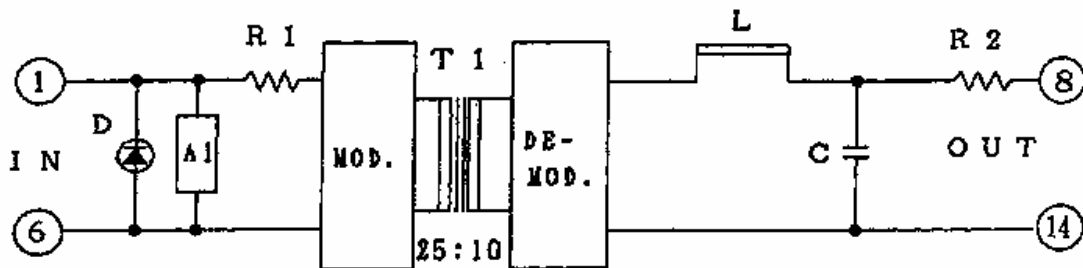


PRODUCT STANDARD

Doc. No.	DCPT2581
Title	SPECIFICATIONS OF ISOLATION AMPLIFIER <b>Model Name: DCPT2581</b>

**Descriptions**

1. DCPT2581 is part of AIKOH ELECTRIC' Isolated Voltage Sensors.
  
2. Parameters : as per page of 3/4
  
3. External Dimensions: as per page of 4/4
  
4. Block Diagrams



**5. Operation**

The above resistors (R1 & R2) are for circuit protection, for fine adjustment of conversion ratio. Input signal enters the above MDO and is being amplitude modulation at 60KHz. The modulating wave enters through Transmission Transformer(T1) to Output circuit then demodulated by the above DEMOD. This output signal is carrier-containing then is reduced under 100mV p-p by LC filter. The unipolar of Input-Output is ranged DC to 3kHz as passband. And the above A1 is correcting circuit, corrects 3% for transmission signal.

PRODUCT STANDARD

Doc. No.	
Title	SPECIFICATIONS OF ISOLATION AMPLIFIER <b>Model Name: DCPT2581</b>

### Definition of Step Response

DCPT2581 is provided operational electricity and signal transmission output by limited impedance of signal source which basically depends on circuit voltage. Thus, especially Conditions of Step Response is defined as it follows:

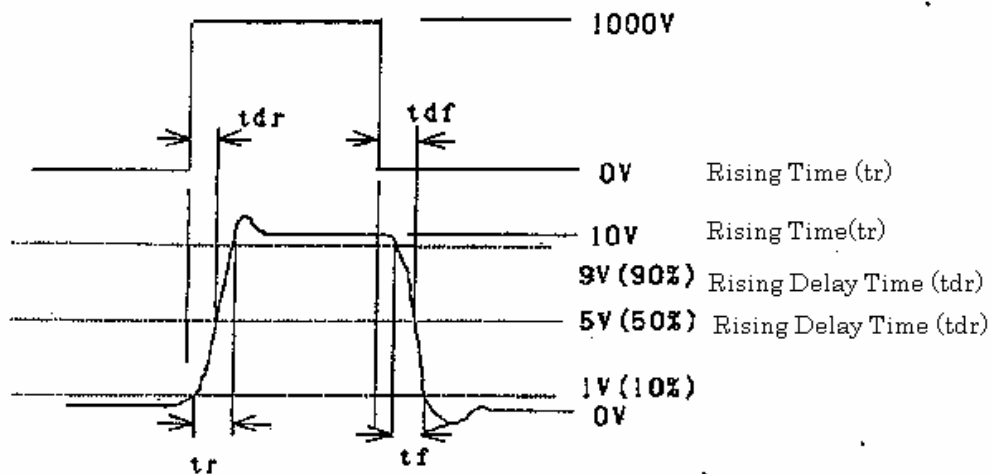
#### 1. Input Conditions

- 1) Input Wave : Square Wave 1000V 0-P (0~+1000V swing)
- 2) Input Resistance : 195kΩ
- 3) Input Wave Rising : Rising Ratio more than 200V/μS
- 4) Input Recurrence Period : Less or Equal 100Hz (Pulth Width 1~5mS)

#### 2. Output Load Conditions

- 1) Load Capacitance : Less or Equal 25pF (capacitance of measuring prove)
- 2) Load Resistance : 10kΩ ± 1%

#### 3. Measuring Standard



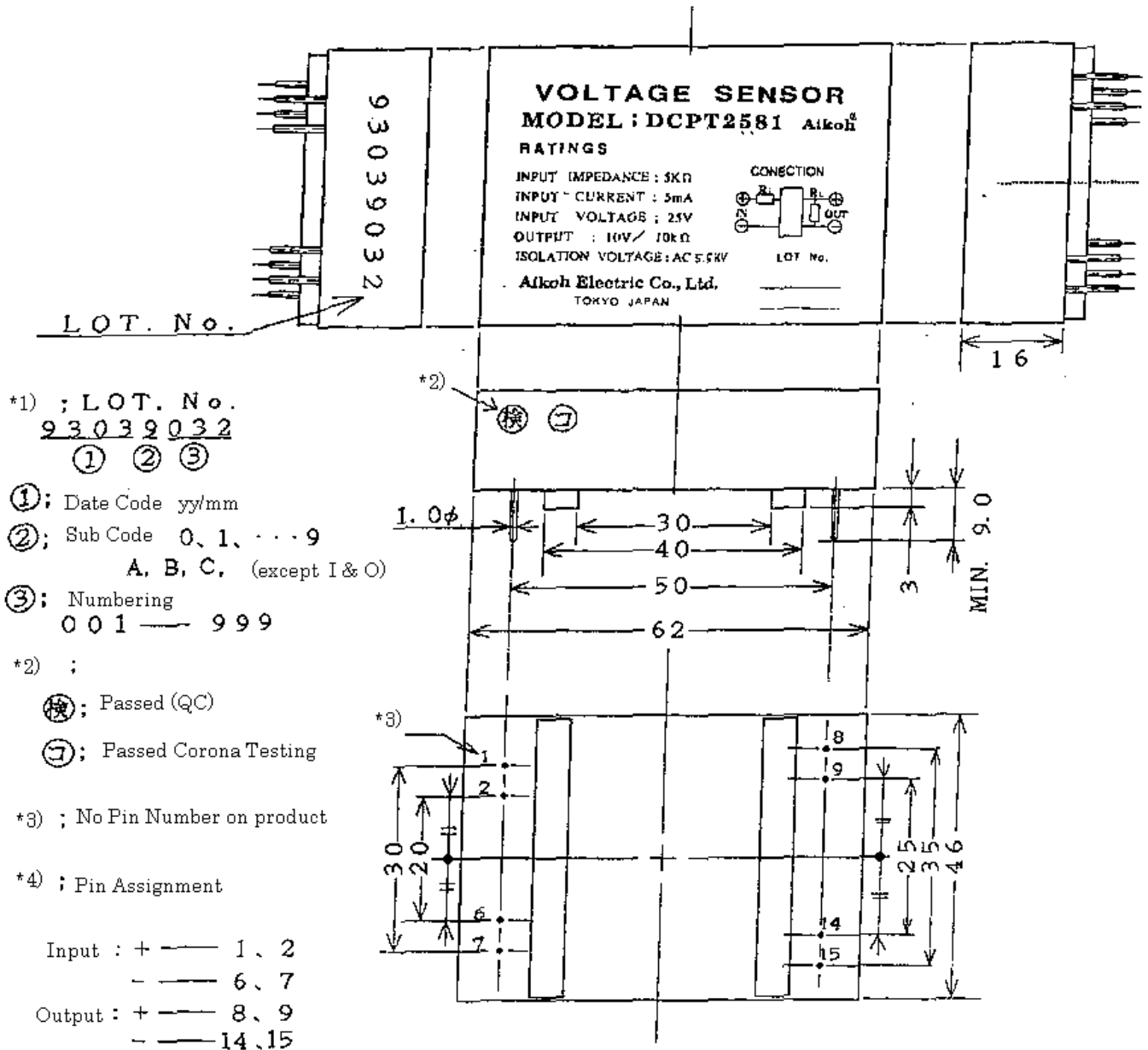
## Model Name: DCPT2581

Parameter	Conditions	Unit	
Rating			
Primary Absolute Max.			
Peak Forward Voltage	Rin=0Ω	V	30V
Peak Inverse Voltage		V	-0.3V
Peak Inverse Current		A	-0.5A
Withstand Voltage			
1. Primary-Secondary	1 minute	ACkVrms	5.5
Primary-Shave	1 minute	ACkVrms	5.5
2. Corona inception voltage	10pC	ACkVrms	2.5
Corona extinction voltage	10pC	ACkVrms	1.8
Withstand Voltage vs. Corona discharge volume		pC(less or equal)	3000
Maximum Output Current *1)	Rin=0 Vin25V	mA	7.5
Operating Temperature		°C	-10~+85
Storage Temperature		°C	-30~+95
Characteristics			
Rating Input	Voltage/Current	V/mA	25/5
Rating Output	Voltage/Load	V/kΩ	10/10
Ratio(Primary : Secondary)	Rating Load	-	25 : 10
DCPT Conversion vs.		%	0~±1.5
Output Voltage Variation			
Offset Voltage	Output(more than 0.6V)	mV(typ.)	±50
Ripple Frequency		kHz	200
Output Ripple Voltage		mVp-p	100
Output Voltage Raising Time		μs(less or equal)	200
Input(turn on) vs.			
Overshoot(max.)	0~25V *2)	%/mS	20/1
Internal Power Consumption	Rating Output	mW	115
Capability(-10~+70°C)			
Linearity of Output Voltage	Output(more than 1.5V)	%(less or equal)	±1
	Output(0.4~1.5V)	%(less or equal)	+1 -2
Temperature Characteristic	at 25°C	%(less or equal)	±1
Frequency Response(-3dB)	DC~	kHz	3
Step Response	10%~90% swing	μs	200

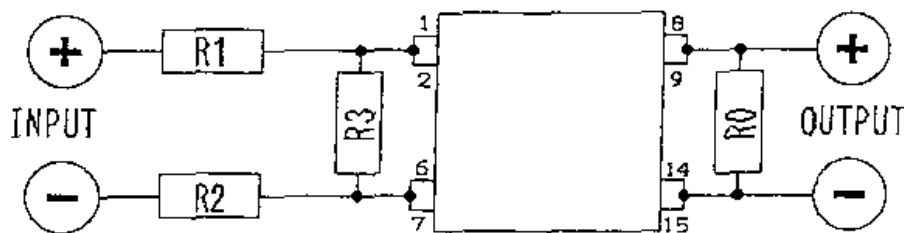
\*1) Output Voltage dropped ± 5%. No short circuit protection.

\*2) Time of Overshoot at 2% (less or equal).

External Dimensions (unit: mm)



Standard Schematic Connection



DCPT2581 basically performs with Resistor(R1). Because of the best stability of common input, it is using R1=R2. Thus it is 50% of common voltage. Further, apply the bleeder current to R3, this will enable to reduce impedance of signal and improve linearity of transmission, at the same time spreading of selectivity for R1 & R2. However, it makes minimum input voltage bigger.