

TDX - Taco Duplex Starter

with  SMARTSTART®

The TDX extends the life of your pumps by alternating control. It comes standard with underload protection, a enhanced class 10 electronic overload to handle a wide range of applications, and an input that accepts 200-600 Volts.



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Features & Benefits

Taco Duplex Starter Benefits

Alternating control to extend pump life

- HOA switch and manual pump selection switch for flexible operation
- Optional alternating control by relay, 24-hour timer, or 7-day clock

Integrated SMARTSTART® electronic pump protection

- Enhanced class 10 electronic overload
- Specifically designed protection for pumps
- Built-in 1.15 service factor compensation
- Underload (dry-run protection)
- Current phase unbalance protection
- Cycle fault protection
- Locked rotor and stall protection
- Out of calibration
- Detects if overload FLA dial is improperly set

Multi-voltage operating range with automation I/O

- Accepts 200-600 VAC directly, true plug and play
- Includes a dry contact auto-run input and fault relay output

Industrial grade construction

- Door mounted heavy-duty HOA switch
- Housed in an outdoor rated, gasketed, NEMA 3R enclosure
- NEMA/IEC rated magnetic contactors feature 2.5 million electrical cycle at full rated current

Include MCP disconnect

- Motor circuit protection disconnect provides short circuit protection
- High interrupting ratings for maximum electrical system compatibility
- No fuses required
- Lockable handle for safety

TDX Sizing

Duplex Alternating Pump Controllers (Combination) 200-600 V

UL/NEMA 3R Enclosures (HOA & Electronic Overload)

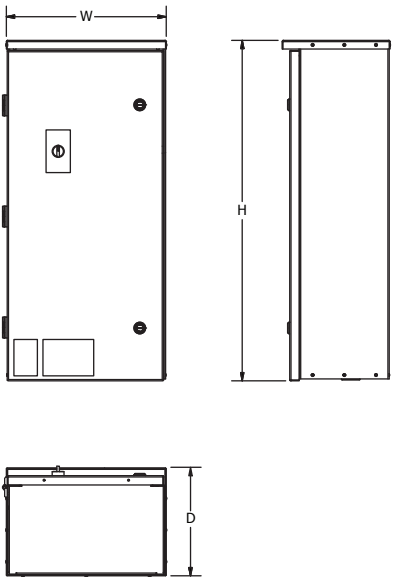
Enclosure Type	Model No.	Horsepower					SCIC KAIC 460 V	@NEMA Size	Wt. (lbs)
		Single-Phase	Three-Phase						
		230V	208 V	230 V	460 V	600 V			
UL/NEMA Type 4	TDX3R9JG1.6	1/10	-	-	-	3/4	65	00	36
	TDX3R9JG2.5	1/6	-	1/2	1	1.5	65	00	36
	TDX3R9JG4	1/3	3/4	3/4	2	3	65	00	36
	TDX3R9JG6	1/2	1	1.5	3	3	65	00	36
	TDX3R18JG8	1	2	2	5	5	65	00	36
	TDX3R18JG10	1.5	2	3	5	5	65	00	36
	TDX3R18JG13	2	3	3	7.5	10	65	0	36
	TDX3R18JG17	3	3	5	10	15	30	0	36
	TDX3R32JG22	3	5	7.5	10	20	30	1	36
	TDX3R32JG26	3	7.5	7.5	15	25	30	1	36
	TDX3R32JG32	5	7.5	10	20	30	30	1	36
	TDX3R50JG40	7.5	10	10	30	30	50	2	50
	TDX3R50JG50	10	15	15	30	40	50	2	50
	TDX3R85JG63	10	20	20	40	60	50	3	58
	TDX3R85JG75	15	25	25	50	-	50	3	58

Consult factory for higher HP starters.

TDX Dimensions

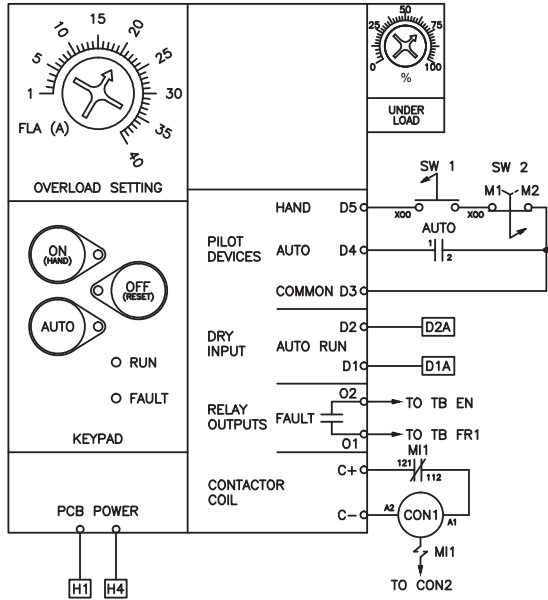
Starter Size	H	W	D	Description
TDX3R(4/F)-9-G	32	15	8	UL/NEMA 3R
TDX3R(4/F)-18-G	32	15	8	
TDX3R(4/F)-32-G	32	15	8	
TDX3R(4/F)-50-G	32	15	8	
TDX3R(4/F)-85-G	32	15	8	

**All measurements in inches*

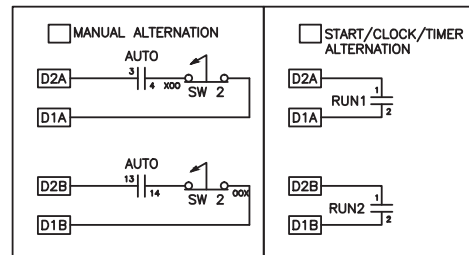
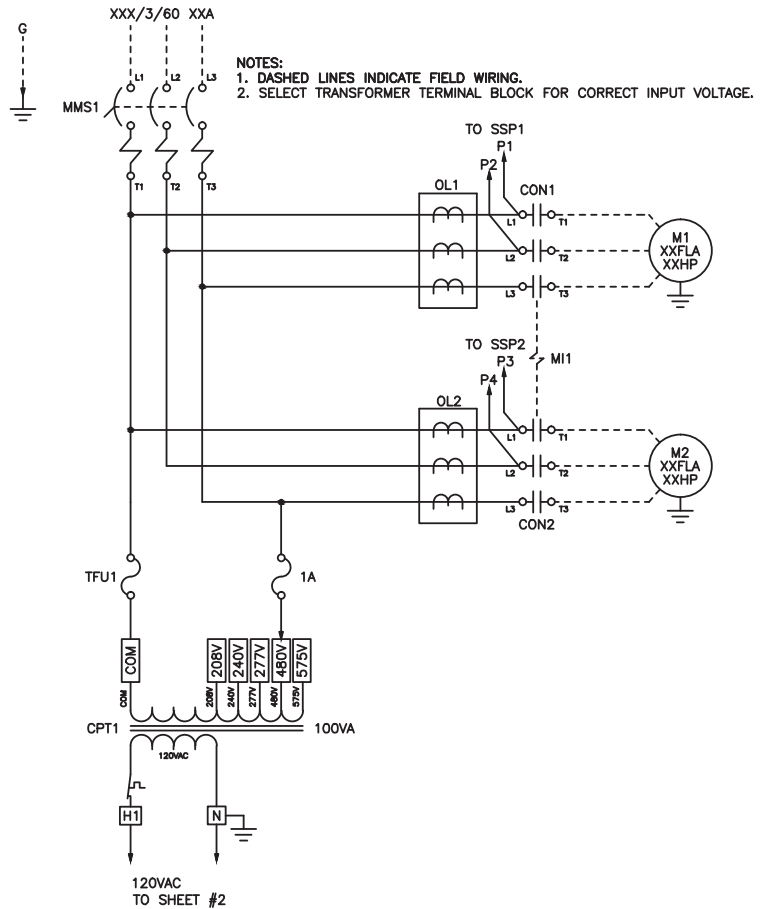
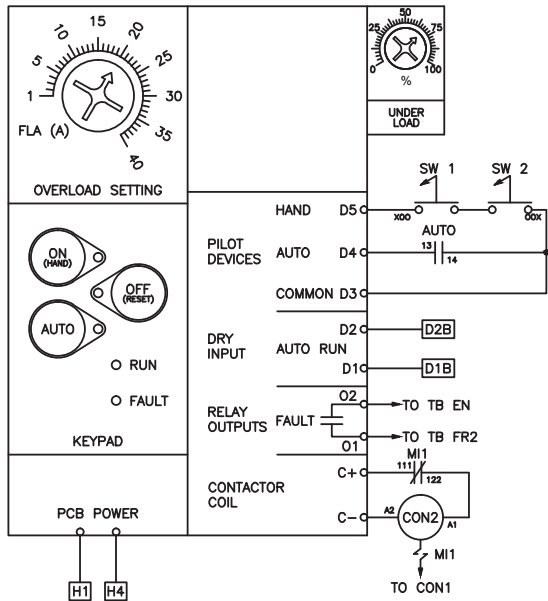


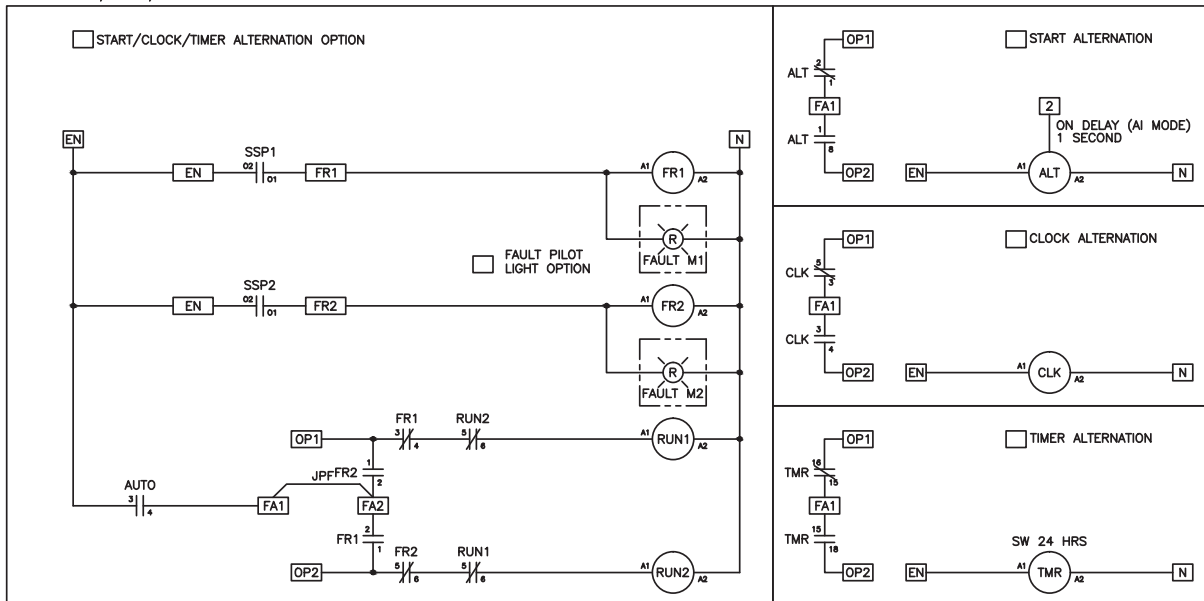
TDX Wiring Diagram

SSP1 CONTROL WIRING



SSP2 CONTROL WIRING





TDX Specification

Starter Type			
TDX - Taco Duplex Starter			
Standard or Combination (Motor Circuit Protection Disconnect)			
NEMA 3R Enclosed			
User Interface			
Settings Adjustments		Internal	
Hand-Off-Auto		NEMA 3R Enclosed - Door mounted switch	
Standard Control Operations			
Inputs	Dry Auto Run	N.O. dry contact closure	
Output	Fault Relay	N.O. 12-240VAC	
Operational	Overload Type	Electronic, I ² t thermal trip curve	
	Fault Reset	Manual	
	Power Fail Modes	Selectable: Return to Off mode or return to last mode (Hand, Off, or Auto)	
Alternation Types (Optional)	Automatic Relay	Alternation will occur on Run command as well as on Fault	
	24 Hour	Alternation will occur at selectable intervals up to 24 hours as well as on Fault	
	7 Day Programmable Clock	Alternation will occur as programmed on a 7 Day/24 hour clock as well as on Fault	
Environmental			
Ambient Operating Temp		-5° to 140° F (-20° to 60° C)	
Ambient Storage Temp		-5° to 185° F (-20° to 85° C)	
Relative Humidity		5% to 95% non-condensing	
Motor Protection		Adjustment / Description	Default Setting
Overload Current Setting Range		Differs per model	Per SFA
Overload Trip Class		Enhanced Class 10	Always on
Underload		Adjustable Trip: 0%-100% of FLA	70%
Cycle Fault		Trip if cycle rate exceeds 20 starts/minute	Always On
Stall		Trips within 0.5 seconds (disabled during startup)	Always On
Protection		Adjustment / Description	Default Setting
Current Phase Unbalance		Trips within 3 sec @ 25% current unbalance. *Trip threshold changes to 80% unbalance when switched to Off	On
Locked Rotor		Trips within 0.5 seconds	
Out of Calibration		Trips after 10 seconds if the FLA dial setting is incorrect (set above calculated FLA range), ie. Start current is outside of an acceptable range (fla setting * 5 < inrush < flasetting * 14).	
Max Time to Start		Regardless of FLA or I ² t curve, always trip at start if starting current is outside of an acceptable range (inrush / 5) and still decreasing after 10 seconds.	



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