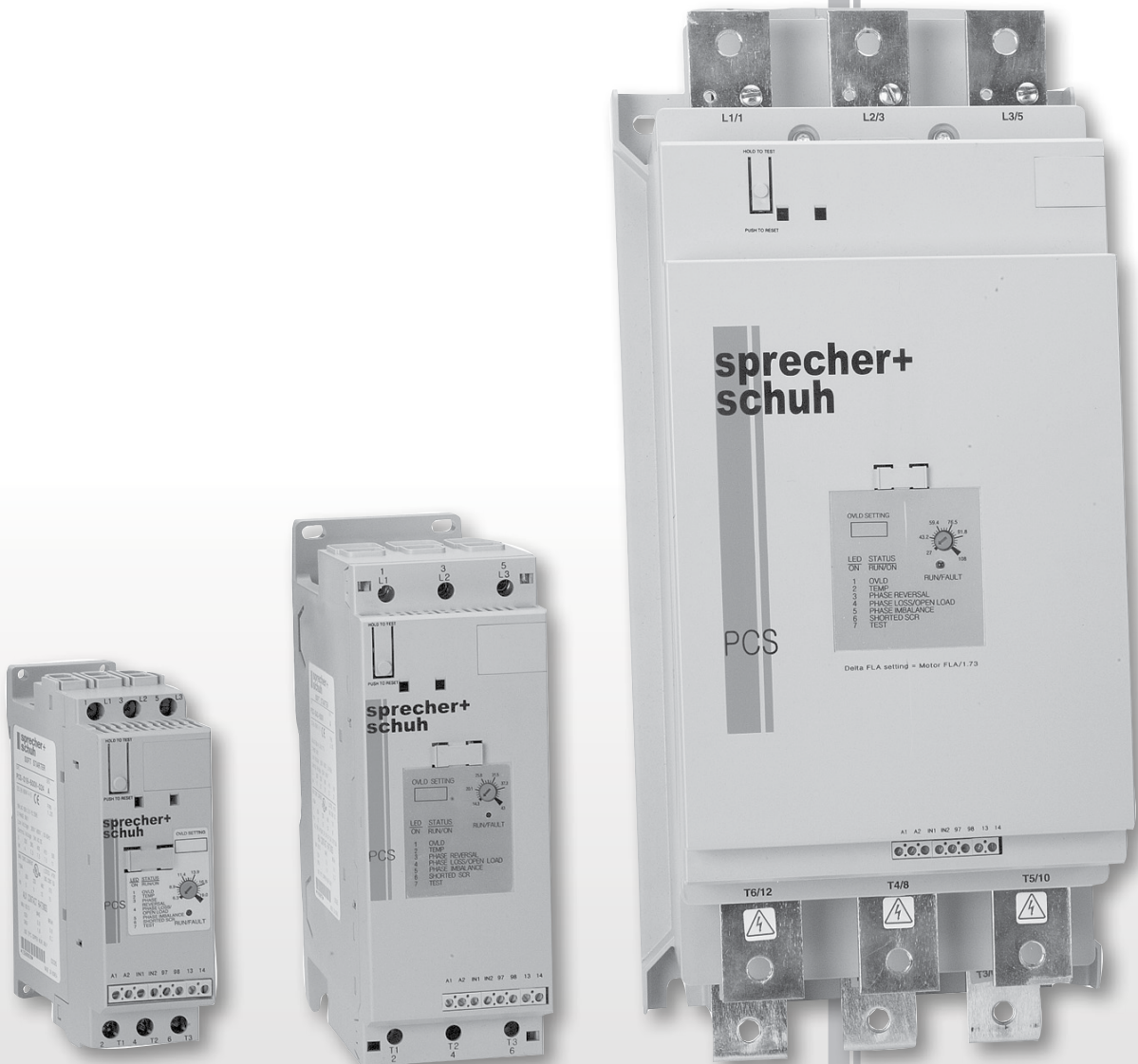


PCS Softstarters 3A ... 480A

Replacement Parts Guide



Important User Information

Because of the variety of uses for the products described in this publication, those responsible for the application and use of this control equipment must satisfy themselves that all necessary steps have been taken to assure that each application and use meets all performance and safety requirements, including any applicable laws, regulations, codes and standards.

The illustrations, charts, sample programs and layout examples shown in this guide are intended solely for purposes of example. Since there are many variables and requirements associated with any particular installation, Sprecher and Schuh does not assume responsibility or liability (to include intellectual property liability) for actual use based upon the examples shown in this publication.

Rockwell Automation publication SGI-1.1, *Safety Guidelines for the Application, Installation and Maintenance of Solid-State Control* (available from your local Sprecher + Schuh office), describes some important differences between solid-state equipment and electromechanical devices that should be taken into consideration when applying products such as those described in this publication.

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Throughout this manual we use notes to make you aware of safety considerations:

Attention



Identifies information about practices or circumstances that can lead to personal injury or death, property damage or economic loss

Attention statements help you to:

- identify a hazard
- avoid a hazard
- recognize the consequences

Important

Identifies information that is critical for successful application and understanding of the product.

European Communities (EC) Directive Compliance

If this product has the CE mark it is approved for installation within the European Union and EEA regions. It has been designed and tested to meet the following directives.

EMC Directive

This product is tested to meet the Council Directive 89/336/EC Electromagnetic Compatibility (EMC) per EN/IEC 60947-4-2.

This product is intended for use in an industrial environment.

Low Voltage Directive

This product is tested to meet Council Directive 73/23/EEC Low Voltage, per EN/IEC 60947-4-2.

This equipment is classified as open equipment and must be mounted in an enclosure during operation to provide safety protection.

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Product Overview

Modular Design

The PCS Softstarter provides intelligence, unmatched performance, flexibility and diagnostics in a modular compact design for controlling either a standard squirrel-cage induction motor or a star-delta motor.

Compact Size

The PCS Softstarter integrates a bypass to minimize heat generation during run time. The bypass automatically closes when the motor reaches its nominal speed, resulting in a cooler-running component and reduction in enclosure size.

Current Range - 17 Models

Product Rating	Line Current	Delta Current
3	3	5.1
9	9	16
16	16	27.6
19	19	32.8
25	25	43
30	30	52
37	37	64
43	43	74
60	60	104
85	85	147
108	108	187
135	135	234
201	201	348
251	251	435
317	317	549
361	361	625
480	480	831

Voltage Range

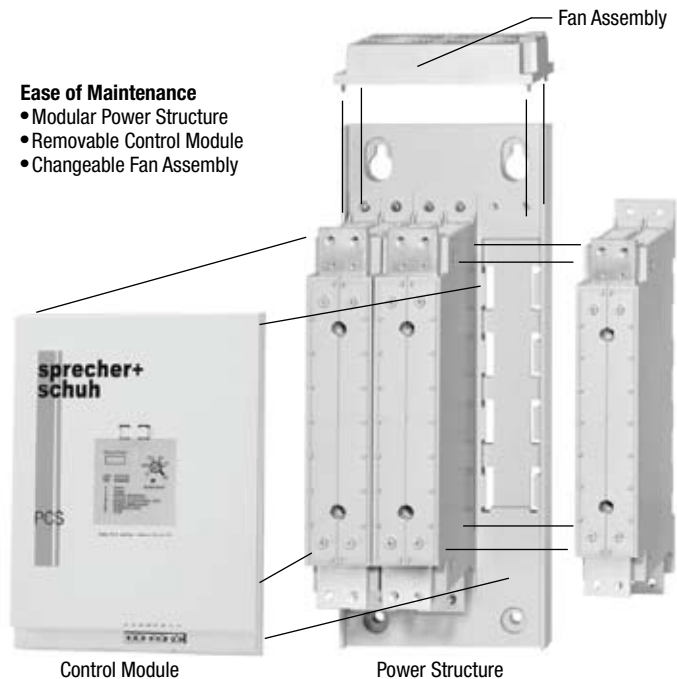
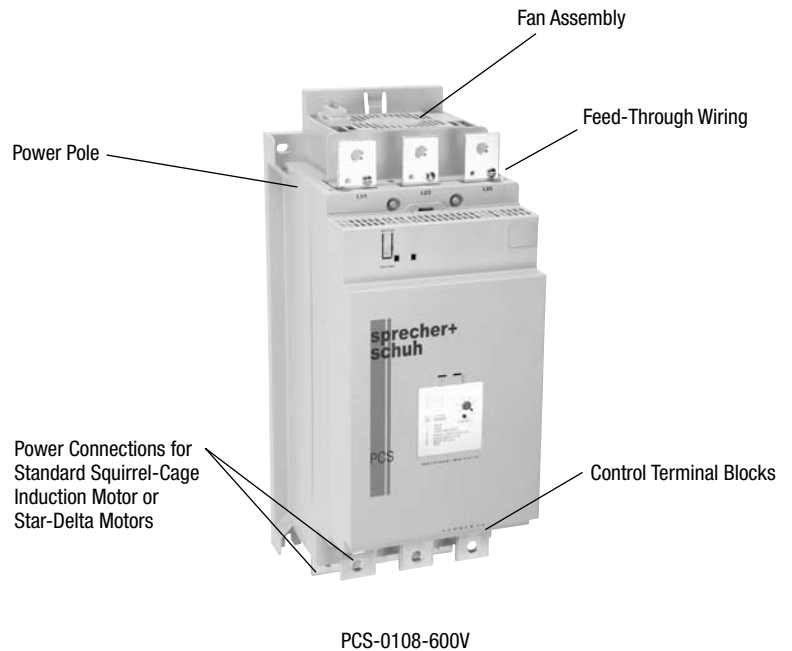
200...600V AC, 50/60 Hz

Control Range

100...240V AC or 24V AC/DC

Starting Modes

	PCS
Soft Start	✓
Soft Stop	✓
Current Limit	✓
Kick Start	✓



PCS Softstarter Replacement Parts Guide

Renewal Parts

Control Modules

PCS Rating	For units rated 200...600V AC ④					
	100...240V AC Catalog Number	Price	Qty	24V AC/DC Catalog Number	Price	Qty
108 A	PCS-108	1553	1	PCS-108-024	1553	1
135 A	PCS-135		1	PCS-135-024		1
201 A	PCS-201		1	PCS-201-024		1
251 A	PCS-251		1	PCS-251-024		1
317 A	PCS-317		1	PCS-317-024		1
361 A	PCS-361		1	PCS-361-024		1
480 A	PCS-480		1	PCS-480-024		1

Power Poles ①

PCS Rating	For units rated 200...600V AC ④		
	200...600V AC Catalog Number	Price	Qty
108 A	PFL-0108-600V ②	3900	1
135 A	PFL-0135-600V ②	4251	1
201 A	PFL-0201-600V ③	2575	1
251 A	PFL-0251-600V ③	3154	1
317 A	PFL-0317-600V ③	3438	1
361 A	PFL-0361-600V ③	3721	1
480 A	PFL-0480-600V ③	5717	1

Each power pole contains two SCR's and one bypass contactor power pole. The PCS requires three power poles. For example: the replacement power pole for a PCS-0108-600V is PFL-0108-600V

- ① One piece provided per part number.
- ② Part number contains three power poles.
- ③ Part number contains one power pole.
- ④ Control Modules and Power Poles are not replaceable for PCS-003...85.

Accessories ❶

Terminal Covers

PCS Rating	Series	Catalog Number	Price	Qty
108...135 A	B	PFT-0135	50	1
201...251 A	B	PFT-0251	57	1
317...480 A	B	PFT-0480	63	1

Heatsink Fans

PCS Rating	Series	Catalog Number	Price	Qty
3...37 A	B	PCV-064	38	1
43...85 A	B	PCV-147	96	1
108...135 A	B	PCV-234	261	1
201...251 A	B	PFV-0251	316	1
317...480 A	B	PFV-0480	347	1

Terminal Lug Kits (108...1250 A) ❷

Current Rating (A)	Conductor Size	Total No. of Line Controller Terminal Lugs Possible Each Side		Pkg. Qty.	Catalog Number	Price
		Line Side	Load Side			
108...135	#6...250 MCM AWG 16 mm ² ...120mm ²	3	3	3	PNX-1120	83
201...251		6	6			
317...480	#4...500 MCM AWG 25 mm ² ...240MM ²	6	6		PNX-1240	123
625...780	2/0...500 MCM AWG	6	6		CA6-L630	240
970	4/0...500 MCM AWG	3	3		CA6-L860	359
1250	2/0...500 MCM AWG	3	3		CA6-L630	240
	4/0...500 MCM AWG	3	3		CA6-L860	359

Base Plate

PCS Rating	Series	Catalog Number	Price	Qty
201...251 A	B	PFM-0251	213	1
317...480 A	B	PFM-0480	242	1

Protective Module

PCS Rating	Series	600V AC Catalog Number	Price	Qty
3...37 A	N/A	PCP-064-600V	60	1
43...85 A	N/A	PCP-147-600V	115	
108...480 A	A	PFP-0480-600V	383	1

❶ See page 8-11 for special installation instructions.

❷ PCS Units 3...85A include box lugs as standard.

Series B Power Pole and Control Module Replacement

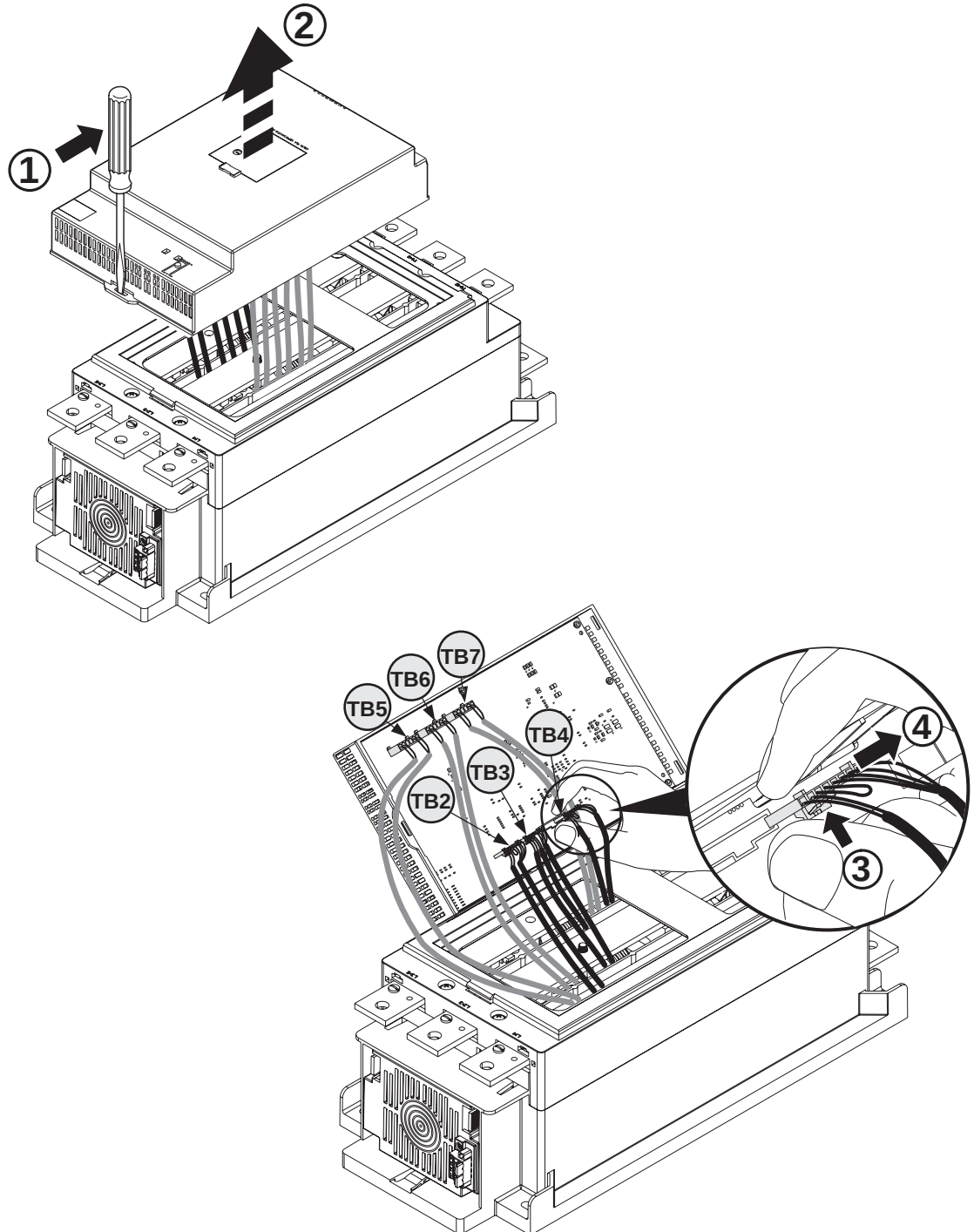
Attention

Remove all power to the unit, before proceeding with replacement procedures.

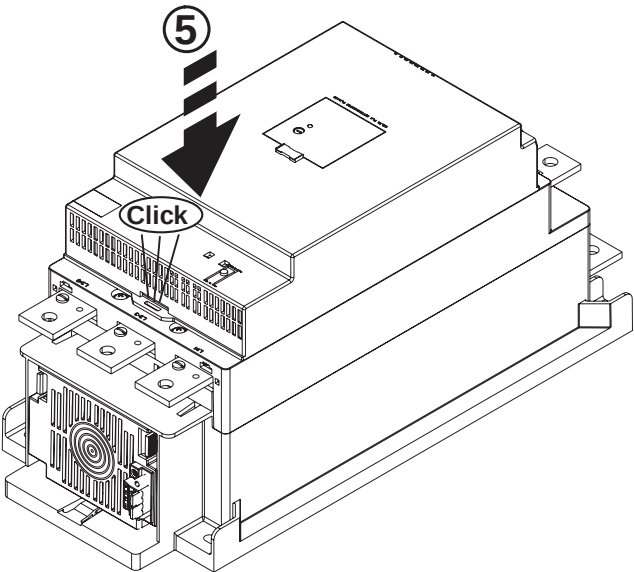
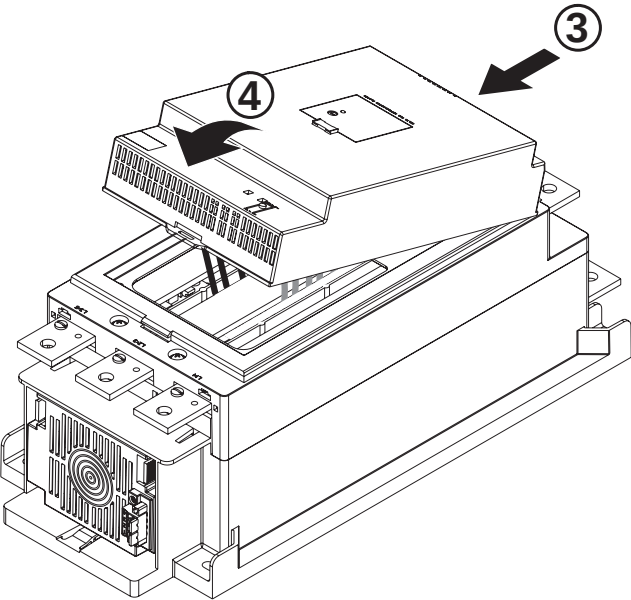
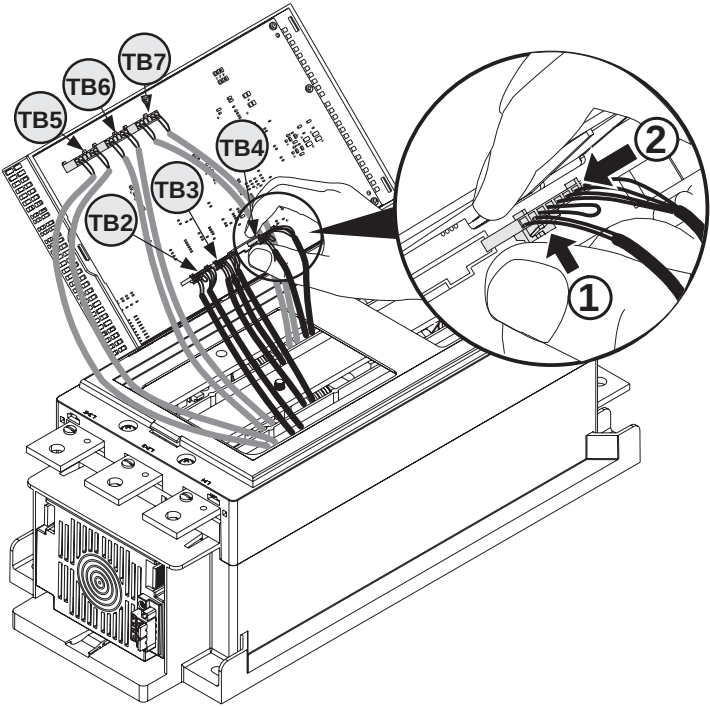
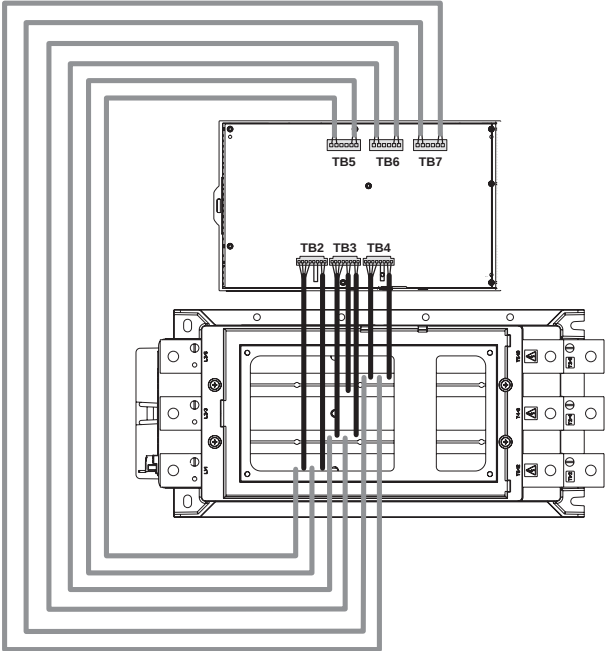


Prior to beginning the following steps, the front cover must be removed.

Control Module Removal



Control Module Installation



Protective Module Installation

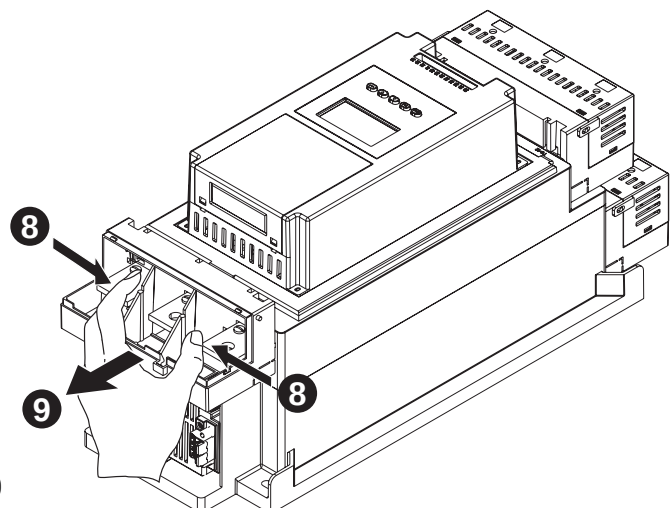
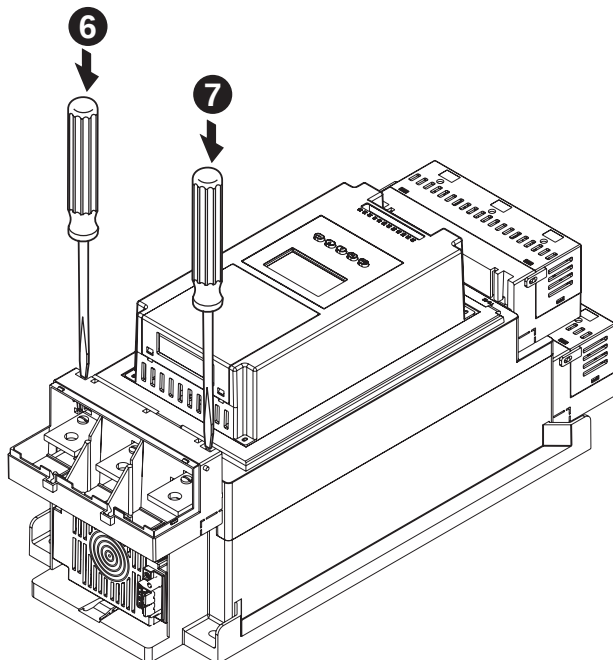
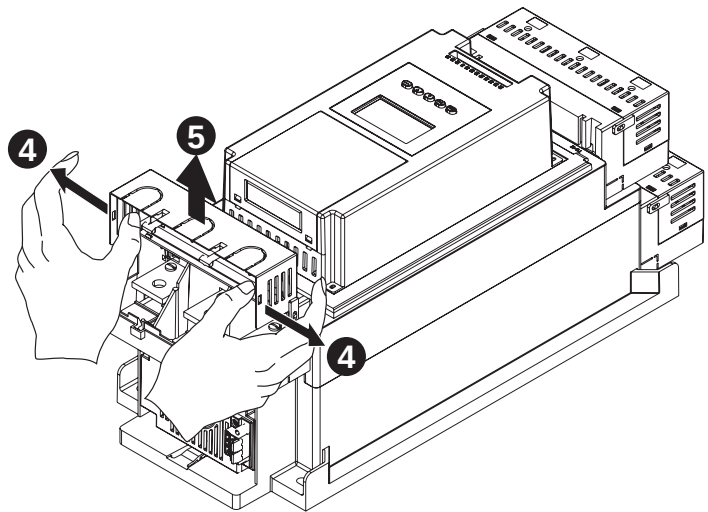
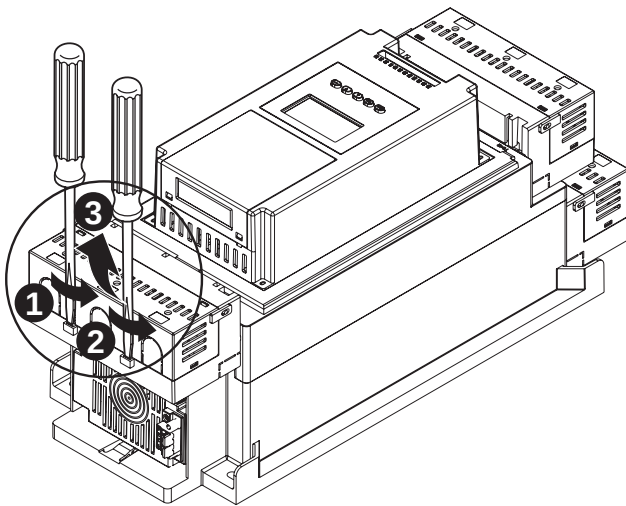
Attention

Remove all power to the unit, before proceeding with replacement procedures.

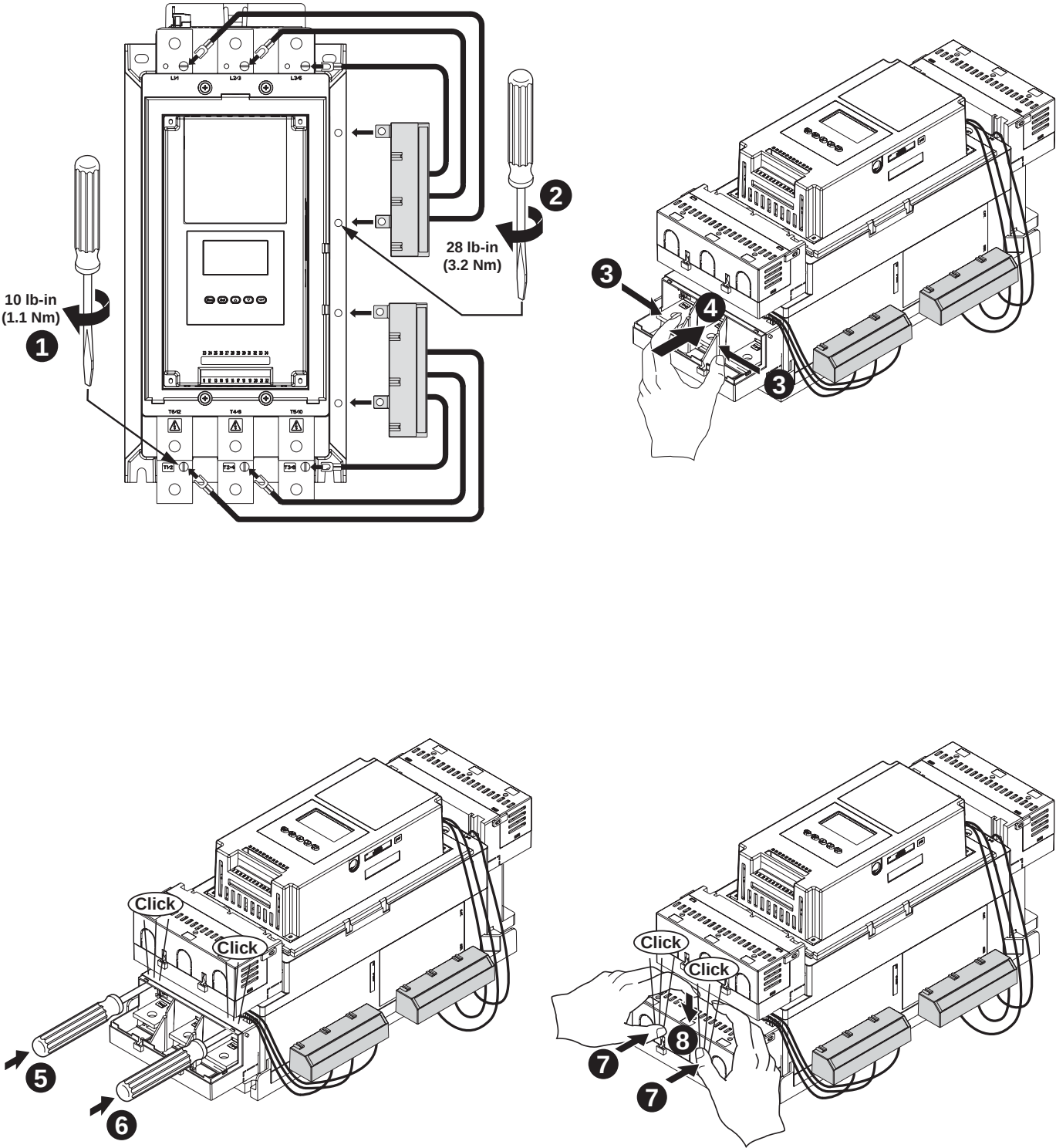


Terminal Cover Removal (PFS Shown)

Prior to beginning the following steps, the front cover must be removed.



Protective Module Installation



Series B Renewal Part Instructions

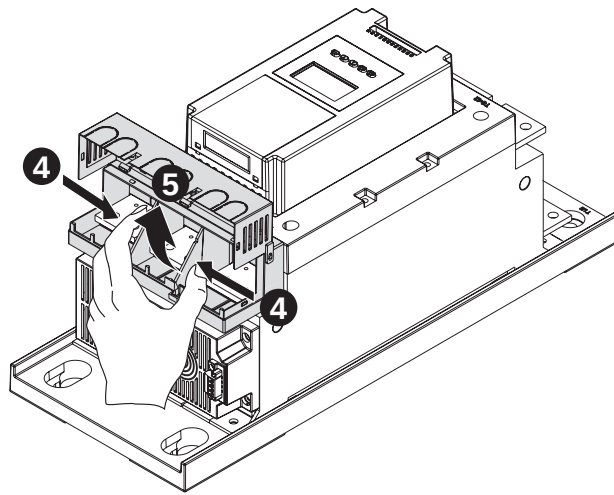
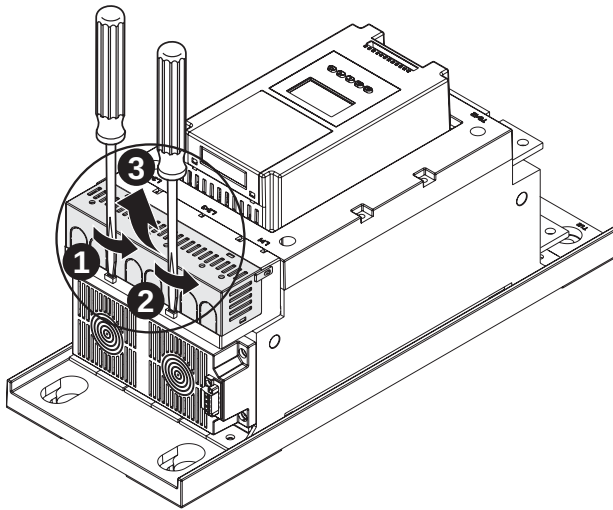
Attention

Remove all power to the unit, before proceeding with replacement procedures.

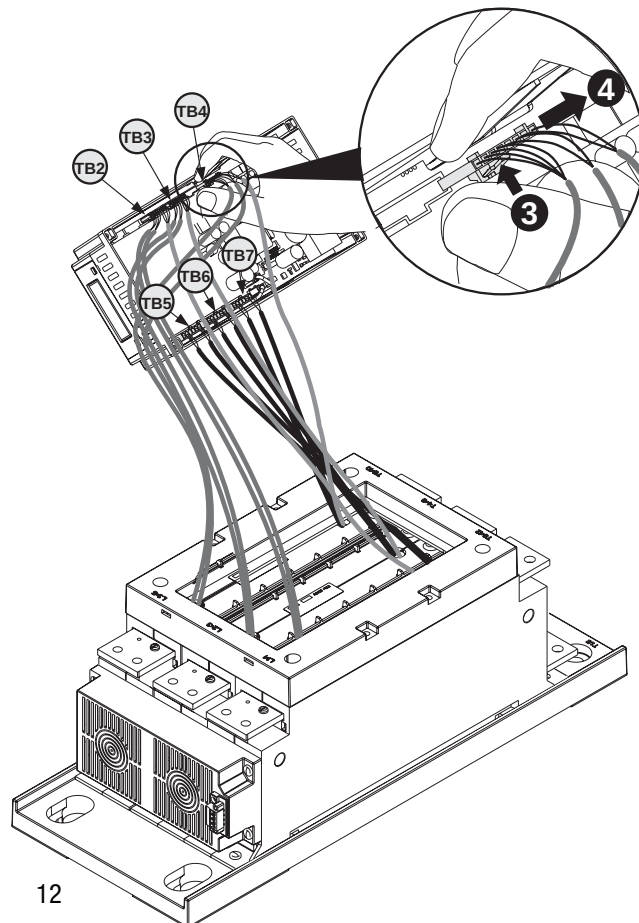
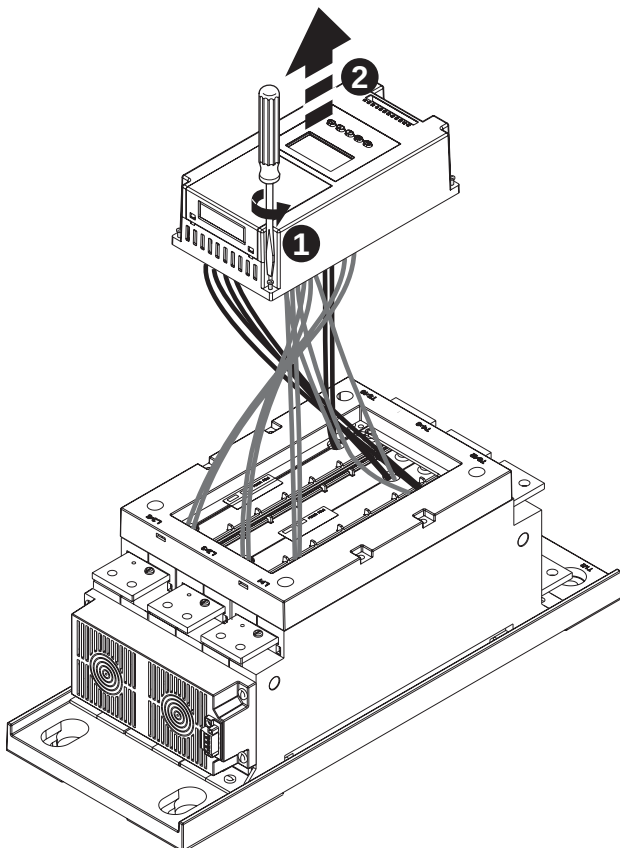


Prior to beginning the following steps, the front cover must be removed.

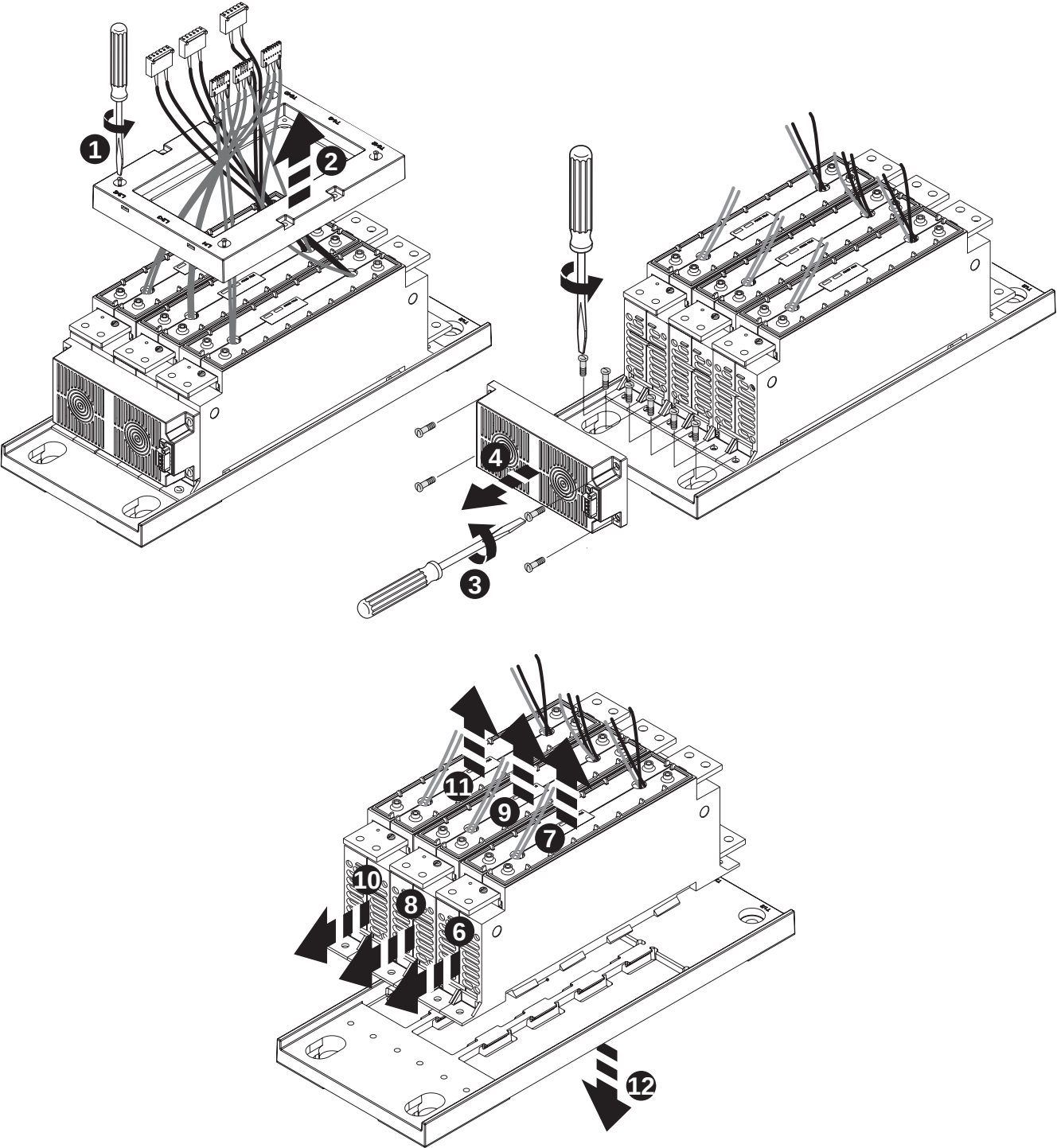
Terminal Cover Removal (PFL / PF_ Shown)



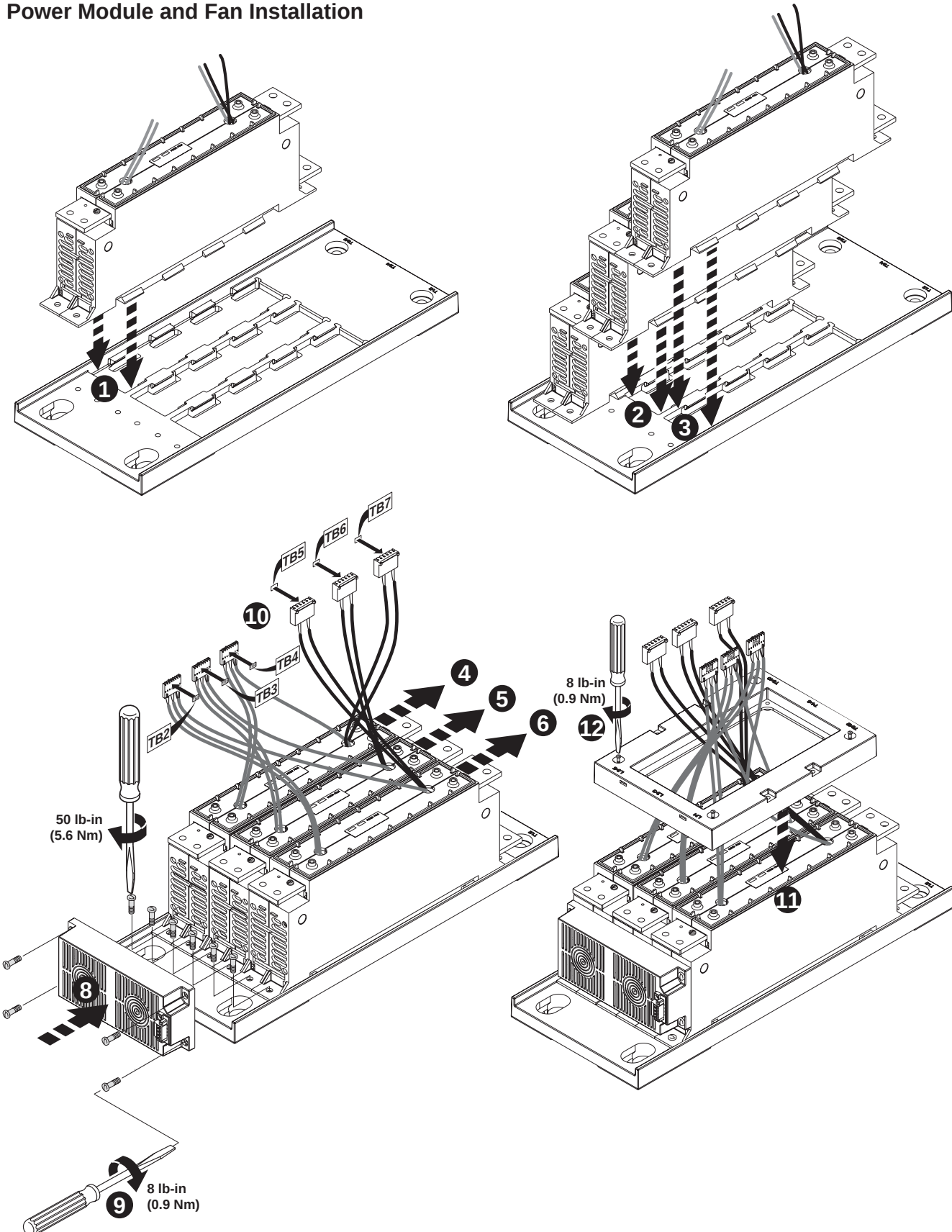
Control Module Removal



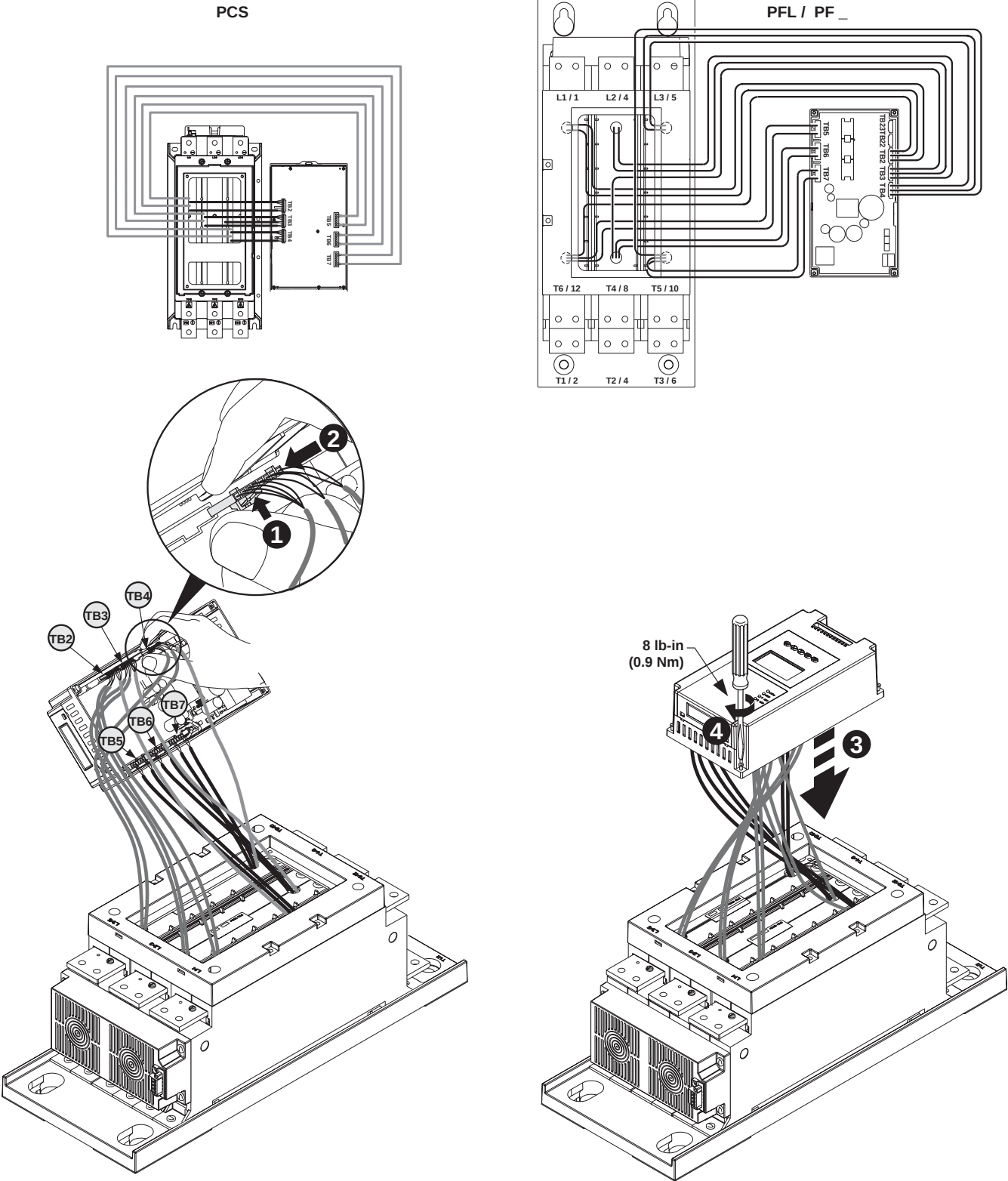
Power Pole and Fan Removal



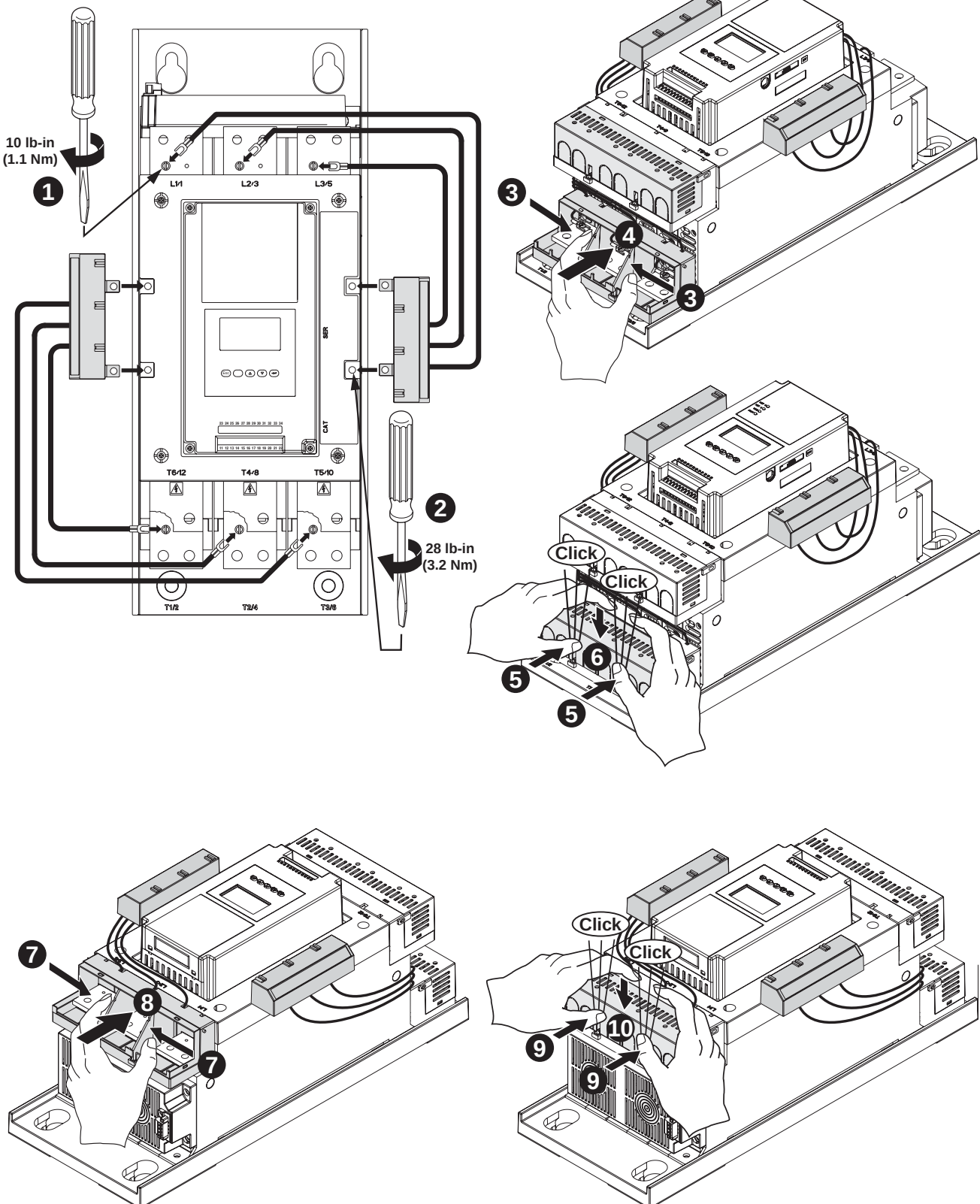
Power Module and Fan Installation



Control Module Installation



Protective Module Installation





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