Norton®

Installation Instructions

80-9380-2213-020 (06-09)

8000ST Series
Slide Track Door Closers

The closing force for Series 8000ST door closers is adjustable from a size 1 to a size 6, as outlined in ANSI Standard A156.4. When these series of door closers are installed and adjusted to conform to ADA reduced opening force requirements (5 lbs max.) for interior doors, they may not have adequate closing force to reliably close and latch the door. Power adjustments charted on Page 4 are recommended where possible, to ensure proper door control.

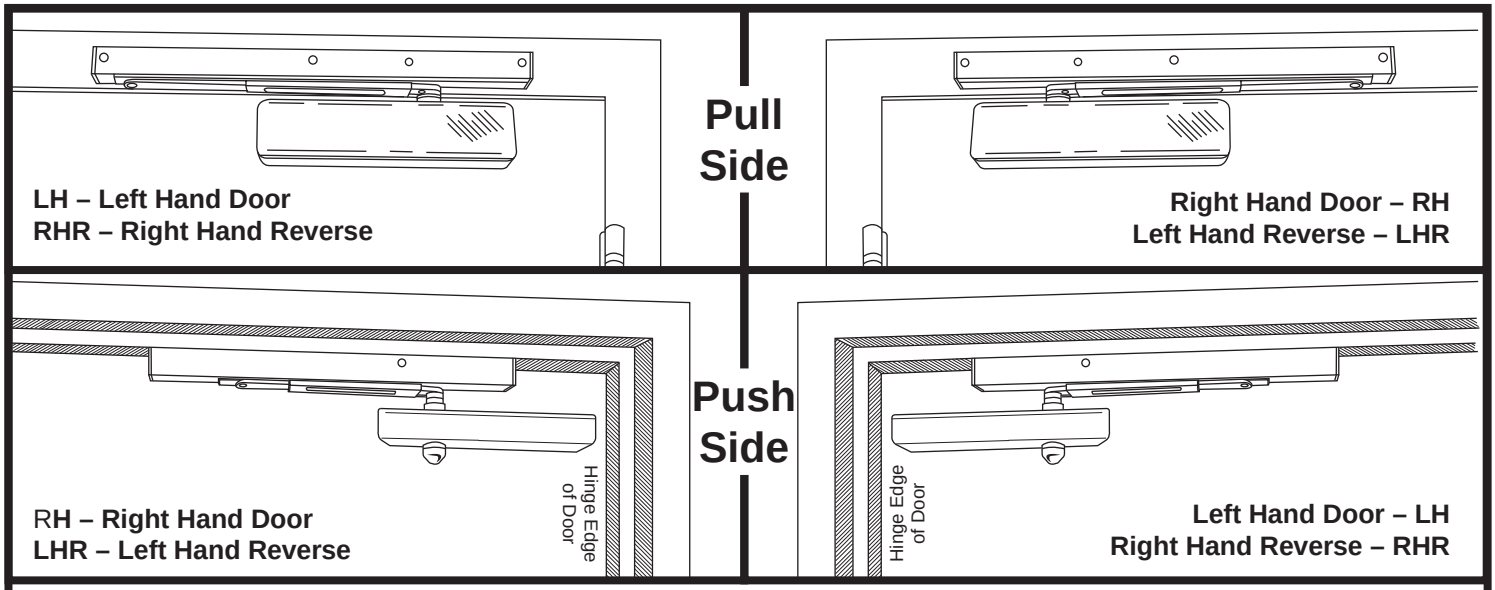
CAUTION

An incorrectly installed or improperly adjusted door closer can cause property damage or personal injury. These instructions should be followed to avoid the possibility of misapplication or misadjustment.

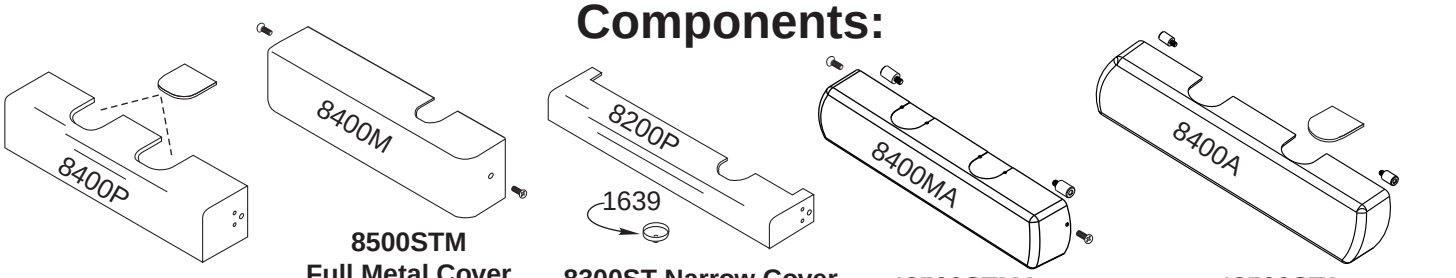
NOTE: For special applications a separate door and frame preparation template is packed with these instructions. Use this instruction sheet for installation sequence and closer adjustments only.

- For closers with or without **Delayed Action** closing suffix **"DA"**.
- Use of an auxiliary door stop is always recommended.

Non Hold Open Models				Hold Open Models			
Hinge (Pull) Side		Stop (Push) Side		Hinge (Pull) Side		Stop (Push) Side	
8300ST	8500ST	PS8300ST	PS8500ST	8300ST-H	8500ST-H	PS8300ST-H	PS8500ST-H
8301ST	8501ST	PS8301ST	PS8501ST	8301ST-H	8501ST-H	PS8301ST-H	PS8501ST-H



Components:



8500ST Full Cover with Insert

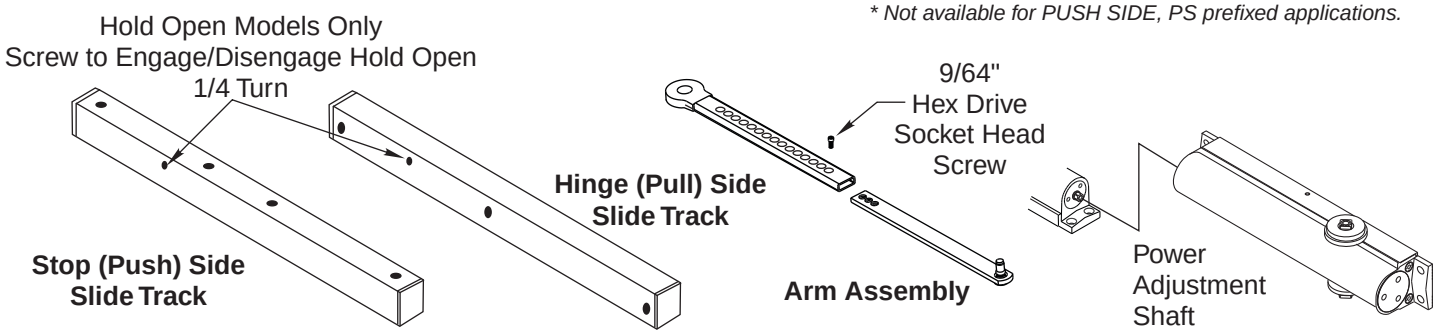
8500STM Full Metal Cover with Cover Screws

8300ST Narrow Cover w/ Pinion Cap

***8500STMA Optional Architectural Metal Cover**

***8500STA Optional Architectural Plastic Full Cover w/ Insert**

** Not available for PUSH SIDE, PS prefixed applications.*

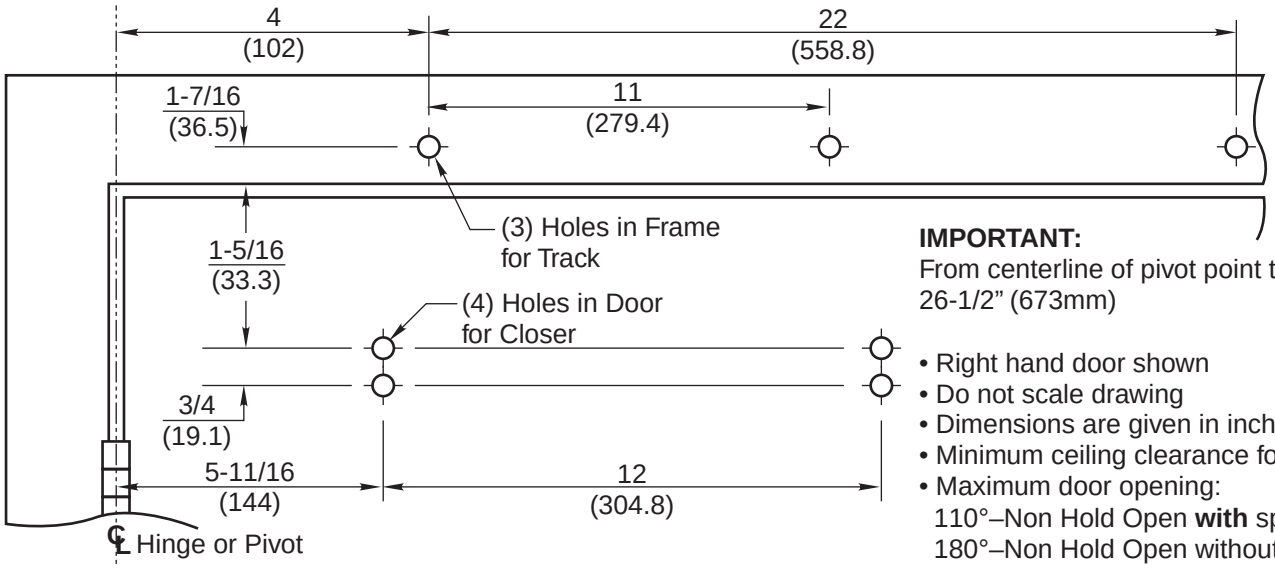


Stop (Push) Side Slide Track

Hinge (Pull) Side Slide Track

Arm Assembly

Pull Side Application



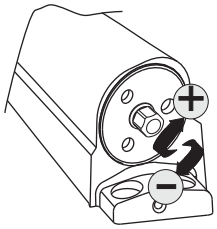
IMPORTANT:
From centerline of pivot point to end of track is 26-1/2" (673mm)

- Right hand door shown
- Do not scale drawing
- Dimensions are given in inches (mm)
- Minimum ceiling clearance for unit is 2" (50mm)
- Maximum door opening:
  110°–Non Hold Open **with** spring buffer in track
  180°–Non Hold Open without spring buffer
  Auxiliary door stop required
  110°–Hold Open track

- **Use template to locate holes on door and frame:**
  4 on door for closer.
  3 on frame face for track assembly.

- **Prepare door and frame for fasteners** using chart on this page.

- **FOR 8301/8501 & 8311/8511 SERIES MODELS ONLY** set closer power for door size using chart below:



Power Adjust

Use 5/16" Socket or Adjustable Wrench for this Adjustment

Power Adjustment Chart for 8301/8501, 8311/8511 ONLY

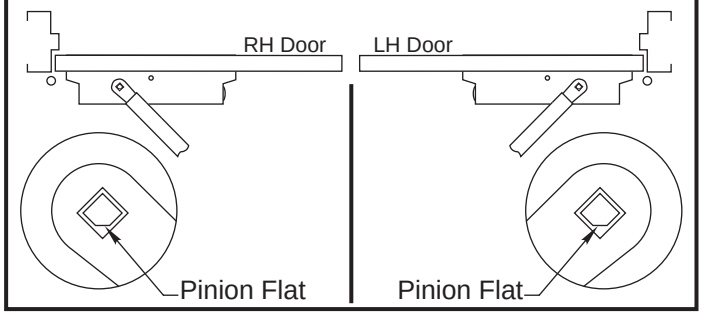
DOOR	Number of Turns Required MAXIMUM DOOR SIZE			
	32" (0.85M)	36" (0.90M)	42" (1.00M)	48" (1.20M)
Interior Door	2	3	5	7
Exterior Door	3	5	7	9

NOTE: Maximum of 20 turns (360°) of Power Adjustment Shaft. Closer is shipped set at 10 turns.

- **Fasten closer body to door** with **power adjustment shaft toward lock** edge of door. Note: If application has a full metal cover, 8500M, slide mounting clips under each end of closer before tightening screws.

- **Fasten slide track to frame face** with open side facing down and spring buffer end toward hinge edge of door.

Arm Indexing



Preparation for Fasteners			
Fasteners		**Door or Frame**	**Drill-Sizes**
Standard	Self-Drilling Screw	Aluminum or Metal	No drill required
		Wood	3/16" (4.30 mm)
	1/4" - 20 machine screw	Metal	Drill: #7 (0.201" dia.) Tap: 1/4" - 20
Optional	Sleeve nuts and bolts	Hollow Metal	9/32" (7 mm) through; 3/8" (9.5 mm) door face opposite to closer
		Aluminum or Wood	3/8" (9.5 mm) through
	Through-bolts and grommet-nuts	All	9/32" (7 mm); 3/8" (9.5 mm) dia. x 3/8" (9.5 mm) deep on door opposite to closer

- **Adjust arm to shortest length** and install 9/64" hex drive socket head screw from screw pack.

- **Place slide arm on pinion shaft** using Arm Indexing instructions above.

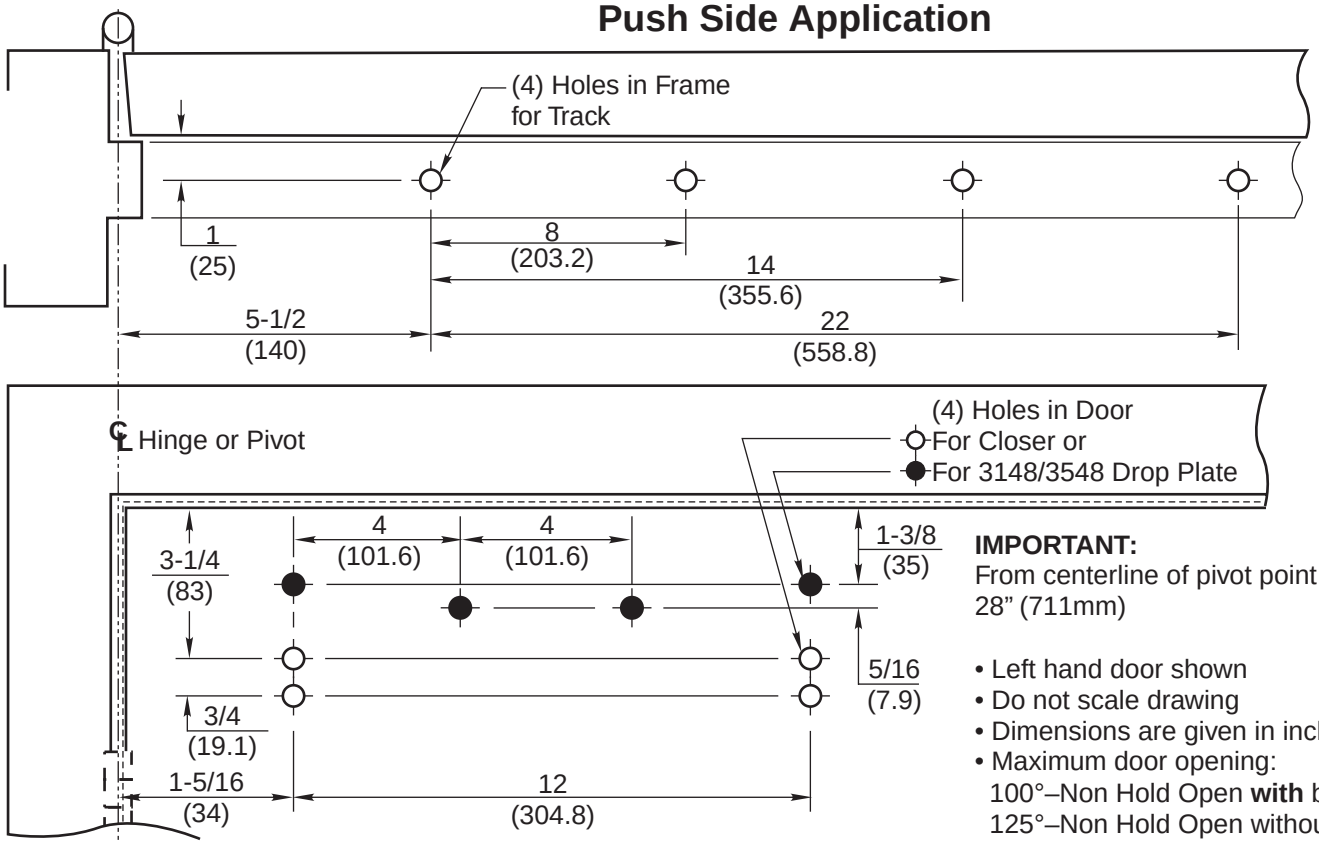
- **Secure arm with arm washer and arm screw.**

- **Insert arm stud into slide block** in track assembly. Secure by pushing in on the retainer clip that extends from the slide block in the track, until it is flush with the slide block.

- **Adjust closer** *See Page 4*.

80-9380-2213-020 (06-09)

Push Side Application



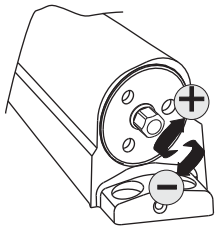
IMPORTANT:
From centerline of pivot point to end of track is 28” (711mm)

- Left hand door shown
- Do not scale drawing
- Dimensions are given in inches (mm)
- Maximum door opening:
  100°–Non Hold Open **with** buffer in track
  125°–Non Hold Open without buffer in track, Auxiliary door stop required
  100°–Hold Open track

- **Use template to locate holes on door and frame:**
  4 on door for closer or drop plate.
  4 on frame soffit for track assembly.

- **Prepare door and frame for fasteners** using chart *on Page 2*.

- **FOR PS8301/PS8501 & PS8301/PS8501 SERIES MODELS ONLY** set closer power for door size using chart below:



Power Adjust

Use 5/16” Socket or Adjustable Wrench for this Adjustment

Power Adjustment Chart for PS8301/PS8501, PS8301/PS8501 ONLY

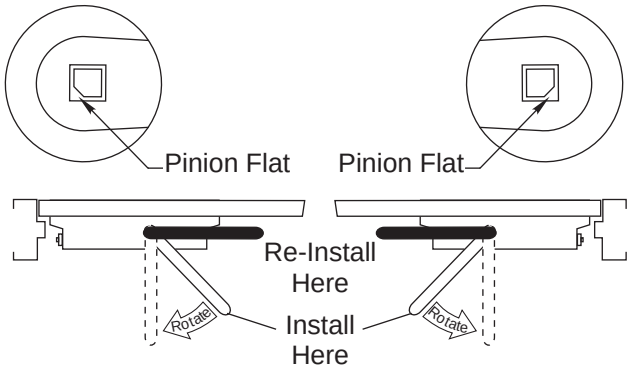
DOOR	Number of Turns Required			
	MAXIMUM DOOR SIZE			
	32” (0.85M)	36” (0.90M)	42” (1.00M)	48” (1.20M)
Interior Door	2	3	5	7
Exterior Door	3	5	7	9

NOTE: Maximum of 20 turns (360°) of Power Adjustment Shaft. Closer is shipped set at 10 turns.

- **Fasten closer body to door** with **power adjustment shaft toward hinge** edge of door. Note: If application has a full metal cover, 8500M, slide mounting clips under each end of closer before tightening screws.

- **Fasten slide track to frame soffit** with open side facing down and spring buffer end toward hinge edge of door.

Arm Indexing



1. Close valves S & L
2. Install arm
3. Rotate arm
4. Remove arm and re-install
5. Open valves S & L

- **Adjust arm to shortest length** and install 9/64" hex drive socket head screw from screw pack.

- **Place slide arm on pinion shaft** using Arm Indexing instructions above.

- **Secure arm with arm washer and arm screw.**

- **Insert arm stud into slide block** in track assembly. Secure by pushing in on the retainer clip that extends from the slide block in the track, until it is flush with the slide block.

- **Adjust closer** *See Page 4*.

Adjustment Instructions

Arm Attachment to Track
Insert arm stud into slide block in track.
Secure by pushing in on the retainer clip that extends from the slide block, until it is flush with the slide block. **See Figure 1**.

Door Opening Angle and/or Hold Open Angle:
Remove 9/64" hex drive socket head screw from arm. Open door to desired angle and install hex-drive socket head screw into hole in adjusting rod that is aligned with the hole in the adjusting tube.

Closing Power
- 8300ST/8500ST Models come in five different sizes (2 thru 6); each power size can be increased by 50%. Adjust as required, **See Figure 2**.
- 8301ST/8501ST Models are fully adjustable. For proper sizing see chart on Page 2 or 3. To adjust closer power – **See Figure 2**. Increase or decrease power as necessary.

Closing Cycle (hydraulic control) **See Figure 3A.**
Valve "L" controls door speed in **Latch range**.
Valve "S" controls door speed in **Sweep range**.
Valve “D”–Optional–controls door speed in the **Delay range**.
Use 1/8” hex-key furnished and adjust as shown in Figure 4.

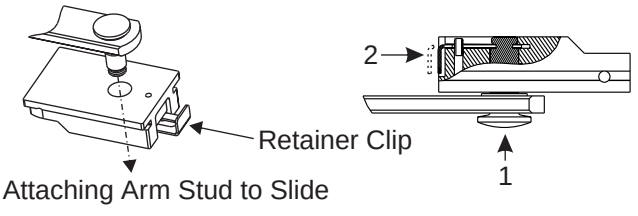
Opening Cycle (hydraulic control) **See Figure 3B.**
Valve cushions (slows) door opening in the **backcheck range**.
Note: Never close this valve completely or damage to closer may occur.
Use 1/8" hex-key furnished and adjust as shown in Figure 5.

Installation of Cover:
- **Full cover:** Slide cover insert into the un-used cutout in cover. Install cover using screws provided.
- **Narrow cover:** Install cover using screws provided. Install pinion cap onto pinion shaft by hand or with a Phillips screw driver - DO NOT OVER TIGHTEN.
- **Architectural plastic cover:** Slide cover insert into the un-used cutout in cover. Install standoffs in ends of closer. Snap cover onto standoffs.

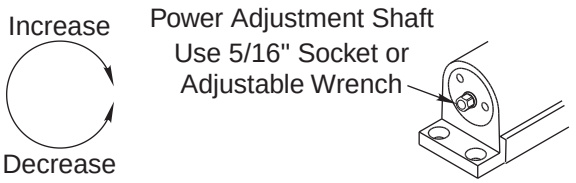
On/Off Hold Open Feature:
Slotted screw, accessible thru hole in face of track, engages or disengages the hold open feature with 1/4 turn of the screw. *See Page 1 for location of screw.*

Hold Open Power Adjustment:
If more hold open power is required, the power may be increased by turning the adjustment shaft in the end of the track nearest the hinges. Use 9/64" hex wrench provided and rotate adjustment shaft clockwise to increase holding power.

Attaching Arm Stud to Slide — Fig. 1

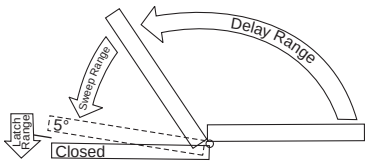


Closing Power Control — Fig. 2



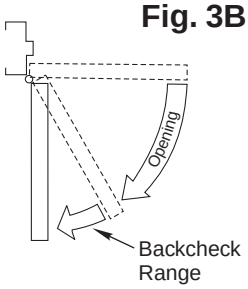
Hydraulic Control

Fig. 3A



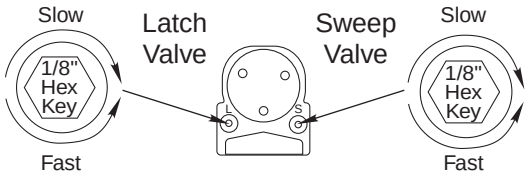
Closing Cycle

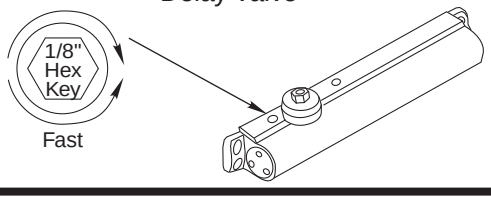
Fig. 3B



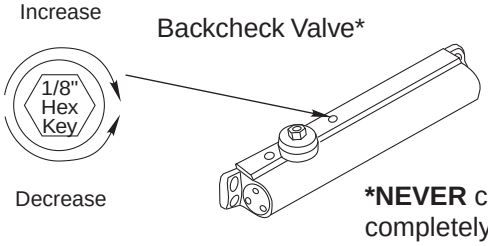
Opening Cycle

Closing Speed — Fig. 4





Backcheck — Fig. 5



***NEVER** close this valve completely.

Norton
ASSA ABLOY
ASSA ABLOY, the global leader in door opening solutions
3000 Highway 74 East • Monroe, NC 28112
Tel: (877)-974-2255 • Fax: (800)-338-0965
www.nortondoorcontrols.com

80-9380-2213-020 (06-09)

Norton ® is a registered trademark of Yale Security Inc., an ASSA ABLOY Group company.
Copyright © 2005, 2009, Yale Security Inc., an ASSA ABLOY Group company. All rights reserved.
Reproduction in whole or in part without the express written permission of Yale Security Inc. is prohibited.