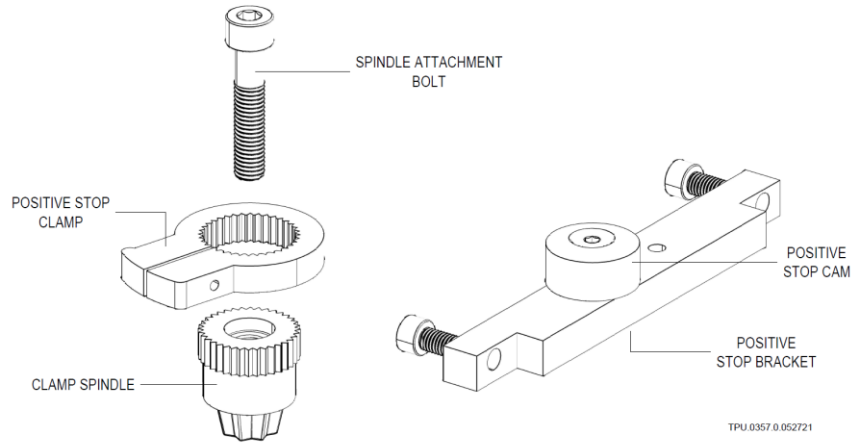


STEP 6 Plug Power Connector back to Control Unit; turn AC power back on

SECTION VII
INSTALLING THE
OPTIONAL POSITIVE STOP
(P/N M10S.0040)

TORXUN <u>requires</u> a physical stop (wall, fence, floor stop or similar) to prevent the door/gate from opening beyond 105 degrees. Without it, the AUTOPED may be damaged by being forced into an over-open position. The internal positive stop is an alternative solution for locations without aggressive wind loads.

VII.1 OPTIONAL POSITIVE STOP KIT (P/N M10S.0040)

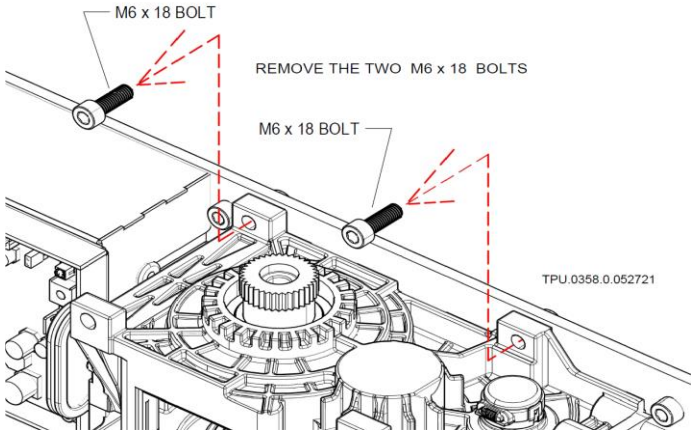


NOTE:
Depending on the function of the operator, push or pull, you may have to change the location of the positive stop cam to the other mounting hole. You want to use the positive stop cam mounting location closest to the rotation of the gear box.

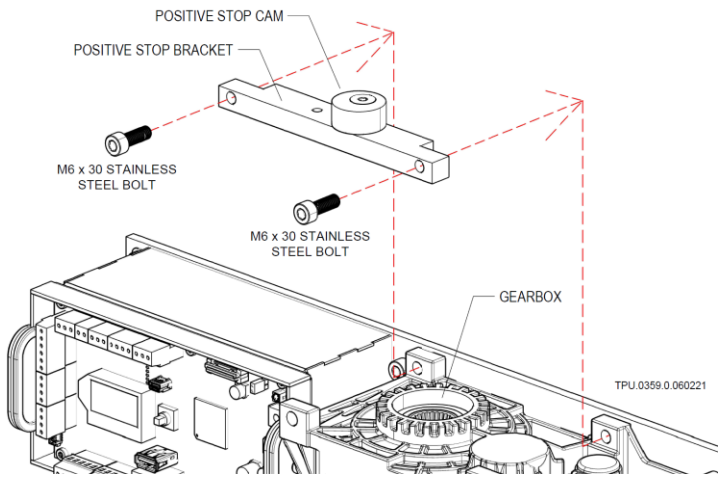
VII.2 INSTALLATION: OPTIONAL POSITIVE STOP

STEP 1 Swing Door/Gate to desired opening; keep the door in open position.

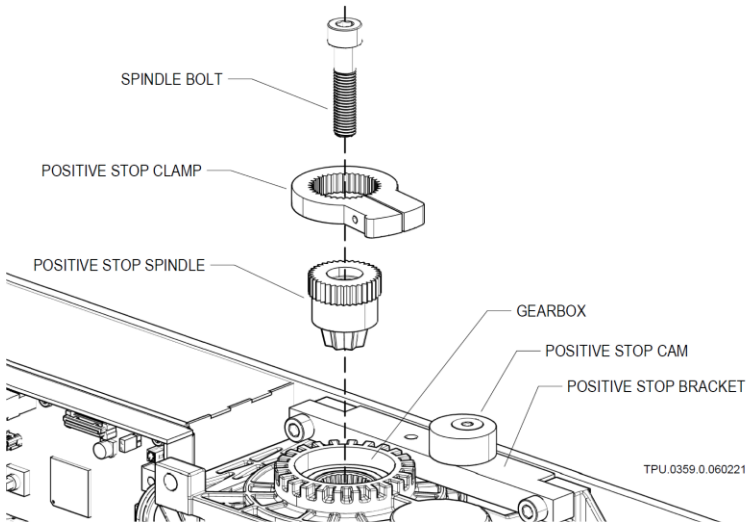
STEP 2 Remove top two bolts on the Gear Box mounting plate



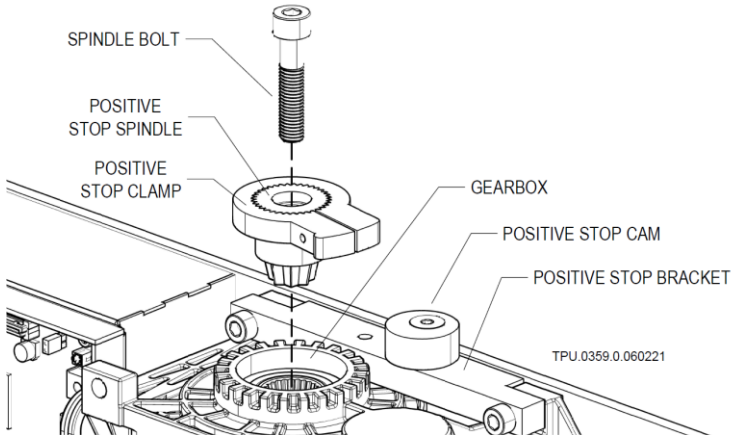
STEP 3 Install the Positive Stop Cam Bracket and Cam; use the two stainless steel M6x3 bolts included in the kit



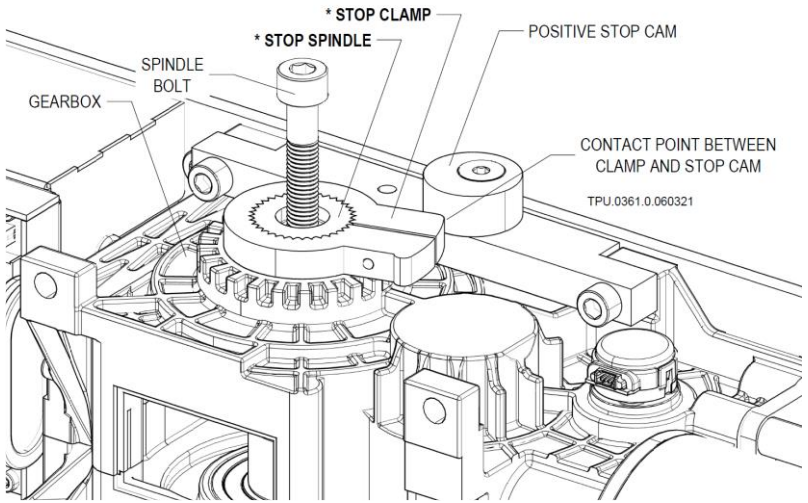
STEP 4 Gather the Spindle bolt, Positive Stop Clamp & Spindle



STEP 5 Assemble the Stop Clamp and Spindle together



STEP 6 Insert Clamp and Spindle assembly to the Gearbox



IMPORTANT NOTE ON STEP 6

Make sure that the Stop Clamp* and Stop Spindle* are flush with each other when assembled (see drawing above*).

Place the Stop Clamp so that its rounded vertical face (contact point) is almost contacting the Positive Stop Cam at full open.

STEP 7 Insert the Spindle Bolt to the Positive Stop Clamp* and Stop Spindle*; tighten to fasten the assembly to the Gearbox.

SECTION VIII
CLOSING-SPRING PRELOAD

The spring tension may need to be adjusted to regulate the closing pressure of the door or gate panel. Make these adjustments when the door or gate panel does not fully close or slams when closing.

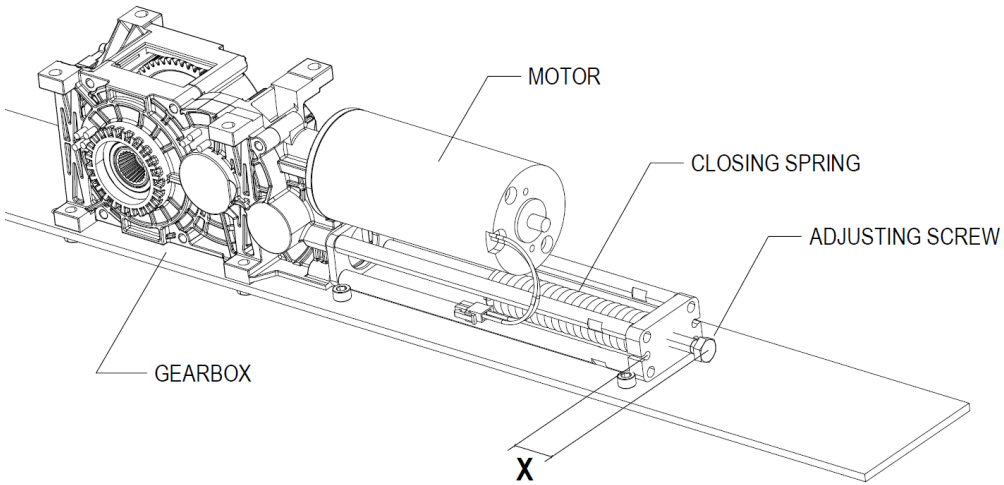
VIII.1 ADJUSTING THE CLOSING-SPRING PRELOAD

The AutoPed operator is equipped with a closing spring that aids in the closure of the gate/door and to keep closing speeds while the gate/door is in manual mode. When power to the operator is cut or turned off, the closing spring will allow the Door/Gate to close in a controlled manner, fully latching the door lock system.

The tension of the spring regulates the amount of pressure the door requires to be pushed open.

Preload adjustment is done by turning the Adjusting Screw. By default, distance **X** between top of head of Adjusting Screw and spring bracket is:

X = 1-1/32 inch (26 mm)



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SECTION IX
INSTALLING DOUBLE DOOR
AND
INTERLOCK SALLY PORT CONFIGURATIONS

IX.1 SETUP SEQUENCE FOR DOUBLE DOOR/GATE OPERATION

IMPORTANT NOTE: The AutoPed must be initially programed for basic functions before it can be setup for Double Door/Gate Operation. Refer to Section XI: Quick Start Programming for this purpose.

Warning: The default setting of the AutoPed is "Low Energy." The AutoPed is ONLY approved and warranted for Low Energy, ANSI 156.19 applications. It is the responsibility of the installing party to adhere to ANSI 156.19 standards when completing the AutoPed installation.

Use of the AutoPed for Full Energy applications is PROHIBITED. TORXUN IS NOT RESPONSIBLE FOR LIABILITY ASSOCIATED WITH FULL ENERGY APPLICATIONS.

The AutoPed is capable of being linked to another AutoPed unit and working in tandem with that other unit. The two operators must be physically connected with a CAN-Bus at terminal X117 to function as double doors; Fig IX.1

STEP 1 Move the joystick up or down to scroll through the menu selections until you get to Double Door.

- Press the joystick in to select the Double Door section and you will get DoubleD on the screen.
- Toggle the joystick left or right to select if the operator will be designated as one of the following: Master A, Master B, Slave A, Slave B.
- An activation of the slave door will open both, while and activation of the master will only open the master.
- Wire all activation devices to the slave operator so that both units will activate from a single input device.

STEP 2 Wire between Master and Slave/Secondary Operators

- Wire the AutoPed Master A to Slave A. Run the wire between terminal X117 on each control board. (See Fig XIV.2g, p.76 Wiring

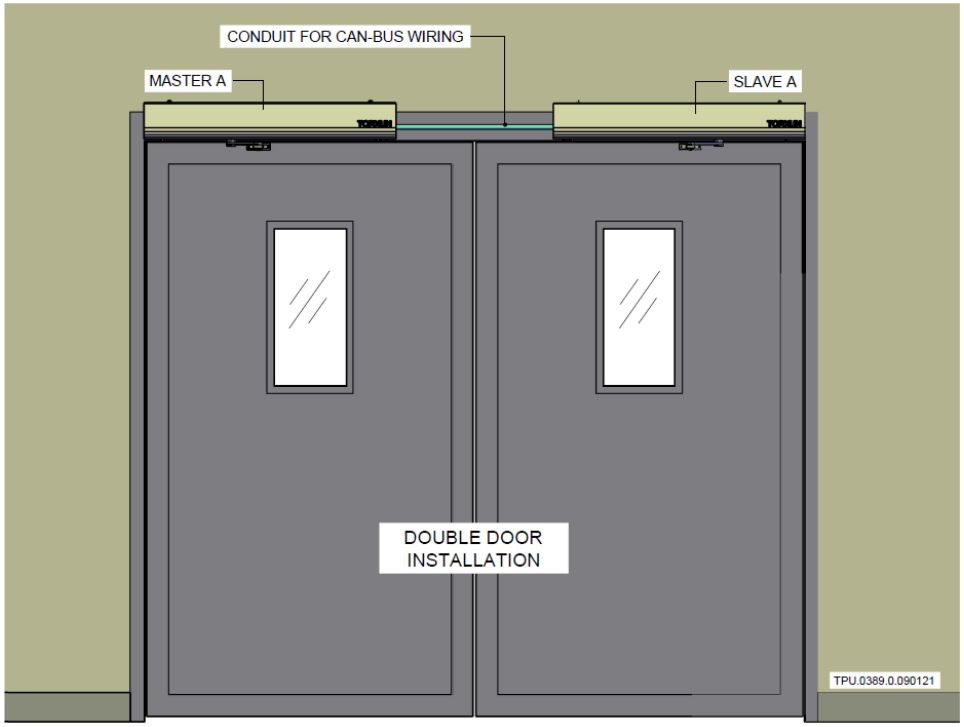


Fig IX.1 Double Door In Tandem

Schematics, and Section XII.7, p.56 for programming information)

- When the CANbus connection is made between the AutoPed controllers, the master is identified by a small black (m) and the slave by a small black (s) on their respective LCD's.
- If a CANbus connection does not exist, the master is identified by a small white (m) and the slave by a small white (s).

STEP 3 Vo

- Using the joystick, toggle down to VO (opening speed) and set the desired opening speed

STEP 4 AoSeq

- Using the joystick in the Master Operator, toggle down to **AoSeq**.
- AoSeq is the delay angle of the Master before the Slave/Secondary begins its opening sequence.
  For example, if you set AoSeq to 20° then the slave operator's gate will wait until the master gate breaks the 20° mark then it will start to open.

STEP 5 TDelay

- If an electric lock is installed on the gate system, the choice **TDelay** will function the same way that it would in the normal programming sequence and adjust the amount of time that the gate delays before moving to allow time for the lock to release. For this set up, refer to **TDelay** in Table VII.6 of Sec VII Menus and Programming

STEP 6 AcSeq

- Using the joystick on the Slave operator, select **AcSeq**. AcSeq is the delay for the master closing sequence. The default AcSeq setting is 0 degrees. This will work the same way that AoSeq does, allowing a set degree of closure to happen before the master gate starts movement.

IX.2 SETUP SEQUENCE FOR INTERLOCK/SALLY PORT/AIRLOCK

IMPORTANT NOTE: The AutoPed must be initially programed for basic functions before it can be setup for Interlock/Sally Port Operation. Refer to Section XI: Quick Start Programming for this purpose.

The gates can be spaced apart from each other and connected to each other via a CAN BUS connection to create an interlocking system similar to an air lock or sallyport, Fig IX.2. When Gate A gets an open command, it will block out any inputs to Gate B until Gate A is fully closed. The same is true for Gate B. When Gate B is opened, Gate A will not be able to open until Gate B is fully closed.

STEP 1 CAN BUS wire between gate A and gate B Operators

- Wire the AutoPed in gate A to the AutoPed in gate B. Run the CAN BUS wire between terminal X117 on each control board; (see item X117 in Section XIV Terminal Connections and Wiring Schematics on p.67)

STEP 2 InterL

- Enter the DoubleD menu
- Make sure that DoubleD is off in the Double Door menu.
- Using the joystick toggle down to InterL
  - Set one control unit to side A and the other to side B
- With the two control units set to interlock A and B respectively, they will work independent of each other but not allow input commands to be activated on one gate until the other has completed its cycle

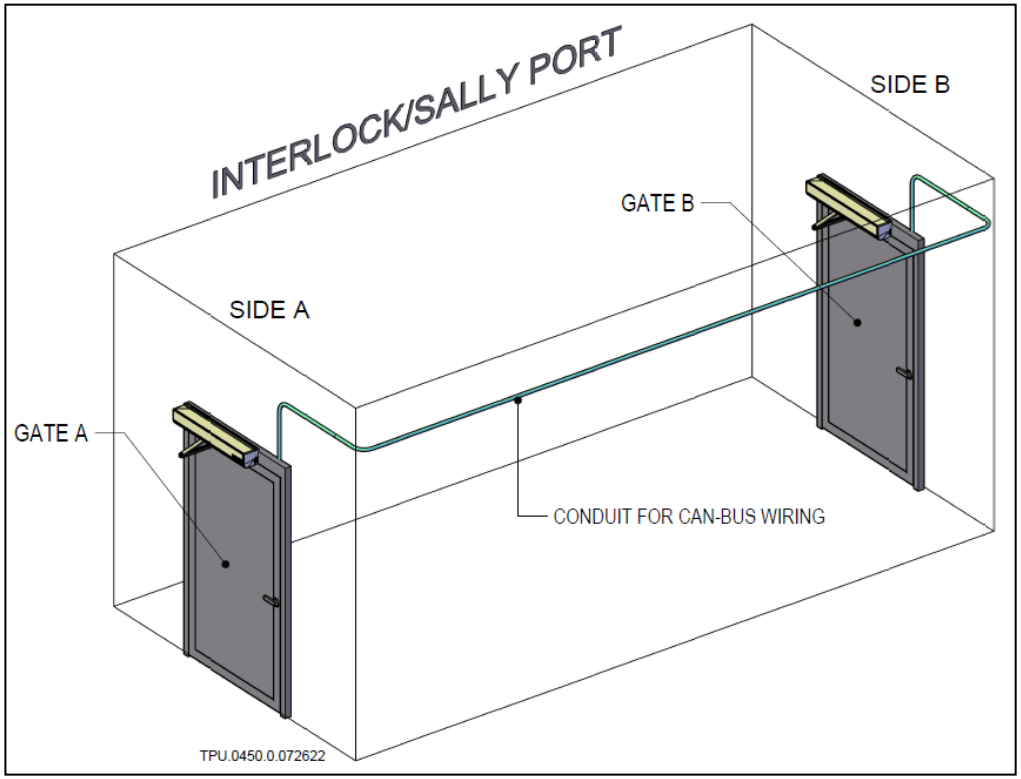


Fig IX.2 Interlock/Sally Port

SECTION X
SETTING UP ELECTRIC LOCKS AND STRIKES

X.1 ELECTRIC LOCKS AND STRIKES SETUP

For wiring of the locks and strikes, see Fig XIV.2d (1, 2), and Fig XIV.2e (1, 2) in Section XIV Terminal Connections and Wiring Schematics, p.71, p.73.

When setting up an electric lock, all the needed settings can be found in the configuration menu of the AutoPed controller. The following are the settings that you will need.

NOTE:
When setting up fail safe and fail secure locks, the difference is in the wiring of the locks not the settings. The settings will apply to all electric locks and strikes including mag locks.

STEP 1 Click the joystick next to the LCD screen in to enter the menus section.

STEP 2 Using the joystick, toggle down to the Config menu.

STEP 3 Press the joystick in to access the configuration section.

STEP 4 Using the joystick, toggle down to the section “Unlock”
- Set unlock to Permanent; refer to Section XII.6 on p.55 for additional information

STEP 5 Using the joystick, toggle down to EL – Fb (Electric Lock - Feedback)
- Set EL-Fb to N.C.; refer to Section XII.6 on p.55 for additional information

STEP 6 Using the joystick, toggle down to LockAu (Lock Automatic)
- Set LockAu to lock; refer to Section XII.6 on p.55 for additional information

STEP 7 Using the joystick, toggle down to LockEx (Local Exit)
- Set LockEx to lock; refer to Section XII.6 on p.55 for additional information

STEP 8 Using the joystick, toggle down to LockMa (Lock Manual)

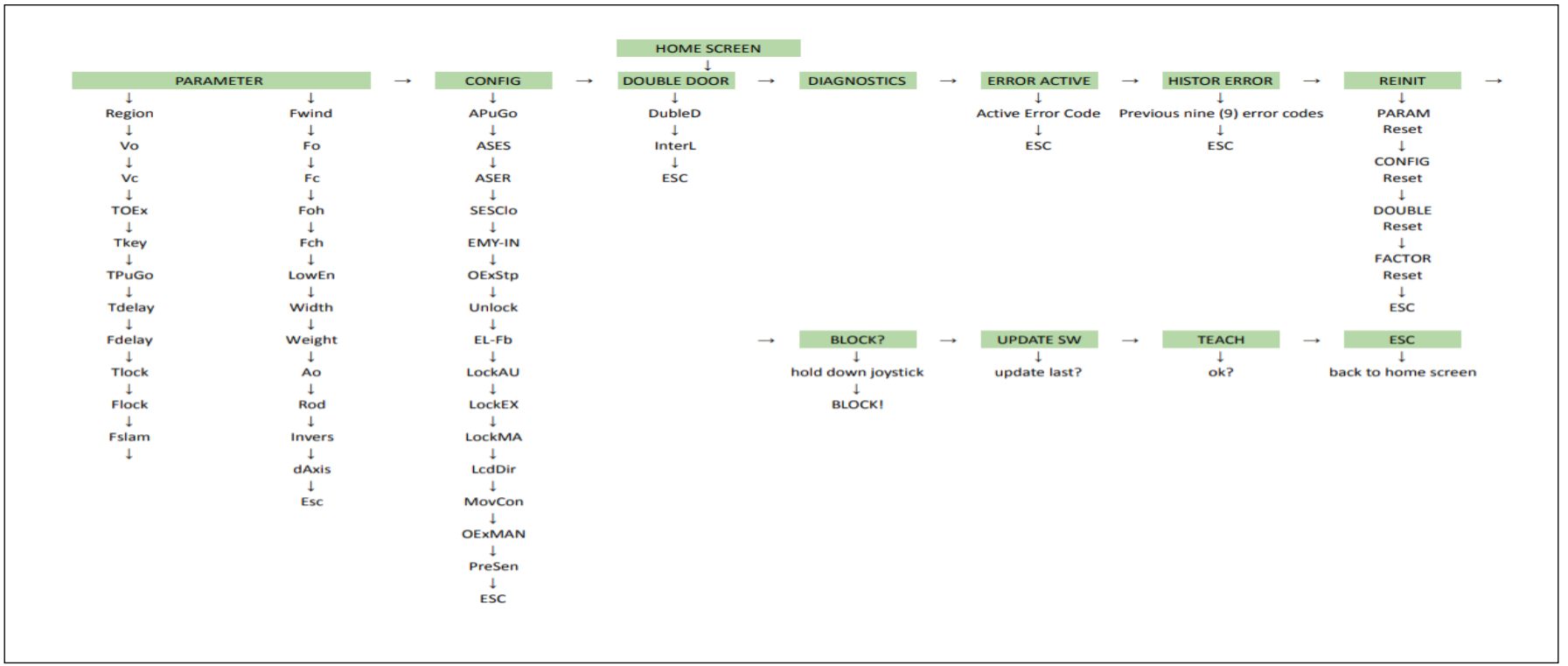
STEP 9 Set LockMa (Lock Manual) to lock; refer to Section XII.6 on p.55 for additional information

SECTION XI
QUICK START PROGRAMMING

NOTE 1: If using Track Arm for pull action operation, make sure the AutoPed is converted for pull action; see Section IV.2, p.23

NOTE 2: Remember to select SLI-PL when initializing the programming of the operator; see Step 3 of Sec XI.2, p.45

XI.1 PROGRAMMING FLOW GUIDE CHART



E10

The E10 code simply indicates that the operator needs to be run through a TEACH cycle. Enter the menu and scroll down to "Teach." Push the joystick in and confirm "yes" by pushing in again. The operator will perform a countdown, beep and run a TEACH cycle of the gate.

E11

The E11 code indicates that the gate must complete on full cycle of motion to confirm the previous TEACH cycle.
Give the gate an activation command to perform this cycle and the E11 will be resolved.

The two most common "error" codes encountered when programming are E10 and E11.

Anytime an item in the "Parameter" menu is changed, the E10 code will appear and a "Teach" cycle becomes necessary

XI.2 PROGRAMMING SEQUENCE FOR SINGLE DOOR/GATE OPERATION

⚠ Following are the basic programming steps for the AUTOPED operator. Complete these 12 steps before addressing advanced programming requirements.

Warning: The default setting of the AutoPed is "Low Energy." The AutoPed is ONLY approved and warranted for Low Energy, ANSI 156.19 applications. It is the responsibility of the installing party to adhere to ANSI 156.19 standards when completing the AutoPed installation.

Use of the AutoPed for Full Energy applications is PROHIBITED. TORXUN IS NOT RESPONSIBLE FOR LIABILITY ASSOCIATED WITH FULL ENERGY APPLICATIONS.

Once power has been supplied or reconnected to the control unit, indicator lights will flash, and the LCD display will light up with the current software version. Locate the LCD display window and the joystick adjacent to it. The joystick (encircled in red; Fig II.2) can be moved: Up (↑), Down (↓), Left (←), Right (→) and pressed in to accept the selected command.

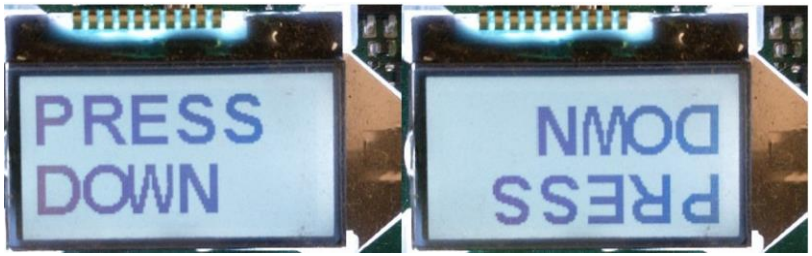
Fig XI.2a Joystick

The following procedures will get the AUTOPED operational with basic programming. The control unit is password protected; Fig XI.2b.
When you get to the "password" screen:

- The password is three nudges to the left on the joystick ←,←,←
- Then three nudges to the right on the joystick. →,→,→

Fig XI.2b Password Screen

STEP 1: Screen Orientation The words "Press Down" will appear on the LCD screen. The text will alternate between being right side up and upside down. Nudge the joystick down (↓) to set the screen orientation upright.



NOTE: The downward movement of the joystick is in relation to the installer, not the text on the screen. The screen will set its orientation based on the downward nudge of the joystick.

STEP 2: Region Selection

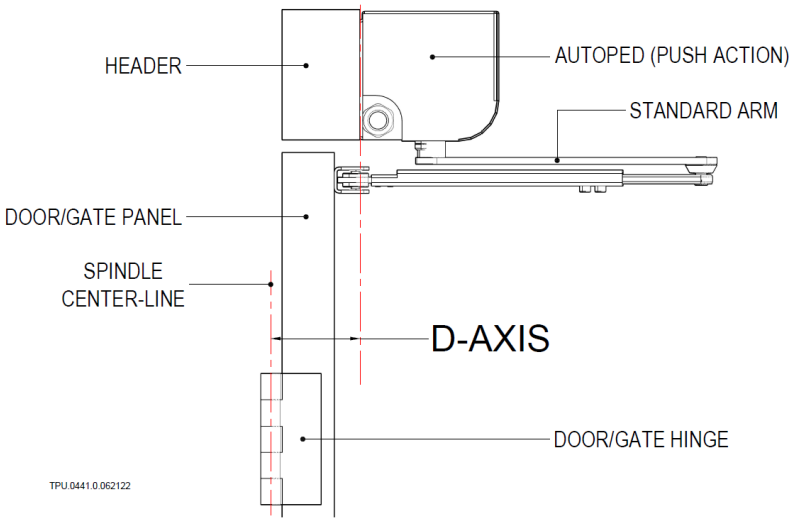
- Press the joystick in and then either left or right (←,→) to select “Region US (USA)”

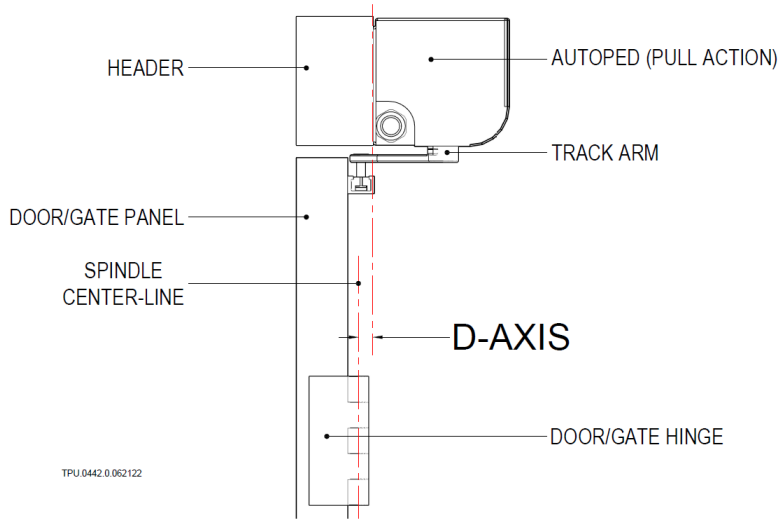
STEP 3: Rod

- Select the appropriate arm assembly type:
- STD-PH (Standard Push Arm)
- NOTE: When using the standard push arm, use the orange wire connectors. When using the optional Track Arm Assembly, use the green wire connections.
- SLI-PL (optional track arm pulling configuration) P/N: M10S.0039
- SLI-PH (optional track arm pushing configuration) P/N: M10S.0039
- ⚠ WIN-PH, DIR-PH, DIR-PL, OHC-PH, OHC-PL will not be used! ⚠
- Press the toggle in to select the appropriate arm type

STEP 4: dAxis

- The D Axis is the distance from the chassis mounted to the header to the centerline of the hinge spindle. Measure this distance on the door/gate.
- Toggle left and right to get the correct number in inches and press the joystick in to confirm the selection.





STEP 5: Ao

- Ao is the angle of opening.
- The default selection is 95°, toggle left or right to select the desired angle of opening then press the joystick in to confirm the selection.
- ⚠ If a physical stop such as a bollard, wall, or cleat is NOT in place to stop the Gate/Door, the use of the Physical Stop Kit is required. P/N: M10S.0040

STEP 6: LowEn

- This is the type of function in which the AutoPed will operate.
- The default is “LowEn on”.
- Keep the operator in LowEn on and press the joystick in to confirm the selection.
- The operator is intended to be used in LowEn mode which complies with the ANSI 156.19 standards
- ⚠ Warning: The default setting of the AutoPed is "Low Energy." The AutoPed is approved and warranted only for Low Energy, ANSI 156.19 applications. It is the responsibility of the installing party to adhere to ANSI 156.19 standards when completing the AutoPed installation. Use of the AutoPed for Full Energy applications is PROHIBITED. TORXUN is not responsible for liability associated with FULL ENERGY applications.

STEP 7: Width

- Measure the gate leaf from outside edge to outside edge and use the toggle left or right to select the correct width in inches of the gate leaf. Press the joystick in to confirm the selection.
- ⚠ UL 325 approves the gate width up to 63″

STEP 8: Weight

- Calculate the approximate weight of the gate leaf.
- Use the joystick either left or right to select the approximate weight in pounds (lbs) of the gate leaf
- Press the joystick in to confirm the selection.
- ⚠ UL 325 approves the operator for weights up to 250lbs

STEP 9: Vo

- Vo controls the velocity/speed at which the gate opens.
- The default setting is 9, nudge joystick left and right to select the desired speed, press the joystick in to confirm the selection; i.e.. In LowEn ON mode, the selection

maximum is 9.

⚠ TORXUN recommends setting Vo between 1-3 for initial set up. Once the operation of the gate is confirmed, then the desired speed can be finalized in compliance with ANSI 156.19. ⚠

STEP 10: Vc

- Vc controls the Velocity/speed at which the gate closes.
- Default is set to 9, use the joystick left and right to select the desired speed. Press the joystick in to confirm the selection; i.e. In LowEn ON mode, the selection maximum is 9

  ⚠ TORXUN recommends setting Vc between 1-3 for the initial set up. Once the operation of the gate is confirmed, then the desired speed can be finalized in compliance with ANSI 156.19 ⚠

STEP 11: Invers

- Using the joystick left and right, set Invers to “OFF”. Press the joystick in to confirm the selection.
- Invers refers to configuring the Door/Gate to open when power is lost. In such rare applications the gate will default (spring) to open and operate to close.

⚠ ATTENTION: At this point, clear the area of any persons or objects in the path of the gate to avoid injuries or damages. Proceed to the next step once the path of the gate is clear. ⚠

STEP 12: Teach

- Press the joystick in to move to the next selection.
- “Teach ok?” will appear on the screen
- Press the joystick in again and you will hear beeping as well as see a ten (10) second countdown on the screen.
- Once the countdown ends, the gate will open, pause, and then close while beeping. If no errors occur, the LCD display will display “Done!” with “E11” underneath it.
- E11 requires the operator to be run through one more full Open and Close cycle via activation command to confirm the settings.

XI.3 ADDITIONAL PROGRAMMING OPTIONS

Before completing the installation, install any additional hardware or make further programming adjustments. These may include:

a. Push and Go (when the gate is pushed open a programmable set of degrees, the AutoPed will take over and open the gate the rest of the way; Section VII.7 APuGO in the Configuration Menu).

b. Internal Physical Stop Kit P/N: M10S.0040 (a mechanical option which prevents the gate from being forced beyond 105 degrees to protect the AutoPed operator; see Section VII Installing the Optional Positive Stop

c. Closing Spring Preload (adjust the pressure of the door/gate closure to overcome the gate slamming or not fully latching); see Section VIII Adjusting The Closing Spring Load.

d. Programming for Double Door system; refer to Section IX.

e. Programming for the Interlock Sally Port; refer to Section IX.

XI.4 FINAL ADJUSTMENTS AND COMPLIANCE TO ANSI 156.19

Make final adjustments to the controller programming and gate operation.

ANSI 156.19 is a safety standard that protects pedestrians when using a low energy automatic door/gate. The AutoPed is designed so that each installation can comply with this standard.

⚠ **IMPORTANT**
It is the responsibility of the **INSTALLER** to adjust the AutoPed so that the gate operates in compliance with ANSI 156.19. Each gate is different so adjustments must be made on a gate-by-gate basis. Refer to the ANSI 156.19 standards for the tables that prescribe:

- The speed/velocity of the opening and closing of gate being installed based on its width and weight. Speed is adjusted in the Vo and Vc settings in the Parameters menu.
- The force of the gate when opening and closing. Force is adjusted in the Fo and Fc settings in the Parameters menu.
- Use a Door Pressure Gauge tool to properly calibrate the force (pressure) of the opening and closing of the gate panel; Fig XI.4
- Signage – Attach signage(s) to Door/Gate and activation switches as specified by ANSI 156.19

Fig XI.4 Typical Door Pressure Gauge Tool (refer to Vendor's Instructions on use)

XI.5 REATTACH THE CONTROL BOX AND OPERATOR FRONT COVER

a. Reattach front plastic cover of Control Box

After the unit has been cycled a few times and your ANSI checklist has been completed, reattach the plastic cover onto the control unit. Align the gaskets into the cut outs so that they sit flush. Tighten the two provided screws into the threaded sections of the control board. Give the cover a slight tug to make sure that it is secured properly. ⚠ Do not over tighten the cover. ⚠ Make sure that the grommets are completely seated in the cut outs on both ends and sealed properly within the groove.

b. Reattach the operator Front Cover

There are two knock outs on the Front Cover that will correspond with the arm coming from the gearbox. Remove the appropriate knock out for the location of the arm and slide the front cover onto the operator. Secure the front cover to the chassis with the four (4) thumb screws. Tighten the thumb screws by hand until the front cover is secured to the chassis.

SECTION XII
MENUS AND PROGRAMMING

XII.1 MENU GLOSSARY

Display	Description
OEO	Exterior activation sensor (exterior activation signal)
OEI	Interior activation sensor (interior activation signal)
KEY	Activation device (external switch activation signal, key switch, card reader, etc.)
SES	Swing side Door/Gate mounted sensor (swing side safety signal)
PRE	Header mounted sensor on swing side
SER	Push side door mounted sensor (approach side safety signal)
SEF	Door mounted sensor for obstacle detection
EMY-IN	Emergency open input (emergency input signal)
PUGO	Push and go

XII.2 CONTROL UNIT LED LIGHTS

LED description and color indications		
LED	**Description**	**Indicator**
SOK	System ok	Green flashing
OE active	Opening devise	Blue=active
SE active	Safety devise	Yellow=active
Error	Error	Red
E-lock relay	E-lock relay	White

XII.3 LCD SCREEN GLOSSARY

Display	Description
<REF?>	Waits for reference switch
< ?? >	Unknown: position of the gate is unknown to the operator
><	Closed
>##<	Closed and locked
<<>>	Opening
<>	Open
>><<	Closing
==	Stopping

XII.4 CHART FOR MENUS AND WHAT THEY DO

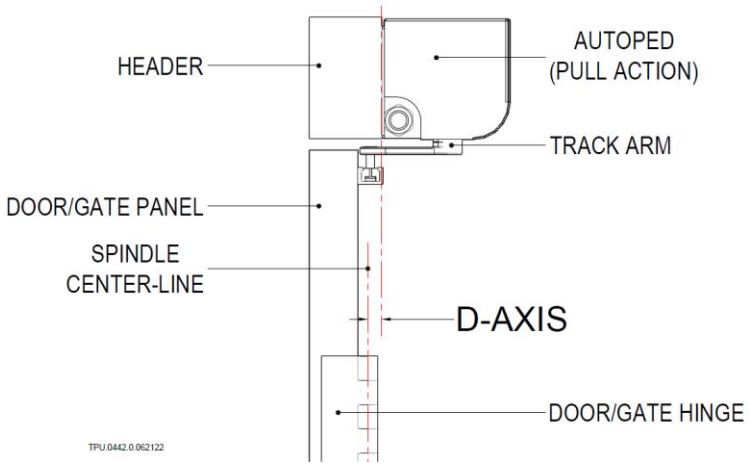
Menu Title	Description
PARAMETER	Sets the parameters for swing Door/Gate movements
CONFIG	Configuration: sets the configuration of the AutoPed control features and functions
DOUBLE DOOR	Sets the closing sequence and interlock function for double door applications
DIAGNOSTICS	Diagnostic tools that display the status of various inputs
ERROR ACTIVE	❖ Displays pending active errors ❖ A0 indicates the latest active error
HISTORY ERROR	❖ Displays all active errors that were detected and then corrected or not corrected. ❖ H0 indicates the latest active error
REINT	Reinitialization resets settings back to factory default
BLOCK?	Locks/unlocks joystick
UPDATE SW	Start the software upgrade process from a USB stick
TEACH	❖ Programs the initial setup, finds errors (if any) ❖ Programs a new setup procedure when necessary

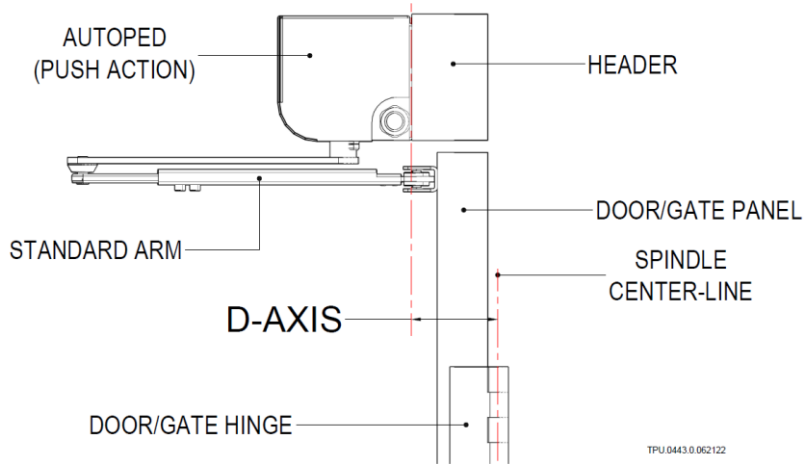
XII.5 PARAMETER MENU: SETTINGS FOR DOOR/GATE MOVEMENT

Device	Unit type	Default	Value	Description
Region	Low Energy	US	US	US- united states
				Software version decided by UL standards
Vo	Low energy	9	0-9	Velocity of opening 9=fastest, 0=slowest
Vc	Low energy	9	0-9	Velocity of closing 9= fastest, 0= slowest
TOEx	Low energy	5s	3-60s	Sets the hold open time for the OEO or OEI input commands. ANSI 156.19 for low energy: TOEx must be no less than 5 seconds.
TKey	Low energy	5s	3-180s	❖ TKey sets the hold open time resulting from an activation signal from a device (referred to as KEY) on terminal X102 ❖ With TOEx and TKey, you can set a different hold open time for different activation devices by using different terminals
TPuGo	Low energy	3s	3-180s	Determines how long the Door/Gate stays open when activated by the push and go feature.
TDelay	Low energy	.2s	0.0-4.0s	Tdelay sets the amount of time the door hesitates to allow the lock to release before opening.
FDelay	Low energy	Off	Off-7.0A	Fdelay is a temporary “hold closed” force applied to the door to keep it closed while the electric lock is released. This parameter sets the amount of force applied. FDelay is only active if TDelay setting is greater than 0.

TLock	Low energy	0.5s	0.0-4.0s	Sets amount of time Door/Gate panel will press against lock to engage it.
Flock	Low energy	2.0A	Off-7.0A	Sets amount of force applied to the Door/Gate panel to engage the lock at the closed position. It is only active if TLock setting is greater than 0.
FSlam	Low energy	Off	Off-10	Accelerating function (Force Slam). For example: when a Door/Gate panel needs to be forced shut due to a latch or heavy seals.
FWind	Low energy	Off	Off Open Close Both	❖ Wind load detection optimized for exterior doors/gate panels ❖ Assuming that a gust of wind is not a hard obstacle which will stop the door, the motor current will rise “slowly.” In this case the AutoPed control unit will supply additional power to continue the door movement. ❖ When FWind is turned ON, TORXUN strongly recommends the use of Door/Gate panel mounted sensors to stop or reopen the door if an obstacle is detected during the door cycle
Fo	Low energy	9	0-9	❖ Opening force (force open) when an obstacle is detected during open/close cycle or both ❖ In standard mode obstacle detection cannot be switched on/off. It can be adjusted with parameters for “Fo”=force opening and “Fc”=force close. To make obstacle detection least sensitive, set both parameters on 9. To make obstacle detection most sensitive, set both parameters on 0. (Caution, this can allow the drive to react to slight changes in wind)
Fc	Low energy	9	0-9	
Foh	Low energy	4	0-9	Hold open force (force hold open)
Fch	Low energy	0.0A	0.0A-3.5A	❖ Interlocking force (force close hold) automatically programs Flock and FDelay if these settings are set at 0. ❖ If there is no electric lock and the interlocking force Fch is not adjusted, error 14/02 will be displayed as a warning after the teach 1 procedure and the Door/Gate will endlessly reopen.
LowEn	Low energy	On	On	Door/Gate panel is low energy in both directions. Door/Gate panel is activated by a knowing act.
Width	Low energy	48in	30-63in	Width of the Door/Gate panel from edge to edge. ⚠ UL approval for maximum width of 63” ⚠
Weight	Low energy	100~250lbs	100-550lbs	Weight of the Door/Gate panel. ⚠ UL approval for 250lbs ⚠
Ao	Low energy	95°	20°-190°	Opening angle of the door (angle open)
				Teach must be activated after this setting has been changed

<table>
<tr><td rowspan="6">Rod</td><td rowspan="6">Full and low</td><td rowspan="6">STD-PH</td><td>STD-PH</td><td rowspan="2">Outswing arm and Arm-Shoe</td><td>Push function using Standard Arm assembly</td></tr>
<tr><td>Motor cable connector: X=orange</td></tr>
<tr><td>SLI-PL</td><td rowspan="2">Inswing arm with track and roller</td><td>Pull function using Track Arm assembly (P/N: M10S0039)</td></tr>
<tr><td>Motor cable connector: Y=Green</td></tr>
<tr><td rowspan="2">SLI-PH</td><td rowspan="2">Outswing with inswing track and roller</td><td>Push function using Track Arm assembly (P/N: M10S0039)</td></tr>
<tr><td>Motor cable connector: X=orange</td></tr>
<tr><td>Rod</td><td>Low energy</td><td>STD-PH</td><td colspan="3">❖ If panic breakout latch is installed and the motor is plugged in backwards or the wrong arms are chosen during programming, there is a possibility the Door/Gate panel can burst open unexpectedly towards the installer once TEACH mode is initiated.
❖ Teach must be activated after this setting has been changed.</td></tr>
<tr><td rowspan="2">Inverse</td><td rowspan="2">Low energy</td><td rowspan="2">Off</td><td>Off-On</td><td colspan="2">In case of a power failure/error, the Door/Gate panel is opened by spring power from any position (unless it has been locked). The position of the motor connector is reversed on the standard drive unit.</td></tr>
<tr><td></td><td colspan="2">Teach must be activated after this setting has been changed.</td></tr>
<tr><td rowspan="2">dAxis</td><td rowspan="2">Low energy</td><td rowspan="2">7in</td><td>2-25in</td><td colspan="2">Distance between center line of the door hinge spindle(s) and the mounting surface of the operating assembly. dAxis is an approximate value. Depending on the installation situation, dAxis may have to be estimated.</td></tr>
<tr><td></td><td colspan="2">Teach must be activated after this setting has been changed.</td></tr>
</table>





XII.6 CONFIGURATION MENU OPTIONS AND DEFINITIONS

Device	Unit type	Default	Description	
APuGO	Off	Off, 2°-10°	Triggering angle for Push and Go (angle Push and Go)	
ASES	95°	45°-95°	Lock out angle: Angle at which the swing side Door/Gate panel mounted sensor is ignored just before open/ If Ao is changed, ASES is automatically set to Ao.	
ASER	0°	0°-60°	Lock out angle: angle at which push side of the Door/Gate panel sensor is ignored just before closing.	
SESClo	Inactive	Active	Sensor mounted on swing side of Door/Gate is activated or inactivated during closing cycle	
		Inactive		
EMY-IN	CL-SPR		Configuration of the emergency terminal (break contact switch)	
		CL-SPR	Spring close (standard application)	
		STOP	Stops Door/Gate panel closing/opening	
		OPEN	Opens the Door/Gate panel	
		CL-MOT	Motor close (inverse application)	
OExSTp	Off	Off	N/A	❖ Used to set one of the activation “values” to “sequential” mode. ❖ Sequential mode is used to hold the door open until a second activation is received. ❖ One activation opens the Door/Gate panel, and a second activation is needed to close the Door/Gate panel.
		OEI	Opening devise inside	
		OEO	Opening devise outside	
		KEY	Key opening devise	
		RADIO	N/A	
UNLOCK	PERMAN	IMPULS	When the Door/Gate panel is first opened: momentarily unlocks the electric lock	
		PERMAN	When the Door/Gate panel is first opened: Permanently unlocks the electric lock.	
EL-FB	Off	Off	Electric lock status feedback	
		N.O.	Open if unlocked (-); closed if locked (+)	
		N.C.	Open if locked (+); closed if unlocked (-)	
Lock AU	UNLOCK	UNLOCK/LOCK	❖ Sets the condition of the lock when in automatic mode. ❖ Only visible when Unlock is set to PERMAN.	
LockEX	LOCK	UNLOCK/LOCK	❖ Sets the condition of the lock when in EXIT mode. ❖ Only visible when Unlock is set to PERMAN	
LockMA	UNLOCK	UNLOCK/LOCK	❖ Sets the condition of the lock when in MANUAL mode. ❖ Only visible when Unlock is set to PERMAN	

LcdDir	0	0-1	Orientation of the display (LCD direction)
MovCon	OFF	OFF/ON	Endurance test Open/Close (moving continuous)
Pre Sen	N.C.	Off/N.C./N.O.	Swing side presence sensor output logic
OExMAN	ON	OFF/ON	❖ On enables activation to reopen the door during the closing cycle of a manual opening. ❖ OExMAN only if APuGo is turned OFF

XII.7 DOUBLE DOOR MENU CHART

Device	Default	Value	Description
DoubleD	Off	Off MastrA SlaveA MastrB SlaveB	Closing sequence role and interlocking side
AoSeq	20°	0-110°	Current delay angle for opening sequence control (only visible if DoubleD is active)
AcSeq	20°	0-110°	Current delay angle for closing sequence control (only visible if DubleD is active)
InterL	Off	Off SideA SideB	Interlocking door system where one door will only receive open commands once the other is closed
ILAuto	Active	Inacti Active	Interlock mode Operating mode AUTOMATIC (only visible in InterL is active)
ILExit	Active	Inacti Active	Interlock mode operating mode EXIT (only visible if InterL is active)
ILNigt	Active	Inacti Active	Interlock mode Operating mode Night (only visible in InterL is active)

XII.8 DIAGNOSTIC TABLE

Devise	Description	Value
K-I-O-R-S-P-E	(K) Key (I) OEI (Interior Activation Sensor) (O) OEO (Exterior Activation Sensor) (R) SER (Push Side Door Mounted Sensor) (S) SES (Swing side door mounted sensor) (P) Swing side header mounted presence	(+) Active (-) Inactive (Read only and cannot be changed)

	sensor (E) EMY-IN (Emergency Open Input)	
-0.0A ; 0°	Displays motor current and the swing door opening angle (Example: 2.1A ; 65°)	
X.YA/Z°	Displays the actual current used by the motor and the current angle of the door/ gate panel.	
Simulate Key	Key command that opens the door panel by pressing OK	
E-Lock	L- Display status of the lock FB- Display input El-FB. Press OK to activate the electric locking device	(L+) locked (L-) Unlocked (FB+) Locked (FB-) Unlocked
PG Version	Packaged software	
SW Version	Version of software	
UL Version	Software changed due to UL specifications	
HW Version	Version of logic PCB	
Cycles	Total number of openings the gate has performed.	
RO R1 FP RP	Display what the Door/Gate panel is doing (R0) Relay print with address 0 (R1) N/A (FP) N/A (RP) N/A	(-) Identified and ready for operation (+) Neither identified nor registered (a) Defective or error (x) Removed

XII.9 REINIT MENU (RESET BACK TO FACTORY DEFAULT)

Device	Description
FACTORY RESET	All settings that were programmed into the control will be reset to factory defaults
PARAM RESET	Resets/sets all motion parameters back to the default values (inclusive opening angle, rod assemblies, invers and dAxis)
CONFIG RESET	Resets all configuration settings back to the default values
DOUBLE RESET	Resets simultaneous pair settings and airlock settings back to the default values

XII.10 BLOCK/UNBLOCK MENU: LOCK KEYS

Menu	Description		
Block?	To lock the joystick	Press ok for 2 seconds	The display shows temporarily BLOC!
UBLOC?	To unlock the joystick	Press ok for 2 seconds	The display shows temporarily UBLOC
BlockD	When the joystick is blocked, the “home display” shows BLOCKD if the joystick is operated!		

XII.11 TEACH MENU

Device	Description
TEACH OK?	Programs the setup procedure within the AutoPed controller.

SECTION XIII
TROUBLE SHOOTING
AND
ERROR CHARTS

XIII.1 ERROR CODE DEFINITION

A	Drive unit deactivates itself during a certain period: manual operating mode or stopping position
F	Fatal error
H	Manual operating mode with restarting attempt
W	Warning
A0	A(active error); (0) most recent error

Error No		Description	Cause	Elimination	Checking time	Reaction
E1	01	Encoder	Channel A lost	• check: ○ Encoder Connection ○ Motor Cable ○ If jumper is inserted on x106 • Direction of motor rotation does not match swing side of door • Door is blocked	During Run	H
	02		Channel B lost			
	03		Channel A+B lost			
	04		Short Circuit A+B		Prior to Start-up	H
	05		Malfunctions			
	06		Motor Cable incorrectly plugged in			
	07		No signal channel A		During Encoder Test	H
	08		No signal channel B			
	09		No signal channel A+B			
	10		Short Circuit A+B		Prior to Start up	H
	11		Malfunctions		During Test	H
	12		Malfunctions			
	13		Encoder not connected		Always	H
E2	02	Motor Current	Current too high	• Check: ○ Motor cable ○ Confirm jumper is inserted on x106	Prior to start up	H
			Current too low			
			Jumper missing			
E3	01	Latch check (cushioning)	Test failed once	Switch the drive unit to Manual operating mode. Carefully check if the door closes in a cushioned manner. • If not: replace hardware • If yes: check/correct the friction of the Door/Gate and the pre-stressing of the closing spring	Prior to closing cycle (after startup)	W
			Test failed twice			
	02		Damping defective			F (Drive unit is functioning Buzzer Active)
			Opening beyond range of operator			

Error No		Description	Cause	Elimination	Checking time	Reaction

E4	01	Reference switch	Range of operator detected in the Open Position	• Check:
				  ○ The connection
				  ○ Switching the point of the reference switch
				• Reference switch must be activated in closed position (switch contact to open)
					Open position	F

	02		Not detected in the Closed Position		Prior to the first setup run	A
	03		Not detected in the closed Position			
	04		Not detected in the open position in “INVERS” mode	• Before start (teach) door must be in open position • Reference switch must be activated in open position (switch contact open)		

E5	00	Power limitation	Control overload
			Maximum power is restricted
				• Check/correct:
				  ○ Friction of the Door/Gate
				  ○ Pre-load of closing spring
				• Ensure maximum door weight is not exceeded
					Permanent	A

E10	01	Full teach required	Parameter Ao, Rod, Invers or dAxis was changed	Carry out a learn cycle	Upon changing the drive unit configuration	H
	02		Minimum opening angle has not been achieved	Check the locking/ electric lock	During teach	H
E11	01	Half teach required (opening)	Parameter Vo changed	Carry out a complete and unhindered opening cycle	Upon changing the speed parameters	W
	02	Half teach required (closing)	Parameter Vc or ForceSlam changed	Carry out a complete and unhindered closing cycle		

Error No		Description	Cause	Elimination	Checking Time	Reaction
E14	01	Locking/Electric lock	The Door/Gate got caught in the locking/electric lock	Check the function of the locking/electric lock	When opening from a closed position	H
	02		The inverted operation has no locking, or the interlocking force Fch has not been programmed	Program/increase the interlocking force Fch	At the end of the teach procedure	W
E15	01	Obstacle during opening	Too many successive obstacles have occurred	• Examine the installation • Remove the obstacle • Move the Door/Gate to the target position	Permanent	H, A Restart after 60 seconds
	02	Obstacle during closing				
E16	01	Temperature	Temperature on output level has reached 178°F	Allow the unit to cool down	Permanent	A Drive unit functions with reduced power
	02		Temperature on output level has reached 196°F			A Drive unit has stopped
E20	01	SER test (Swing side safety)	SER test signal unsuccessful	SER short circuit to the earth. Check the cabling of the sensor or the jumper	Prior to closing	A
	02		SER too slow	SER reacts too slowly. Check the cabling for the sensor. Check for polarity reversal/test signal.	E20-01 and E20-02 together, no line in between, like E21	
E21	01	SES test (Push side safety)	SES test signal unsuccessful	SES short circuit to the earth. Check the cabling of the sensor or the jumper.	Prior to opening	A
	02		SES too slow	SES reacts too slowly. Check the cabling of the sensor. Check for polarity reversal/test signal.		

Error No		Description	Cause	Elimination	Checking time	Reaction
E22	01	EMY-IN test (emergency input)	EMY-IN input on 24v	Check the jumper NOT. Check the cabling of the NOT	Permanent	H
	02		Malfunction	Restart the control unit SW update necessary	After power up	
E30	01	30v error	30v too low	Main's failure, overload motor. Check 115vac line. Replace hardware	Permanent	A
	02		30v too high			
	03		Error upon switching on		After power up	
E31	01	24v general	Error upon switching on	Overload, short circuit of the 24v inputs (without electric lock, safety sensors)	After power up	A (restart after 10 seconds)
	02		Over-resp, under-voltage		permanent	
E32	01	24v safety	Over-resp, under voltage	Overload, short circuit safety sensors		
E33	01	24v E-lock	Error: over-resp under voltage	Overload, short circuit electric lock		
	02		Premonition: over-resp under voltage			W
E34	01	24v CAN	Over resp under voltage	Overload, short circuit external power supply CAN		
E60	00	Relay PCB 0	Optional PCB has been removed, its address changed or became defective	Check if the option is provided. If defective: replace or remove from configuration.	Permanent	W
	10	Relay PCB 1				W
	20	Radio PCB				W
	30	Fire Protection				A
E50	01-99	System error	Unexpected hardware or software event	Switch the drive unit Off/On. Carry out a Factory Reset, Carry out a software update, inform the manufacturer	Permanent	W or H or F
E51						
E52						
E70	XX	CAN bus setting	CAN address XX existing twice	Correctly define the role of the closing sequence or the interlock function	Permanent	W
E71	01	CAN connection	No CAN connection	Plug in, check, or replace the CAN cable Check if all the CAN participants are switched on	Permanent	W

Error No		Description	Cause	Elimination	Checking time	Reaction
E80	01	Continuous routine	Malfunction	-----	Permanent	W
	02			Power down then power up		F
E81	01	MCU routine		-----	Before: opening Door/Gate Closing Door/Gate	W
	02			Power down then power up		F
E82	01	Dynamic routine	Damping test failed	-----	After power down then every 24hrs when Door/Gate is closing	W
	02			Power down then power up		F
E83	01	Static routine	Motor current test failed	-----	Test occurs at the door closed position	W
	02			1. Power down then power up again 2. If problem is not resolved, turn the “ForceSlam potentiometer adjuster” fully counterclockwise. 3. If the problem still is not resolved, replace the faulty control and or motor operator.		F

SECTION XIV
TERMINAL CONNECTIONS
AND
WIRING SCHEMATICS

XIV.1 TERMINAL CONNECTION CHART

Terminal	Description	Connector	Description
X101	Opening command outside (OEO)	8	24VDC
		9	OEO
		10	GND
X101	Opening command inside (OEI)	11	24VDC
		12	OEI
		13	GND
X102	Key Operated Switch	1	24VDC
		2	KEY
		3	GND
X103	Plug in connection to the Power Supply Unit	N/A	N/A
X104	Programmable Emergency Close or Open or Stop	4	EmA
		5	EmB
X105	Safety Devise Stop	14	SE 24V
		15	SE Stop
		16	SE Test
		17	GND
X106	Jumper	N/A	N/A
X107	Safety Devise Reverse	18	SE 24V
		19	SE Rev
		20	SE Test
		21	GND
X108	Electric Lock	27	EL 24V
		28	GND
		29	EL-COM
		30	EL-NO
		31	EL-NC
		32	EL-Fb
X110	External Program Selector (three position Rocker Switch or Optional Key Switch P/N: M10S.0100) used to activate preprogrammed options	SA	Auto
		SL	Locked
		SO	Hold Open
		SM	Manual
		SW	One Way
		SG	GND

Terminal	Description	Connector	Description
X111	Present Sensor (Sensor is only checked before the door moves)	PU	Programmable I/O Voltage
		PI	Programmable Input
		PO	Programmable Output
		PG	GND
X113	Connection to the Encoder	N/A	N/A
X114	Power/Program Selector Switch	N/A	N/A
X115	Serial Port	N/A	N/A
X116	Connection to the Relay PCB Board	N/A	N/A
X117	Can Bus (for dual door installation)	CG	GND
		CL	CAN Low
		CH	CAN High
X118	USB/Service	N/A	N/A

XIV.2 WIRING SCHEMATIC DIAGRAMS

Fig X.2a 3-Function Switch Wiring Diagram (Rocker Arm and Key type switches)

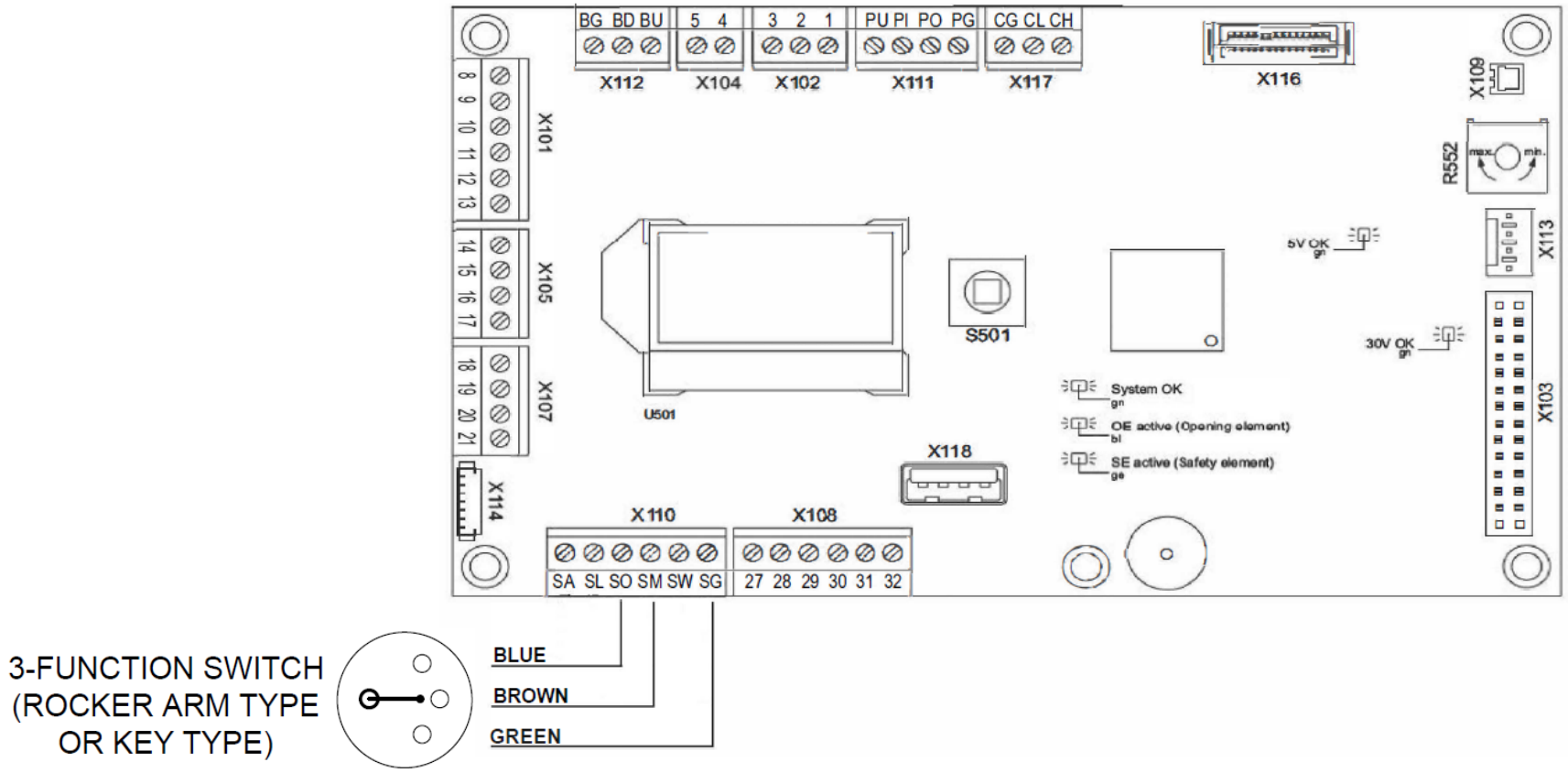


Fig XIV.2b Non-Powered Activation Devices

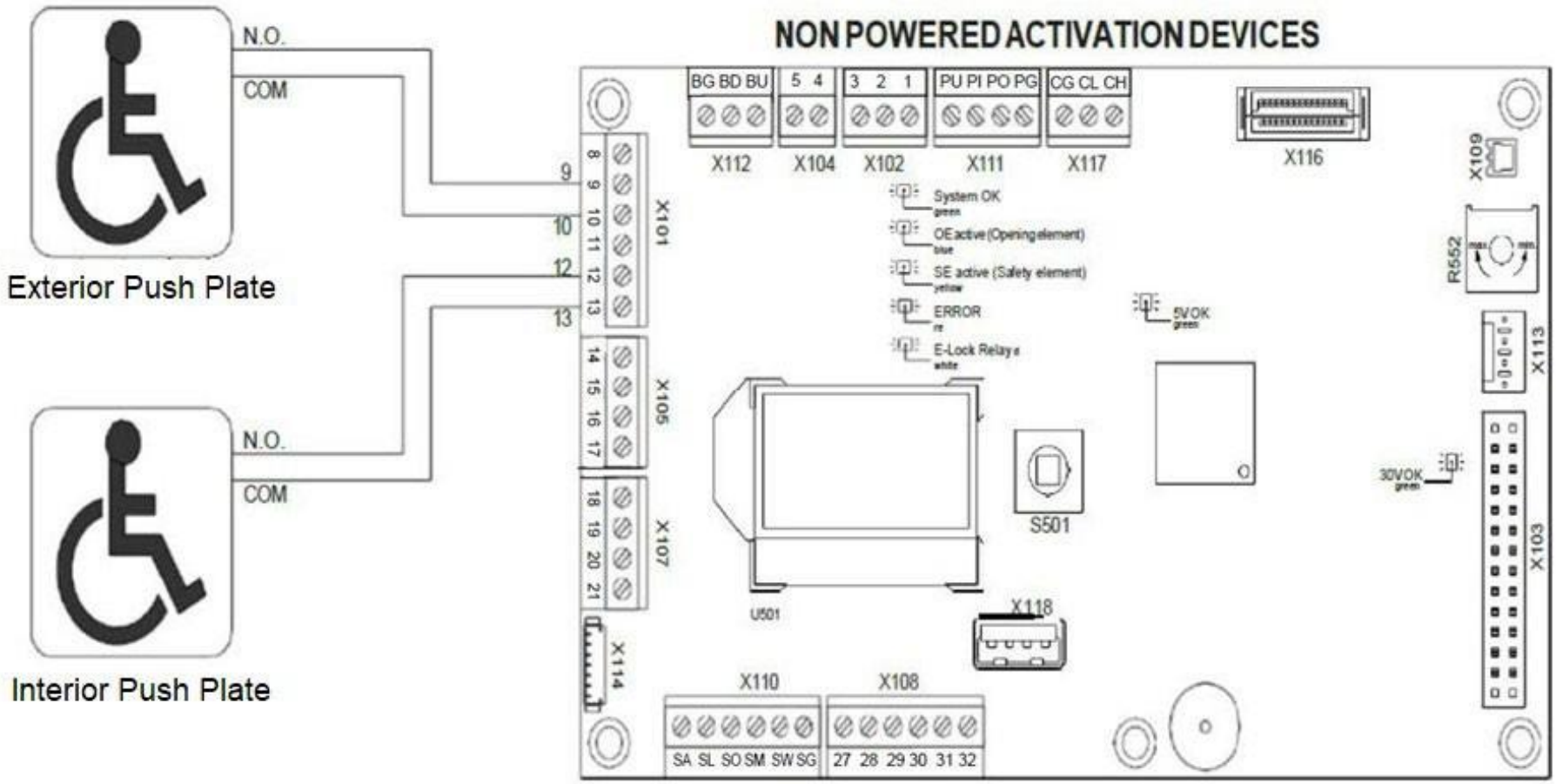
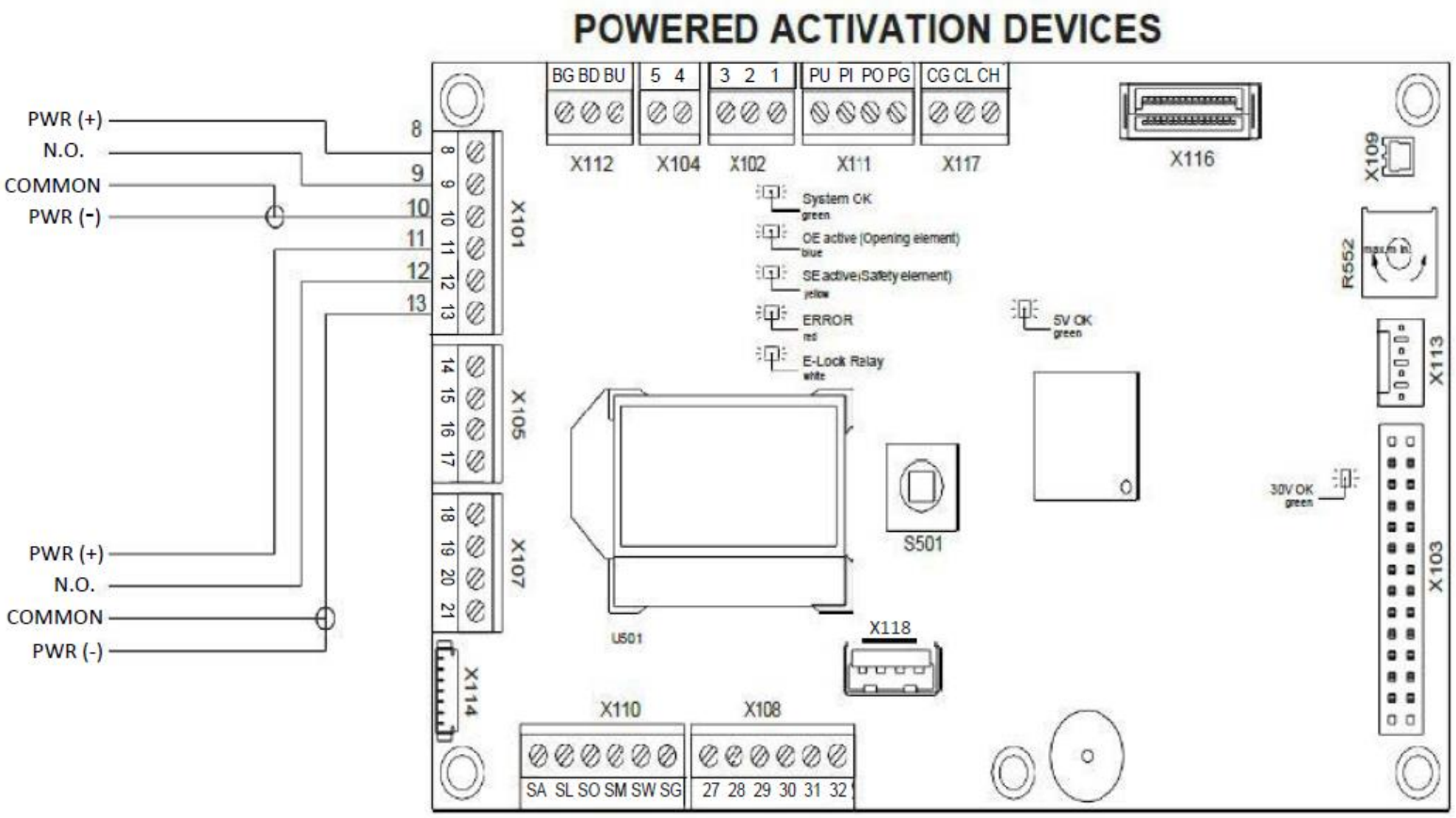


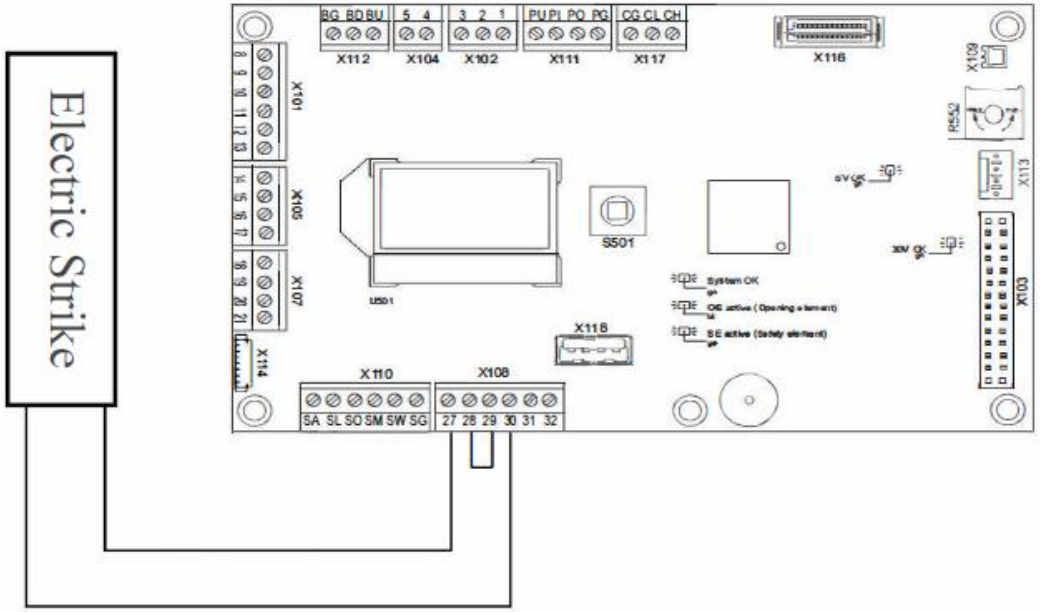
Fig XIV.2c Powered Activation Devices



NOTE: Do not exceed 2A 24V draw from the Board. TORXUN recommends one board powered accessory only. Others should be powered by independent power supplies.

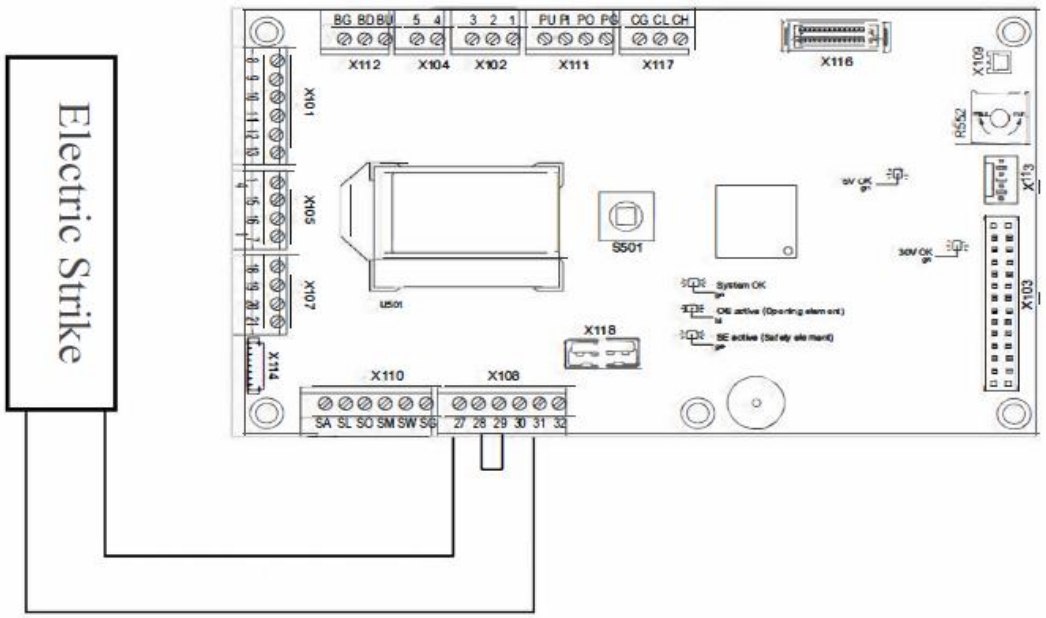
Fig XIV.2d Locking Devices Powered by the AutoPed Operator

1. FAIL SECURE: Powered by Control Board
   Configuration Settings:
   Unlock : Permanent
   EL-FB (Electric Lock - Feedback : N.C.
   LockAu (Lock Automatic) : Lock
   LockEx (Lock Exit): Lock
   LockMa (Lock Manual) : Lock



NOTE: Do not exceed 2A 24V draw from the Board. TORXUN recommends one board powered accessory only. Others should be powered by independent power supplies

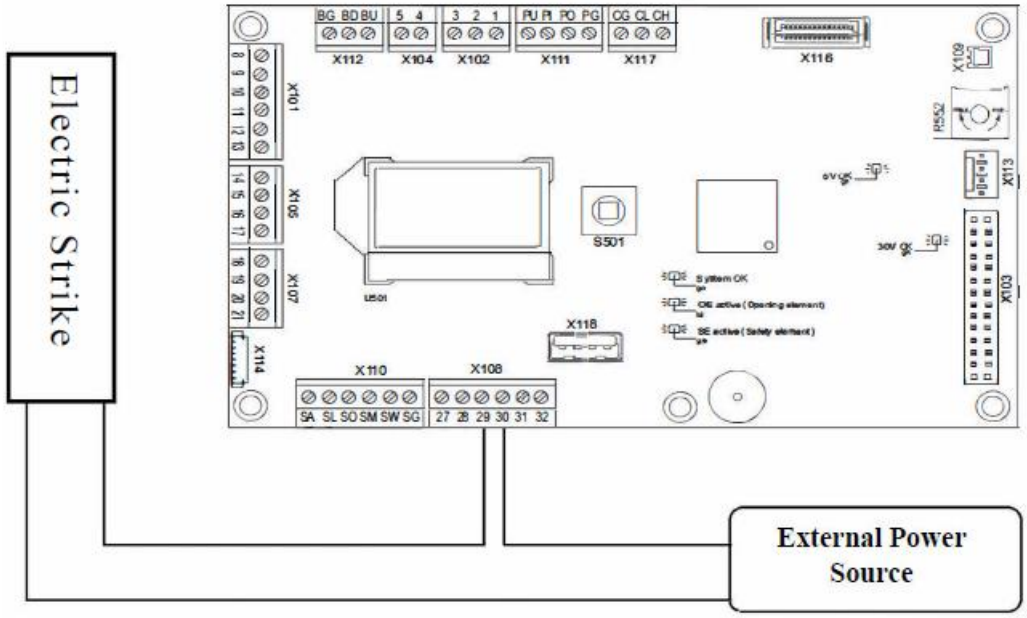
2. FAIL SAFE: Powered by Control Board
   Configuration Settings:
   Unlock : Permanent
   EL-FB (Electric Lock – Feedback) : N.C.
   LockAu (Lock Automatic) : Lock
   LockEx (Lock Exit): Lock
   LockMa (Lock Manual) : Lock



NOTE: Do not exceed 2A 24V draw from the Board. TORXUN recommends one board powered accessory only. Others should be powered by independent power supplies

Fig XIV.2e Locking Devices Powered by Another Source (not powered by AutoPed Operator)

1. FAIL SECURE: Powered by External Source
   Power to Lock: 24 VDC, 800 mA Max
   Configuration Settings:
   Unlock : Permanent
   EL-FB (Electric Lock – Feedback): N.C.
   LockAu (Lock Automatic): Lock
   LockEx (Lock Exit): Lock
   LockMa (Lock Manual): Lock



2. FAIL SAFE: Powered by External Source
Power to Lock: 24 VDC, 800 mA Max
Configuration Settings:
Unlock : Permanent
EL-FB (Electric Lock – Feedback): N.C.
LockAu (Lock Automatic): Lock
LockEx (Lock Exit): Lock
LockMa (Lock Manual): Lock

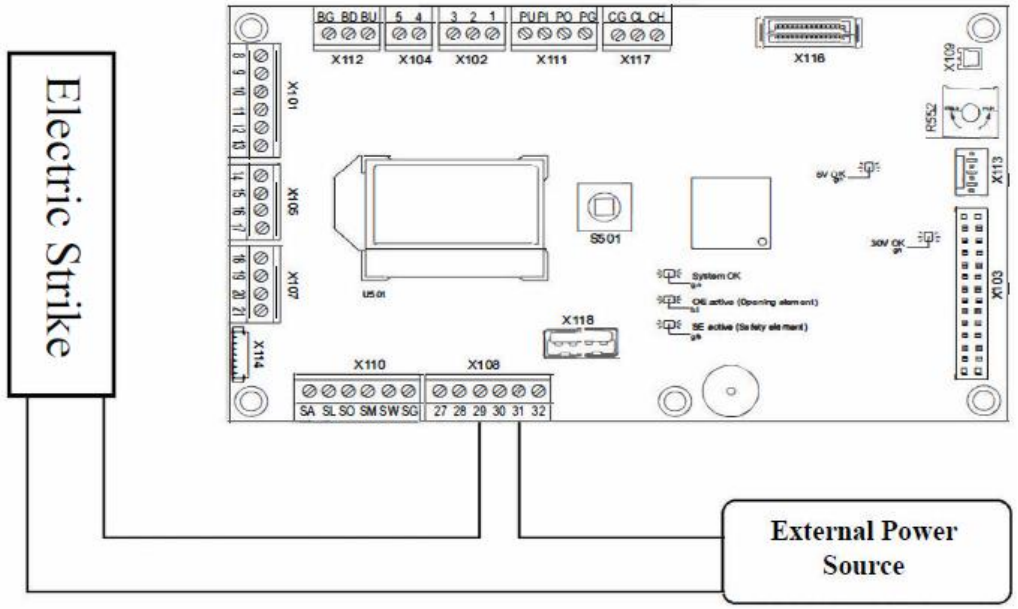


Fig XIV.2f Secured Activation Devices

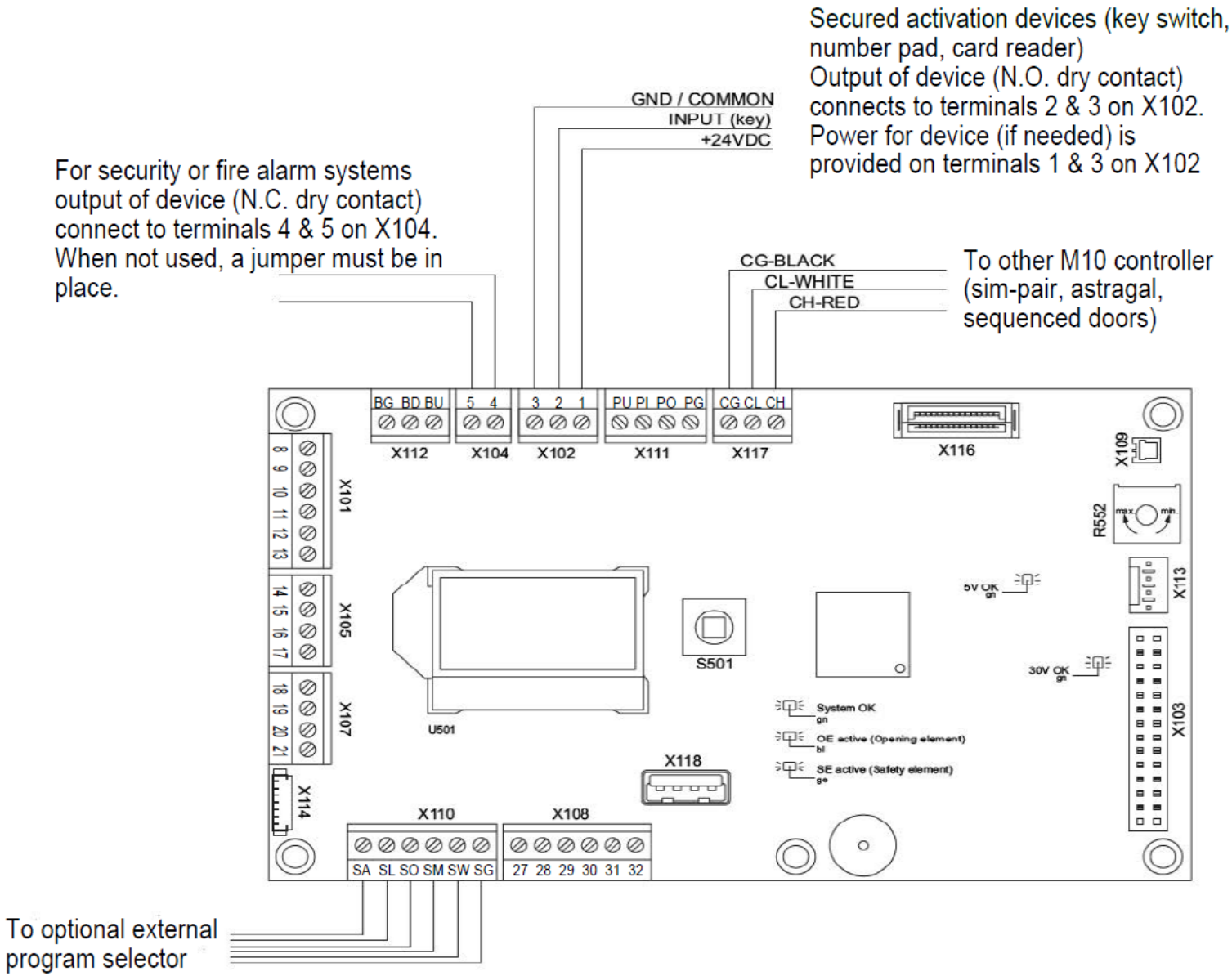
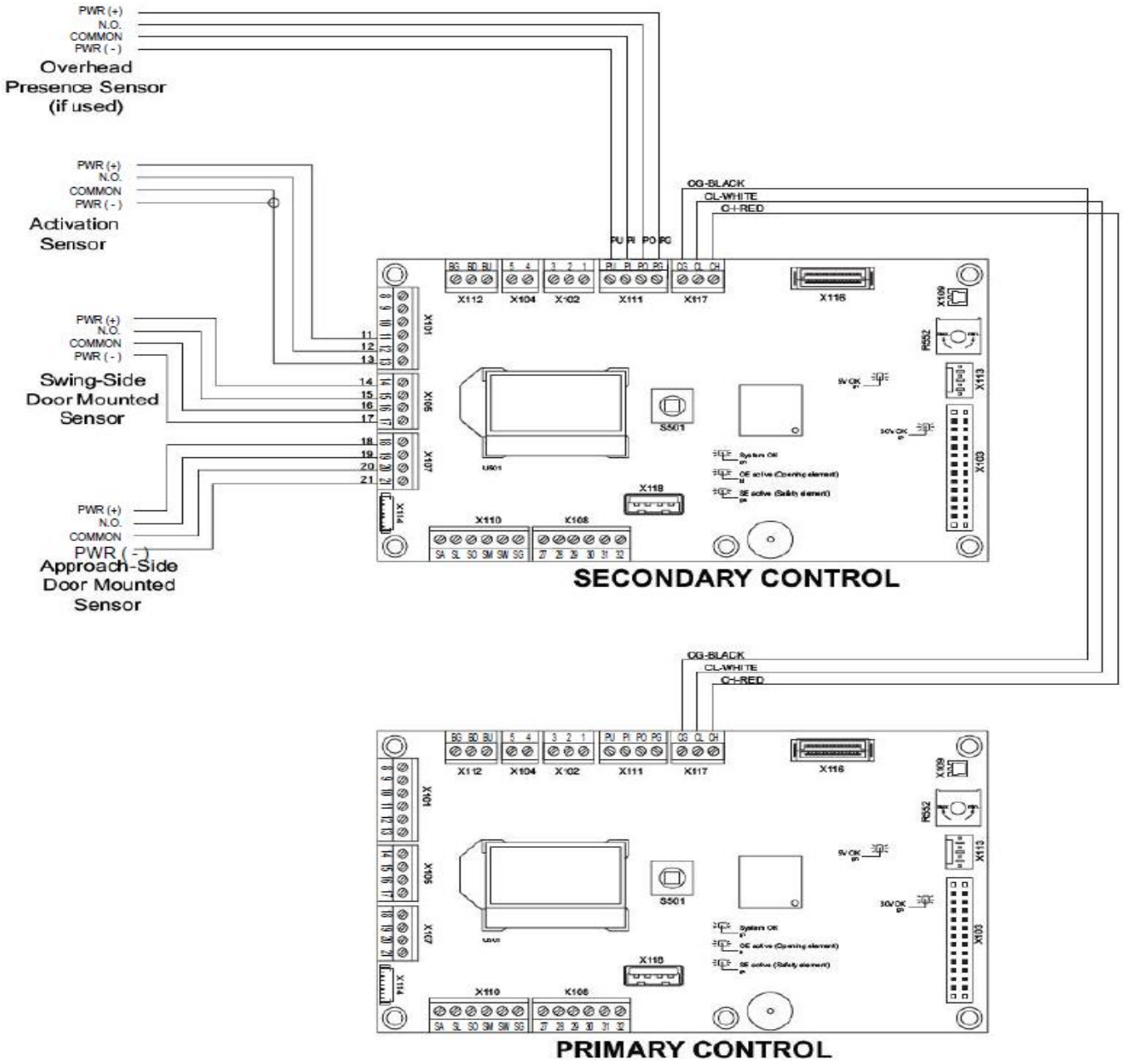
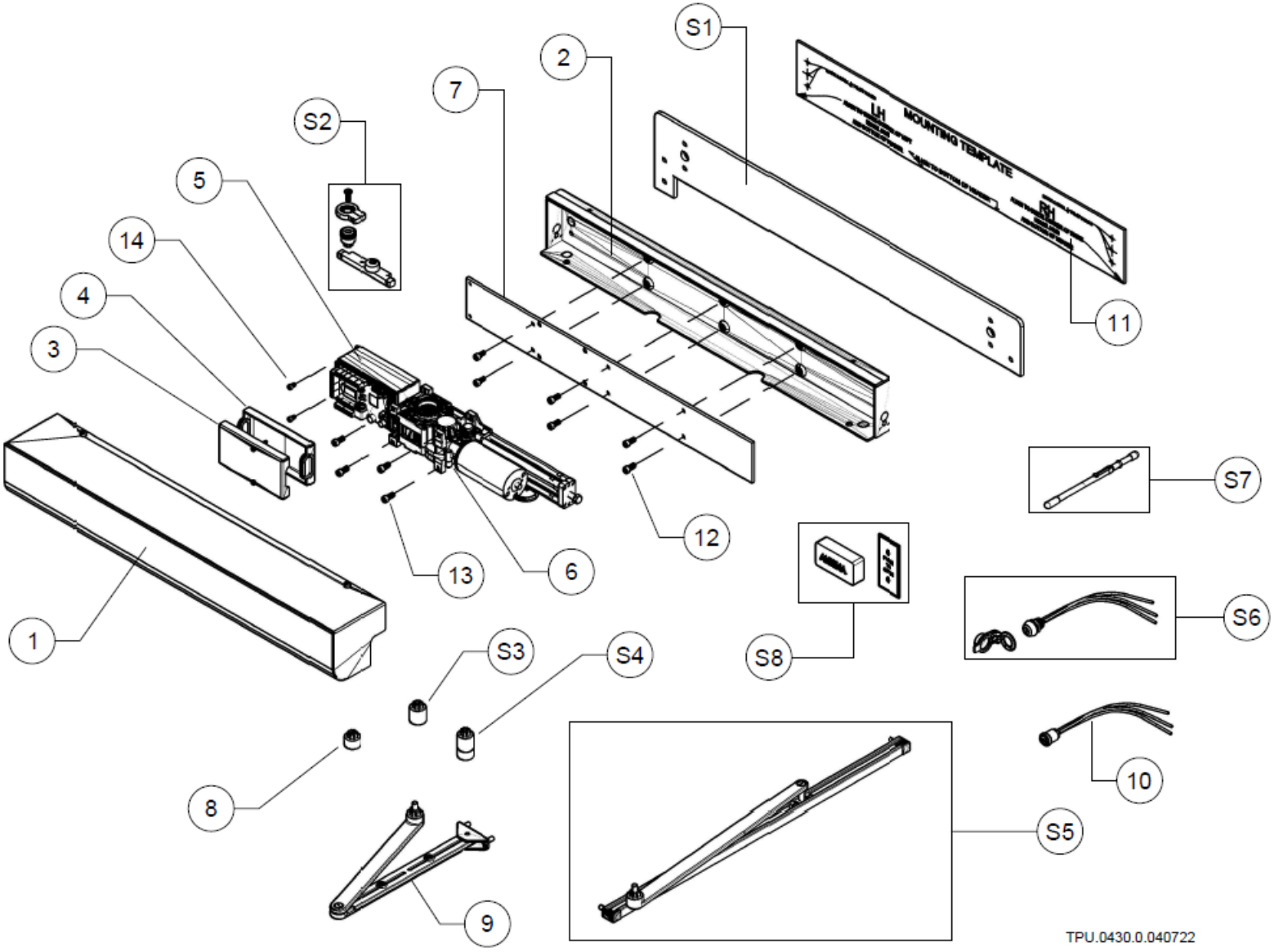


Fig XIV.2g Wiring for Double Door/Gate System



SECTION XV
SERVICE PARTS

XV.1 SERVICE PARTS/COMPONENTS VISUAL GUIDE



XV.2 STANDARD PARTS LIST

ITEM#	TORXUN PART NUMBER	DESCRIPTION	QTY
1	M10S.0001 REV A	ENCLOSURE - FRONT COVER	1
2	M10S.0001 REV A	ENCLOSURE - CHASSIS	1
3	M10S.0020	CONTROL UNIT FRONT COVER	1
4	M10S.0019	CONTROL UNIT REAR COVER	1
5	M10S.0022	CONTROL UNIT	1
6	M10S.0021	MOTOR-GEARBOX ASSEMBLY	1
7	M10S.0010	MOUNTING PLATE	1
8	M10S.0017	SPINDLE EXTENSION 20MM	1
9	M10S.0028	STANDARD SWING ARM ASSY	1
10	M10S.0092	3-FUNCTION ROCKER SWITCH	1
11	M10S.0034	PAPER MOUNTING TEMPLATE	1
12	M10S.0056	M6 -1 x12 (fastens mounting plate to chassis)	6
13	M10S.0026	M6 -1 x 18 (fastens gearbox to mounting plate)	4
14	M10S.0027	M4 x 10 (fastens control unit box to mounting plate)	2

XV.3 OPTIONAL PARTS LIST

ITEM#	TORXUN PART NUMBER	DESCRIPTION	QTY
S1	M10S.0011	STIFFENERPLATE	1
S2	M10S.0040	POSITIVE STOP KIT	1
S3	M10S.0018	EXTENSION SPINDLE 30MM	1
S4	M10S.0055	EXTENSION SPINDLE 50MM	1
S5	M10S.0039	TRACK ARM ASSEMBLY	1
S6	M10S.0083	3-FUNCTION KEY SWITCH WITH SAFETY COVER	1 SET
S7	9700.0001	DOOR PRESSURE GAUGE TOOL	1
S8	9750-0004, 9750-0006, 9750-0008	RADIO FREQUENCY ANTENNA KIT	1 SET

SECTION XVI
PRODUCT WARRANTY
AND
REGISTRATION

XVI.1. TORXUN LIMITED WARRANTY

To the original purchaser only: TORXUN Vehicle Access Technologies, (hereafter referred to as TORXUN) warrants, for one (1) year from the date of invoice, the gate operator systems and other related systems and equipment manufactured by, and distributed by TORXUN, to be free from defects in material and workmanship under normal use and service for which it was intended provided it has been properly installed and operated. TORXUN's obligations under this warranty shall be limited to the repair or exchange of any part or parts manufactured by and distributed by TORXUN. Defective products must be returned to TORXUN, freight prepaid by purchaser, within the warranty period. Items returned will be repaired or replaced, at TORXUN's option, upon an examination of the product by TORXUN, which discloses, to the satisfaction of TORXUN, that the item is defective. TORXUN will return the warranted item freight prepaid. The products manufactured by TORXUN and distributed by TORXUN are not warranted to meet the specific requirements, if any, of safety codes of any state, municipality, or other jurisdiction, and TORXUN does not assume any risk or liability whatsoever resulting from the use thereof, whether used singly or in combination with other machines or apparatus.

Any products and parts not manufactured by TORXUN and distributed by TORXUN, will carry only the warranty, if any, of the manufacturer. This warranty shall not apply to any products or parts thereof which have been repaired or altered, without TORXUN's written consent, outside of TORXUN's workshop, or altered in any way so as, in the judgment of TORXUN, to affect adversely the stability or reliability of the product(s) or has been subject to misuse, negligence or accident, or has not been operated in accordance with TORXUN's instructions or has been operated under conditions more severe than, or otherwise exceeding, those set forth in the specifications for such product(s). TORXUN shall not be liable for any loss or damage whatsoever resulting, directly or indirectly, from the use or loss of use of the product(s). Without limiting the foregoing, this exclusion from liability embraces a purchaser's expenses for downtime or for making up downtime, damages for which the purchaser may be liable to other persons, damages to property, and injury to or death of any persons. TORXUN neither assumes nor authorizes any person to assume for them any other liability in connection with the sale or use of the products of TORXUN. The warranty herein- above set forth shall not be deemed to cover maintenance parts, including, but not limited to, hydraulic oil, filters, batteries, or the like. No agreement to replace or repair shall constitute an admission by TORXUN of any legal responsibility to effect such replacement, to make such repair, or otherwise. This limited warranty extends only to wholesale customers who buy directly through TORXUN's normal distribution channels. TORXUN does not warrant its products to end consumers. Consumers must inquire from their selling dealer as to the nature and extent of that dealer's warranty, if any.

This warranty is expressly in lieu of all other warranties expressed or implied including the warranties of merchantability and fitness for use. This warranty shall not apply to products or any part thereof which have been subject to accident, negligence, alteration, abuse, or misuse or if damage was due to improper installation or use of improper power source, or if damage was caused by fire, flood, lightning, electrical power surge, explosion, wind storm, hail, aircraft or vehicles, vandalism, riot or civil commotion, or acts of God.

XVI.2 PRODUCT REGISTRATION

Date Today:_____

End User Location & Information

First Name, Last Name	
Company/ Association	
Street Address	
City	
State	
Zip Code	
Telephone	
Email Address	

Installer Information

Company Name	
First Name, Last Name	
Street Address	
City	
State	
Zip Code	
Telephone	
Email Address	

Product Information

Model Name/ Number	
Serial Number	
Purchase Date	
Installation Date	
Distributor's Name	
Distributor's City	

Operator and Gate Use

[ ] Residential	**[ ]** Commercial/ Multi-Family
[ ] Restricted Access Facility	**[ ]** Parking Spaces Inside Garage

Fax or Email this completed form to:

TORXUN ™
50 Sloan Court
Tracy, CA 95304
Fax: 888-492-4283
Email: sales@TORXUN.com