## TA/TC Series



#### 1kV - 2kV. 1.5W **ULTRA COMPACT, LOW RIPPLE** HIGH VOLTAGE POWER SUPPLIES FOR PMT

### 🍑 Matsusada Precision

#### **■ FEATURES**

- · Ultra-compact, PCB mountable
- · Low ripple, 5mVp-p(1kV output type)
- · Low Noise due to metal shielding
- · Well-regulated, high performance
- External potentiometer or external control voltage programming
- · Arc and continuous short circuit protection
- NRTL(UL1950), TÜV, CE approved



TA and TC Series are miniaturized, well regulated high voltage power supplies suitable for photomultiplier. They feature exceptionally low noise, external potentiometer or voltage control and fully protection against arc and continuous output short circuit.



Output voltage	Output current (mA)☆	Model(*Specify "12" for 12Vdc, "15" for 15Vdc input.)				Ripple (mVp-p)
(kVdc)		Positive pol	arity output	Negative po	larity output	(mVp-p)
0 to 1	1.5	TA-1P-*	TC-1P-*	TA-1N-*	TC-1N-*	5
0 to 1.5	1	TA-1.5P-*	TC-1.5P-*	TA-1.5N-*	TC-1.5N-*	7
0 to 2	0.7	TA-2P-*	TC-2P-*	TA-2N-*	TC-2N-*	10
		·				

<sup>☆</sup>Output voltage range for this output current is 50% to 100% of maximum output voltage.

#### SPECIFICATIONS

Input voltage/current +12Vdc ±1Vdc 230mA Typ +15Vdc ±1Vdc 180mA Typ

**Output control** 

By external  $5k\Omega$  potentiometer or external control voltage(Vcon-in) 0 to 6Vdc(Input impedance  $0 \ge 30k\Omega$ )

Line: ±0.02% of max voltage for Vin ±1V

Regulation Load: 0.02% of max voltage for full load change

Stability 0.02%/Hr 0.05%/8Hr

Temperature coefficient 0.007%/°C

Protection Overload, arc and continuous output short circuit

Temperature range Operating : -10°C to +50°C

Storage : -25°C to +85°C

Weight 60g approx

Note : • Specifications are at the maximum rated output after  $\frac{1}{2}$ Hr warm-up.

#### OPTIONS

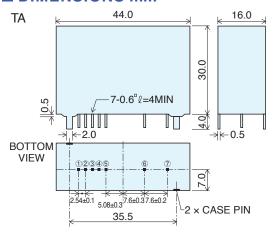
LS: remote HV ON/OFF

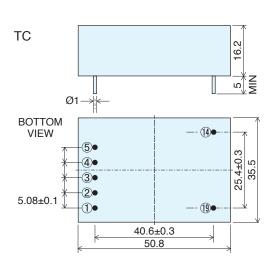
Enable to HV ON/OFF with contact signal.

When open collector, ON  $\leq 0.3V(Low)$ OFF  $\geq 2V(High)$ 

Add LS to the model number. i.e.: TA-1P-12LS, TC-1.5N-15LS

#### ■ DIMENSIONS mm





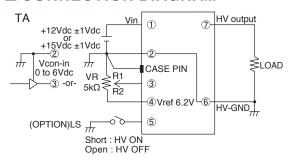
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<sup>☆</sup>Output current must be derated linearly when operating at levels below 50% of the output voltage capability.

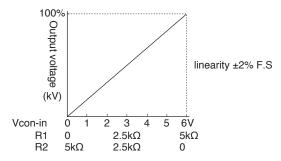
# TA/TC Series

#### **■ CONNECTION DIAGRAM**

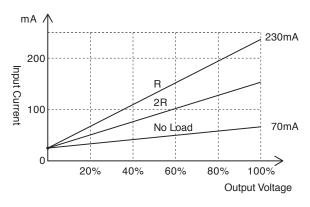


- 1. PIN ②, ⑥ are internally connected (isolated from CASE).
- 2. CASE PIN should be always connected to ground.
- 3. Input impedance of Pin  $\ensuremath{\mathfrak{J}}$  is greater than  $30 k\Omega$
- 4. External potentiometer of T.C  $\stackrel{\frown}{\leq}$  100ppm/°C, PC  $\stackrel{\geqq}{\geq}$  1/4W is recommended.
- (9 HV output TC 1 +12Vdc ±1Vdc or +15Vdc ±1Vdc Vcon-in ≶LOAD CASE 0 to 6Vdc VR 3 -3 -or-5kΩ ₹ -**4** Vref 6.2V <sup>L</sup>-**1**₩ HV-GND\_ (5) (OPTION)LS Short : HV ON Open : HV OFF
- 1. PIN ②, (4) and CASE are internally connected.
- 4. External potentiometer of T.C ≤ 100ppm/°C, PC ≥ ¼W is recommended.

### ■ CHARACTERISTICS OF OUTPUT VOLTAGE SETTING



#### **■ INPUT CURRENT**



- It is TYP value in 12V input type.
- The 15V input type makes the current value to be 80%.

$$\left( R = \frac{\text{Vo max}}{\text{Io max}} \right)$$