

# TI SERIES

## Pulse transformers

### Definitions

- Transformation ratio: NP: NS1: NS2.
- Transfer area:  $\int dt$ , (voltage-time area), in  $V \times \mu s$ .
- Rising time:  $T_r$ , in  $\mu s$ .
- Load resistance:  $R_L$ , in  $\Omega$ .
- Firing current:  $I_f$ , in A.
- Primary inductance:  $L_p$ , in mH.
- Primary resistance:  $R_p$ , in  $m\Omega$ .
- Secondary resistance:  $R_s$ , in  $m\Omega$ .
- Dielectric strength:  $V_{is}$ , in kVAC.
- Coupling capacitance:  $C_k$ , in pF.
- Rated voltage:  $V_{ps}$ , in V.

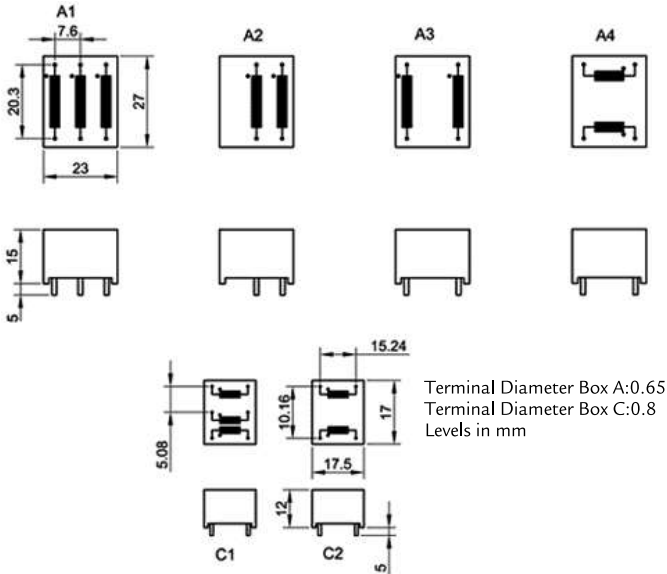


### Electrical specifications

Code	Np: Ns1: Ns2:	$\int vdt$ (V. $\mu s$ )	$T_r$ ( $\mu s$ )	$R_L$ ( $\Omega$ )	$I_f$ (mA)	$L_p$ (mH)	$R_p$ ( $\Omega$ )	$R_s$ ( $\Omega$ )	$V_{ps}$ (VAC)	$V_{is}$ (kVac)	CK rF MIN.	Case
TI-102	1:1	500	1	100	100	5.6	2.0	2.0	400	2.5	27	C2
TI-103	1:1	500	1	100	100	7.7	1.6	1.6	500	3.5	5	A2
TI-104	1:1:1	600	2	2x100	100	9	1.9	1.9	500	3.5	7	A1
TI-105	3:1:1	600	1.2	2x100	100	80	7.2	2.8	500	3.5	6	A1
TI-106	1:1	250	1	40	250	1.6	0.6	0.6	400	2.5	25	C2
TI-107	1:1	300	1	40	250	3.2	0.6	0.6	500	3.5	25	A2
TI-109	3:1:1	300	1	2x40	250	28	1.9	0.6	500	3.5	8	A1
TI-111	1:1	700	2	40	250	56	2.8	2.8	400	2.5	30	A3
TI-112	1:1	700	2	40	250	56	2.8	2.8	400	2.5	30	A2
TI-113	1:1	350	3	40	250	4.4	0.6	0.6	500	3.5	33	A3
TI-114	1:1	350	3	40	250	4.4	0.6	0.6	500	3.5	5	A4
TI-115	1:1:1	300	1.5	2x40	250	3.2	0.6	0.6	500	3.5	5	A1
TI-116	1:1	252	2	10	1000	2.7	0.7	0.7	400	2.5	30	C2

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## Pulse transformers



### Pulse transformers

The TI series small-size pulse transformers are constructed using high permeability E / EF shaped ferrite cores and wound using a special technique to achieve the optimization of its inter-related electric parameters, which determine the over-all performance of the transformers. We shall emphasize the following parameters:

- High galvanic insulation between primary winding (control circuit) and secondary winding (power circuit).
- Low coupling capacitance between windings.
- Low stray inductance.
- High transfer capability of unipolar pulses.
- Low losses in the magnetic circuit.

### Applications:

Generally, they are used for triggering low, medium and high power thyristors and triacs, as well as for controlling power transistors, used in power electronic circuits.

The TI standard series consists of 16 encapsulated models in three case sizes and with one or two secondary windings.

By request, we can manufacture special models, according to customer specifications, using other coil formers and core shapes, sizes and types, with some electrical features other than than construction or encapsulated, using high permeability E / EF shaped ferrite cores or toroidal ones.

### Features:

- Transfer area: from 200 to 700 V x  $\mu$ s
- Transformation ratio: 1:1, 1:1:1 and 3:1:1
- Trigger current: from 0.1 A to 1 A
- Dielectric strength: between 2.5 KVac and 3.5 KVac (depending on the model)
- Size: (width x depth x height) in mm. (23 x 27 x 15), (23 x 16.5 x 25) and (17 x 17.5 x 12).