

# MASSUSE SOLID STATE RELAY

# MC SERIES

## Current Control Solid State Relay (input 4-20mA, output 24-280VAC or 48-480VAC)

MC2010CA    MC2040CA    MC2090CA    MC4025CA    MC4075CA  
 MC2015CA    MC2050CA    MC4010CA    MC4040CA    MC4090CA  
 MC2025CA    MC2075CA    MC4015CA    MC4050CA

### SPECIFICATION

Model No.		Control Current Range	Max Load Current	Rated Operational Voltage	Non-rep. Peak Voltage	Insulation voltage Input-Output	Insulation Voltage Output-Case
MC2010CA MC2015CA MC2025CA MC2040CA	MC2050CA MC2075CA MC2090CA	4 to 20mA (DC3.8-10V)	10A 50A 15A 70A 25A 90A 40A	24-280VAC	600V peak	4000Vrms	2500Vrms
MC4010CA MC4015CA MC4025CA MC4040CA	MC4050CA MC4075CA MC4090CA	4 to 20mA (DC3.8-10V)	10A 50A 15A 70A 25A 90A 40A	48-480VAC	1200V peak	4000Vrms	2500Vrms

Model No.		Operational Frequency Range	Power Factor	Operational Temperature	Storage Temperature	Junction Temperature	Weight (g)	CE-marking
MC2010CA MC2015CA MC2025CA MC2040CA	MC2050CA MC2075CA MC2090CA	40 to 65Hz	>0.90	0 to 70°C	-20 to 100°C	125°C	Approx. 100g	Yes
MC4010CA MC4015CA MC4025CA MC4040CA	MC4050CA MC4075CA MC4090CA	40 to 65Hz	>0.90	0 to 70°C	-20 C to 100°C	125°C	Approx. 100g	Yes

### Output Specifications

	Mini Operational Current	Rep. Overload Current t=1s	Non-rep. Surge Current t=10ms	Off-state leakage Current	$I^2t$ for fusing t=1-10ms	Critical di/dt @50hz	Critical dV/dt Off-state min.
10A	150Ma	25Ap	120Ap	< 4mA	60A <sup>2</sup> s	100A/μs	1000V/μs
15A	150Ma	30Ap	168Ap	< 4mA	180A <sup>2</sup> s	100A/μs	1000V/μs
25A	150Ma	55Ap	300Ap	< 4mA	400A <sup>2</sup> s	100A/μs	1000V/μs
40A	150Ma	100Ap	420Ap	< 4mA	1250A <sup>2</sup> s	100A/μs	1000V/μs
50A	150Ma	125Ap	520Ap	< 4mA	1300A <sup>2</sup> s	100A/μs	1000V/μs
75A	150Ma	135Ap	750Ap	< 4mA	1800A <sup>2</sup> s	100A/μs	1000V/μs
90A	150Ma	150Ap	1400Ap	< 4mA	7200A <sup>2</sup> s	100A/μs	1000V/μs

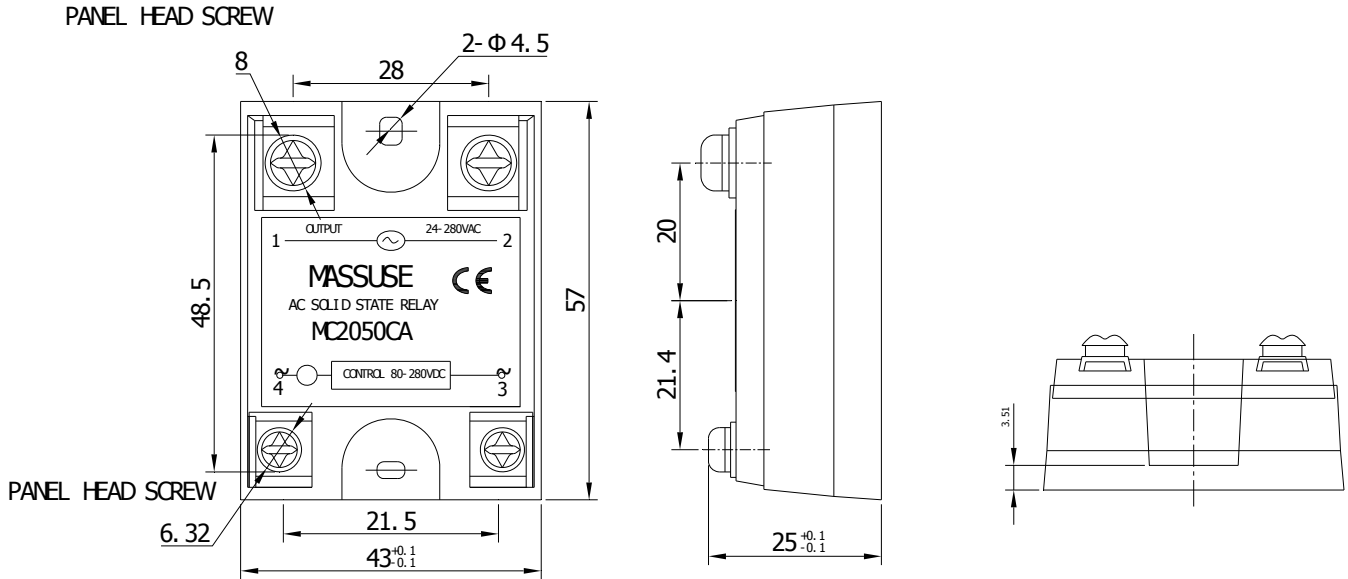
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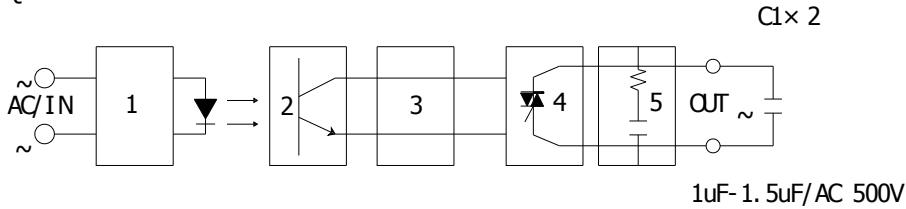
## Input Specifications

Control current Range	Pick up Current	Drop out Current	Response time (Input-Output)	Off-state leakage Current	Dynamic Impedance	Allowable Input Current (max)	Reverse Polarity protected
4-20mA	4mA	3.5mA	10ms	>10vdc@20mA	150	50mA	Yes

## Dimensions(unit: mm)



## EQUIVALENT CIRCUIT



1. INPUT CIRCUIT
2. PHOTO DETECTOR
3. ZERO-CROSS CIRCUIT
4. OUTPUT CIRCUIT
5. PROTECTED CIRCUIT

## Transfer Characteristics (Output power as a function of control input (4 to 20mA))

I in (mA)	P out (%)
4	4
6	13
8	25
10	38
12	50
14	62
16	75
18	87
20	100