

### Electrical data

$I_{PN}$	Primary nominal RMS current	10	mA
$I_{PM}$	Primary current, measuring range	0 ... $\pm 14$	mA
$R_M$	Measuring resistance	$R_{M \min}$ $R_{M \max}$	
	with $\pm 12$ V	@ $\pm 10$ mA	30 190 $\Omega$
		@ $\pm 14$ mA	30 100 $\Omega$
	with $\pm 15$ V	@ $\pm 10$ mA	100 350 $\Omega$
		@ $\pm 14$ mA	100 190 $\Omega$
$I_{SN}$	Secondary nominal RMS current	25	mA
$N_p/N_s$	Turns ratio	2500 : 1000	
$U_C$	Supply voltage ( $\pm 5$ %)	$\pm 12$ ... 15	V
$I_C$	Current consumption	10 (@ $\pm 15$ V) + $I_S$	mA

Parameter	Symbol	Unit	Value
Primary involved potential		V AC/DC	600
Ambient operating temperature	$T_A$	$^{\circ}\text{C}$	85
Primary current	$I_p$	mA	0 to 10
Supply voltage	$U_C$	V DC	$\pm 12$ to $\pm 15$
Secondary nominal RMS current	$I_{SN}$	mA	25

### Instructions for use of the voltage transducer model LV 25-P



Primary resistor  $R_1$ : the transducer's optimum accuracy is obtained at the nominal primary current. As far as possible,  $R_1$  should be calculated so that the nominal voltage to be measured corresponds to a primary current of 10 mA.

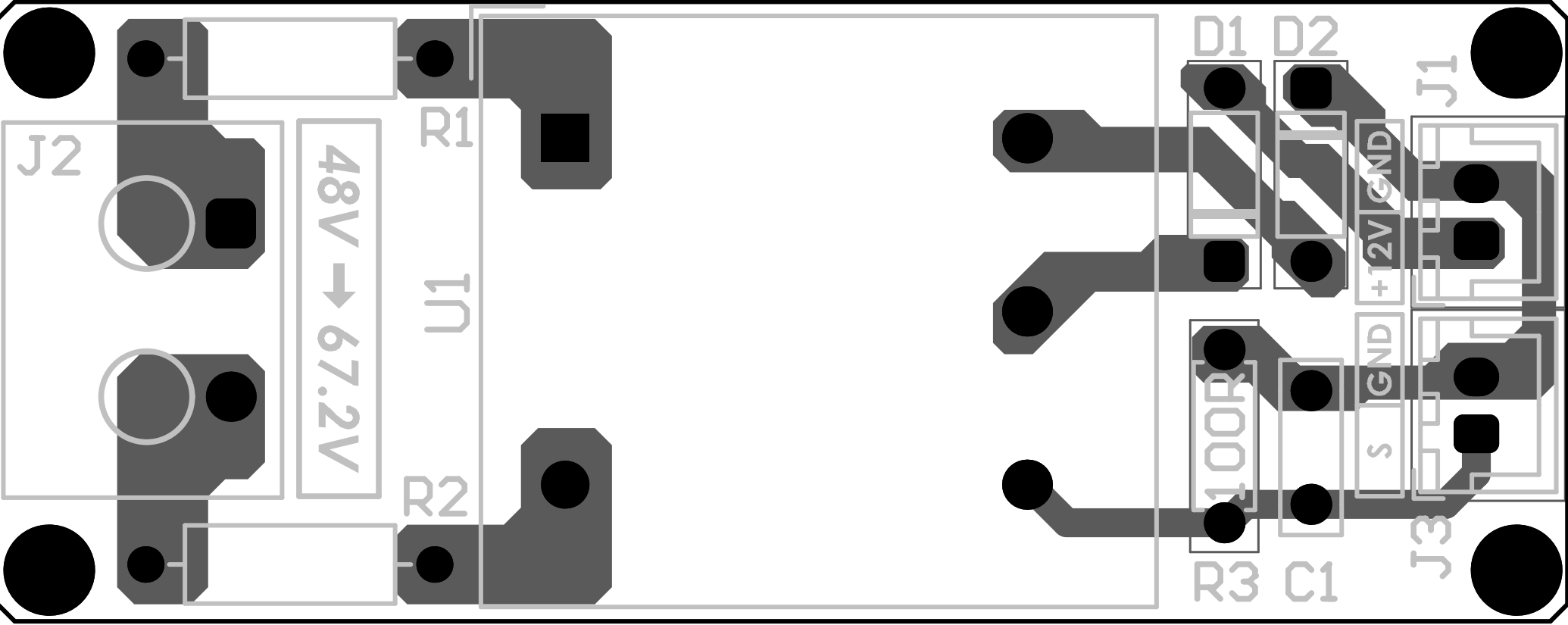
Example: Voltage to be measured  $U_{PN} = 250$  V

a)  $R_1 = 25$  k $\Omega$  / 2.5 W,  $I_p = 10$  mA Total error =  $\pm 0.9$  % of  $U_{PN}$  (@  $T_A = +25$   $^{\circ}\text{C}$ )

b)  $R_1 = 50$  k $\Omega$  / 1.25 W,  $I_p = 5$  mA Total error =  $\pm 1.5$  % of  $U_{PN}$  (@  $T_A = +25$   $^{\circ}\text{C}$ )

Operating range (recommended): taking into account the resistance of the primary windings (which must remain low compared to  $R_1$ , in order to keep thermal deviation as low as possible) and the insulation, this transducer is suitable for measuring nominal voltages from 10 to 500 V.

Title: LLC VOLTAGE SENSOR		 	
ID:	Version: VER 1.0		
Date: 8/26/2023 Time: 6:54:11 AM	Sheet 1 of 1		
File: llc_voltage_sensor.SchDoc	Author: Ly Narith		



Line #	Name	Description	Designator	Quantity	Manufacturer 1	Manufacturer Part Number 1	Manufacturer Lifecycle 1	Supplier 1	Supplier Part Number 1	Supplier Unit Price 1	Supplier Subtotal 1
	100nF		C1	1							
	1N4007		D1, D2	2							
	VCC		J1	1							
	48V		J2	1							
	ADC		J3	1							
	2k4/0.5W		R1, R2	2							
	100R		R3	1							
	LV25-P	Voltage Transducer LV 25- P	U1	1							