

# Solid State Relays Accessories Type MS1...



- Rated operational voltage: 115, 230 or 400 VACrms
- Supply output: 14 VDC @  $I_{max.} = 110 \text{ mA}$
- Short-circuit protected
- 5 A SPST relay output
- LED indication for power supply on and relay on
- Insulation: 2000 Vrms/4 mm
- H2 housing

## Product Description

Power supply unit with built-in control relay for motor controllers type RSC/RSO, RTC/RTO, RRC/RRO.

## Ordering Key

**MS 1 400**

Motor controller \_\_\_\_\_  
Supply unit \_\_\_\_\_  
Index no. \_\_\_\_\_  
Rated operational voltage \_\_\_\_\_

## Type Selection

Type	Index no.	Rated operational voltage
MS: Supply unit for motor controller	1	115: 115 VACrms 230: 230 VACrms 400: 400 VACrms

## Selection Guide

Rated operational voltage	230 VACrms	400 VACrms
115 VACrms		
MS 1 115	MS 1 230	MS 1 400

## General Specifications

	MS 1 115	MS 1 230	MS 1 400
Rated operational voltage terminals 21 & 22)	115 VACrms	230 VACrms	400 VACrms
Operational frequency range	45 to 65 Hz	45 to 65 Hz	45 to 65 Hz
Environment			
Degree of protection	IP 20 B	IP 20 B	IP 20 B
Pollution degree (IEC 60664)	3	3	3
Overvoltage category	III	III	III
Indication for			
Power supply ON	LED, green	LED, green	LED, green
Relay ON	LED, yellow	LED, yellow	LED, yellow
Approval	CSA	CSA	CSA
CE-marking	Yes	Yes	Yes

## Supply Specifications

	MS 1 115	MS 1 230	MS 1 400
Operational voltage range	103 to 126 VACrms	207 to 253 VACrms	360 to 440 VACrms
Voltage interruption	≤ 40 ms	≤ 40 ms	≤ 40 ms

## Input Specifications

Relay pick-up voltage	≤ 8.0 VDC
Relay drop-out voltage	≥ 0.6 VDC
Max. input voltage	≤ 21.2 VDC
Input impedance	640 Ω

## Output Specifications

Supply output range	10 to 30 VDC
Rated DC output voltage @ 110 mA (terminals 1 & 4)	14 VDC
Relay output SPST (terminals 23 & 24)	AC 1 5 A, 250 VAC AC 15 2 A, 250 VAC DC 1 5 A, 24 VDC DC 13 3 A, 24 VDC

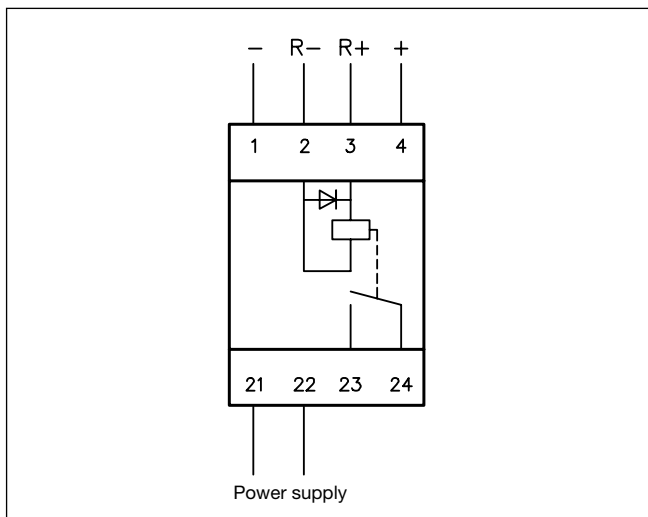
## Thermal Specifications

Operating temperature	-20° to +50°C (-4° to +122°F)
Storage temperature	-50° to +85°C (-58° to +185°F)

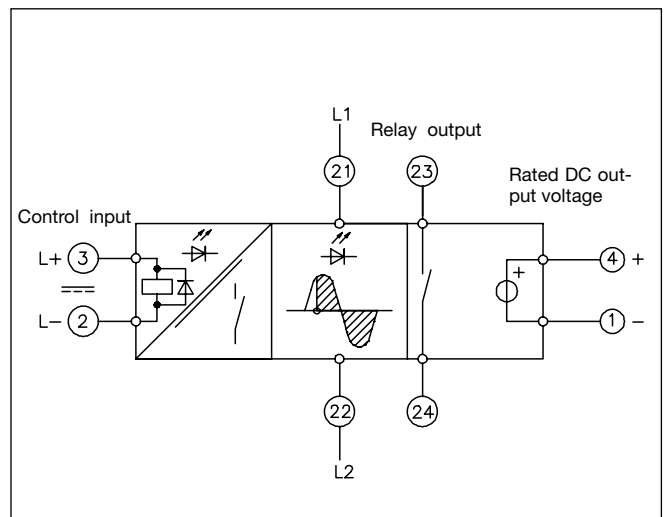
## Insulation

Rated insulation voltage Supply to electronic circuit	≥ 2000 VACrms
Rated impulse withstand voltage	4000 Vp (1.2/50 μs)

## Wiring Diagram

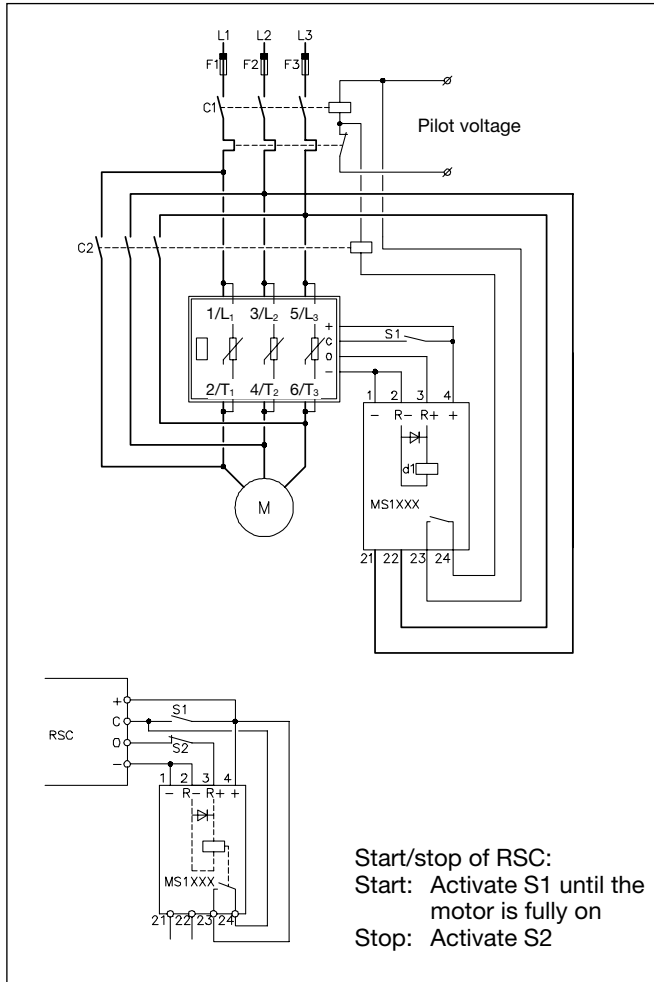


## Functional Diagram

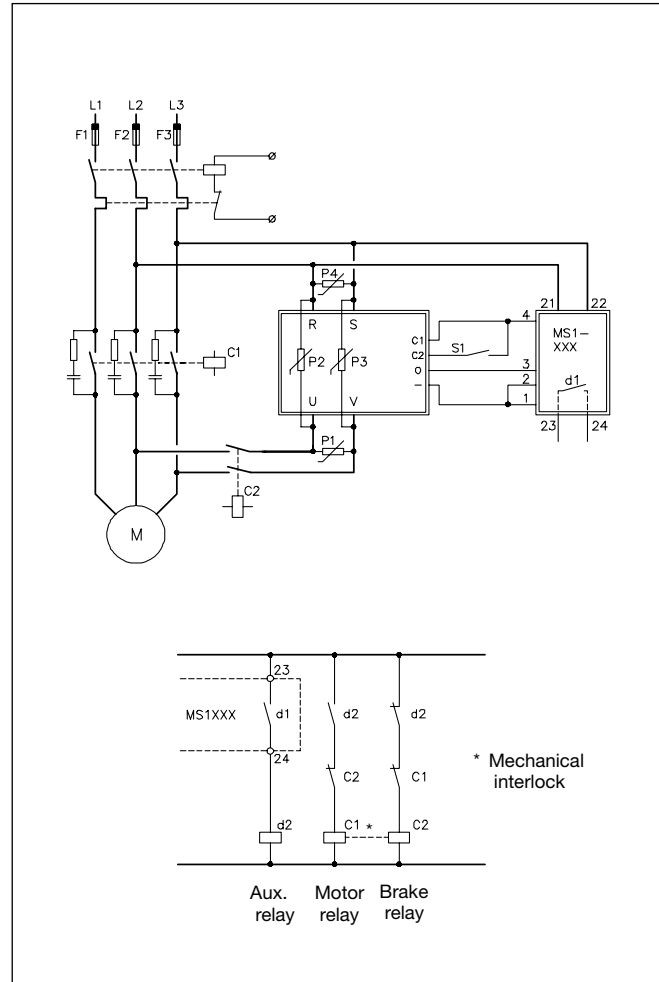


## Applications

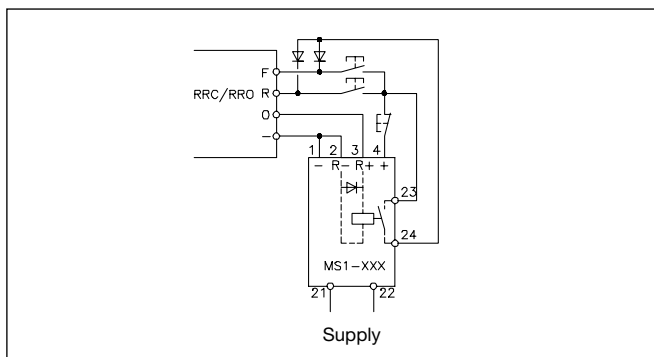
The MS1.. power supply connected to a motor controller (RSC) for soft starting/soft stopping of an induction motor.



The MS1.. power supply connected to a motor controller (RTC) for dynamic braking of an induction motor.



The MS1.. power supply connected to a motor controller (RRC) for reversing of an induction motor.



For a 400 V application the following components are recommended:

S1 closed:  
Motor is running

S1 opened:  
Motor brakes and stops

Varistors:  
S20K420 Siemens

RC:  
PMR 209 Rifa 47 Ω/1.1 μF

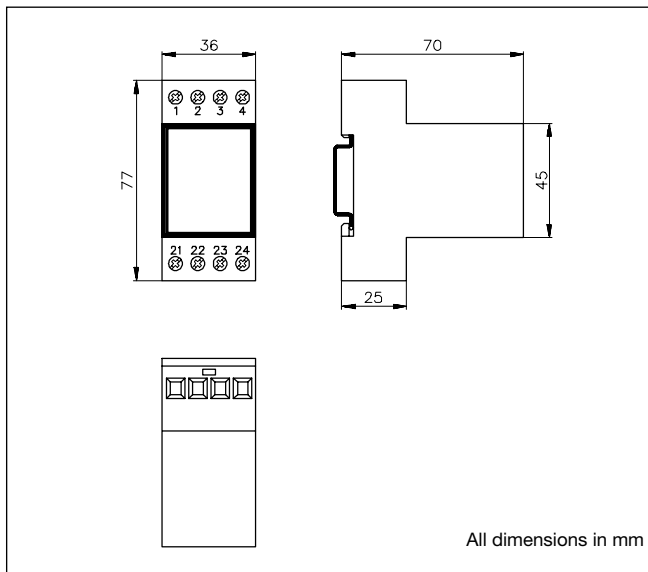
Fuses:  
F2 - F3 FERRAZ

RTO 1210:  
660 gRB 10-16

RTO 1225:  
660 gRB 10-25

RTO 1250:  
6.621CP URGA 22 x 58/50

## Dimensions



## Housing Specifications

Weight	Approx. 250 g
Housing material	Noryl, black
Mounting	DIN rail
Terminals	
Mounting screws	M 3.5
Mounting torque	≤ 0.8 Nm