



**Motor Control - Soft Start and Stop
2 Pole Switching**

**Transformer
Switching**

Types

Soft starting and stopping of 3-phase motors. Starting / stopping time and initial torque can be independently adjusted by built-in potentiometers. Switching of 1-phase transformers to minimise inrush current.

RSE..-B



RSE..-C



RSE..-CR1



TSE..



Dimensions (mm) H x W x D

Features

80 x 45 x 103

Up to 5.5 kW at 400VAC

80 x 90 x 103

Up to 11.0 kW at 400VAC

80 x 90 x 103

User selected ramp profiles

80 x 45 x 103

Reduces inrush current

Control Specifications

Control input range

Max. input current

Rated insulation voltage

Dielectric voltage

Inpulse withstand volt.

A1-A2: 24-110VAC/DC
A1-A3: 110-480VAC

A1-A2: 12 mA
A1-A3: 5 mA

630 Vm

2 kVrms

4 kV (1.2/50 µs)

A1-A2: 24-110VAC/DC
A1-A3: 110-480VAC

A1-A2: 12 mA
A1-A3: 5 mA

630 Vm

2 kVrms

4 kV (1.2/50 µs)

A1-A2: 24-110VAC/DC
A1-A3: 110-480VAC

A1-A2: 12 mA
A1-A3: 5 mA

630 Vm

2 kVrms

4 kV (1.2/50 µs)

4-32 VDC

12 mA

Output Specifications

Rated operational current

Overload current profile

Operational voltage

AC53b: integral bypassing of semiconductor
3 A [RSE..03..]
12 A [RSE..12..]

3 A:AC-53b:3-5:30
12 A:AC-53b:3-5:180

127/220 Vrms [RSE22..]
230/400 Vrms [RSE40..]
227/480 Vrms [RSE48..]
346/600 Vrms [RSE60..]

AC53b: integral bypassing of semiconductor
25 A

25 A:AC-53b:4-3:120

127/220 Vrms [RSE22..]
230/400 Vrms [RSE40..]
227/480 Vrms [RSE48..]
346/600 Vrms [RSE60..]

AC53b: integral bypassing of semiconductor
25 A

25 A:AC-53b:4-3:120

127/220 Vrms [RSE22..]
230/400 Vrms [RSE40..]
227/480 Vrms [RSE48..]
346/600 Vrms [RSE60..]

AC51: <16 A
AC51: >16 A with external thyristor module

90/135 Vrms [TSE.110.]
160/270 Vrms [TSE.230.]
280/440 Vrms [TSE.400.]
350/550 Vrms [TSE.480.]

General Specifications

Frequency range

Ramp up / Ramp down

Initial torque

Kick-start

Ramp profiles

Over-temp. protection

Relay output

50-60 Hz

0.5-7.5s / 0.5-10s

70-100% on max.
5 % on min.

No

General purpose

No

No

Connections

Capacity max. power

Capacity max. control

Operating temperature

Storage temperature

Degree of protection

Approvals/Marks

Screw terminals

2 x 2.5 mm x 4

2 x 2.5 mm x 4

-20°C to +50°C

-50°C to +85°C

IP 20

CE - UL - CSA

50-60 Hz

0.5-10s / 0.5-20s

50%±5% on max.
5 % on min.

No

General purpose

Yes

No

Screw terminals

10 mm or 2x 6 mm

2.5 mm

-20°C to +50°C

-50°C to +85°C

IP 20

CE - UL - CSA

50-60 Hz

0.5-20s / 0.5-20s

50%±5% on max.
5 % on min.

200 ms

Pump compressor

Yes

Over-temperature

End of ramp

Wrong phase sequence

Screw terminals

10 mm or 2x 6 mm

2.5 mm

-20°C to +50°C

-50°C to +85°C

IP 20

CE - UL - CSA

45-65 Hz

Trasformer selector

Load can be single phase transformer with EI-cut strip-wound core or toroidal core with any secondary load or it can be a parallel connection of different types of 1- phase transformers

Screw terminals

2.5 mm

2.5 mm

0°C to +50°C

-50°C to +85°C

IP 20

CE

References

Motor Control:

3-phase/2-pole switching

Transformer switching:

1 pole switching

3 A

RSE2203-B (0.55 kW)

RSE4003-B (1.1 kW)

RSE4803-B (1.5 kW)

RSE6003-B (2.2 kW)

12 A

RSE2212-B (3.0 kW)

RSE4012-B (5.5 kW)

RSE4812-B (5.75 kW)

RSE6012-B (0.55 kW)

25 A

RSE2225-C (5.5 kW)

RSE4025-C (11 kW)

RSE4825-C (15 kW)

RSE6025-C (15 kW)

25 A

RSE2225-CR1 (5.5 kW)

RSE4025-CR1 (11 kW)

RSE2485-CR1 (15 kW)

RSE6025-CR1 (15 kW)

16 A

TSE6-1A1113100

TSE6-1A2113100

TSE6-1A3113100

TSE6-1A4113100

30 A / 50 A / 63 A

TSE6-1A1213100

TSE6-1A2213100

TSE6-1A3213100

TSE6-1A4213100

* Other options available on request: Single pole up to 12 A/400 V/4.7 kW (RSE..-BS), Relay output on 25 A 400 V/15 kW (RSE..-C10).

Switch



3-Phase Control Devices

Types

Soft starting and stopping of 3-phase motors (RSC...+RSO...). Phase angle control of 3-phase heaters (RSC.AA..+RSO). Switching and reversing (RZ..., RR..).

Dimensions (mm) H x W x D
Features

Control Specifications

Control input range

Max. input current

Control supply

Max supply current

Output Specifications

Rated operational current

Operational voltage

General Specifications

Ramp up / Ramp down

Initial torque

Bypass contactor supply

Connections

Operating temperature

Storage temperature

Approvals/Marks

References

	Motor Control 3 Pole Switching	Switching	Reversing
	RSC..HD..+RSO...	RSC..AA..+RSO...	RZ3A
	RR2I		
			
			
Dimensions (mm) H x W x D	74 x 103 x 65	74 x 103 x 65	74 x 103 x 41
Features	Output for external bypass contactor	User controlled analogue input	3-phase switching
Control input range	10-32 VDC	0-20 mA (A-input) 4-20 mA (B-input)	4-32 VDC [RZ3A..D.] 5 VDC [RZ3A..LD.] 24-265 Vrms [RZ3A..D.] 23 / 15 / 15 mA
Max. input current	1 mA		
Control supply	10-32 VDC	10-32 VDC	
Max supply current	180 mA	180 mA	
Rated operational current	AC53a: 5 Arms [RSO..25] 15 Arms [RSO..50] 30 Arms [RSO..90] 40 Arms [RSO..110]	AC53a: 5 Arms [RSO..25] 15 Arms [RSO..50] 30 Arms [RSO..90] 40 Arms [RSO..110]	AC51: 25 / 40 / 55 / 75 Arms AC53a: 5 / 8 / 15 / 20 Arms I ² t for fusing (t=10 ms) 265/450/1800/6600 A ² s
Operational voltage	150-250Vrms [RSO22..] 220-420Vrms [RSO40..] 400-510Vrms [RSO48..] 400-625Vrms [RSO60..]	150-250Vrms [RSO22..] 220-420Vrms [RSO40..] 400-510Vrms [RSO48..] 400-625Vrms [RSO60..]	24-440Vrms [RZ3A..40.] 42-660Vrms [RZ3A..60.] 850 V _p [RZ3A..40.] 1200 V _p [RZ3A..60.]
Ramp up / Ramp down	0.5-30 s / 0.5-30 s	User controlled	3-phase, zero switching, built-in transient overvolt. protect., LED status indic.
Initial torque	10-75%	User controlled	3-phase, built-in transient overvolt. protect., interlock revers., LED status indic.
Bypass contactor supply	V _{cc} -8VDC@150mA max.		
Connections	Screw type with clamp	Screw type with clamp	Screw type with clamp
Operating temperature	-20°C to +70°C	-20°C to +70°C	-30°C to +80°C
Storage temperature	-40°C to +100°C	-40°C to +100°C	-40°C to +100°C
Approvals/Marks	CE - UL - CSA	CE - UL - CSA	CE - UL - CSA
Control module	RSC-HD0M60	RSC-AAM60	
Output module: 400VAC	25A: RSO4025 (4kW*) 50A: RSO4025 (11kW*) 90A: RSO4025 (15kW*) 110A: RSO4025 (22kW*)	25A: RSO4025 (4kW*) 50A: RSO4025 (11kW*) 90A: RSO4025 (15kW*) 110A: RSO4025 (22kW*)	25 A / 50 A / 75 A 3 x 400 Vrms: RZ3A40D.. RZ3A40LD.. RZ3A40A.. 3 x 600 Vrms: RZ3A60D.. RZ3A60LD.. RZ3A60A..
Output module can be 200,400,480,600 VAC.			10 A / 25 A / 40 A 2 x 400 Vrms: RR2I4005.. (0.5kW) RR2I4015.. (1.5kW) RR2I4030.. (3.0kW) 2 x 480 Vrms: RR2I4805.. (0.5kW) RR2I4805.. (1.5kW) RR2I4805.. (3.0kW)
*Correct heatsink assembly required.			
For further details please consult datasheet.			

