Stanley Access Technologies **Quick-Reference Guide**



Solenoid Lock Installation Instructions Quick-Reference Guide 203820

Rev. G, 3/14/09

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Stanley Access Technologies

Quick-Reference Guide

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1. PURPOSE

1.1 **Discussion**

This manual provides removal and installation instructions for the Stanley solenoid lock assembly (Figure 1). The manual also provides instructions for replacing the following solenoid lock assembly components:

- The solenoid
- Switch S1, S2, and S3
- The latch, pawl, or cam

This manual provides information primarily for MC521 wiring. For additional information refer to the following manuals:

- Stanley Access Technologies Manual No. 204003, "MC521 Controller Installation and Operation Manual"
- Stanley Access Technologies Manual No. 203832, "Access Control Console Operation/Installation Manual"
- Stanley Access Technologies Manual No. 203973, "Double Diamond Sliding Door Installation Instructions Quick-Reference Guide"
- Stanley Access Technologies Manual No. 203913, "IS10000 Sliding Door Installation Instructions Quick-Reference Guide"

For solenoid locks (only MC521 compatible) replacement parts, refer to Attachment 1.

The solenoid lock assembly is an optional electrical lock installed on Dura-Glide door packages. The lock is available in left or right handing. The handing of the lock *cannot* be changed in the field.

Lock switch S3 is used for closed position status. Lock switches S1 and/or S2 are used for Double Diamond telescopic sliding doors or when the optional closed and locked status kit (part number 313948) is added. The closed and locked status is standard with the Remote Access Control. A lock strike kit (part number 313986) is required on Dura-Glide 5200/5300 sliding doors for retrofit.

Solenoid locks operate in a "fail safe" or "fail secure" mode. In the "fail safe" mode, the door will unlock upon loss of electrical power to the door. In the "fail secure" mode, the door will lock upon loss of electrical power to the door.

The MC521 solenoid lock retrofit kits can be obtained using the following part numbers:

Part Number	Handing	Mode	Control Box
313985-1	Right Hand	Fail Safe	MC521
313985-2	Left Hand	Fail Safe	MC521
313985-3	Right Hand	Fail Secure	MC521
313985-4	Left Hand	Fail Secure	MC521

203820 Rev. G, 3/14/09 2 of 15 The solenoid lock assembly is wired so that when the door "Enter" switch is set to the "Yes" or "Automatic" position the lock remains continuously unlocked. In this case both the inside and outside sensors will activate the door.

The solenoid lock assembly requires no adjustments. Lubrication of the assembly is described in Section 3.2.

If the lock is added to an existing door and security is required, Access Control (panic hardware) must be installed to make door fully secure.

1.2 Applicability

The instructions in this manual apply to solenoid lock assemblies installed on the following Stanley Dura-Glide door packages:

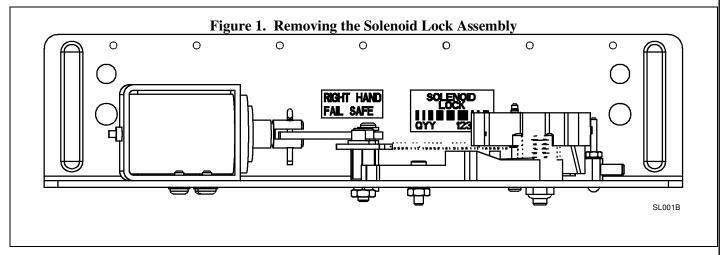
- Dura-Glide 2000-, 3000-, 5200- and 5300-series sliding doors
- Dura-Guard 2000- and 3000-series sliding doors
- Dura-Storm 3000-series sliding doors
- Double Diamond sliding doors
- IS10000 sliding doors

2. PREREQUISITES

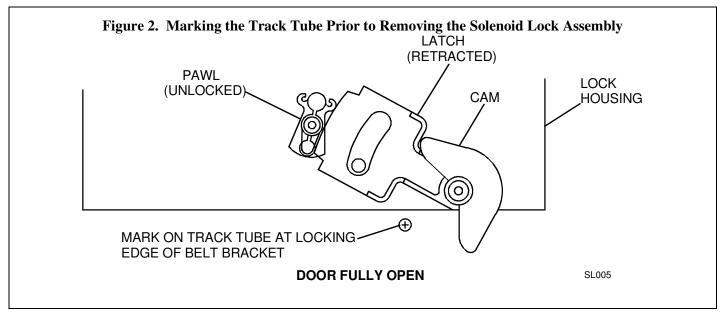
- 2.1 Protective barrier (caution/warning tape) has been set up to prevent unauthorized access to work area.
- 2.2 The packing list has been reviewed, and all required parts are included.
- 2.3 The following reference manuals have been obtained as applicable:
 - Stanley Access Technologies Manual No. 204003, "MC521 Controller Installation and Operation Manual"
 - Stanley Access Technologies Manual No. 203832, "Access Control Console Operation/Installation Manual"
 - Stanley Access Technologies Manual No. 203973, "Double Diamond Sliding Door Installation Instructions Quick-Reference Guide"
 - Stanley Access Technologies Manual No. 203913, "IS10000 Sliding Door Installation Instructions Quick-Reference Guide"

3. <u>INSTRUCTIONS</u>

- 3.1 Removing the Solenoid Lock Assembly
 - 3.1.1 DE-ENERGIZE electrical power to the door package.
 - 3.1.2 Manually SLIDE the door(s) to the open position. (If fully closed, it will be difficult for the technician to get to the lock. See Figure 1.)



3.1.3 Refer to Figure 2, and MARK the track tube at the locking edge of the belt bracket.



3.1.4 REMOVE the fasteners securing the lock to the header, and REMOVE the lock assembly and harness.

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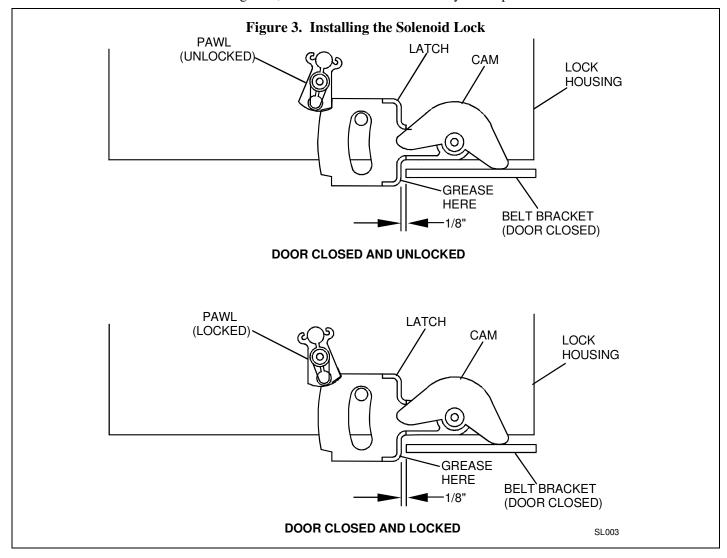
3.2 Installing the Solenoid Lock Assembly

- 3.2.1 Refer to Figure 2, and PERFORM the following:
 - POSITION the lock assembly in the header at the position shown.
 - ENSURE the lock assembly is aligned with the track tube mark from step 3.1.5.
- 3.2.2 INSTALL, but do not tighten, the fasteners securing the lock assembly to the header.

NOTE

If the latch does not retract into the position shown in Figure 1, the cam may have been manually rotated and its motion restricted by the switch rollers S2 and S3. Using a small screwdriver or similar tool, carefully press the two switch rollers to release the cam.

- 3.2.3 Manually RELEASE (UNLOCK) the pawl such that the latch retracts into the lock assembly housing.
- 3.2.4 Manually SLIDE the door(s) to the fully closed position.
- 3.2.5 Refer to Figure 3, and MOVE the lock assembly to the position shown.



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- 3.2.6 With the lock approximately $\frac{1}{8}$ " from the belt bracket, TIGHTEN the fasteners securing the lock assembly to the header.
- 3.2.7 APPLY a small amount of lubriplate grease or equivalent to the locking edge of the belt bracket and the corresponding latch surface.
- 3.2.8 Refer to Attachments 2 through 7 as applicable, and CONNECT solenoid lock assembly and applicable accessory component electrical wiring as required.
- 3.2.9 ENSURE all wiring is clear of the lock mechanism, the rear end of the solenoid plunger, and the belt and belt brackets.
- 3.2.10 VERIFY proper operation of the solenoid lock assembly as follows:
 - a. ENERGIZE electrical power to the door package.
 - b. CONFIGURE MC521 lock type to Fail Safe or Fail Secure as applicable.
 - c. OPEN and CLOSE the door several times, and ENSURE the following:
 - The solenoid lock functions properly.
 - Electrical wiring does not interfere with the operation of the lock.

3.3 **Replacing the Solenoid**

- 3.3.1 Refer to Section 1.1, and REMOVE the solenoid lock assembly from the header.
- 3.3.2 Refer to Attachment 1, and NOTE the location of the solenoid mounting holes.
- 3.3.3 REMOVE the four screws and lockwashers securing the solenoid to the lock housing.

NOTE

In most cases it will not be necessary to replace the solenoid plunger.

- 3.3.4 SLIDE the solenoid off the plunger, and ALLOW the plunger to remain connected to the mechanism.
- 3.3.5 POSITION the replacement solenoid onto the plunger.
- 3.3.6 Using the four screws and lockwashers, FASTEN the solenoid to the lock.
- 3.3.7 Refer to Section 3.2, and INSTALL the solenoid lock assembly into the header.

3.4 Replacing Switch S3 (Closed-Position Switch)

- 3.4.1 Refer to Section 1.1, and REMOVE the solenoid lock assembly from the header.
- 3.4.2 Refer to Attachment 1, and NOTE the following:
 - The orientation of the screws and lockwashers securing switch S3 to the solenoid lock assembly.
 - The electrical wiring to switches S3.
- 3.4.3 REMOVE the screws and lockwashers securing switch S3 to the solenoid lock assembly, and REMOVE switch S3.
- 3.4.4 POSITION replacement switch S3 in the solenoid lock assembly.
- 3.4.5 Using screws and lockwashers, FASTEN switch S3 to the solenoid lock assembly, and ENSURE the following:
 - For each mounting screw, a lockwasher is installed above the switch and one lockwasher is installed below the housing.

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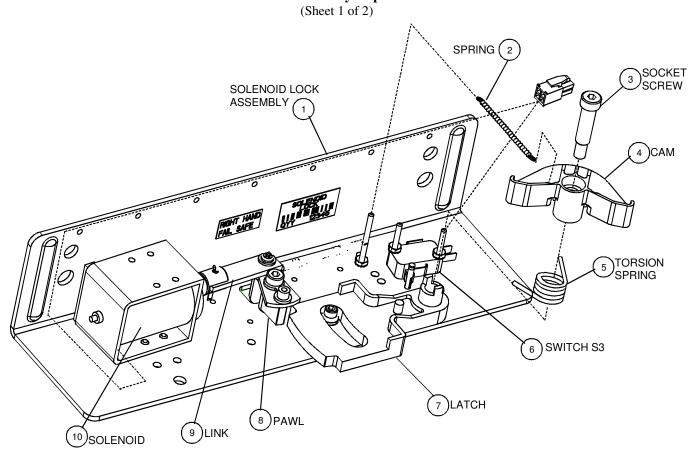
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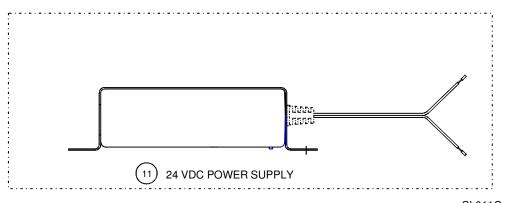
- 3.4.6 CONNECT electrical wiring to switch S3.
- 3.4.7 Refer to Section 3.2, and INSTALL the solenoid lock assembly into the header.

3.5 Replacing the Latch, Pawl, or Cam

- 3.5.1 Refer to Section 1.1, and REMOVE the solenoid lock assembly from the header.
- 3.5.2 Refer to Attachment 1, and REMOVE the shoulder screws, lockwashers, and nut securing the pawl or latch and cam assembly to the housing.
- 3.5.3 REMOVE the pawl or latch and cam assembly from the housing.
- 3.5.4 POSITION the replacement pawl or latch and cam assembly into the housing.
- 3.5.5 THREAD the shoulder screws securing the pawl or latch and cam assembly fully down into the housing.
- 3.5.6 HOLD the shoulder screw in that position, and TIGHTEN the external nut as necessary to ensure that the shoulder screws seat firmly.
- 3.5.7 Refer to Section 3.2, and INSTALL the solenoid lock assembly into the header.

Attachment 1 Solenoid Lock Assembly Replacement Parts





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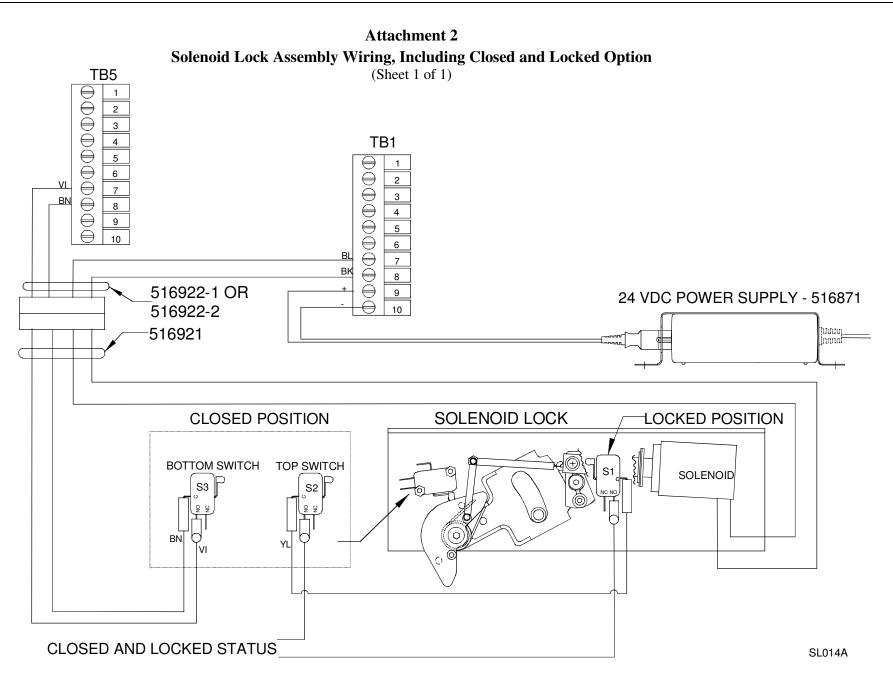
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Attachment 1 Solenoid Lock Assembly Replacement Parts

(Sheet 2 of 2)

Index No.	Part No.	Description	Index No.	Part No.	Description
1	185040-1	Solenoid Lock Assembly, Right Hand, Fail Safe	8	515694	Pawl
	185040-2	Solenoid Lock Assembly, Left Hand, Fail Safe	9	412394	Link
	185040-3	Solenoid Lock Assembly, Right Hand, Fail Secure	10	515230-4	Solenoid
	185040-4	Solenoid Lock Assembly, Left Hand, Fail Secure	11	516871	24 VDC Supply
2	412397-1	Spring		516922-1	Harness, Solenoid Lock, MC521, 67"
3	412401-2	Socket Screw		516922-2	Harness, Solenoid Lock, MC521, 148"
4	516030	Cam, Solenoid Lock		313984	Kit—Closed & Locked, Switches, Hardware, and Harness
5	412395-R	Torsion Spring, Right Hand		313986	Lock Strike Kit 5200/5300
	412395-L	Torsion Spring, Left Hand			
6	412399	Switch S3		516921	Harness, Solenoid Lock Pigtail*
7	515695	Latch			
* 51692	21 is needed f	for solenoid locks that do not inclu	de solenoid le	ock harness pi	gtail.

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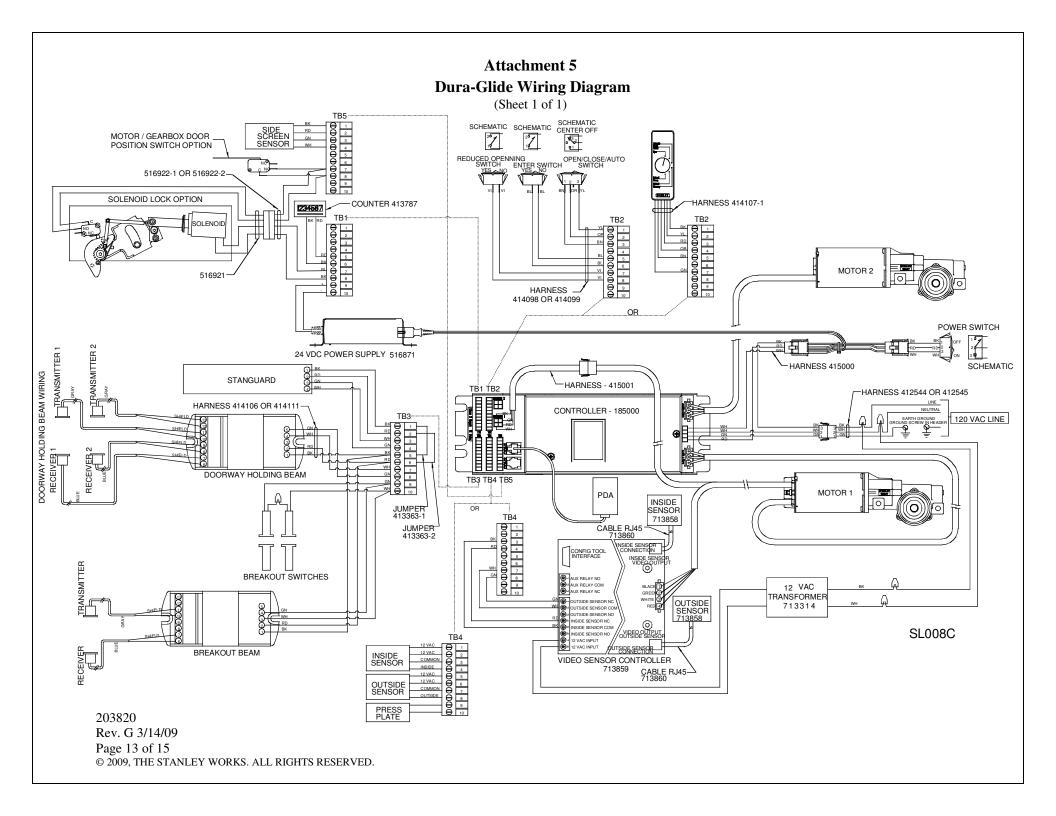
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Attachment 3 Remote Access Control Wiring Diagram (Sheet 1 of 1) TRANSMITTER 1 STANGUARD REMOTE INSIDE SENSOR ACCESS CONTROL CONSOLE DOORWAY HOLDING BEAM ⁻516871 OUTSIDE SENSOR TB1 24 VDC POWER SUPPLY 縣口區 -516922-1 OR 516922-2 FIELD WIRING TO CONSOLE 2 TWISTED PAIRS 22 AWG IN SHIELDED CABLE 1200 FT MAX. CONNECT SHIELD TO HEADER. 414125 POWER SWITCH \blacksquare - 415001 ACCESS CONTROL INTERFACE BOARD & 515778 CONTROLLER-185000 TO CONTROL 185037 413367-1 MOTOR 1 PDA REDUCED OPENNING 413363-SWITCH NOTE: SET FUNCTION SWITCH TYPE TO OLD ROTARY SWITCHES LOCKED POS. SCHEMATIC SOLENOID LOCK BOTTOM SWITCH TOP SWITCH CLOSED POS. CLOSED POS SL006B 203820 Rev. G 3/14/09 Page 11 of 15 © 2009, THE STANLEY WORKS. ALL RIGHTS RESERVED.

Attachment 4 IS10000 Wiring Diagram (Sheet 1 of 1) SCHEMATIC SCHEMATIC SCHEMATIC SCHEMATIC CENTER OFF TRANSMITTER DWHB 713117 RECEIVER DWHB **№**3₂2 REDUCED OPENING SWITCH YES NO AUTO/CLOSE/OPEN SWITCH SWITCH JUMPERS: 413363-6 (BLUE) I/O ASSY 413363-5 (BROWN) 412933 413363-1 (BLACK) HARNESS 414126 713099-12 VAC TB2 INSIDE 1 2 2 3 4 5 6 7 0 8 9 10 SENSOR TRANSMITTER RECEIVER 12 VAC OUTSIDE 713099 JUMPERS: I/O ASSY SENSOR 413363-5 (BROWN 412933 413363-1 (BLACK) PRESS PLATE CUT BLACK WIRE LEFT HEADER RIGHT HEADER JUMPERS: 413363-1(BLACK) 413363-2(RED) I/O ASS 413363-4 (WHITE) JUMPERS: 413351 413352 413357 413363-1 (BLACK) 413363-2 (RED) 413363-4 (WHITE) TELCO POWER PACK 313920 MOTOR 2 STANGUARD RED WHITE 24 VDC POWER SUPPLY 516871 MICRO SWITCH JUMPER 413362 √412161-1 709183 QTY₂ 413363-8 THARNESS - 415001 TB1 TB2 CONTROLLER - 185000 NEUTRAL 120 VAC LINE COUNTER 234567 413787 TB1 SOLENOID 0 1 2 2 3 4 4 5 6 6 7 8 8 9 9 10 12 VAC TB5 1 2 3 4 4 5 6 6 7 7 8 8 9 9 10 TB3 TB4 TB5 RANSFORME 713314 SOLENOID LOCK PDA -516921 MOTOR 1 516870 SL007C 203820 TERMINAL 2 TERMINAL 10 Rev. G 3/14/09 TELCO POWER 415075 -Page 12 of 15 © 2009, THE STANLEY WORKS. ALL RIGHTS RESERVED.



Attachment 6 Double Diamond Wiring Diagram (Sheet 1 of 1) RADIO FLAT FLEX -CUT GREEN WIRE 4-COND. CABLE CUT GREEN WIRE 4-COND. CABLE BLUE FLAT CABLE RECEIVER FULL OPEN 709702) BLACK 709842 414055 BLACK-BK 1 FORKLIFT WH 3 SENSOR GN 5 FALCON **FORKLIE** 87654 - BLACK TELCO POWER PACK (313920) - BROWN 9001123 9000023 515558 R1 SET TO 30 FORKLIFT SENSOR TERMINAL STRIP BLACK 0 6 7 7 8 9 9 10 SMT 3000 TELCO TRANSMITTER (713863) TELCO TRANSMITTER (713863) BLUE WHITE **REAR DOOR WIRING NOTES:** 414107-2-1. REMOVE AND CUT BARE END OF BROWN WIRE ON MOTOR 2 TB2 POSITION 7. ## 1 2 3 4 4 5 6 7 8 9 9 1 2. REMOVE AND CUT BARE END OF RED WIRE ON TB2 POSITION 3. **7**13875-1 POWER SWITCH 413733-3 --304549 WIRE NUT 413362-1 QTY 2 BLUE A GREEN RD SCHEMATIC MC521 CONTROLLER - 185000 -HARNESS 412544 412161-2-WH 120 VAC LINE EADER GROUND SCREW IN H COUNTER 12 VAC 413787 WH. RANSFORME VI BN 09 10 SOLENOID LOCK OPTION 713314 1234587 415075 воттом TOP SWITCH SWITCH TERMINAL 10 TERMINAL 2 S2P SS2P SS2P SS2P SS2P SRD TELCO POWER PDA 516921 516870 MOTOR 1 24 VDC POWER SUPPLY - 516871 -411746 REAR DOOR APPLICATION FRONT DOOR APPLICATION -413363-4 n- TB4-5 TB4-6 TB4-7 TB4-8 **-**413363-3 TB4-1 TB4-2 709702 709702 203820 STRIP 00000000 Rev. G 3/14/09 TO INSIDE TO OUTSIDE TO INSIDE TO OUTSIDE **SENSORS SENSORS** Page 14 of 15 **SENSORS SENSORS** SL009F © 2009, THE STANLEY WORKS. ALL RIGHTS RESERVED. MC521 CONTROLLER TERMINAL STRIP

