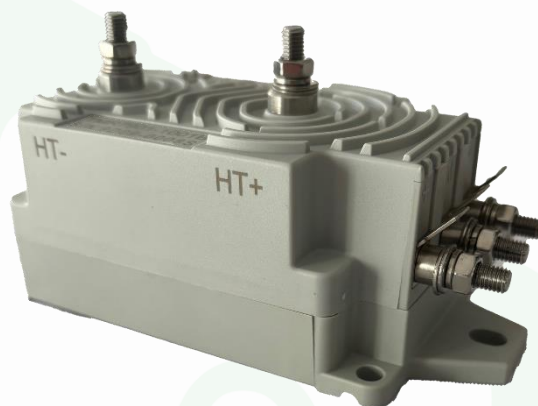


## Technical Specification

### Isolated Voltage Sensor COSY-2000

#### Features :

- Low Power
- High accuracy
- Fast response Time
- High accuracy low drift
- High immunity to external interference
- Current Output
- RoHS & REACH compliant



**COSY** series are voltage sensor for accurate measurement of DC, AC, Pulse, and arbitrary voltage signal with galvanic isolation between the primary and secondary circuits.

Code	Part Number	Connector
20003333120063	COSY-2000	M5 Studs

#### Application Domaine:

- Railway
- Industrial

#### Applications :

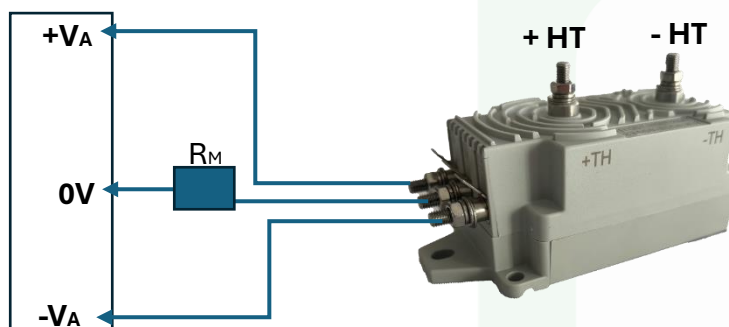
- Battery supply applications.
- Uninterruptible Power Supplies (UPS).
- Static Converter for Motor drives.
- Inverter and variable frequency drives.
- Power supplies for welding application.
- Switching power suppliers
- Renewable Energy (solar & Wind)
- High Power Drives.
- Auxiliary converters.
- Propulsion converters.
- Three phase or single inverters.
- Substations.

Part Number	Primary Nominal Voltage	Primary Voltage Measuring Range
<b>COSY-2000</b>	<b>2000V</b>	<b>±3000 V</b>

## Technical Specification

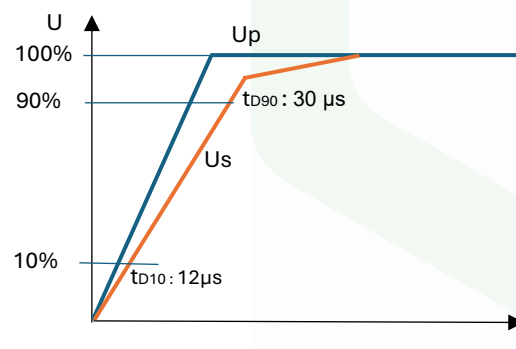
### Bi-directional power supply

The primary voltage to be measured is applied directly to the +HT and -HT terminals of the sensor. This voltage passes through an isolating amplifier and is then converted into a secondary output current  $I_s$ . This secondary current  $I_s$  is electrically isolated from the primary voltage, to which it is exactly proportional. The voltage sensor measures instantaneous values.



The secondary current  $I_s$  can then flow through a measuring resistor  $R_M$ . The measurement voltage  $V_M$  across this measurement resistor  $R_M$  is therefore also exactly proportional to the primary voltage. The sensor power supply is also isolated from the primary voltage.

The delay time  $t_{D10}$  and the delay time  $t_{D90}$  are shown in the figure beside, both depend on the primary voltage  $dv/dt$



### Insulation and Environmental Characteristics

Parameters	Symbol	Typ.	Unit
Dielectric Strength	$V_D$	8.5	KV (50 Hz, 1min)
Insulation Resistance	$R_{is}$	1000	MΩ
Creepage Distance	$d_{CP}$	60	mm
Clearance	$d_{CL}$	43	mm
Ambient Operating Temperature	$T_A$	-40 To 85	°C
Ambient Storage Temperature	$T_{STG}$	-45 To 90	°C
Mass	$m$	320	g
Note	Insulated plastic case recognized according to UL 94-V0		

## Technical Specification

### Specifications:

$T_A = +25^{\circ}\text{C}$  ,  $V_{CC} = \pm 24\text{V}$  ,  $R_M = 120\ \Omega$  , unless otherwise noted

Parameter	Symbol	Condition	Min	Typ	Max	Unit
<b>ELECTRICAL DATA</b>						
Primary nominal r.m.s Voltage	$V_{PN}$		-	2000	-	V
Primary Voltage measuring range	$V_{PM}$		-3000	-	3000	V
Secondary nominal r.m.s. current	$I_{SN}$		-	50	-	mA
Secondary Maximam Output	$I_{out}$		-	-	75	mA
Measuring resistance	$R_M$	$\pm 12\text{V}$	0	-	47	$\Omega$
		$\pm 24\text{V}$	0	-	200	$\Omega$
Supply Voltage	$V_{CC}$	$\pm 5\%$	$\pm 12$	-	$\pm 24$	V
Quincent Current	$I_c$	$V_{CC} = \pm 24\text{V}$ , $I_P=0$	-	20	-	mA
Sensitivity	$S$	$V_p=0$ To $\pm V_{PN}$	33.27	33.33	33.4	$\mu\text{A/A}$
Power-On Time	$T_{ON}$	-	-	190	250	ms
Output Noise	$I_{NOISE}$	1KHz – 100 KHz	-	10	-	$\mu\text{A}$
Primary Power	$P$	$V_p = V_{PN}$	-	0.2	-	W
<b>STATIC PERFORMANCE DATA</b>						
Linearity Error	$\varepsilon_L$	$V_p=0$ To $\pm V_{PN}$	-	0.5	-	%
Accuracy	$X$	$V_p=0$ To $\pm V_{PN}$	-	$\pm 0.7$		% $V_{PN}$
Sensitivity Error	$\varepsilon_s$	$T_A = -40^{\circ}\text{C}$ To $+85^{\circ}\text{C}$ $V_p=0$ To $\pm V_{PN}$	-	$\pm 0.5$		% $V_{PN}$
di/dt accurately followed	di/dt	-	100	-	-	A/ $\mu\text{s}$
Frequency Bandwidth	$B_w$	-3 dB	-	14	-	kHz
		-1 dB	-	8	-	
		-0.1 dB	-	2	-	
Response Time	$T_r$	10% to 90% of $V_{PN}$	-	30	-	$\mu\text{s}$

## Technical Specification

### DIMENSIONS

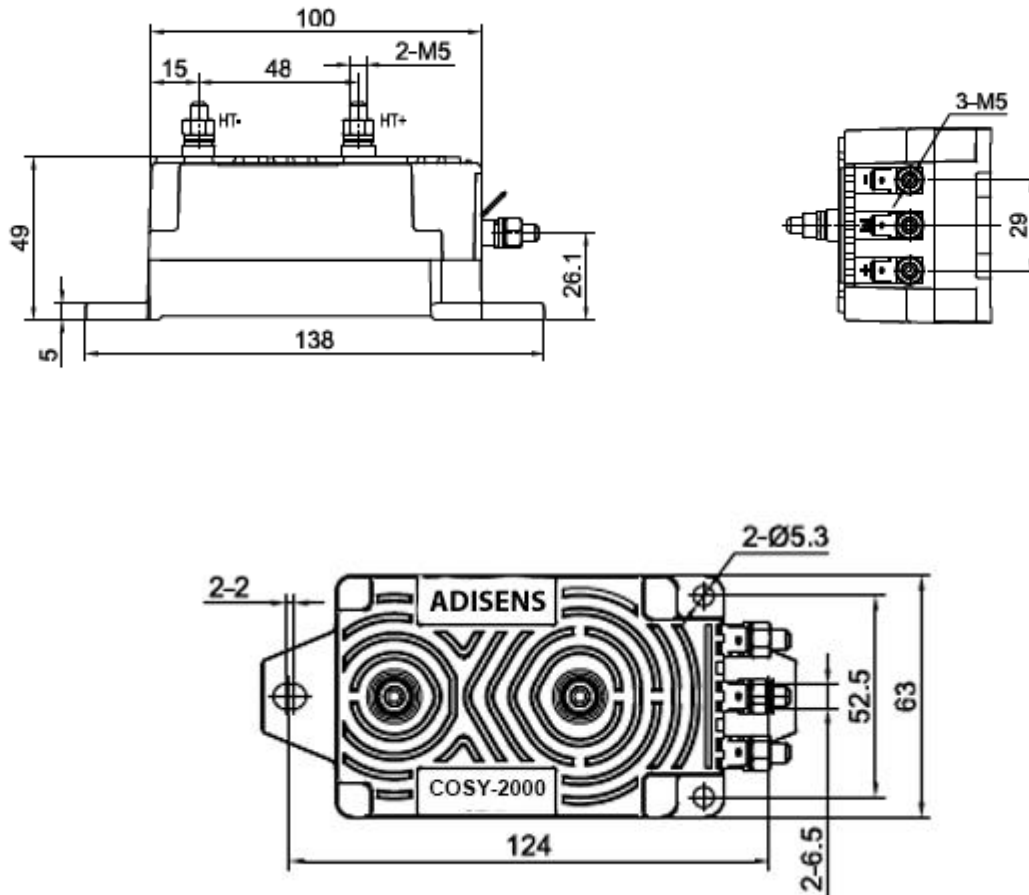


Figure : Dimension (unit: mm, tolerances for unmarked scales  $\pm 1$  mm)

### Mounting Recommendation

1. Mounting method:  $2 \times \Phi 6.5$  mm slotted holes
2. Primary connection dimensions:  $2 \times M5$  thread post
3. Secondary connection:  $3 \times M5$  thread post or  $6.3 \text{ mm} \times 0.8 \text{ mm}$  terminal

