

TSS - Taco Standard Starter

with  SMARTSTART®

The TSS comes standard with underload protection, enhanced class 10 electronic overload to handle a wide range of applications, and an input that accepts 200-600 Volts - a true plug and play install.



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Features & Benefits

Taco Standard Starter Benefits

Integrated SMARTSTART® electronic pump protection

- Enhanced class 10 electronic overload with underload protection
 - Specifically designed protection for pumps
 - Built-in 1.15 service factor compensation
- 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 or keypad
- Housed in an indoor rated NEMA N1 or outdoor rated NEMA 3R enclosure
- NEMA/IEC rated magnetic contactors feature 2.5 million electrical cycles at full rated current

Combination versions include disconnect

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

TSS Sizing

Taco Standard Starter - 1 & 3-Phase, 50/60 Hz, 200~600 VAC
UL Type 1 Enclosed - Standard Starter, Electronic Overload
Disconnect Not Included

Part Number	UL HP Ratings					SCIC KAIC @			Contactor NEMA Size
	1Ø	3Ø				240V	460V	V	
	230V	208V	230V	460V	575V	240V	460V	V	
TSS19J32	1	2	2	5	7.5	5	5	5	00
TSS118J32	3	5	5	10	15	5	5	5	0
TSS132J32	5	7.5	10	20	25	5	5	5	1
TSS150J52	10	15	15	40	40	5	5	5	2

Taco Standard Starter - 1 & 3-Phase, 50/60 Hz, 200~600 VAC
UL Type 3R Enclosed - Standard Starter, Electronic Overload
Disconnect Not Included

Part Number	UL HP Ratings					SCIC KAIC @			Contactor NEMA Size
	1Ø	3Ø				240V	460V	575	
	230V	208V	230V	460V	575V	240V	460V	575	
TSS3RJ32	1	2	2	5	7.5	5	5	5	00
TSS3R18J32	3	5	5	10	15	5	5	5	0
TSS3R32J32	5	7.5	10	20	25	5	5	5	1
TSS3R50J52	10	15	15	40	40	5	5	5	2
TSS3R100J80	15	25	30	60	75	10	10	10	3+
TSS3R150J130	25	40	50	100	100	10	10	10	4

Taco Standard Starter - 1 & 3-Phase, 50/60 Hz, 200~600 VAC
UL Type 1 Enclosed - Combination Starter, Electronic Overload
Includes Disconnect

Part Number	UL HP Ratings					SCIC KAIC @			Contactor NEMA Size
	1Ø	3Ø				240V	460V	575V	
	230V	208V	230V	460V	575V	240V	460V	575V	
TSS19JG1.6	1/10	-	-	3/4	3/4	100	65	25	00
TSS19JG2.5	1/6	1/2	1/2	1	1.5	100	65	25	
TSS19JG4	1/3	3/4	3/4	2	3	100	65	25	
TSS19JG6	1/2	1	1.5	3	3	100	65	25	
TSS19JG8	1	2	2	5	5	100	65	25	
TSS118JG10	1.5	2	3	5	7.5	100	65	25	0
TSS118JG13	2	3	3	7.5	10	100	65	25	
TSS118JG17	3	3	5	10	15	100	30	10	
TSS132JG22	3	5	7.5	15	20	100	30	10	1
TSS132JG26	3	7.5	7.5	15	20	100	30	10	
TSS132JG32	5	7.5	10	20	25	100	30	10	
TSS140JG40	7.5	10	10	30	30	100	30	10	1+

Taco Standard Starter - 1 & 3-Phase, 50/60 Hz, 200~600 VAC
UL Type 3R Enclosed - Combination Starter, Electronic Overload
Includes Disconnect

Part Number	UL HP Ratings					SCIC KAIC @			Contactor NEMA Size
	1Ø	3Ø				240V	460V	V	
	230V	208V	230V	460V	575V	240V	460V	V	
TSS3R9JG1.6	1/10	-	-	3/4	3/4	100	65	25	00
TSS3R9JG2.5	1/6	1/2	1/2	1	1.5	100	65	25	
TSS3R9JG4	1/3	3/4	3/4	2	3	100	65	25	
TSS3R9JG6	1/2	1	1.5	3	3	100	65	25	
TSS3R9JG8	1	2	2	5	5	100	65	25	
TSS3R18JG10	1.5	2	3	5	7.5	100	65	25	0
TSS3R18JG13	2	3	3	7.5	10	100	65	25	
TSS3R18JG17	3	3	5	10	15	100	30	10	
TSS3R32JG22	3	5	7.5	15	20	100	30	10	1
TSS3R32JG26	3	7.5	7.5	15	20	100	30	10	
TSS3R32JG32	5	7.5	10	20	25	100	30	10	
TSS3R40JG40	7.5	10	10	30	30	100	30	10	1+
TSS3R50JG50	7.5	10	10	30	40	100	50	10	2
TSS3R85JG63	10	20	20	40	-	100	50	10	3
TSS3R85JG75	15	20	25	50	-	100	50	10	
TSS3R85JG90	20	25	30	60	-	100	50	10	
TSS3R150JG200	25	30	40	75	100	10	10	10	4
TSS3R150JG250	25	40	50	100	-	10	10	-	

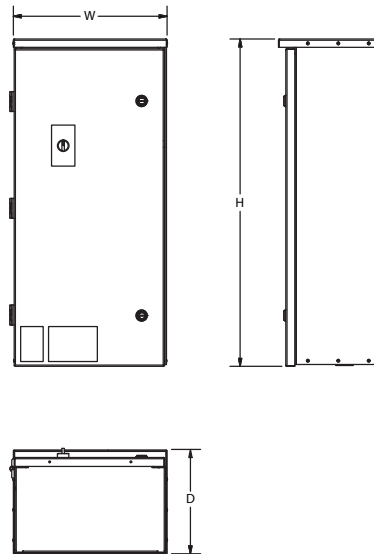
TSS Sizing

- 4 -

NEMA 3R Dimensions

**All measurements shown in inches*

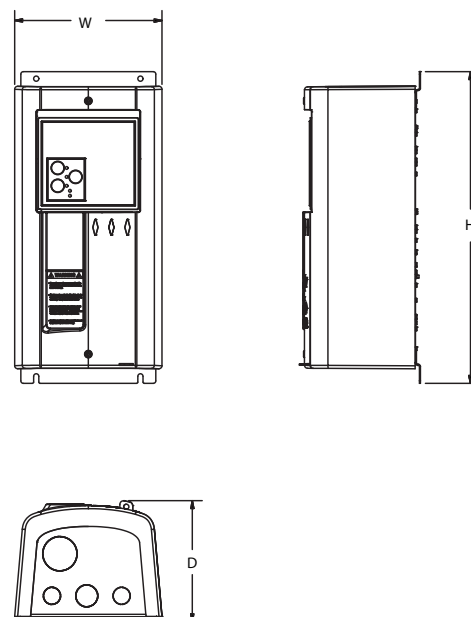
Combination Starter	H	W	D
TSS3R9JG1.6 - TSS3R40JG40	14	7.5	6
TSS3R50JG50	22	15	8
TSS3R85JG63 - TSS3R150JG200	32	15	8
Standard Starter	H	W	D
TSS3R9J9-TSS3R32J32	14	7.5	6
TSS3R50JG52-TSS3R100J80	16	12	8
TSS3R150J130	22	15	8



NEMA 1 Dimensions

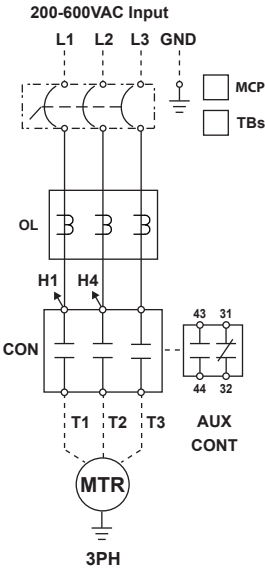
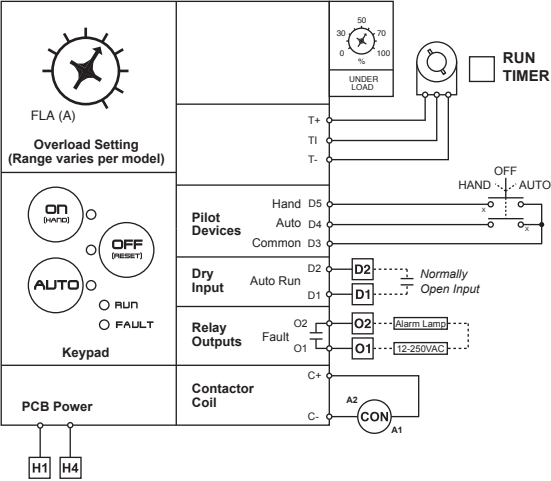
**All measurements shown in inches*

Combination Starter	H	W	D
TSS19JG1.6-TSS140JG40	16	7.5	6
Standard Starter	H	W	D
TSS19J9-TSS15J52	16	7.5	6



Wiring Diagram

TSS Control Wiring



Standard wiring schematic shown, actual product wiring may vary depending on options selected

TSS Specification

- 6 -

Starter Type			
TSS - Taco Standard Starter			
Standard or Combination (Motor Circuit Protection Disconnect)			
NEMA Type 1 or 3R Enclosed			
User Interface			
Settings Adjustments	Internal		
Hand-Off-Auto	NEMA 3R Enclosed - Door mounted switch or keypad (model dependent), NEMA 1 Enclosed - Hand-Off-Auto keypad		
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)	
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		Class 10	Always on
Underload		Adjustable Trip: 0%-100% of FLA	35%
Cycle Fault		Trip if cycle rate exceeds 20 starts/minute	Always On
Stall		Trips within 0.5 seconds (disabled during startup)	Always On
⏻ SMARTSTART™ 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 < fla setting * 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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