

RSGT Series Self-Learning 3-Phase Soft Starters for Motors up to 75Hp / 55kW

Launch Presentation

September 2024



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Logan MacWebb September 2024

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INTRODUCTION

Why this launch? Expectations Markets of interest

THE PRODUCT

Relevant technical data Features and Benefits

THE MARKET

Relevant applications Marketing tools

CONCLUSIONS

Self-Learning 3-Phase Soft Starters for Motors up to 75Hp / 55kW





Why this launch?

- The drive for higher energy efficiency is also impacting the world of industrial motors
- As of July 2021 3-phase motors from 0.75 kW to 1,000 kW must be IE3 efficiency or higher
- Starting currents of higher efficiency motors can reach more than 10 times the motor rated current
- RSGT soft starters can counteract this problem by reducing starting current by an average of 50%
- We observed a general trend towards availability and access to data to enable real-time monitoring and to facilitate trouble shooting.
- Together with RSGD soft starters, RSGT will significantly enhance our offering to various sales channels and will thus make our offering more appealing to Distributors and potential PLB partners



Expectations

Strengthen our General Purpose porfolio

A go-to solution provider	Increase worldwide presence
 Complete product portfolio Less settings than competitors IE3 ready 	 Multi-voltage operation: 220 – 600 VAC More attractive & complete offering

New markets

- Address new markets
 - 3-phase control is a must
 - Current reduction > 40%

New features

- QR code to facilitate troubleshooting
- Dry-run functionality
- Automatic recognition of supply voltage
- Modbus communication



Markets of interest





RSGT product range

	45mm	75mm	120mm	
Current range	12 A to 25 A	32 A to 55 A	70 A to 90 A	
Voltage range	RSGT40:RSGT60:187 - 440 VAC187 - 660 VAC			
Power range	Up to 20Hp / 15kW	Up to 50Hp / 37kW	Up to 75Hp / 55kW	
Relay outputs	2	3		
PTC input	No	Yes		
Ramp-up time	1 – 20 sec	1 – 30 sec		
Ramp-down time	0 – 20 sec	0 – 30 sec		
Overload protection	Yes			
Communication	Optional	Yes		

















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RSGT Series Self-Learning 3-Phase Soft Starters



New features and benefits | Self-Learning Algorithm

Feature	Feature description	Benefit
Self-learning	 Initial torque to start the load is automatically adjusted by RSGT Optimal current reduction is achieved within few starts (typically < 10) Self-learning is active at every start to adjust parameters according to load needs 	 Easy to set-up Reduces commissioning time Optimal starts under different conditions Fewer alarms Improved machine uptime Less service calls



New features and benefits | Intelligent diagnostics

Feature	Feature description	Benefit		
Dry-run protection	 Dry-run protection will trigger an alarm if less than 50% of FLC flows for 5 seconds (Default - disabled) Dry-run protection can also be enabled/disabled by pressing the Test/Rest button for 3 sec 	 Increase pump lifetime Protects pumps from serious failures of rubber seals Detects broken belts and couplings in fans 		
Torque-control	 Torque control during ramp-down Torque control is an advanced algorithm that is very suitable in pumps. Deceleration of pumps is very smooth and reduces water hammering 	 Reduces stresses on the load system Smoother deceleration of the load 		



New features and benefits | Faster troubleshooting

Feature	Feature description	Benefit
	Frontal QR code provides a link to the online troubleshooting guide	 Facilitates troubleshooting Less machine downtime
	 More information from RSGT History file extract with: First 8 starts data Last 24 starts data 	 Can be used as a commissioning tool Enables quicker fault-finding Facilitates fault root cause identification History data can reveal application related issues and also issues related with soft starter sizing



Applications



Market Compressors

Channel OEM

Application Soft starting & soft stopping of screw compressor for air compressor unit

Benefits

Lower starting current reduces light flickering Less belt slippage



Applications



Reverse Osmosis Membrane Element inside a Pressure Vessel



Market Agriculture

Channel System Integrator/Panel Builder

Application

Soft starting & soft stopping of centrifugal pumps in irrigation, reverse osmosis, water pumping

Benefits

Lower starting current Less vibrations during pump start Less disturbance to voltage grid especially in weak networks (e.g. isolated farms)



Applications



Market Food & Beverage

Channel OEM

Application

Soft starting & soft stopping of high pressure pumps in industrial cleaning applications – e.g. food crates through high pressure water jets

Benefits

Lower starting current Less vibrations during pump start/stop Longer lifetime for pumps and pipe joints



Applications



Market Plastic & Rubber

Channel OEM

Application

Soft starting and soft stopping of cooling pumps used to cool the extrusion barrel

Benefits

Lower starting current Less vibrations during pump start/stop Longer lifetime for pumps and pipe joints



Applications



Market HVAC

Channel OEM

Application

Soft starting & soft stopping of (big)circulating water pumps for cooling circuit

Benefits

Quicker diagnostics Information improves system management Scheduling preventive maintenance activity Real-time alarm indication History of the last 24 starts & first 8 starts Monitoring of real-time energy variables



Promotional Material

Data Sheet Languages

- ✓ Danish
- ✓ English
- ✓ French
- ✓ German
- ✓ Italian
- ✓ Spanish
- ✓ Russian
- ✓ Chinese

Sales Battlecard





Application selection guide

Selection guide and typical application settings

Category	Туре	Trip Class	Ramp-up setting [s]	Ramp-down setting [s]
	Scroll compressor	5	1	0
Compressors	Screw compressor	5	2 to 5	0
Compressors	Piston compressor	5	2	0
	Centrifugal compressor	10	10	0
	du comp	5	2	0
Bumpo	Centrifugal puri, (start time <10sec)	5	5 to 10	10
Fumps	Centrifugal pump (sart time >10sec)	10	10 to 20	15
	Piston pump	10	5 to 10	0
	Centrifugal fan (<0.5n diameter)	10	5 to 10	0
Fans	Centrifugal fan (>0.5m diameter)	20	15 to 20	0
	Vacuum blowers	10	5 to 10	0
Foodoro	Screw feeder	10	2 to 10	0
reeders	Auger	10	5 to 10	0
	Agitators	10	5 to 15	0
	Mixers	10	5 to 10	0
	Saws (<0.5m diame	10	5 to 10	5
Rotating machinery	Saws (>0.5m diamete	20	15 to 20	10
	Grinder	20	15 to 20	0
	Crusher	30	20	0
	Conveyors	10	5 to 10	5



Application selection guide

Motor	Motor HP ratings		Motor kW ratings		Trin class	Trin class	Trin class	Trin Class
FLC [A]	@ 230 V	@ 400 V	@ 230 V	@ 400 V	5	10	20	30
1.8	1⁄3	1	0.25	0.75	RSGT4012	RSGT4012	RSGT4012	RSGT4012
2.6	1/2	1.5	0.37	1.1	RSGT4012	RSGT4012	RSGT4012	RSGT4012
3.4	3⁄4	2	0.56	1.5	RSGT4012	RSGT4012	RSGT4012	RSGT4012
5	1.5	3	1.1	2.2	RSGT4012	RSGT4012	RSGT4012	RSGT4012
6	1.5	4	1.1	3	RSGT4012	RSGT4012	RSGT4012	RSGT4012
9	2	5.5	1.5	4	RSGT4012	RSGT4012	RSGT4016	RSGT4025
12	4	7.5	3	5.5	RSGT4012	RSGT4012	RSGT4025	RSGT4025
16	5.5	10	4	7.5	RSGT4016	RSGT4016	RSGT4032	RSGT4045
22	7.5	15	5.5	11	RSGT4025	RSGT4025	RSGT4045	RSGT4045
30	10	20	7.5	15	RSGT4032	RSGT4032	RSGT4055	RSGT4070
37	10	25	7.5	18	RSGT4045	RSGT4045	RSGT4090	RSGT4090
45	15	30	11	22	RSGT4045	RSGT4045	RSGT4090	RSGT4090
55	20	40	15	30	RSGT4055	RSGT4055	RSGT4090	RSGT4090
70	25	50	18	37	RSGT4070	RSGT4070	- *	- *
85	30	60	22	45	RSGT4090	RSGT4090	- *	- *

CE



Certifications

Europe: Conformité Européenne Acc. to EN60947-4-2

EAC: EurAsian conformity mark



FAL

USA: Underwriters Laboratories Inc.

Canada: Canadian Standards Authority *cULus according to UL60947-4-2*



Unique Selling Proposition

- RSGT is an advanced soft starter that results in best-in-class current reduction performance and still maintaining the most easy to use interface
- Unlike our competitors such as Allen Bradley SMC3, the RSGT only requires 3 user adjustments
- All this is possible thanks to the advanced self-learning algorithm that facilitates the life of our customers by taking away the burden of the complex fine-tuning that most of our competitors require
- Modbus serial interface enables our customers to get access to critical real-time data. Also, the Modbus communication will increase the attractiveness and differentiate our offering vs competition
- This is what we want to be distinguished for when it comes to Motor Control products we
 provide high-end performance through simple user interfaces
- RSGT is a strong addition to our portfolio as it can address a wider market and more applications



Thank you