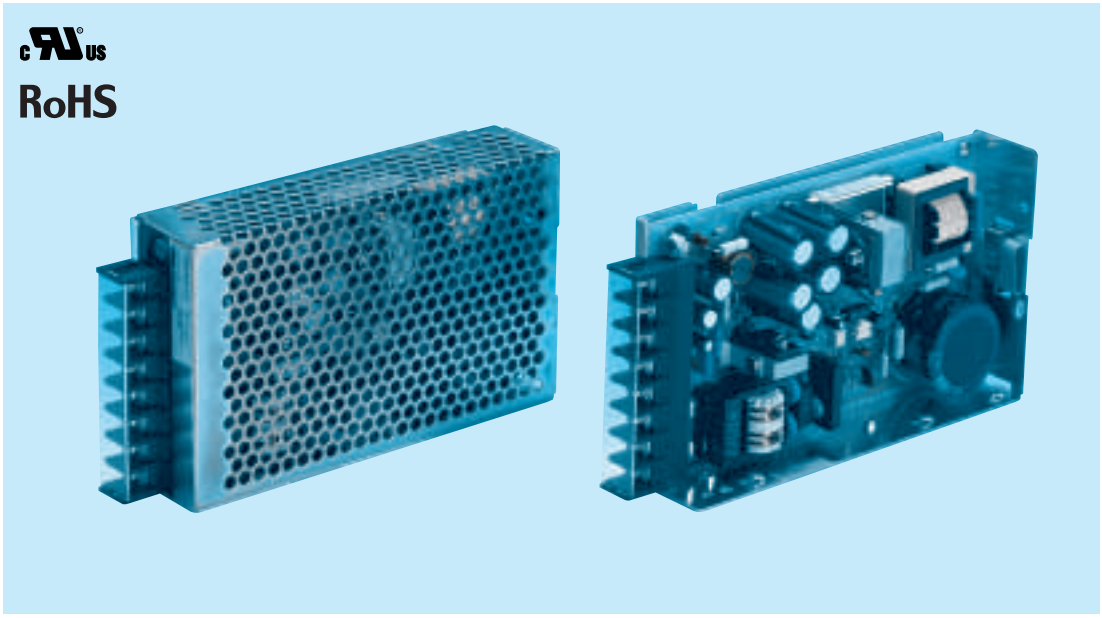
COSEL **Unit type**

# MMC50A

**Ordering information**

**MMC 50A -1 -□**

① ② ③ ④



①Series name
②Output wattage
③Output voltage combination
④Optional
C :with Coating
G :Low leakage current
J :Connector type
N :with Cover

MMC

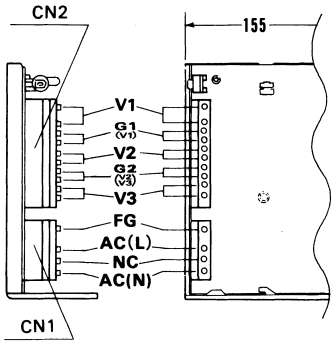
| MODEL | | MMC50A-1 | MMC50A-2 | MMC50A-3 | MMC50A-4 |
|---|---|---|---|---|---|
| DC OUTPUT | V1 | +5V 5.0A | +5V 5.0A | +5V 5.0A | +5V 7.0A |
| | V2 | +12V 1.5(Peak 2.0)A | +15V 1.2A | +12V 1.5(Peak 2.0)A | +12V 1.0(Peak 1.5)A |
| | V3 | -12V 0.5A | -15V 0.5A | -5V 0.5A | -12V 0.3A |

## SPECIFICATIONS

| | MODEL | | MMC50A-1 | | | MMC50A-2 | | | MMC50A-3 | | | MMC50A-4 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | AC85 - 132 1φ or DC110 - 170 | | | | | | | | | | | |
| | CURRENT[A] | ACIN 100V | 1.5typ (Io=100%) | | | | | | | | | | | |
| | FREQUENCY[Hz] | | 47 - 440 or DC | | | | | | | | | | | |
| | EFFICIENCY[%] | ACIN 100V | 70typ (Io=100%) | | | | | | | | | | | |
| | INRUSH CURRENT[A] | ACIN 100V | 30typ (Io=100%) (At cold start) | | | | | | | | | | | |
| OUTPUT | VOLTAGE[V] | | +5 | +12 | -12 | +5 | +15 | -15 | +5 | +12 | -5 | +5 | +12 | -12 |
| | CURRENT[A] | *1 | 5 | 1.5 (Peak2) | 0.5 | 5 | 1.2 | 0.5 | 5 | 1.5 (Peak2) | 0.5 | 7 | 1 (Peak1.5) | 0.3 |
| | MINIMUM CURRENT[A] | | 0.75 | 0 | 0 | 0.75 | 0 | 0 | 0.75 | 0 | 0 | 0.75 | 0 | 0 |
| | LINE REGULATION[mV] | | 20max | 48max | 100max | 20max | 60max | 60max | 20max | 48max | 20max | 20max | 48max | 48max |
| | LOAD REGULATION[mV] | | 40max | 150max | 150max | 40max | 150max | 150max | 40max | 150max | 100max | 40max | 150max | 150max |
| | RIPPLE[mVp-p] | *2 | 80max | 120max | 120max | 80max | 120max | 120max | 80max | 120max | 120max | 80max | 120max | 120max |
| | RIPPLE NOISE[mVp-p] | *2 | 120max | 150max | 150max | 120max | 150max | 150max | 120max | 150max | 150max | 120max | 150max | 150max |
| | TEMPERATURE REGULATION[mV] | 0 to +50℃ | 50max | 350max | 350max | 50max | 350max | 350max | 50max | 350max | 350max | 50max | 350max | 350max |
| | START-UP TIME[ms] | | 100max (ACIN 85V, Io=100%) | | | | | | | | | | | |
| | HOLD-UP TIME[ms] | | 15typ (ACIN 85V, Io=100%) | | | | | | | | | | | |
| | OUTPUT VOLTAGE ADJUSTMENT RANGE[V] | | 5.00 - 5.25 | Fixed | Fixed | 5.00 - 5.25 | Fixed | Fixed | 5.00 - 5.25 | Fixed | Fixed | 5.00 - 5.25 | Fixed | Fixed |
| | OUTPUT VOLTAGE SETTING[V] | | ——— | 11.40 to 12.60 | -11.40 to -12.60 | ——— | 14.25 to 15.75 | -14.25 to -15.75 | ——— | 11.40 to 12.60 | -4.75 to -5.25 | ——— | 11.40 to 12.60 | -11.40 to -12.60 |
| PROTECTION CIRCUIT | OVERCURRENT PROTECTION | | Works over 105% of rating (V2 works at peak current) and recovers automatically | | | | | | | | | | | |
| | OVERVOLTAGE PROTECTION | | Works at 115 - 140% of rating (+5V) | | | | | | | | | | | |
| ISOLATION | INPUT-CASE, OUTPUT | | AC2,000V 1minute, DC500V 50MΩmin (At Room Temperature) | | | | | | | | | | | |
| | OUTPUT-CASE | | AC500V 1minute, DC500V 50MΩmin (At Room Temperature) | | | | | | | | | | | |
| | OUTPUT-OUTPUT(V1-V2,V3) | | AC100V 1minute, DC100V 10MΩmin (At Room Temperature) | | | | | | | | | | | |
| ENVIRONMENT | OPERATING TEMP.,HUMID.AND ALTITUDE | | 0 to +65℃, 20 - 90%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000feet) max | | | | | | | | | | | |
| | STORAGE TEMP.,HUMID.AND ALTITUDE | | -20 to +75℃, 20 - 90%RH (Non condensing), 9,000m (30,000feet) max | | | | | | | | | | | |
| | VIBRATION | | 10 - 55Hz, 19.6m/s² (2G), 3minutes period, 30minutes each along X, Y and Z axis | | | | | | | | | | | |
| | IMPACT | | 196.1m/s² (20G), 11ms, once each X, Y and Z axis | | | | | | | | | | | |
| SAFETY AND NOISE REGULATIONS | AGENCY APPROVALS | | UL60950-1, C-UL Complies with DEN-AN | | | | | | | | | | | |
| | CONDUCTED NOISE | | Complies with FCC-A | | | | | | | | | | | |

*1 Peak current for 30 seconds.
*2 Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN : RM101).
* When units are operated with chassis and cover, derating is required.
* Avoid prolonged use under over-load.

## External view

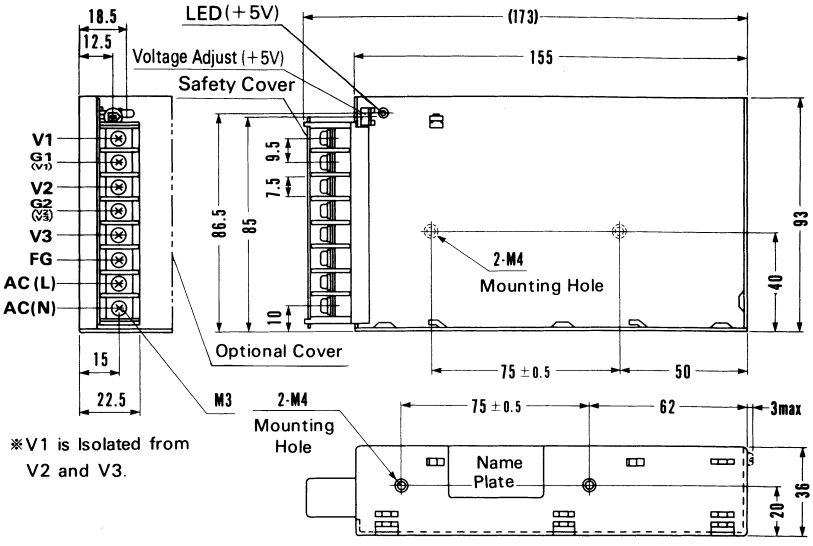



| I/O Connector | | Mating Connector | Terminal |
|---|---|---|---|
| CN1 | 5289-4A | 5199-04 | Chain : 5194PBT |
| CN2 | 5277-10A | 5196-10 | Loose : 5194PBTL |

(Mfr: Molex)

※Use J cover for connector type.

Connector type




※V1 is Isolated from V2 and V3.

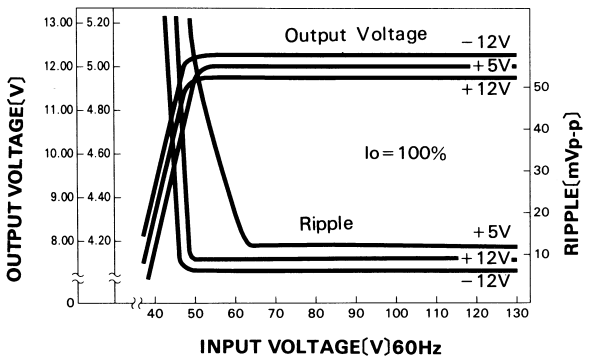
※Mounting torque : 1.2N•m (12.8kgf•cm) max

Barrier strip type

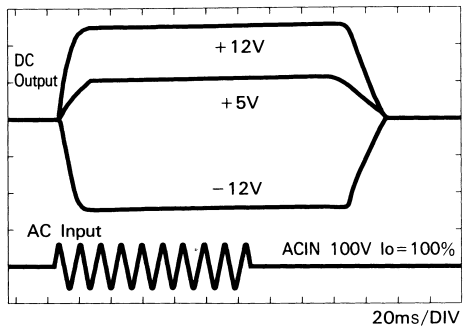
※Weight: 400g or less.
※Cover is optional
※Tolerance: ±1
※Dimensions in mm.

## Performance data

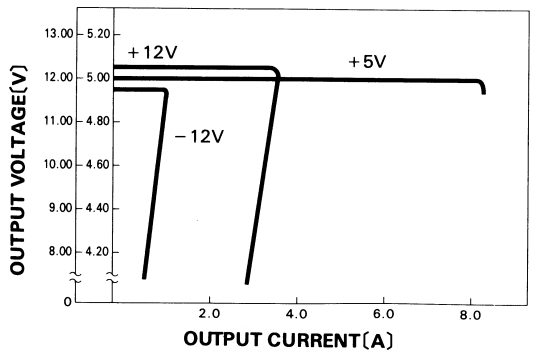
### ■STATIC CHARACTERISTICS (MMC50A-1)




### ■RISE TIME & FALL TIME (MMC50A-1)




### ■OVERCURRENT CHARACTERISTICS (MMC50A-1)




### ■DERATING CURVE