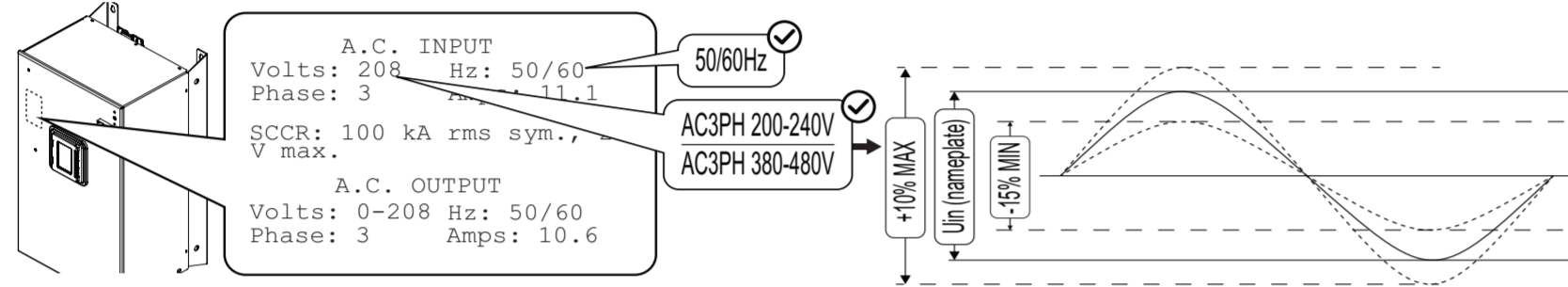
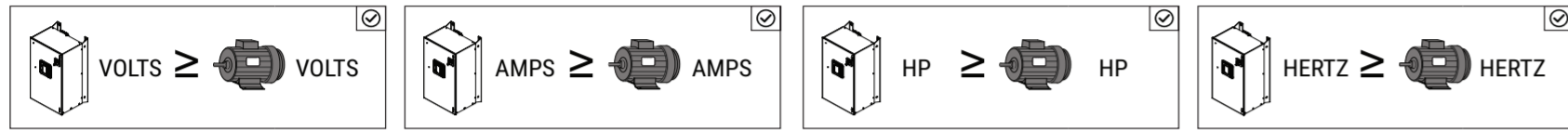
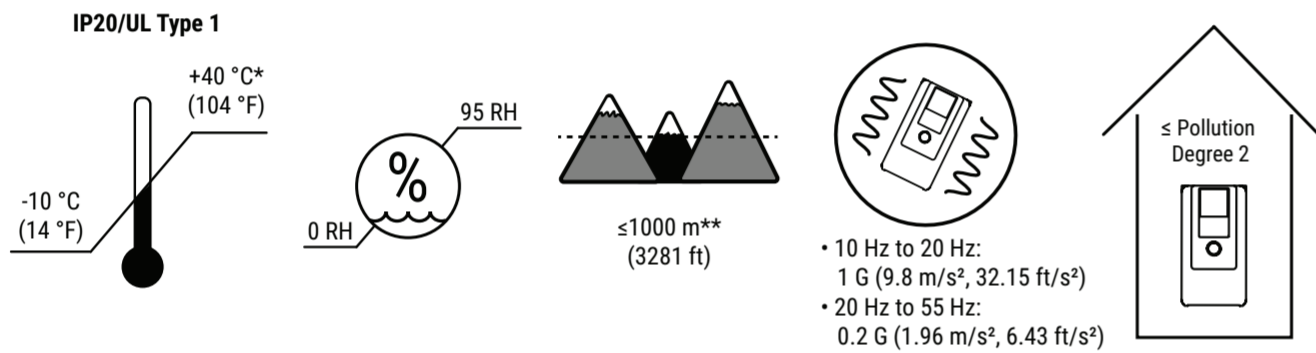


Read and follow the safety and installation procedures in the Installation & Startup (TOEPYAIH6B03) manual packaged with the bypass.

**1 Confirm the Bypass and Motor Specifications**



**2 Confirm the Correct Installation Environment**



\*You can use the bypass at a maximum of 60 °C (140 °F) when you derate the output current.  
 \*\*Derate the output current by 1% for each 100 m (328 ft) to install the drive in altitudes between 1000 m to 4000 m (3281 ft to 13123 ft). Refer to the Technical Reference (SIEPYAIH6B01) for derating information.

**3 Select the Correct Mounting Location and Position and Mount the Bypass Vertically**

Use Your Dimension Drawing to help you select the correct mounting location. The Dimension Drawing for your model is packaged with the bypass.

Bypass Model	Dimension Drawing DD.HWF.1.xx.xx	Bypass Model	Dimension Drawing DD.HWF.1.xx.xx	Bypass Model	Dimension Drawing DD.HWF.1.xx.xx
D002 - D016	W0.01	A002 - A015	W0.01	B1P1, B001 - B014	W0.01
D024, D030	W1.01	A022, A028	W1.01	B021 - B034	W1.01
D046, D059	W2.01	A042, A054	W2.01	B040 - B065	W2.01
D074 - D114	W3.01	A068 - A104	W3.01	B077 - B124	W3.01
D143, D169	W4.01	A130, A154	W4.01	B156	W4.01
D211, D273	F1.01	A192, A248	F1.01	B180 - B302	F1.01

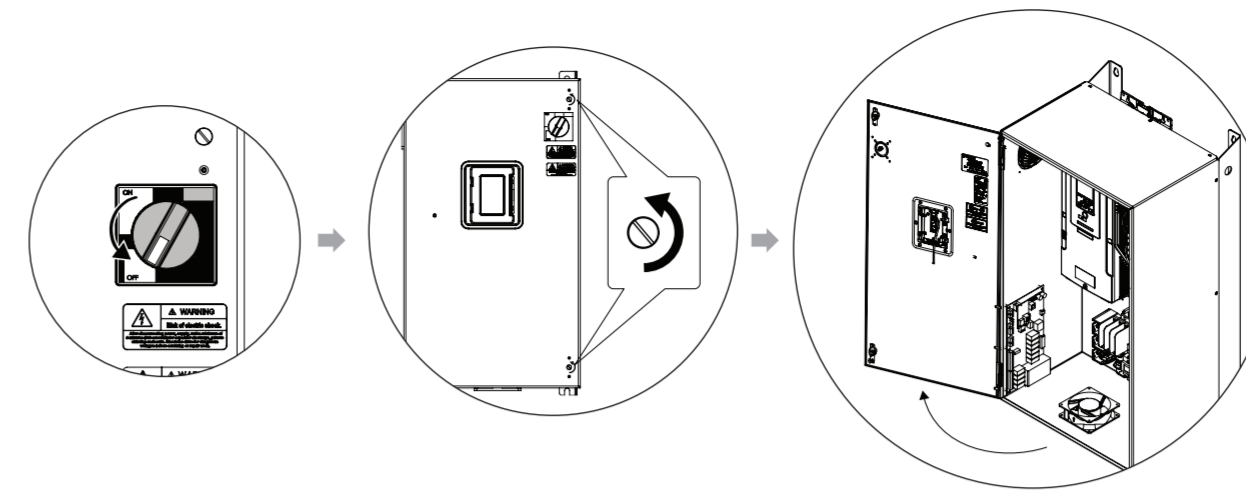
**4 Select the Input and Output Wires and Branch Circuit Protection**

Use your Customer Connection Drawing to help you select the correct wires. The Customer Connection Drawing for your model is packaged with the bypass.

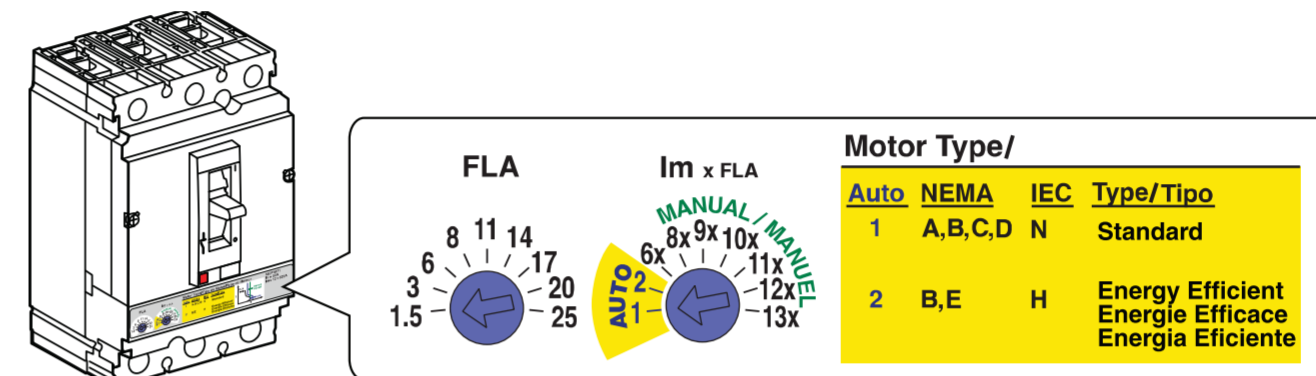
**Branch Circuit Protection**

**WARNING!** Fire Hazard. The standard bypass includes a non-fusible disconnect switch that does not provide branch circuit protection. Branch Circuit protection is required to be installed according to applicable local codes and the requirements listed on the bypass nameplate. The bypass is suitable for use on a circuit capable of delivering not more than 100,000 RMS symmetrical amperes, 208/240 Vac and 480 Vac with the circuit breaker option or when protected by class J or class L fuses as specified on the bypass nameplate. Failure to obey can cause fire and damage to the bypass and drive or injury to personnel.

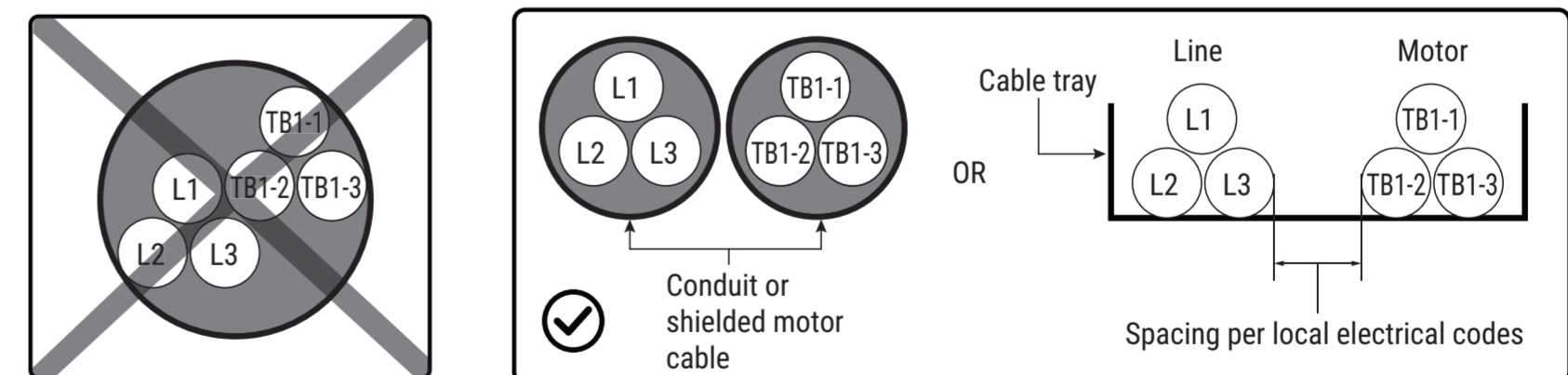
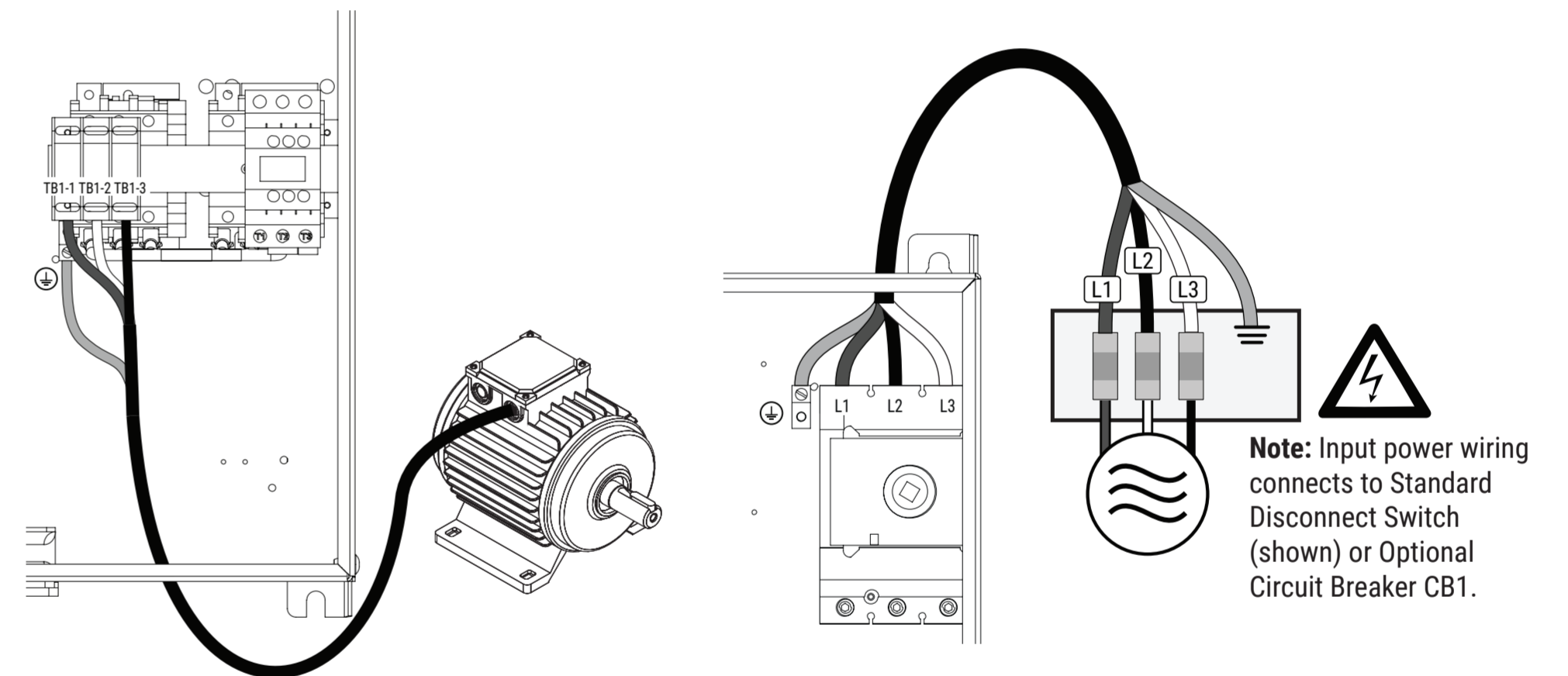
**5 Open the Bypass Door**



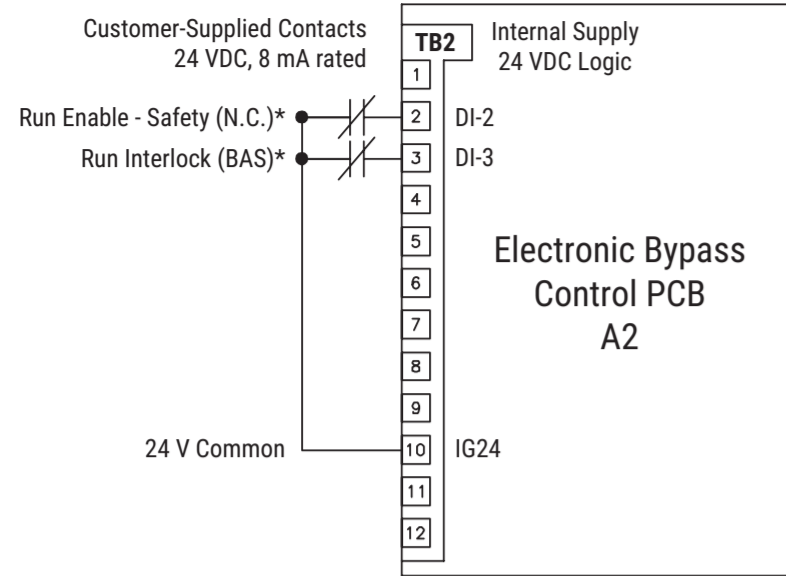
**6 Optional Circuit Breaker CB1 - Set "FLA" to Match Motor FLA; Make Sure that "Im x FLA" is set to "AUTO"**



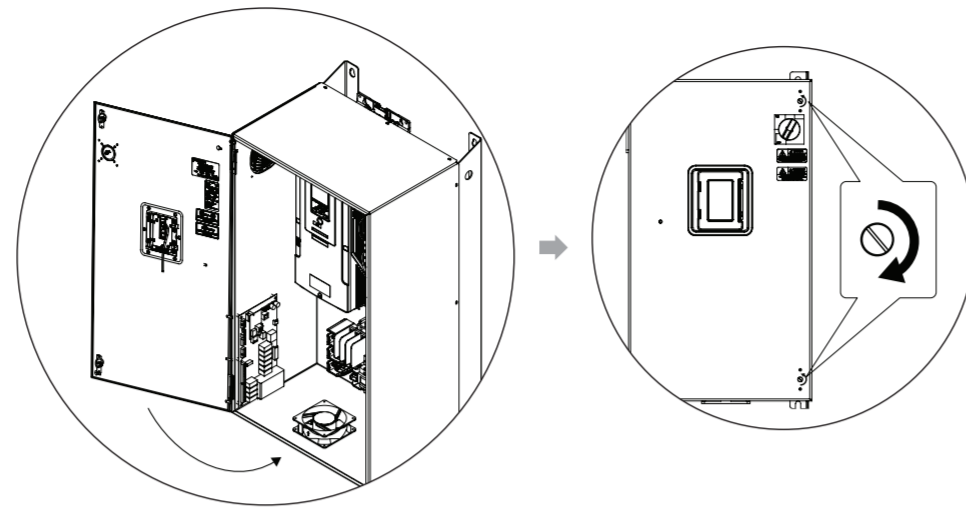
**7 Install the Motor Wiring and Power Wiring**



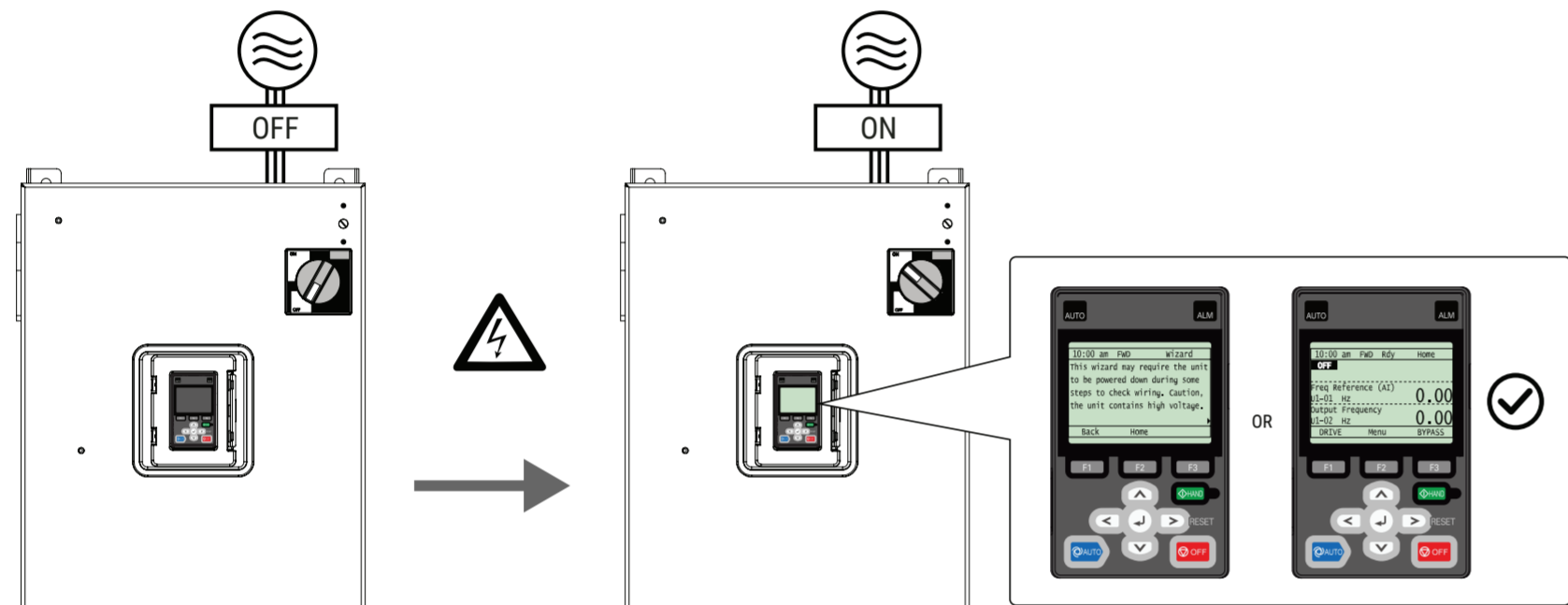
**8 Make the Necessary Connections on the Bypass Control PCB**      **9 Close and Secure the Bypass Door**



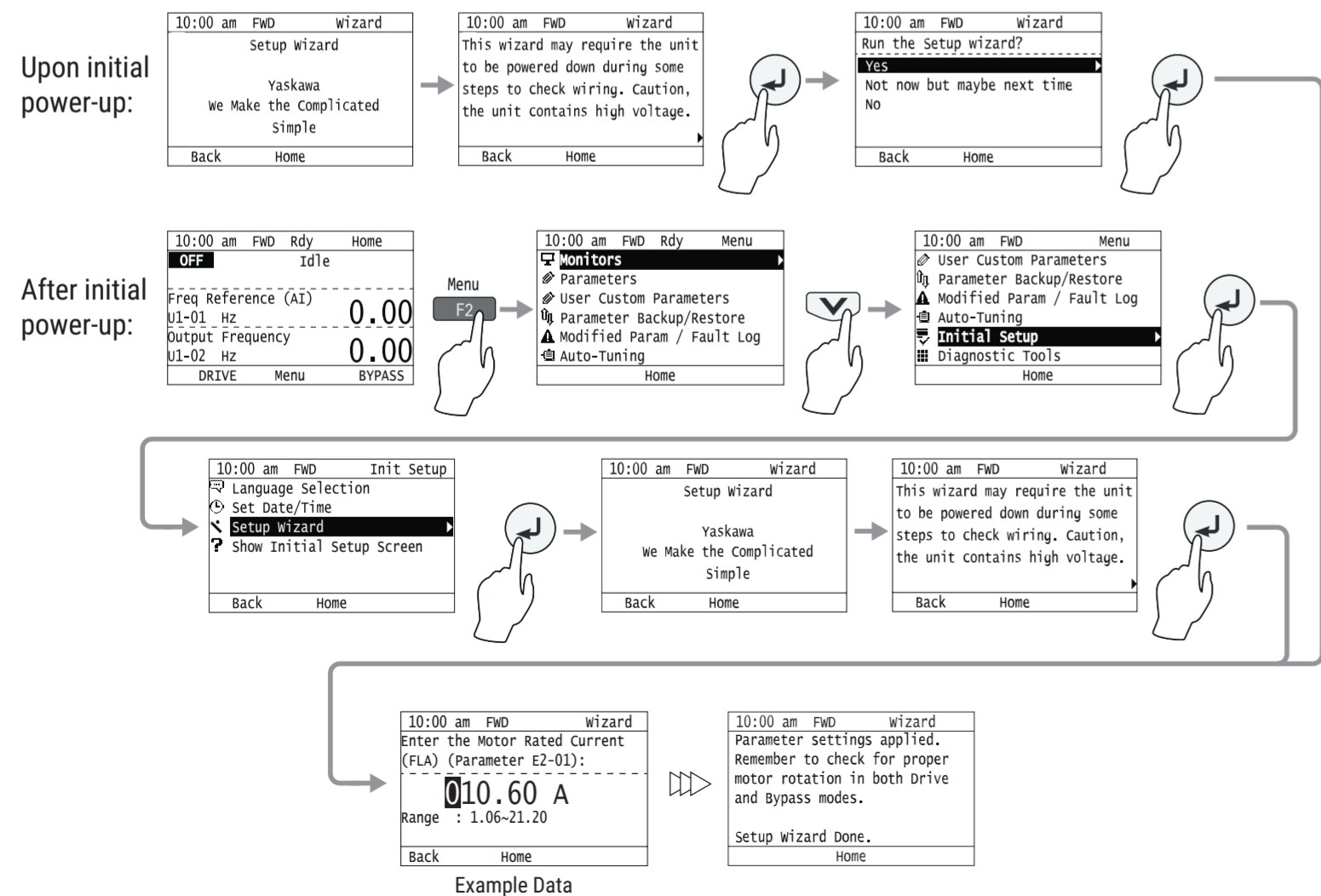
\*You must make these connections to prevent "Safety Open" and "AL02 - Interlock Open" alarms.  
If a safety circuit is not available, connect a jumper between DI-2 and IG24.  
If an interlock circuit is not available, connect a jumper between DI-3 and IG24.



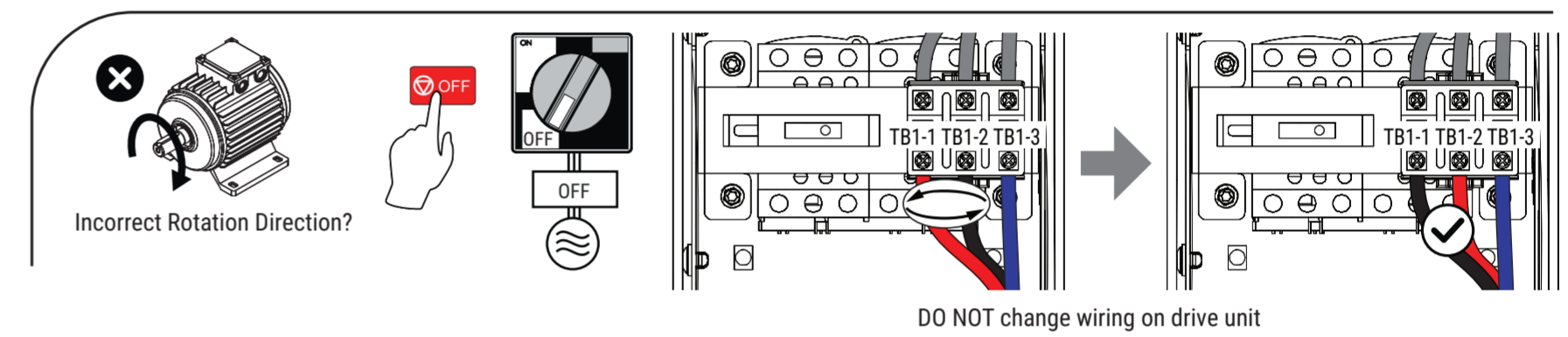
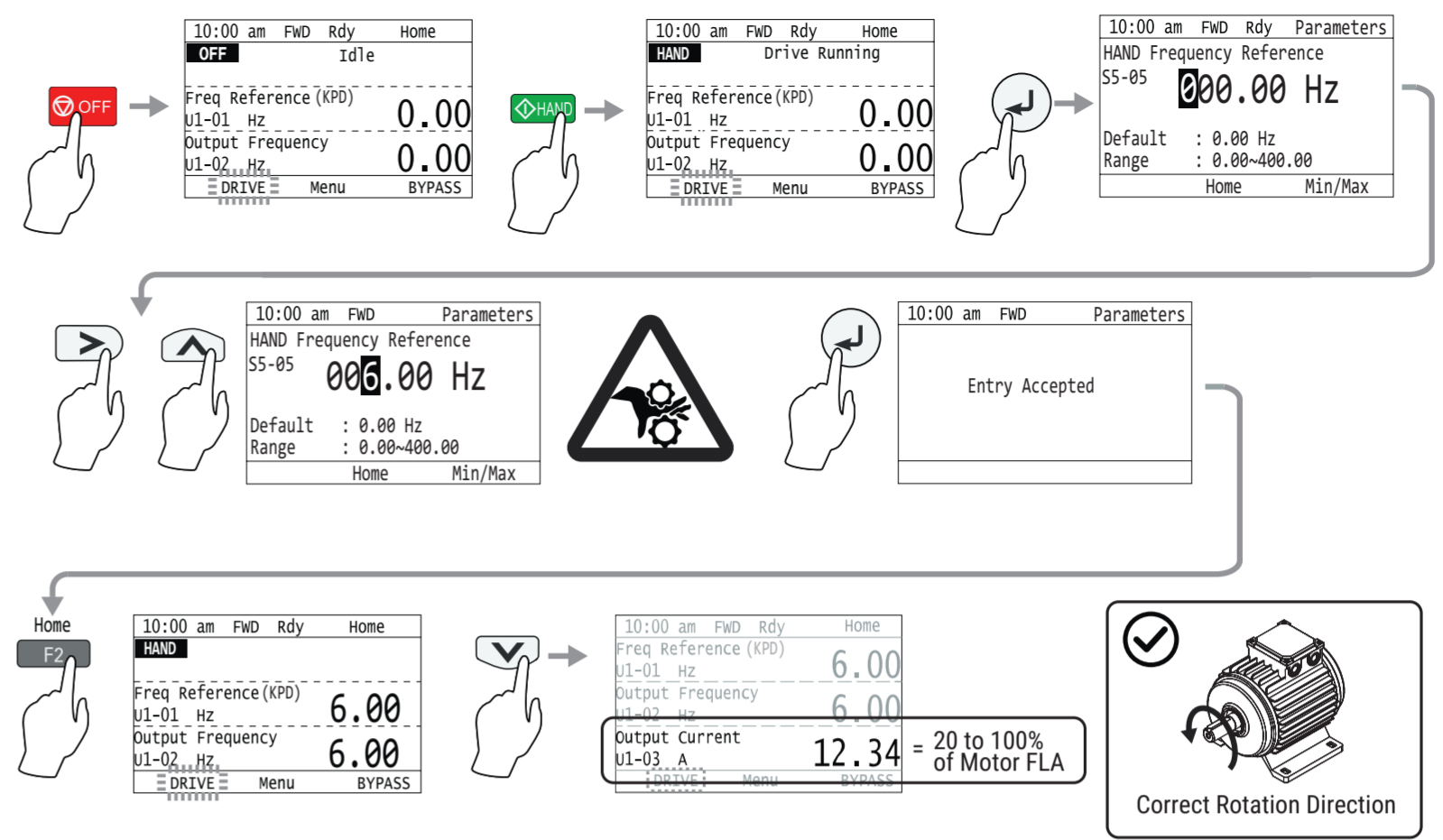
**10 Energize the Bypass and Confirm It Is Ready**



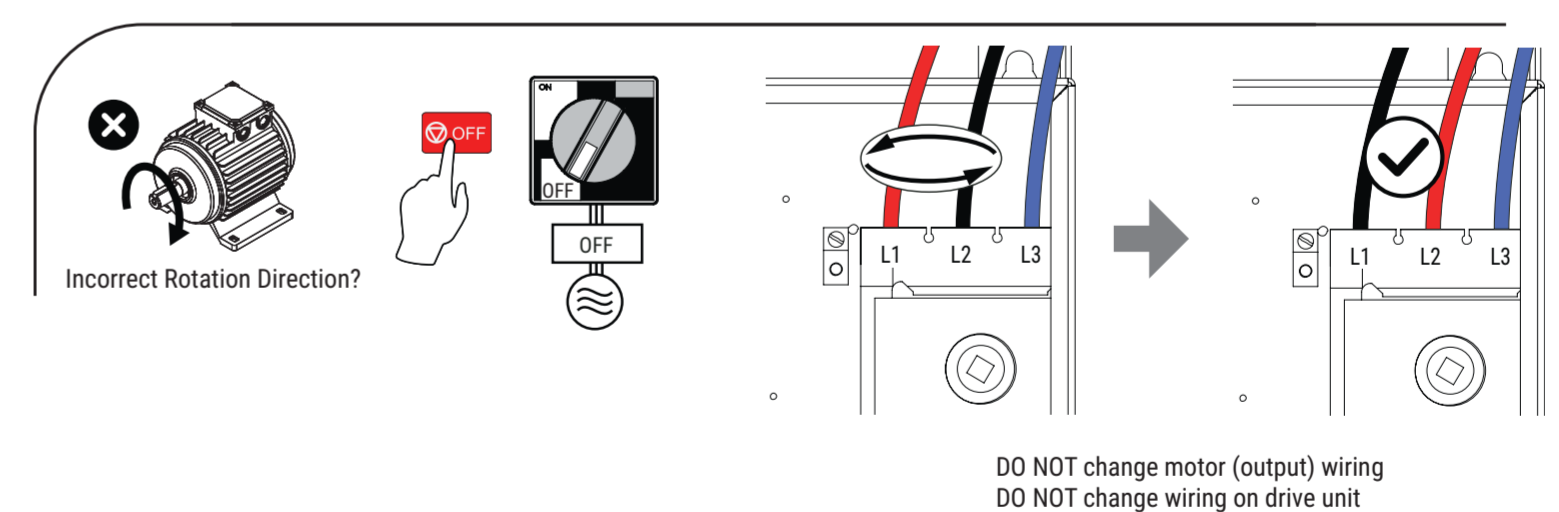
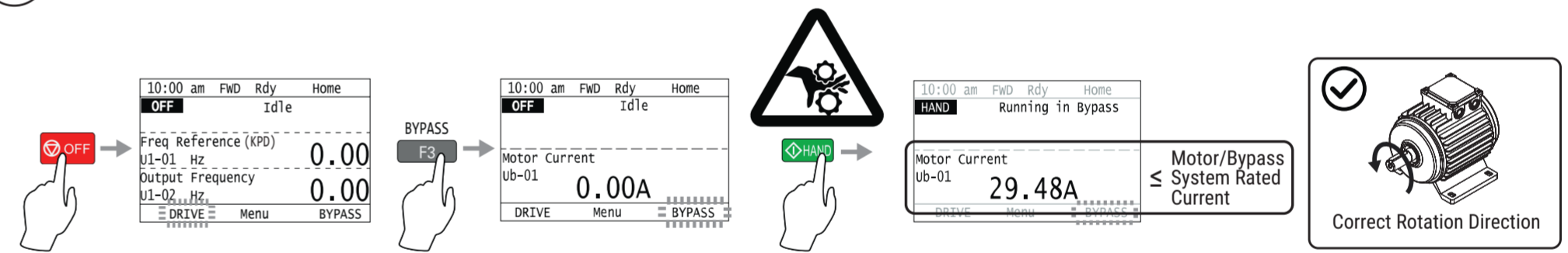
**11 Run the Setup Wizard**



**12 Do a Test Run and Check the Motor Rotation in Drive Mode**

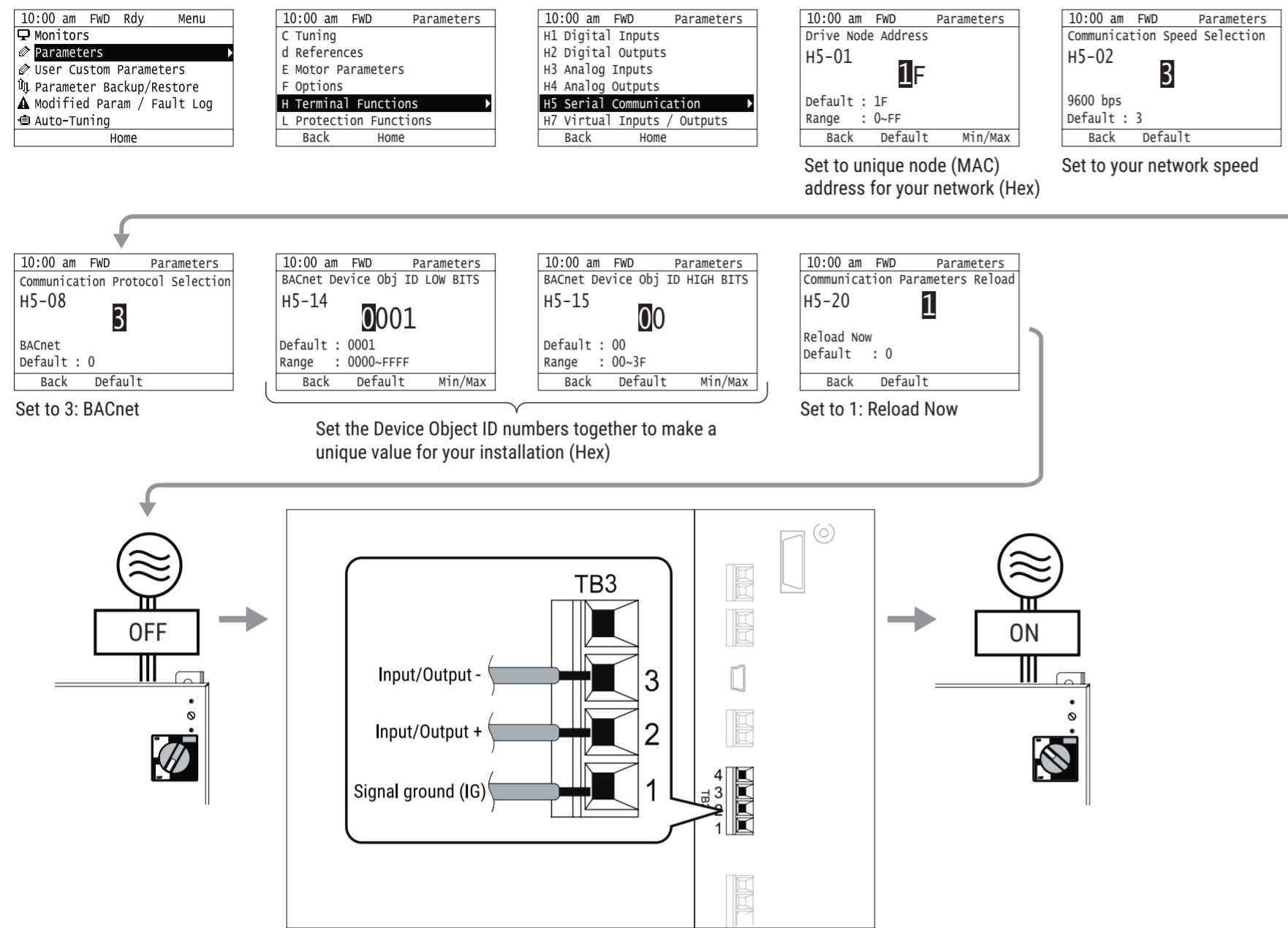


**13 Do a Test Run and Check the Motor Rotation in Bypass Mode**

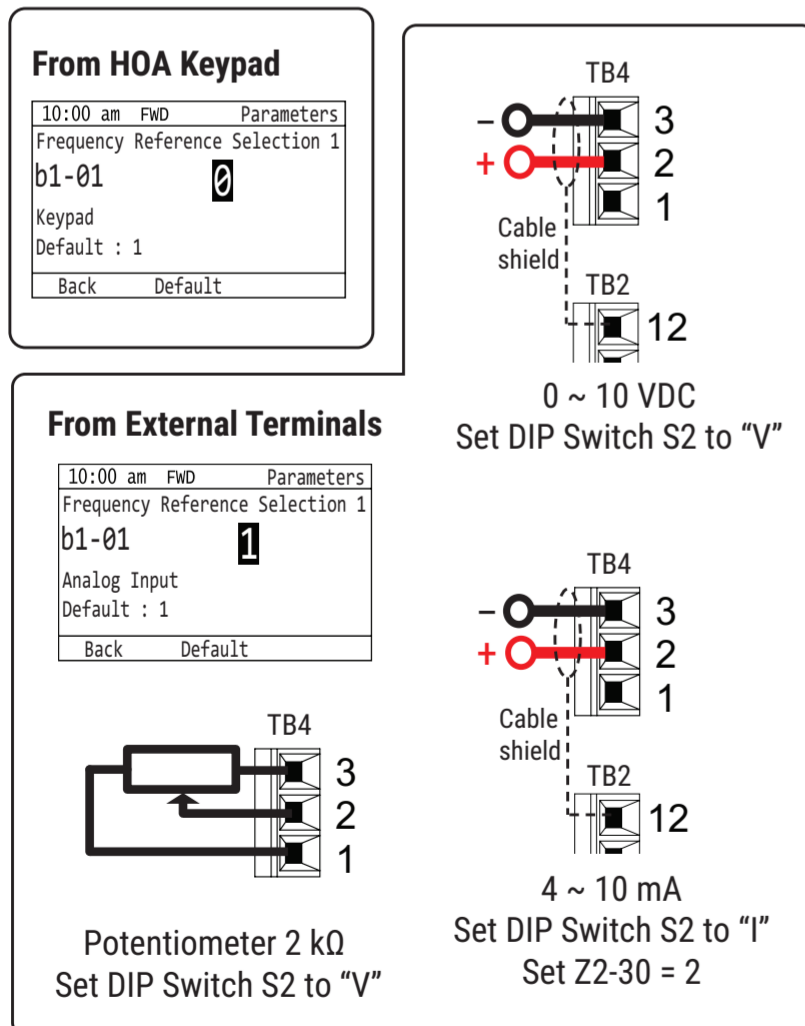




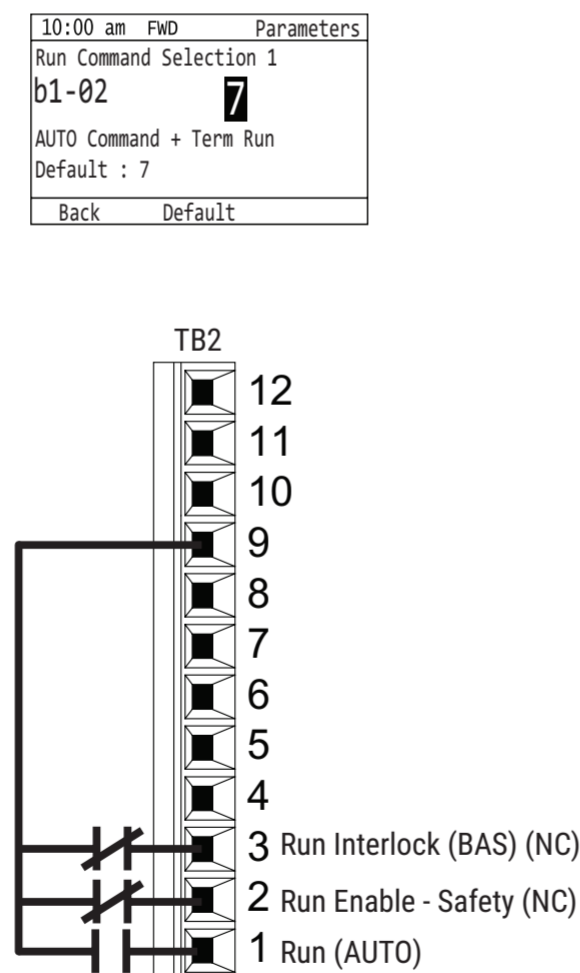
### A How to Set Up the Drive for Monitoring via BACnet MS/TP



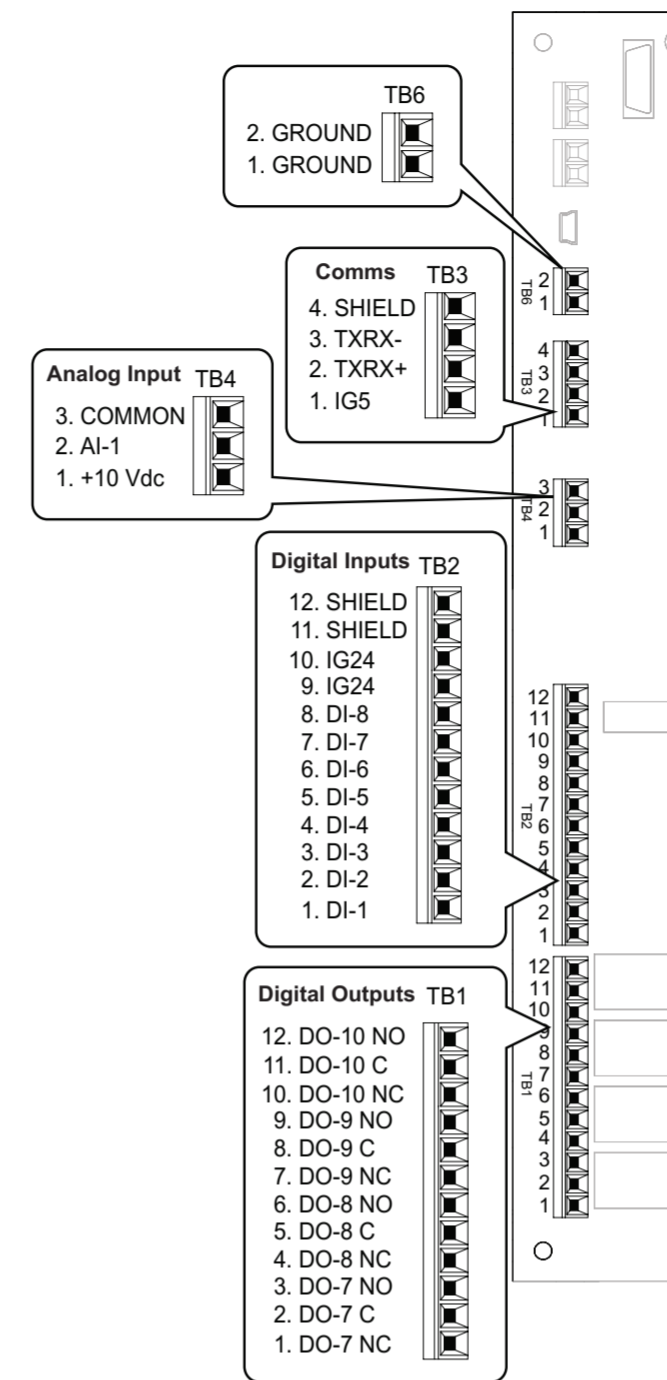
### B Set Frequency Reference Source



### C Set Start/Stop Control Method from External Terminals

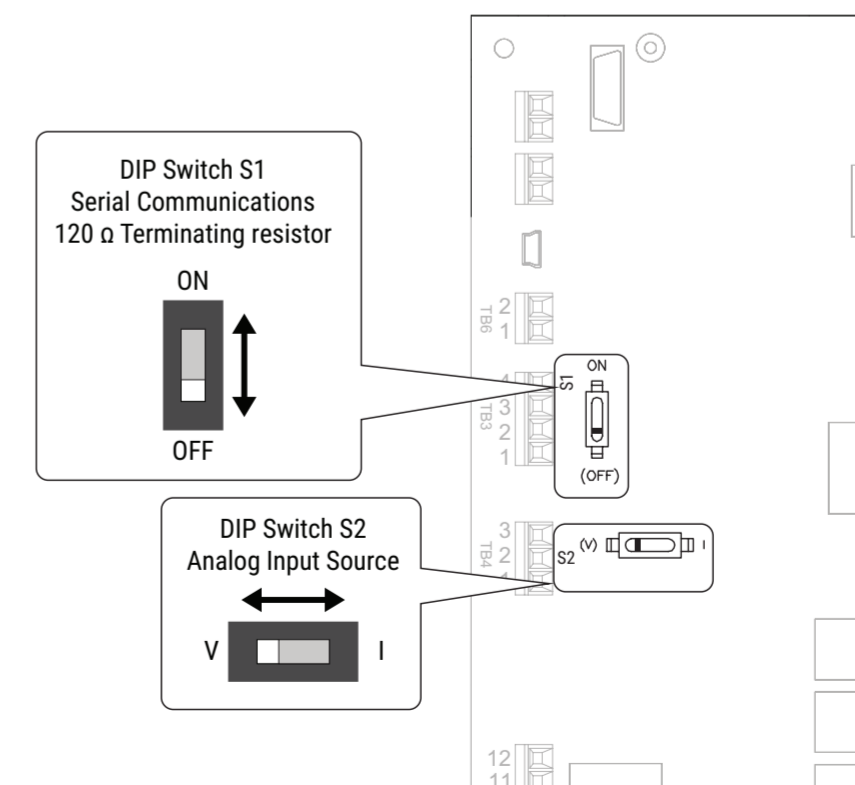


### D Bypass Control Circuit

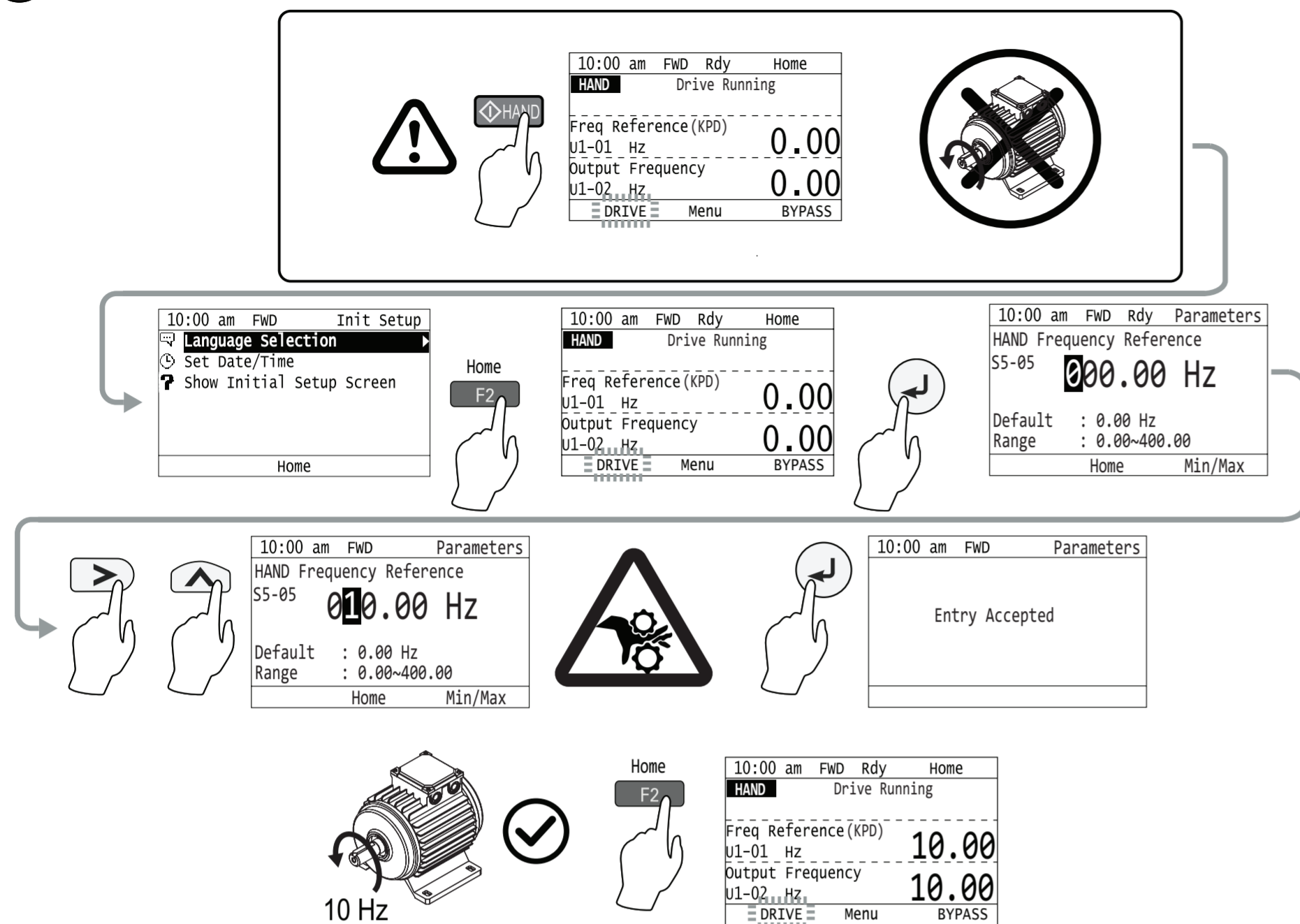


Terminal Block	Type	Terminal	Parameter	Default	Name	Function (Signal Level)		
TB2	Digital Inputs	TB2-1	DI-1	Z2-01	21	Run (Auto)	Dry contact rated, photocoupler sinking input to IG24, 24 VDC 8 mA, ground fault protected	
		TB2-2	DI-2	Z2-02	22	Run Enable - Safety (NC)		
		TB2-3	DI-3	Z2-03	23	Run Interlock BAS (NC)		
		TB2-4	DI-4	Z2-04	24	Remote Transfer to Bypass		
		TB2-5	DI-5	Z2-05	25	Emergency Override to Bypass		
		TB2-6	DI-6	Z2-06	0	Spare		
		TB2-7	DI-7	Z2-07	0	Spare		
		TB2-8	DI-8	Z2-08	0	Spare		
		TB2-9/10	IG24	-	-	Isolated Ground		Digital input common
		TB4	Analog Inputs	TB4-1	+10 VDC	Z2-30		0
TB4-2	AI			-	-	Analog Input Speed Reference		
TB4-3	COMMON			-	-	Analog Input Common	Analog input common	
TB1	Digital Outputs	TB1-1/2/3	DO-7	Z2-23	7	Motor Run	Relay, dry contact form C, 30 VDC or 120 Vac, 2 Amp	
		TB1-4/5/6	DO-8	Z2-24	10	HAND Mode		
		TB1-7/8/9	DO-9	Z2-25	12	AUTO Mode		
		TB1-10/11/12	DO-10	Z2-26	15	System Fault		
		TB1-10/11/12	DO-10	Z2-26	15	System Fault		
TB6	Ground Terminals	TB6-1/2	GROUND	-	-	Chassis Ground		
TB3	Serial Comms	TB3-1	IG5	H5-xx	-	Isolated Ground	Ground reference for RS-485 signals	
		TB3-2	TXRX+	H5-xx	-	(+) Differential Communication Signal	RS-485 BACnet communications: Maximum 76.8 kbps	
		TB3-3	TXRX-	H5-xx	-	(-) Differential Communication Signal		
		TB3-4	SHIELD	H5-xx	-	Shield Tie Point	Capacitively coupled to chassis ground.	

### E Switches on the Bypass Control Board



**F** If You Push the HAND Button but the Motor Does Not Spin (Drive Mode)



**G** Parameter Groups

A: Initialization	d: Reference Settings	L: Protection Functions	S: Special Applications
A1 Initialization	d1 Frequency Reference	L1 Motor Protection	S1 Dynamic Noise Control
A2 User Parameters	d2 Reference Limits	L2 Power Loss Ride Through	S2 Sequence Run Timers
<b>b: Application</b>	d3 Jump Frequency	L3 Stall Prevention	S3 PI2 Control
b1 Operation Mode Selection	d4 Freq. Ref. Up/Down & Hold	L4 Speed Detection	S5 HAND/OFF/AUTO Operation
b2 DC Injection Braking and Short Circuit Braking	d6 Field Weakening	L5 Fault Restart	S6 Protection
b3 Speed Search	d7 Offset Frequency	L6 Torque Detection	<b>T: Auto-Tuning</b>
b4 Timer Function	<b>E: Motor</b>	L8 Drive Protection	T0 Tuning Mode Selection
b5 PID Control	E1 V/f Pattern for Motor 1	L9 Drive Protection 2	T1 InductionMotor Auto-Tuning
b8 Energy Saving	E2 Motor 1 Parameters	<b>n: Special Adjustment</b>	<b>Y: Application Features</b>
<b>C: Tuning</b>	<b>F: Options</b>	n1 Hunting Prevention	Y1 Application Basics
C1 Accel & Decel Time	F6 Communication Option	n3 High Slip/Overexcite Braking	Y2 PID Sleep and Protection
C2 S-Curve Characteristics	F7 Ethernet Options	<b>o: Keypad-Related Settings</b>	Y4 Application Advanced
C3 Slip Compensation	<b>H: Terminal Functions</b>	o1 Keypad Display	YA Preset Setpoint
C4 Torque Compensation	H1 Digital Inputs	o2 Keypad Operation	YC Feedback Features
C6 Carrier Frequency	H2 Digital Outputs	o3 Copy Keypad Function	YF PI Auxiliary Control
	H3 Analog Inputs	o4 Maintenance Monitors	<b>Z: Bypass Parameters</b>
	H4 Analog Outputs	o5 Log Function	Z1 Bypass Control Ssystem
	H5 Serial Communication		Z2 Bypass Digital Inputs/Outputs
	H7 Virtual Inputs/Outputs		Z3 Bypass Serial Communications

Frequently Used Parameters

Parameter Number   Name	Default   Description	Parameter Number   Name	Default   Description	Parameter Number   Name	Default   Description
A1-03   Initialize Parameters	0   Operation Only	b3-24   Speed Search Method Selection	2   Current Detection 2	E1-04   Maximum Output Frequency	60.0 Hz
A1-06   Application Preset	0   No preset	C1-01   Acceleration Time 1	30.0 s	E2-01   Motor Rated Current (FLA)	-
b1-01   Frequency Reference Selection 1	1   Analog Input	C1-02   Deceleration Time 1	30.0 s	Z2-30   Analog Input Signal Level Select	0   0 to 10 V
b1-02   Run Command Selection 1	7   AUTO Command + Term Run	d2-01   Frequency Reference Upper Limit	100.0%	L5-01   No. of Auto-Restart Attempts	0
b1-03   Stopping Method Selection	1   Coast to Stop	d2-02   Frequency Reference Lower Limit	0.0%	L5-04   Interval Method Restart Time	10.0 s
b3-01   Speed Search at Start Selection	0   Disabled	E1-01   Input AC Supply Voltage	-		

**H** Troubleshooting Resources for Faults and Alarms

Resource	Choose This When:	URL	QR Code
Installation & Startup	You have access to the paper copy of the manual that was packaged with the drive. This manual lists all drive faults and alarms, and offers a selection of causes and solutions.	<a href="https://www.yaskawa.com/toepyaih603">https://www.yaskawa.com/toepyaih603</a>	 PDF download
Technical Reference	You want to download a PDF of the manual to your smartphone or tablet. This manual lists the full complement of causes and solutions to all drive faults and alarms and also includes detailed information about drive maintenance, wiring, and programming.	<a href="https://www.yaskawa.com/siepyaih601">https://www.yaskawa.com/siepyaih601</a>	 PDF download

**I** Additional Resources **J** Customer Feedback

**Product Manuals**

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