Installation and Wiring Instructions for the TL- Prefix SARGuide Illuminated Touchpad for 80 Series Exit Devices to ElectroLynx™ Connector System

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ASSA ABLOY

U.S. Patent No. 7,204,050

For assistance, contact SARGENT at 800-810-WIRE (9473) or www.sargentlock.com

A. Function

The SARGuide exit device contains an illuminated touchpad to enhance the visibility of exit locations in dark or smoke-filled passages and is intended as a supplement to existing codes for egress lighting.

B. Important

1. **Caution:** Disconnect all input power before beginning installation to prevent electrical shock and equipment damage.
2. Installer must be a trained, experienced service person.
3. All wiring must comply with applicable local electrical codes, ordinances and regulations.

4 2
3 1

1, Violet (-24)
2, Grey (+24)

EXIT EXIT EXIT

SARGuide TL- 80 Series Rail
with 4-pin connector
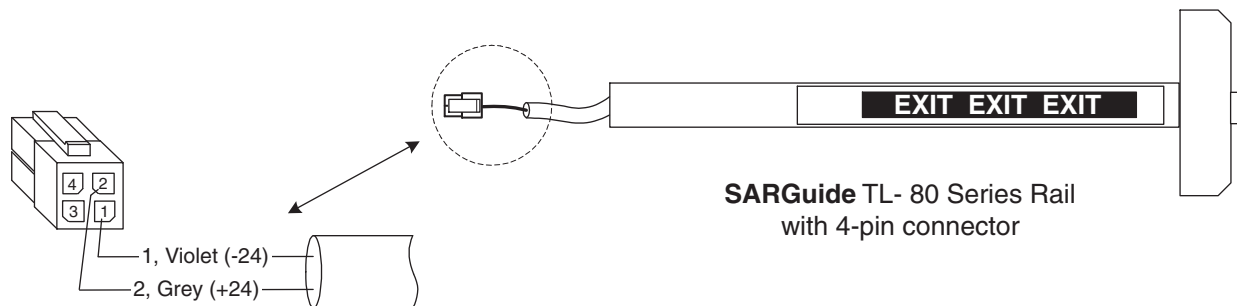
C. ElectroLynx Connector System Notes:

The system is designed to be installation friendly with connectors from the electric hinge through the door to the rail. The only wiring required is to the loose wires on the pigtail harness assembly on the frame side of the electric hinge.

IMPORTANT:
The plug and receptacle connectors are designed to mate and lock together as shown in the figure. Plug the connectors into each other with the locking mechanism aligned as indicated.
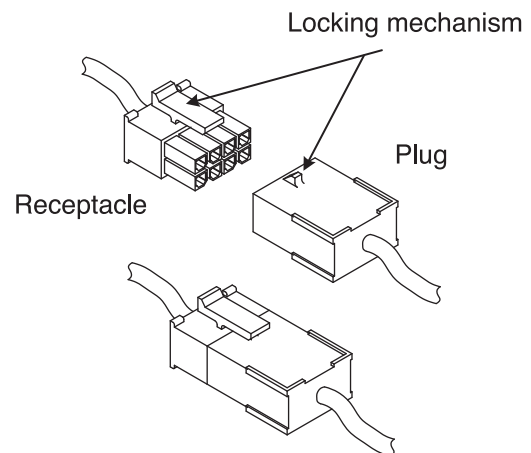
Do NOT force connectors on any other way.

Locking mechanism

Plug

Receptacle

D. Installation Notes

1. With new applications, a raceway harness with 8 & 4-pin connectors will be pre-installed inside door by ASSA ABLOY door manufacturer when specified during ordering process. Raceway harness kits are also available for retrofit applications. For retrofit applications, refer to retrofit instructions.

2. If door does not have a raceway harness with connectors, either consult factory for raceway retrofit kit, or cut the connectors off product and hard wire as required.

2. Wiring to pigtail harness is per facility wiring requirement. The rail, raceway, electric hinge and pigtail connector terminations and wire colors all match.

1

E. TL- SARGuide Exit Device Installation

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Mounting bracket

Screw location

1" dia hole in door

Pigtail harness assembly with 8-pin connector ④

① EXIT EXIT EXIT

TL- SARGuide 80 Series Rail with 4-pin connector

②

Electric Hinge with 8-pin connector ③

4 to 8-pin patch cable (see note 2)

Raceway harness with 8 & 4-pin connectors. The 4-pin connectors are not used here.
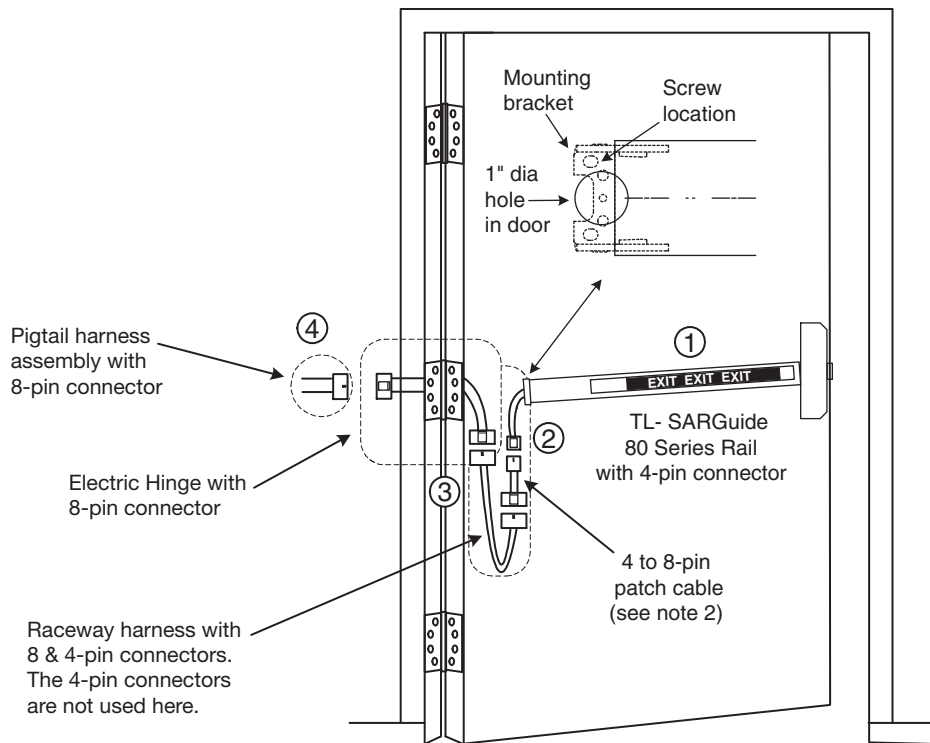
1. Mount exit device per instruction sheet provided.

2. TL- (SARGuide) only <u>without</u> other rail wiring requirements - Install 4 to 8-pin patch cable between the rail and raceway connectors.

   TL- (SARGuide) <u>with</u> other rail wiring requirements - Do NOT install 4 to 8-pin patch cable.

   Refer to the wiring diagrams on the following pages.
   If additional electrical functions exist, plug rail 8 & 4-pin connectors into raceway connectors. Feed harnesses through 1" hole in door. Install rail mounting bracket with two screws supplied. Install rail insert and end cap.

To insure trouble free operation, check that the push rail can be fully depressed.
On vertical rod exit devices, adjust rods and check that the latch bolts do not go into hold back position until the push rail is fully depressed.

3. Plug raceway connector(s) into electric hinge connector(s), then feed through door prep. Mount electric hinge to door.

4. Go to (A) if wiring now. Go to (B) if wiring is to be done later.

   A. Refer to wiring examples. Wire loose frame side wires to loose wires on pigtail harness as required, using connectors allowed by local code. Plug pigtail harness connector(s) into electric hinge connector(s). Feed harnesses through frame prep and mount electric hinge. Apply power and test exit device

   B. Plug pigtail harness connector(s) into electric hinge connector(s). Feed harnesses through frame prep and mount electric hinge.

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Sample Wiring #1 – TL- Prefix SARGuide and 3532 Power Supply and Battery Back-up
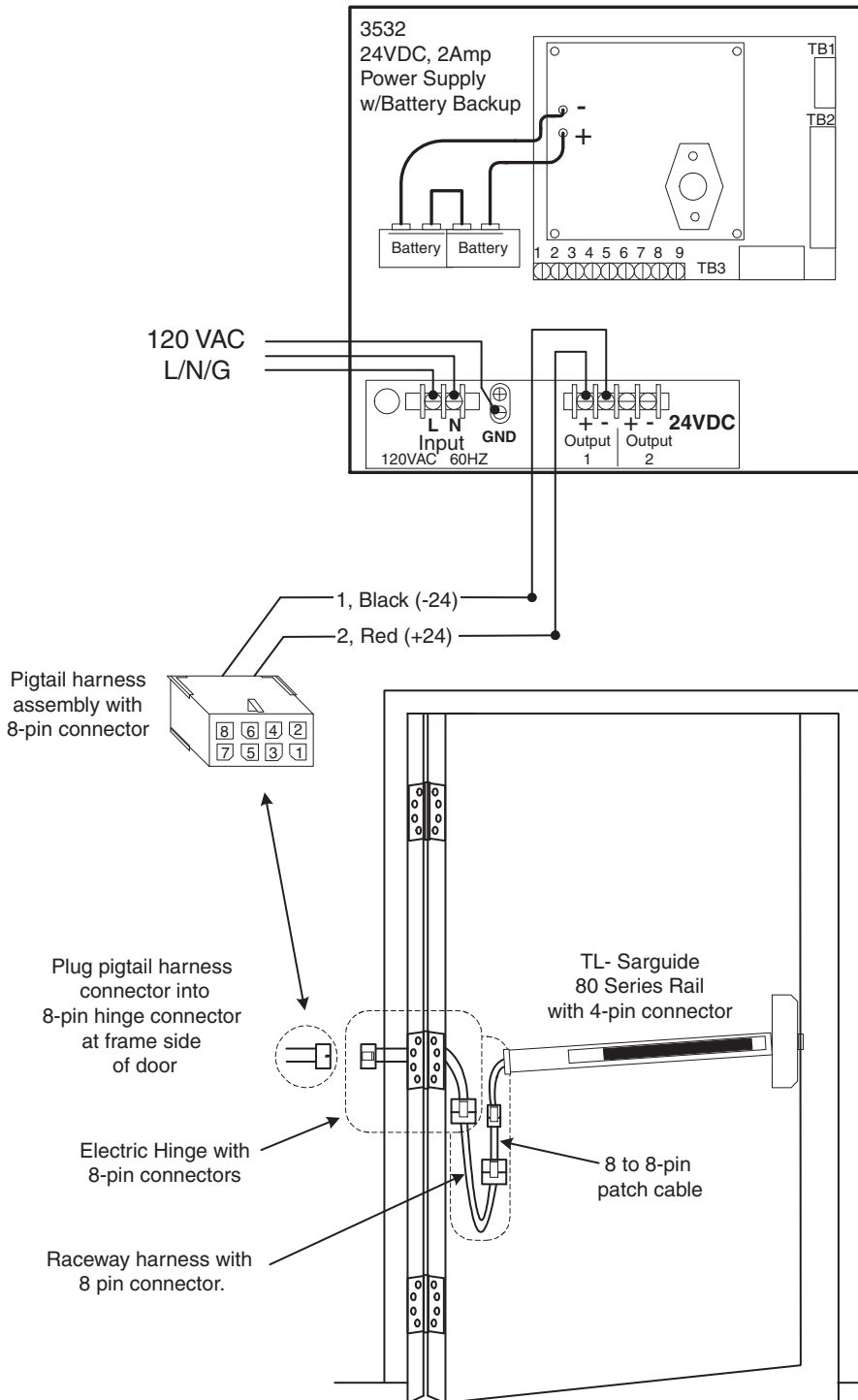
3532
24VDC, 2Amp
Power Supply
w/Battery Backup

TB1

TB2

−
+

Battery Battery

1 2 3 4 5 6 7 8 9   TB3

120 VAC
L/N/G

L N ⊕
Input GND
120VAC 60HZ

+ − + − **24VDC**
Output Output
1   2

1, Black (-24)

2, Red (+24)

Pigtail harness
assembly with
8-pin connector

8 6 4 2
7 5 3 1

System Description:
SARGuide is always powered. During a power outage SARGuide remains powered and illuminated by 3532 battery back-up power.

Plug pigtail harness
connector into
8-pin hinge connector
at frame side
of door

TL- Sarguide
80 Series Rail
with 4-pin connector

Electric Hinge with
8-pin connectors

8 to 8-pin
patch cable

Raceway harness with
8 pin connector.

Notes:

1. TL- SARGuide power requirement:
   Input Power: 24VDC/VAC
   Current draw: 30mA

2. Pigtail harness, raceway and electric hinge 8-pin connector terminations and wire colors all match.

3. 4 to 8-pin patch cable converts TL- 4-pin connector pins 1 & 2 to 8-pin connector pins 1 & 2.

4. Wire to pigtail harness assembly as shown then plug pigtail connector into hinge connector.

F. TL- SARGuide Wiring Examples cont'd

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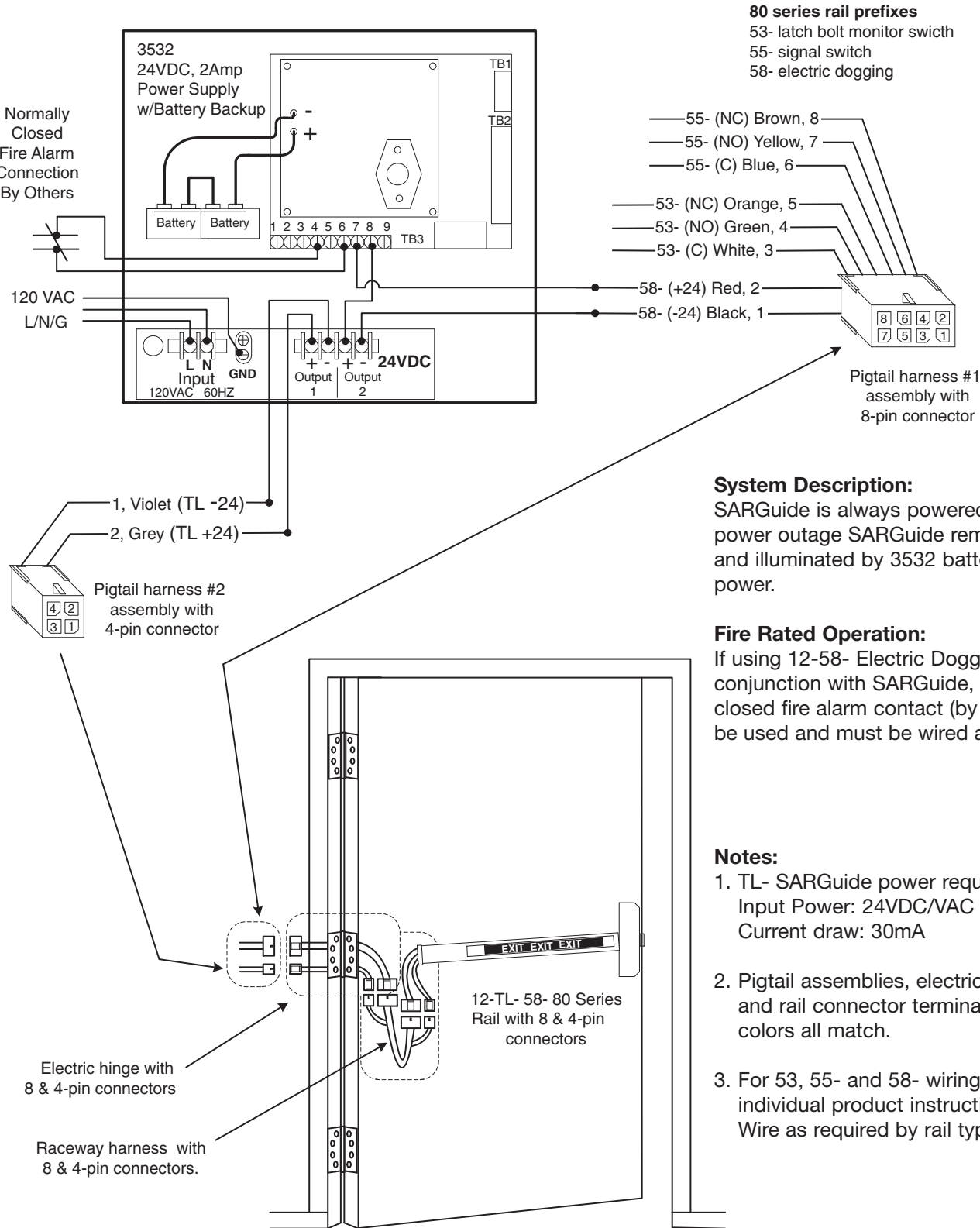**ASSA ABLOY**

Sample Wiring #2 – TL- (SARGuide) with 12- 58- (Electric Dogging) combination and 3532 Power Supply with Battery Back-up. 53-, 55- wiring if required.

80 series rail prefixes
53- latch bolt monitor swicth
55- signal switch
58- electric dogging

3532
24VDC, 2Amp
Power Supply
w/Battery Backup

TB1

TB2

Normally
Closed
Fire Alarm
Connection
By Others

-
+

Battery   Battery

1 2 3 4 5 6 7 8 9   TB3

55- (NC) Brown, 8
55- (NO) Yellow, 7
55- (C) Blue, 6

53- (NC) Orange, 5
53- (NO) Green, 4
53- (C) White, 3

58- (+24) Red, 2
58- (-24) Black, 1

120 VAC
L/N/G

L N   GND
Input
120VAC 60HZ

+ -   + -   **24VDC**
Output   Output
1   2

8 6 4 2
7 5 3 1

Pigtail harness #1
assembly with
8-pin connector

1, Violet (TL -24)
2, Grey (TL +24)

System Description:
SARGuide is always powered. During a power outage SARGuide remains powered and illuminated by 3532 battery back-up power.

4 2
3 1

Pigtail harness #2
assembly with
4-pin connector

Fire Rated Operation:
If using 12-58- Electric Dogging in conjunction with SARGuide, a normally closed fire alarm contact (by others) must be used and must be wired as shown.

EXIT EXIT EXIT

12-TL- 58- 80 Series
Rail with 8 & 4-pin
connectors

Notes:
1. TL- SARGuide power requirement:
   Input Power: 24VDC/VAC
   Current draw: 30mA

2. Pigtail assemblies, electric hinge, raceway and rail connector terminations and wire colors all match.

Electric hinge with
8 & 4-pin connectors

Raceway harness with
8 & 4-pin connectors.

3. For 53, 55- and 58- wiring also refer to individual product instructions provided. Wire as required by rail type used.

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Sample Wiring #3 – TL- (SARGuide) with 57- (Delayed Egress) combination and 3532 Power Supply with Battery Back-up.

3532
24VDC, 2Amp
Power Supply
w/Battery Backup

TB1

TB2

Battery Battery

1 2 3 4 5 6 7 8 9   TB3

120 VAC
L/N/G

L N
Input
120VAC 60HZ

GND

Output
1

Output
2

System Description:
SARGuide and the 57- Delayed Egress device are always powered. During a power outage, SARGuide remains powered and illuminated and the 57- Delayed Egress device remains powered by the 3532 battery back-up power.

Red (+24), 2

Normally Closed Fire
Alarm Contact
(If Required)

7, Brown, Mag (-)

8, Yellow, Mag (+)

White (FA), 3

Blue (DS), 6

Black (-24), 1

Green (EG), 4

8 6 4 2
7 5 3 1

**To
57-**

Pigtail harness
assembly with
8-pin connector

1, Violet (-24)

2, Grey (+24)

**To
TL-**

4 2
3 1

Pigtail harness
assembly with
4-pin connector

Red (+)

Black (-)

1584
Electromagnetic
Lock

Plug pigtail harness
connectors into
electric hinge
connectors
at frame side
of door

EXIT EXIT EXIT

Electric hinge with
8 & 4-pin connectors

TL- 57- 80 Series Rail
with 8 & 4-pin
connectors

Raceway harness with
8 & 4-pin connectors

Notes:
1. TL- SARGuide power requirement:
   Input Power: 24VDC/VAC
   Current draw: 30mA

2. Rail, raceway, electric hinge and pigtail
   8 & 4-pin connector terminations and wire
   colors all match.

3. If fire alarm is not required, connect the
   white wire to the black (-24VDC) wire.

4. The fire alarm contact could be wired to
   drop 24DC power to 57- portion of rail.
   Refer to 3530 power supply instructions
   for wiring.

5. Refer to 57- instructions for wiring,
   specifications, operation, etc.

F. TL- SARGuide Wiring Examples cont'd

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Sample Wiring #4 – TL- Prefix (SARGuide) with Solenoid Exit Trim (ET) and 3532 Power Supply and Battery Back-up

SARGuide is always powered. During a power outage SARGuide remains illuminated by 3532 battery back-up power. The 3532 power supply also provides battery back-up power to the solenoid exit trim (ET), which is used to control access.

3532
24VDC, 2Amp
Power Supply
w/Battery Backup

TB1
TB2

Battery   Battery

1 2 3 4 5 6 7 8 9   TB3

Typical wiring to fail secure ET shown. Refer to 773-6 ET instructions for wiring requirements, specifications, etc.

NO
C
NC
*Switch or relay contacts

120 VAC
L/N/G

L N   GND
Input
120VAC 60HZ

+ -   + -   **24VDC**
Output Output
1   2

1, Black (TL **-**24)
2, Red (TL **+**24)

1, Black (773-6 ET)
2, Red (773-6 ET)

8 6 4 2
7 5 3 1

Pigtail harness #2 assembly with 8-pin connector

Pigtail harness #1 assembly with 8-pin connector

8 6 4 2
7 5 3 1

Raceway harness #2 with 8 & 4-pin connectors. The 4-pin connectors are not shown or used here.

Electric Hinge #2 with 8-pin connectors

773,774, 775 or 776 Solenoid ET with 8-pin connector. Plug into raceway connector.

2, Red (+)
1, Black (-)

EXIT EXIT EXIT

TL- SARGuide 80 Series Rail with 4-pin connector

4 to 8-pin patch cable

Electric hinge #1 with 8-pin connectors

Raceway harness #1 with 8 & 4-pin connectors. The 4-pin connectors are not used here

Notes:

1. Pigtail harness, raceway and electric hinge 8-pin connector terminations and wire colors all match.

2. Typical raceway locations shown. Location may vary depending on door type.

3. 4 to 8-pin patch cable converts TL- 4-pin connector pins 1 & 2 to 8-pin connector pins 1 & 2.

4. Wire to pigtail harness assembly as shown. Then plug pigtail connector into hinge connector.

6

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