Soft Starter
Three-Phase Scroll Compressor Soft Starter
Types RSBD

- **Soft starting of 3-phase scroll compressors up to 95Amp**
- **Patented auto-adaptive algorithm for optimum inrush current reduction (No user settings required)**
- **2-Phase controlled solution**
- **Current balancing strategy**
- **Integrated bypass relays**
- **Internally supplied (RSBD40 versions only)**
- **Short ramp up time: <600 ms**
- **Rated operational voltage: RSBD40: 220 - 400 VAC**
  RSBD60: 220 - 600 VAC
- **Over-temperature, Overcurrent, Locked Rotor protection**
- **cULus, CE, RoHS compliant, CCC[1]**
- **HP version for multi-compressor systems**

1. pending for RSBD..55 to RSBD..95 models

Product Description

RSBD is an easy to use soft starter for scroll compressors up to 95Amp nominal current.

The units are equipped with a patented auto-adaptive algorithm that automatically adapts itself to the specific compressor it is controlling ensuring that an optimum inrush current reduction is achieved.

RSBD is a 2-phase controlled solution and is internally bypassed - resulting in less heat dissipation inside the panel.

Short Circuit and Overload protection are not provided with the controller and must be procured separately.

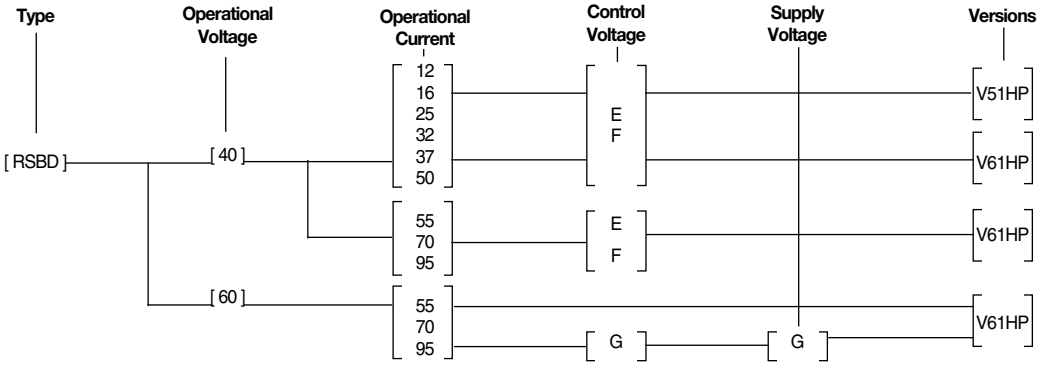
Ordering Code

RSB D 40 25 E V 61 HP

- RSB — Compressor Soft Starter
- D — Controlled Phases
- 40 — Operational Voltage
- 25 — Rated Operational Current
- E — Control Voltage
- V — Version
- 61 HP

Type Selection

Type	Operational Voltage Ue	Rated Operational Current Ie @ 40°C	Control Voltage Uc	Supply voltage Us[2]	Version
RSBD 2-Controlled phases	40: 220 – 400 VAC +10% -15% 60: 220 – 600 VAC +10% -15%	12: 12 Arms 16: 16 Arms 25: 25 Arms 32: 32 Arms 37: 37 Arms 50: 45 Arms 55: 55 Arms 70: 70 Arms 95: 95 Arms	E: 110 – 400 VAC +10% -15% F: 24 VAC/ DC +10% -10% G: 100 - 240VAC +10% -15%	F: 24 VAC/ DC G: 100 - 240 VAC [2]	V51HP V61HP



2. Applies to RSBD60 models only

Selection Guide

Operational Voltage Ue	Control Voltage Uc	Supply Voltage Us	Options	Rated Operational Current Ie		
Housing 1 (45mm)				**12 Arms**	**16 Arms**	**25 Arms**
220 - 400 VAC	110 - 400 VAC	Internally Supplied	No options	RSBD4012EV51HP	RSBD4016EV51HP	RSBD4025EV51HP
			Relay outputs	RSBD4012EV61HP	RSBD4016EV61HP	RSBD4025EV61HP
	24 VAC/DC		No options	RSBD4012FV51HP	RSBD4016FV51HP	RSBD4025FV51HP
			Relay outputs	RSBD4012FV61HP	RSBD4016FV61HP	RSBD4025FV61HP
				32 Arms	**37 Arms**	**45 Arms**
	110 - 400 VAC	Internally Supplied	No options	RSBD4032EV51HP	RSBD4037EV51HP	RSBD4050EV51HP
			Relay outputs	RSBD4032EV61HP	RSBD4037EV61HP	RSBD4050EV61HP
	24 VAC/DC		No options	RSBD4032FV51HP	RSBD4037FV51HP	RSBD4050FV51HP
			Relay outputs	RSBD4032FV61HP	RSBD4037FV61HP	RSBD4050FV61HP
Housing 2 (75mm)				**55 Arms**	**70 Arms**	**95 Arms**
220 - 400 VAC	110 - 400 VAC	Internally Supplied	Relay outputs	RSBD4055EV61HP	RSBD4070EV61HP	RSBD4095EV61HP
	24 VAC/DC			RSBD4055FV61HP	RSBD4070FV61HP	RSBD4095FV61HP
220 - 600 VAC	100 - 240 VAC	100 - 240 VAC	Relay outputs	RSBD6055GGV61HP	RSBD6070GGV61HP	RSBD6095GGV61HP

General Specifications

Starting Method	Current limit, auto-adaptive	
Ramp-up time	<600 msec	
Ramp-down time	0 sec	
Under/Overvoltage protection	**RSBD40**	**RSBD60**
Recovery from Undervoltage	176 VAC	176 VAC
Recovery from Overvoltage	466 VAC	675 VAC
Status Indication LEDs		
Power supply ON	Green LED	
Recovery mode (alarm condition)	Flashing red LED	
Alarm	Red LED	
Vibration	Acc. to IEC60068-2-6	
Frequency 1	2 [+3/-0]Hz to 25Hz Displacement +/- 1.6mm	
Frequency 2	25Hz to 100Hz @2g (19.96m/s^2)	

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Input Specifications

	RSBD40..EV..	RSBD40..FV..	RSBD60..GGV..
Control Voltage Uc	A1 – A2: 110 – 400 VAC +10%, -15%	A1 – A2: 24 VAC/DC +10%, -10%	ST: 100 - 240 VAC +10%, -15%
Control Voltage Range Uc	93.5 – 440 VAC	21.6 – 26.4 VAC/DC	85 – 264 VAC
Max. Pick Up Voltage	80 VAC	20.4 VAC/DC	80 VAC
Min. Drop Out Voltage	20 VAC	5 VAC/DC	20 VAC
Supply Voltage range Us	-	-	A1 - A2: 100 - 240 VAC +10%, -15%
Rated AC frequency	45 – 66 Hz	45 – 66 Hz (applies to 24VAC supply)	45 – 66 Hz
Rated Insulation Voltage Ui	500 VAC		
Overvoltage category	III		
Dielectric Strength			
Dielectric withstand voltage	2 kVrms		
Rated Impulse withstand Voltage	4 kVrms		
Control Input Current	0.5….5 mA	0.4….1 mA	0.4….3 mA
Input to Output response time	< 400 msec	< 400 msec	< 1.5 sec
Integrated varistor	Yes		

* **Note 1:** For the Canadian application, the control terminals A1, A2 (or A1, A2, ST for RSBD60 versions) of the RSBD devices shall be supplied by a secondary circuit where power is limited by a transformer, rectifier, voltage divider, or similar device that derives power from a primary circuit, and where the short-circuit limit between conductors of the secondary circuit or between conductors and ground is 1500VA or less. The short-circuit volt ampere limit is the product of the open circuit voltage and the short circuit ampere.

Note 2: RSBD60 soft starters require a separate single phase control source. RSBD60...GG versions: 100-240VAC. Output connections (1 L1, 3 L2, 5 L3, 2 T1, 4 T2,6 T3) are not galvanically isolated from the external supply connections (A1, A2, ST).

Output Specifications

	RSBD4012….	RSBD4016….	RSBD4025….	RSBD4032….	RSBD4037….
Overload cycle acc. to EN/IEC 60947-4-2 @ 40˚C surrounding temperature	AC53b:3.5-1:299				
Maximum number of starts per hour @ 40˚C @ rated overload cycle	12				
Rated operational current @ 40˚C	12 AAC	16 AAC	25 AAC	32 AAC	37 AAC
Rated operational current @ 50˚C	11 AAC	15 AAC	23 AAC	28 AAC	34 AAC
Rated operational current @ 60˚C	10 AAC	13 AAC	21 AAC	25 AAC	31 AAC
Minimum time between stop and start	1 sec				
Minimum time between starts	300 sec				
Minimum load current	1 AAC	1 AAC	5 AAC	5 AAC	5 AAC

	RSBD4050…	RSBD..55…	RSBD..70…	RSBD..95…
Overload cycle acc. to EN/IEC 60947-4-2 @ 40˚C surrounding temperature	AC53b:3.5-1:299			
Maximum number of starts per hour @ 40˚C @ rated overload cycle	12			
Rated operational current @ 40˚C	45 AAC	55 AAC	70 AAC	95 AAC
Rated operational current @ 50˚C	39 AAC	50 AAC	64 AAC	87 AAC
Rated operational current @ 60˚C	35 AAC	46 AAC	59 AAC	80 AAC
Minimum time between stop and start	1 sec			
Minimum time between starts	300 sec			
Minimum load current	5 AAC			

Note: The overload cycle describes the switching capability of the soft starter at a surrounding temperature of 40ºC as described in EN/IEC 60947-4-2. An overload cycle AC53b:3.5-1:299 means that the soft starter can handle a starting current of 3.5xIe for 1second followed by an OFF time of 299 seconds.

Supply Specifications

	RSBD40..	RSBD60..
Operational Voltage Range	187 – 440 VACrms	187 – 660 VACrms
Supply Current at idle	< 30 mAAC	< 30 mAAC
Blocking Voltage	1200 Vp	1600 Vp
Rated AC frequency	50/60 Hz +/-10%	
Rated Insulation Voltage	630 VAC	690 VAC
Dielectric Strength		
Dielectric withstand voltage		
Supply to Input	2.5 kVrms	
Supply to Heatsink	2.5 kVrms	
Integrated Varistor	Yes	

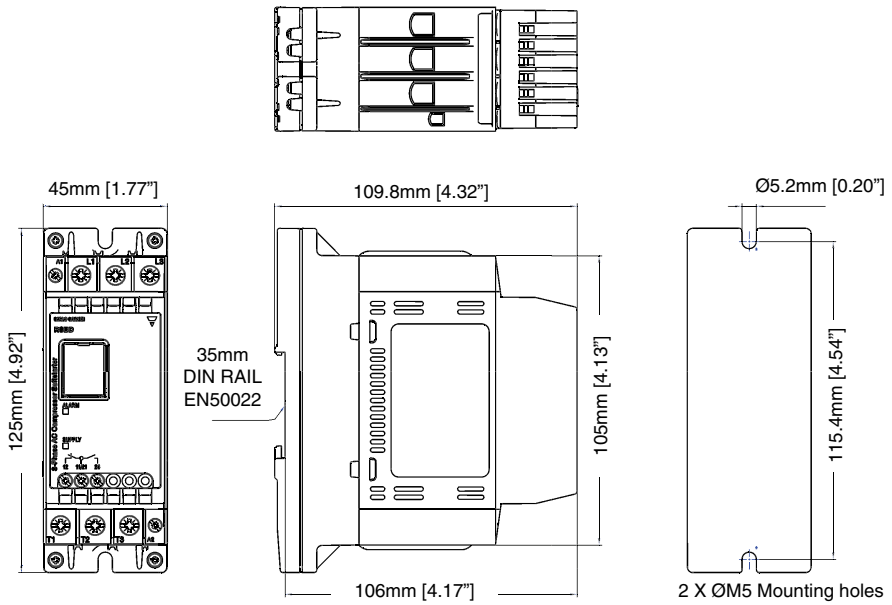
Environmental Specifications

Operating Temperature	-20°C to +60°C (-4°F to +140°F) Note: For operating temperatures >40°C derating applies
Storage Temperature	-40°C to +80°C (-40°F to 176°F)
Relative Humidity	<95% non-condensing @ 40°C

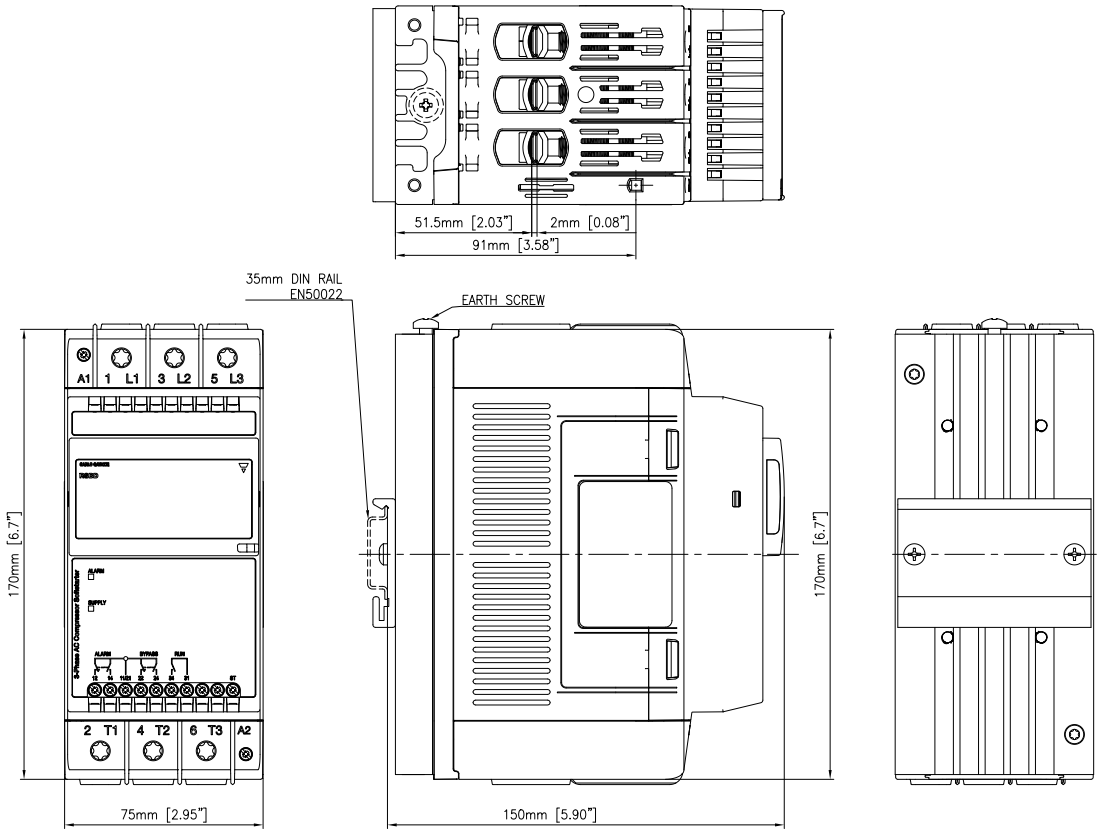
Pollution Degree	2
Degree of Protection (control circuit)	IP20 (EN/IEC 60529)
Installation Category	III
Installation Altitude	1000 m

Dimensions

RSBD ..12... to RSBD..50..



RSBD ..55... to RSBD..95..



Connection Specifications

	RSBD…12 to RSBD…50	RSBD…55 to RSBD…95
Line conductors		
1 L1, 3 L2, 5 L3, 2 T1, 4 T2, 6 T3		
Acc. to EN60947-1		
Flexible	2.5 ….. 10 mm^2	
	2.5 ….. 2 x 4 mm^2	-
Rigid (solid or stranded)	2.5 ….. 10 mm^2	2x(10...50 mm^2)
Flexible with end sleeve (ferrule)	2.5 ….. 10 mm^2	2x(10...50 mm^2)
UL/cUL rated data		
Rigid (stranded)	AWG 6...14	
Rigid (solid)	AWG 10...14	
Rigid (solid or stranded)	AWG 2 x 10...2 x 14	2x(AWG 8...1/0)
Terminal screws	M4	M8
Max. tightening torque	2.5 Nm (22 lb.in) with Posidrive bit 2	12 Nm (106 lb.in) with Torx TT40 bit
Stripping length	8.0 mm	20 mm
Secondary conductors		
A1, A2		
Acc. to EN60998		
Flexible	0.5 ….. 1.5 mm^2	-
Rigid (solid or stranded)	0.5 ….. 2.5 mm^2	0.5 ... 2.5 mm^2
Flexible with end sleeve (ferrule)	0.5 ….. 1.5 mm^2	0.5 ... 1.5 mm^2
UL/cUL rated data		
Rigid (solid or stranded)	AWG 10...18	AWG 10…18
Terminal screws	M3	M3
Max. tightening torque	0.6Nm (5.3lb.in) with Posidrive bit 0	0.6Nm (5.3 lb.in) with Positive bit 0
Stripping length	6.0 mm	6.0 mm
Auxiliary conductors		
11, 12, 21, 24, (31, 34)*, ST		
Rigid (solid or stranded)	0.05 ... 2.5 mm^2	0.05 ... 2.5 mm^2
Flexible with end sleeve (ferrule)	0.05 ... 1.5 mm^2	0.05 ... 1.5 mm^2
UL/cUL rated data		
11, 12, 21, 24, (31, 34)*, ST*	AWG 30 … 12	AWG 30 … 12
Rigid (solid or stranded)	AWG 24 ... 12	AWG 24 … 12
Terminal screws		
11, 12, 21, 24, (31, 34)*, ST*	M3	M3
Max. tightening torque		
11, 12, 21, 24, (31, 34)*, ST	0.45 Nm (4.0 lb.in)	0.45 Nm (4.0 lb.in)
Stripping length	6 mm	6 mm

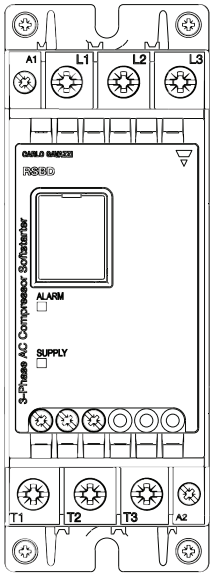
Use 75ºC Copper (Cu) conductors

* For RSBD..55 to RSBD..95 models only

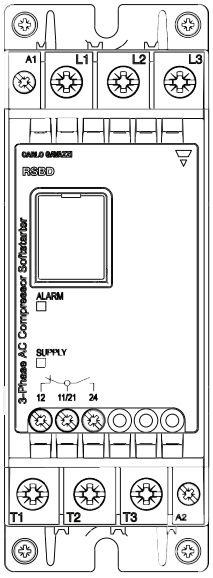
Terminal Markings

RSBD..12.. to RSBD..50..

RSBD40...V51HP

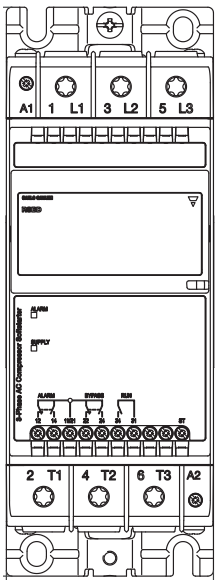


RSBD40...V61HP



L1, L2, L3: Line connections
T1, T2, T3: Load connections
A1, A2: Control voltage
11, 12: Alarm indication (Normally Closed, NC)
21, 24: Top of Ramp indication (Normally Open, NO)

RSBD..55.. to RSBD..95..

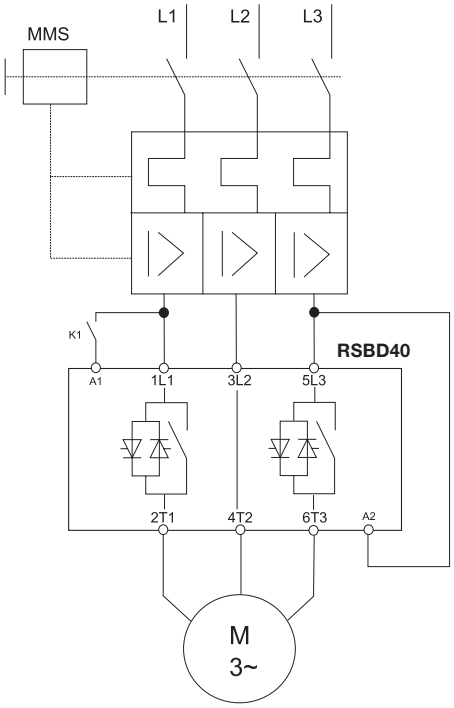


1L1, 3L2, 5L3:	Line connections
2T1, 4T2, 6T3:	Load connections
A1, A2:	Control voltage (Supply voltage for RSBD60 models)
11, 12, 14:	Alarm indication (NO, NC, changeover)
21, 22, 24:	Top of Ramp indication (NO, NC, changeover)
31, 34:	Run relay indication(NO, normally open)
ST*:	Control voltage (start signal)

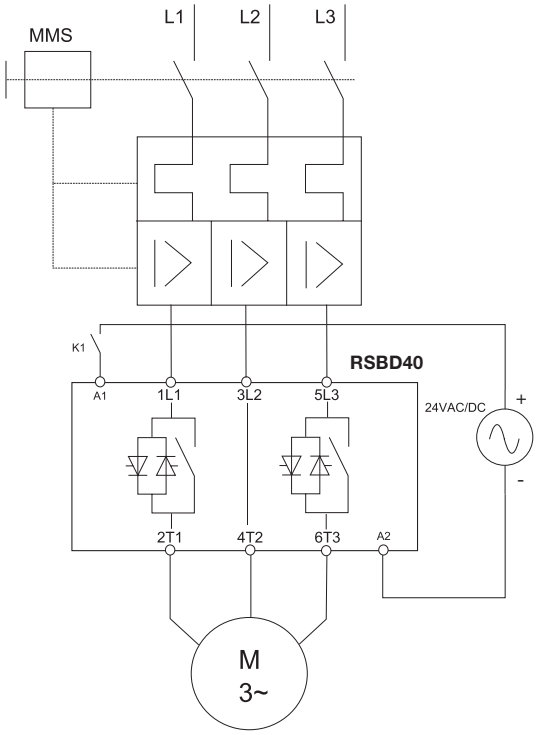
* only for RSBD60.. models

Wiring Diagrams

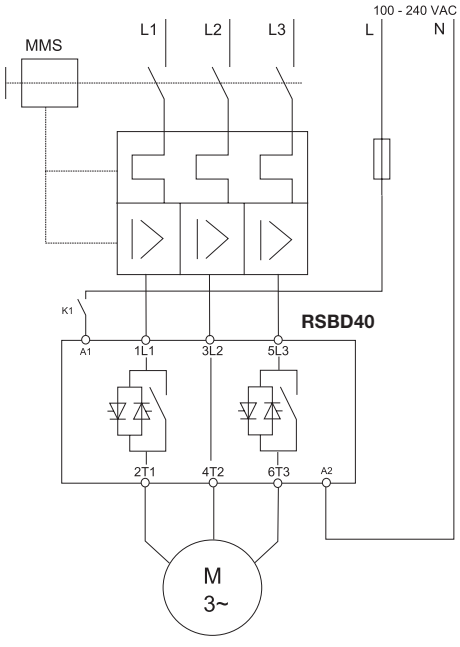
Valid up to 400VAC



RSBD40...E0V..



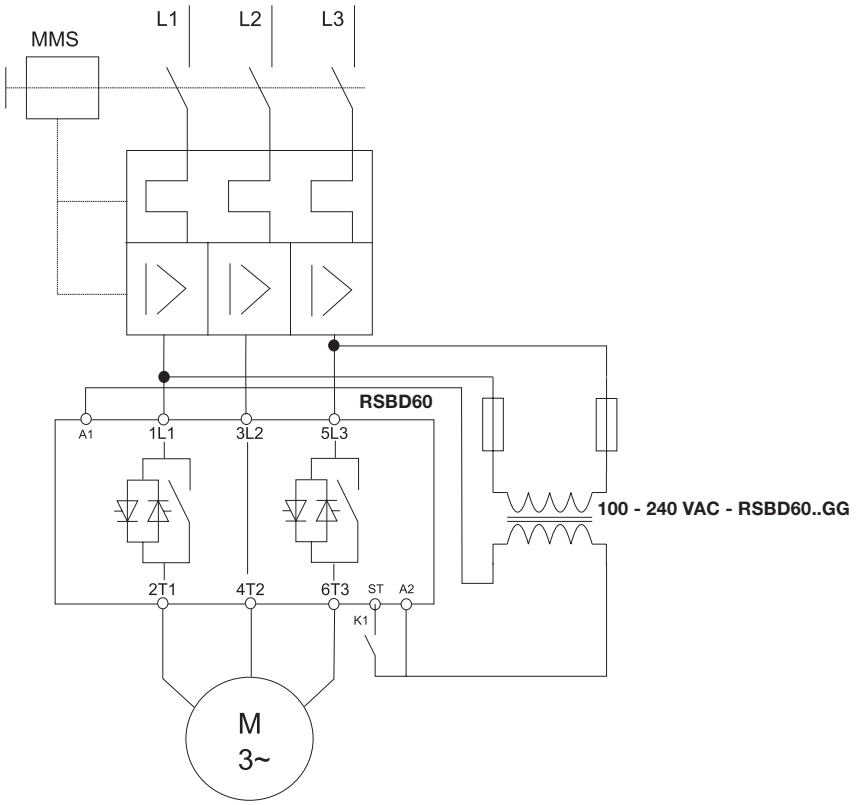
RSBD40...F0V..



RSBD40...E0V..

Wiring Diagrams (cont.)

IMPORTANT: L1, L2, L3 should already be connected when A_1, A_2 and ST signals are applied. A minimum delay of 200ms should be allowed between switching of L1, L2, L3 and A_1, A_2 and ST respectively. If L1, L2 and L3 are not present, when A_1, A_2 is applied the "Line voltage out of range alarm will be triggered". The alarm will automatically recover if L1, L2, L3 are within operational range for 1 sec (on power up only).



RSBD60...GG..

Note 1: For RSBD60..GG... models apply 100 - 240VAC across A1, A2 terminals.
Note 2: For DC supply, connect A1 to the positive (+) and A2 to the negative (-) terminal of the power supply.
Note 3: ST terminal has to be at the same potential of A2 (refer to wiring diagrams)

Housing Specifications

Weight (approx)	
RSBD4012 - RSBD4050	430g
RSBD..55 - RSBD..95	2.2 kg
Material	PA66
Material colour	RAL7035
Terminal colour	RAL7040
Mounting	DIN or Panel (accessory included)

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Auxiliary Relays

	RSBD..12... - RSBD4050...	RSBD..55... - RSBD..95...
Rated operational voltage	250 VAC/ 30 VDC	250 VAC/ 30 VDC
Rated insulation voltage	250 VAC	250 VAC
Dielectric withstand voltage (Coil to contacts)	2.5 kV	2.5 kV
Overvoltage category	II	II
Number of output relays	2	3
Overload/Fault		
Terminal markings	11/ 12	11/ 12 / 14
Type of control circuit	Electromechanical relay	Electromechanical relay
Number of contacts	1	2
Type of contacts	NC - Normally Closed	Changeover (NO, NC)
Type of current	AC/DC	AC/DC
Rated operational current	3 A, 250 VAC 3 A, 30 VDC	3A, 250 VAC 3A, 30 VDC
Bypassed (Top of ramp)		
Terminal markings	21/ 24	21/ 22/ 24
Type of control circuit	Electromechanical relay	Electromechanical relay
Number of contacts	1	2
Type of contacts	NO - Normally Open	Changeover (NO, NC)
Type of current	AC/DC	AC/DC
Rated operational current	3 A, 250 VAC 3 A, 30 VDC	3 A, 250 VAC 3 A, 30 VDC
Run		
Terminal markings	-	31/34
Type of control circuit	-	Electromechanical relay
Number of contacts	-	1
Type of contacts	-	NO - Normally open
Type of current	-	AC/DC
Rated operational current	- -	3 A, 250 VAC 3 A, 30 VDC

Electromagnetic Compatibility

Immunity	IEC/EN 61000-6-2
Electrostatic Discharge (ESD) Immunity	IEC/EN 61000-4-2
Air discharge, 8 kV	Performance Criteria 2
Contact, 4 kV	Performance Criteria 2
Electrical Fast Transient (Burst) Immunity	IEC/EN 61000-4-4
Output: 2 kV	Performance Criteria 2
Input: 1 kV	Performance Criteria 2
Electrical Surge Immunity	IEC/EN 61000-4-5
Output, line to line, 1 kV	Performance Criteria 2
Output, line to earth, 2 kV	Performance Criteria 2
Input, line to line, 1 kV	Performance Criteria 2
Input, line to earth, 2 kV	Performance Criteria 2
Radiated Radio Frequency Immunity	IEC/EN 61000-4-3
3 V/m, 80 - 1000 MHz	Performance Criteria 1
Conducted Radio Frequency Immunity	IEC/EN 61000-4-6
10 V/m, 0.15 - 80 MHz	Performance Criteria 1
Voltage Dips Immunity	IEC/EN 61000-4-11
0% for 10 ms/20 ms,	Performance Criteria 2
40% for 200 ms	Performance Criteria 2
70% for 500 ms	Performance Criteria 2
Emission	IEC/EN 61000-6-3
Radio Interference field emission (Radiated) 30 - 1000 MHz	IEC/EN 55011 Class A (Industrial)
Radio interference field emissions (conducted)	IEC/EN 55011 Class A (Industrial)

Agency Approvals and Conformances

Conformance	EN/IEC 60947-4-2 UL508 Listed (E172877) cUL Listed (E172877) CCC*

* pending for RSBD..55.. up to RSBD..95.. models

Mode of Operation

Auto Adaptive Algorithm (Patented)
RSBD series of soft starters includes an innovative auto-adaptive algorithm (Patented) such that an optimum starting current performance is achieved at every compressor start. This feature is active at every compressor start. Appropriate parameters are automatically set by the soft starter in order to achieve an optimum inrush current reduction whilst maintaining a ramp-up time < 1sec.

In case of Locked rotor/ramp-up time alarm, default parameter settings are restored automatically. During the subsequent compressor starts, the auto-adaptive function will start optimising such parameters automatically once again.

RSBD Specific Mode of Operation
The RSBD shall try to start the compressor at the set current limit. Depending on the load requirement, the current limit will be gradually increased up to a maximum of the default current limit, after which the RSBD will switch in bypass mode.

If ramping is not achieved after a maximum of 1 second, the Incomplete Ramp alarm (5 flashes on red LED) will be triggered and the RSBD will enter into a recovery mode for 5mins. If, at the second consecutive attempt the RSBD raises again the Incompete Ramp alarm, then a manual user intervention to reset power on the RSBD shall be required, as this might indicate a real locked rotor condition.

Auto-adaptive current balancing
RSBD soft starters use a two-phase control strategy with two anti-parallel thyristors across L1-T1 and L3-T3. Phase L2-T2 is the uncontrolled phase.

During every start, the RSBD soft starter measures a number of parameters and dynamically adjusts the starting parameters to minimise the current unbalance in the phase L2-T2 resulting in a smoother starting performance of the compressor.

Alarm LED Indications (Red LED)

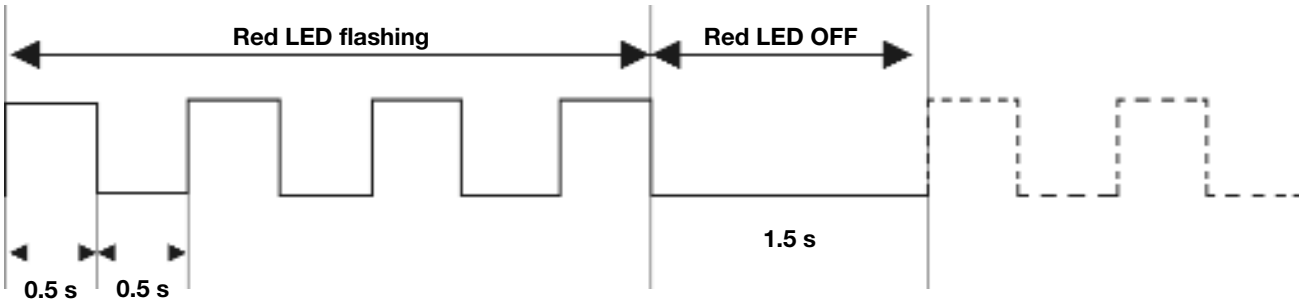
Flashes	Description of Fault	Relay Contact Position		Action
		RSBD4012 - RSBD4050 (11,12)	RSBD..55 - RSBD..95	
2	Wrong Phase Sequence	Open	11/14	Physical Change
3	Line Voltage Out of Range	Open	11/14	Auto reset with 5mins recovery
4	Frequency Out of Range	Open	11/14	Auto reset with 5mins recovery
5	Over Current (during RAMPING)	Open	11/14	Auto reset with 5mins recovery
6	Ramp Up Time > 1 sec	Open	11/14	Auto reset with 5mins recovery
7	Over Temperature	Open	11/14	Auto reset with 5mins recovery
8	Over Current (during BYPASS)	Open	11/14	Auto reset with 5mins recovery
9	Supply Voltage Unbalance	Open	11/14	Auto reset with 5mins recovery assuming all phases (L1, L2, L3) are connected
Fully ON	Internal Fault	N/A	11/14	Reset power (L1, L2,L3). If fault is not cleared upon reset, please contact your CG representative.

LED Status Indications (Green LED)

Status	Condition	Relay Contact Position				
		RSBD4012 - RSBD4050		RSBD..55 - RSBD..95		
		Alarm Relay (11,12)	Top of Ramp Relay (21,24)	Alarm Relay - 11,12,14	Top of Ramp Relay - 21, 22, 24	Run Relay - 31,34
Flashing	Recovery time between starts	Closed	Open	11/12	21/22	Open
Fully ON	Idle State	Closed	Open	11/12	21/22	Open
Fully ON	Ramping	Closed	Open	11/12	21/22	Closed
Fully ON	Bypassed	Closed	Closed	11/12	21/24	Closed

Flashing sequence

Alarm condition



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Short Circuit Protection

Protection Co-ordination, Type 1 vs Type 2

Type 1 protection implies that after a short circuit, the device under test will no longer be in a functioning state.

In Type 2 co-ordination the device under test will still be functional after the short circuit. In both cases, however the short circuit has to be interrupted. The fuse between enclosure and supply shall not open. The door or cover of the enclosure shall not be blown open. There shall be no damage to conductors or terminals and the conductors shall not separate from terminals. There shall be no breakage or cracking of insulating bases to the extent that the integrity of the mounting of live parts is impaired. Discharge of parts or any risk of fire shall not occur.

Products protected with manual motor starters must be wired according to the following installation guidelines.

	Copper (Cu) Wire Conductor	
Part. No.	**Minimum length***	**Maximum cross-sectional area**
RSBD4012… - RSBD4016…	15 m	2.5 mm^2
RSBD4025… - RSBD4050…	10 m	16.0 mm^2
RSBD..55… - RSBD..95…	1.5 m	50.0 mm^2

* The length includes the conductors from the voltage source to the manual motor starter, from the manual motor starter to the soft starter and from the soft starter to the load.

The product variants listed in the table hereunder are suitable for use on a circuit capable of delivering not more than 5,000Arms (or 10,000Arms for RSBD..70 - RSBD..95) Symmetrical Amperes, 400Volts (or 600V for RSBD60 models) maximum when protected by fuses.

Tests at 5,000Arms (or 10,000Arms for RSBD..70 - RSBD..95) were performed with Class RK5 fuses, fast acting; please refer to the table below for maximum allowed ampere rating of the fuse. Use fuses only.

Co-ordination Type 1 (UL508)				
Part. No.	**Max. Fuse Size [A]**	**Class**	**Current [kA]**	**Max. Voltage [VAC]**
RSBD4012….	20	RK5	5	400
RSBD4016….	20	RK5	5	400
RSBD4025….	25	RK5	5	400
RSBD4032….	35	RK5	5	400
RSBD4037….	50	RK5	5	400
RSBD4050….	50	RK5	5	400
RSBD4055…./ RSBD6055…	60	RK5	5	600
RSBD4070…./ RSBD6070…	100	RK5	10	600
RSBD4095…./ RSBD6095…	100	RK5	10	600
Co-ordination Type 1 Manual Motor Starters				
	Model No.		**Current [kA]**	**Max. Voltage [VAC]**
RSBD4012….	GMS32S-17 / GMS32H-17		10	400
RSBD4016….	GMS32S-17 / GMS32H-17		10	400
RSBD4025….	GMS32H-32		10	400
RSBD4032….	GMS32H-32		10	400
RSBD4037….	GMS63S-50 / GMS63H-50		10	400
RSBD4050….	GMS63S-50 / GMS63H-50		10	400
RSBD4055…./ RSBD6055…	GMS63H-63A		10	400
RSBD4070…./ RSBD6070…	GMS100S-75A		10	400
RSBD4095…./ RSBD6095…	GMS100S-100A		10	400

Current / Power Ratings

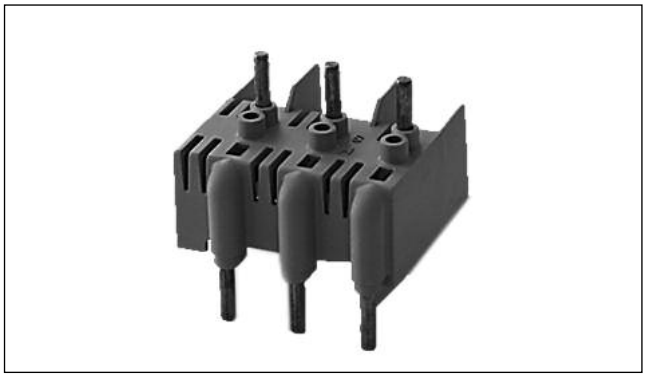
Current / Power Ratings - RSBD			
Assigned compressor rating @ 40ºC UL rating @ 40ºC	**220 - 240 VAC**	**380 - 415 VAC**	**Max. Current limit level Irms**
RSBD4012.V….	3 kW (3 HP)	5.5 kW (5 HP)	42 Arms
RSBD4016.V….	4 kW (5 HP)	7.5 kW (7.5 HP)	56 Arms
RSBD4025.V….	5.5 kW (7.5 HP)	11 kW (10 HP)	87.5 Arms
RSBD4032.V….	9 kW (10 HP)	15 kW (15 HP)	112 Arms
RSBD4037.V….	9 kW (10 HP)	18.5 kW (20 HP)	129.5 Arms
RSBD4050.V….	11 kW (15 HP)	22 kW (25 HP)	175 Arms
RSBD4055…./RSBD6055…	15 kW (20 HP)	30 kW (30 HP)	192.5 Arms
RSBD4070…./RSBD6070…	20 kW (25 HP)	37 kW (40 HP)	245.0 Arms
RSBD4095…./RSBD6095…	22 kW (30 HP)	55 kW (50 HP)	285.0 Arms

Assigned compressor rating @ 40ºC UL rating @ 40ºC	**440 - 480 VAC**	**550 - 600 VAC**	**Max. Current limit level Irms**
RSBD6055.V….	30 kW (40 HP)	45 kW (50 HP)	192.5 Arms
RSBD6070.V….	45 kW (50 HP)	55 kW (60 HP)	245.0 Arms
RSBD6095.V….	55 kW (75 HP)	75 kW (75 HP)	285.0 Arms

Note: Motor kW ratings are provided as a reference. User shall always ensure that compressor operational current and overload current of the compressor during starting does not exceed the rating of the softstarter being used.

Accessories

RTPM (Interconnecting Clip)



Ordering Key

Interconnecting clip for GMS-32-H motor starter **RTPMGMS32HL**

- Qty: 10pcs per bag

Interconnecting clip for GMS-32-S motor starter **RTPMGMS32SL**

- Qty: 10pcs per bag

RFCG (Finger Guards)

Ordering Key

RFCG X6

Finger/ cable guards
6 pcs per box

- For RSBD..55 to RSBD...95 models only

Accessories

GMS (Manual Motor Starter)

GMS32H

GMS32S

GMS63H/ GMS63S

GMS100S

Ordering Key GMS-32S-13A

Type
S: Standard, H: High breaking capacity
Rated operational current

- Overload and short-circuit protection
- Operational current range: 0.16 up to 32AAC
- Magnetic release 13xIe max
- Adjustable thermal release
- Ambient temperature compensation
- Trip Class 10
- CE, cULus

Ordering Key GMS-63H-13A

Type
S: Standard, H: High breaking capacity
Rated operational current

- Overload and short-circuit protection
- Operational current range: 10 up to 63AAC
- Magnetic release 13xIe max
- Adjustable thermal release
- Ambient temperature compensation
- Trip Class 10
- CE, cULus

Note: For higher trip classes please contact your Carlo Gavazzi representative

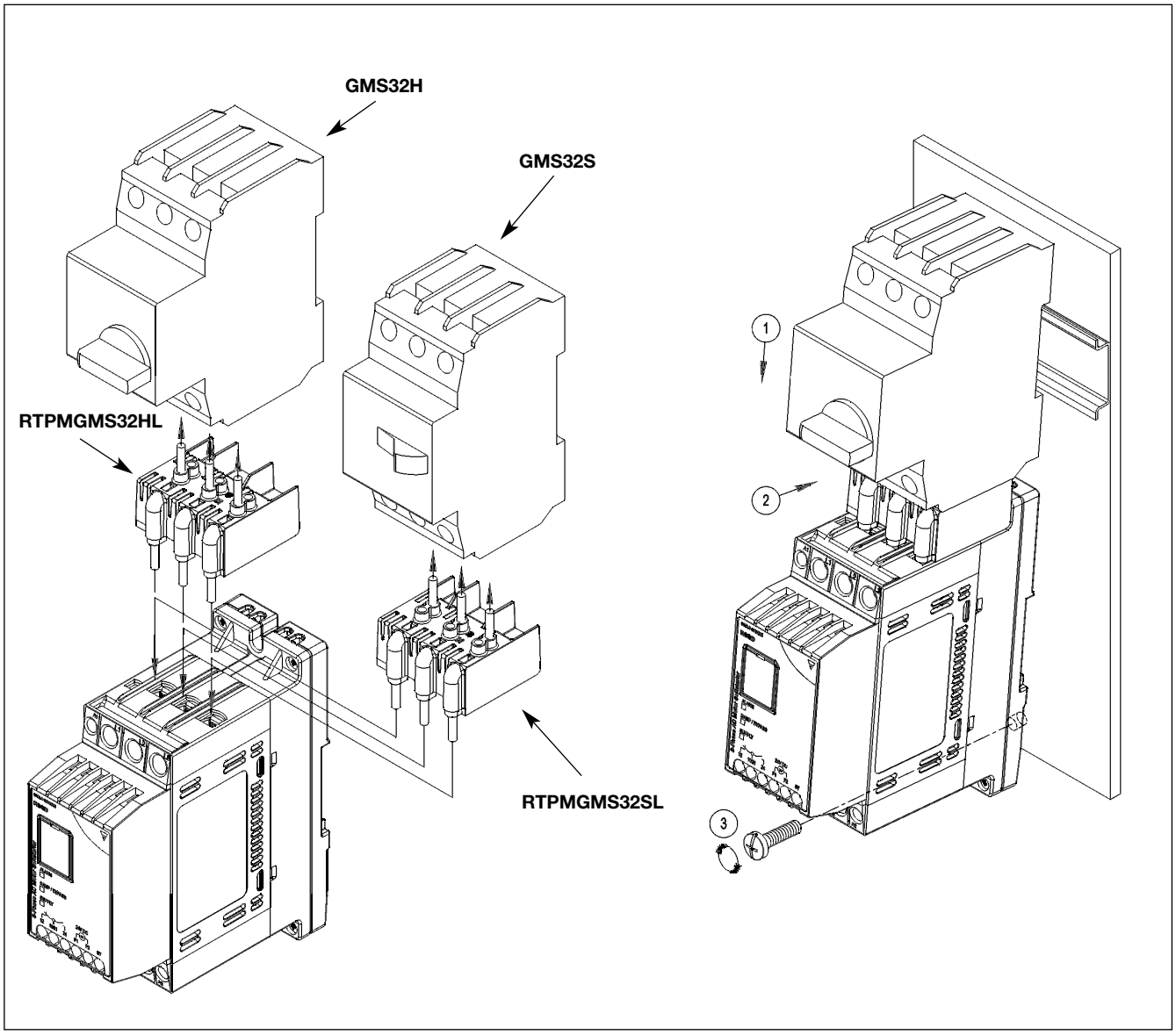
Ordering Key GMS-100S-100A

Type
S: Standard breaking capacity
Rated operational current

- Overload and short-circuit protection
- Operational current range: up to 100AAC
- Magnetic release 13xIe max
- Adjustable thermal release
- Ambient temperature compensation
- Trip Class 10
- CE, cULus

Accessories

GMS Mounting Instructions



The following procedure should be followed when mounting the GMS motor starter onto the RSBD soft starter:-

Step 1: Unscrew the terminals on the RSBD and GMS units and insert the proper RTPM clip in the respective terminals.

Step 2: Tighten the screws on the GMS and RSBD units respecting the maximum torque specified.

Step 3: Mount the complete assembly to the DIN rail and screw the RSBD to the panel as shown in the diagram.

Note: Always mount the GMS motor starter on the supply side (L1, L2, L3) of the RSBD soft starter.

Important: Make sure that the handle on the GMS starter is in the OFF position before installing and uninstalling.