



If your transformer requirement cannot be met by one of our standard products, let us design and manufacture a transformer to your exact needs.

You may be surprised to learn that a custom transformer can make economical sense for your product, even when produced in small quantities.

Please read through the following information provided to assist you as you complete your specifications, then just fill out the *Custom Transformer Request for Quotation* form (see page 13) for a prompt response.

Markings and international standards

- Transformers can be certified to and marked for:
UL506/CSA 22.2, No. 66; UL1411/CSA 22.2 No. 1-94;
UL1950/CSA 22.2 No. 950-95; UL2601 (UL544)/CSA 22.2 No.601.1; CE marked and tested in accordance with EN61558 (replacing EN60742), EN60065, EN60950, BS415, VDE0550.

Common toroid sizes

(For 50/60 Hz design—60 Hz-only are typically smaller.)

Load (VA)	Diameter (mm / inches)	Height (mm / inches)	Weight (Kg / pounds)	Regulation (%)
15	70 / 2.8	28 / 1.1	.34 / 0.8	16
30	70 / 2.8	31 / 1.2	.42 / 0.9	16
60	89 / 3.5	33 / 1.3	.84 / 1.9	13
100	91 / 3.6	43 / 1.7	1.20 / 2.7	10
160	114 / 4.5	43 / 1.7	1.90 / 4.2	9
230	121 / 4.8	51 / 2.0	2.67 / 5.9	8
330	133 / 5.2	52 / 2.1	3.30 / 7.3	7
530	150 / 5.9	61 / 2.4	5.00 / 11.0	6
600	165 / 6.5	76 / 3.0	6.00 / 13.2	5
800	180 / 7.1	76 / 3.0	7.00 / 15.4	4
1000*	196 / 7.7	81 / 3.2	8.00 / 17.6	4

* Higher ratings are available; please contact factory.

Typical mounting:

15-530 VA: Standard mounting kit with metal dished mounting plate, foam pads, and bolt.

600 VA+: Epoxy resin-filled center with threaded bushing or clearance hole is recommended.

Minimizing Noise

Although toroidal transformers inherently exhibit very low radiated field, the following may be considered to reduce noise further in very sensitive applications.

- Steel or Mu-metal band:**
Added to periphery under finishing tape.
- Metal can:**
For complete or partial enclosure.
Resin filling can also dampen acoustic noise.

Transformers can also be constructed using special manufacturing techniques and tested to ensure 100% acceptable noise levels.

Custom Leads and Termination Examples

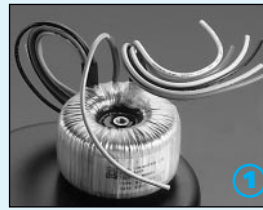
Reduce your assembly labor costs—let us supply transformers with connectors or terminals to your specifications attached to lead wires.

Just indicate manufacturer and part number on the request for quotation form.





Termination Options



Flying solid lead wires:
Most cost-effective.

Flying stranded lead wires:
Withstand repeated flexure better than solid wires; may be required if connectors or terminals are to be crimped to wires.

We can supply transformers with connectors or terminals to your specifications attached to lead wires—just indicate manufacturer and part number on request for quotation form.

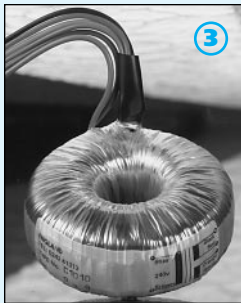
Tabs (not shown):

For quick connections and disconnection using standard wire terminals.



Pins for PCB mounting:
Save time in assembly; standard and custom pin layouts available.

Finish Options



Polyester tape:
A proven, economical option.



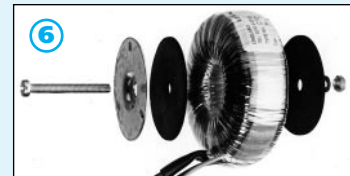
Metal can or plastic enclosure:
For environmental protection and / or magnetic shielding.



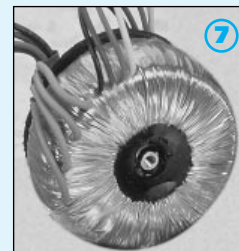
Varnishing and vacuum impregnation:
Good protection; recommended for harsh environments. Protective against humidity and pollution.

Avel offers full vacuum and pressure varnish impregnation, as well as envelope dipping with mold-resistant polymers and protective barriers. Impregnation and dipping can be carried out with either standard solvent-based coil varnishes or solventless epoxy varnishes. Please call if you have an unusual environmental requirement.

Mounting Options



Dished mounting plate with foam pads and bolt:
The most economical option.



Epoxy resin-filled center with threaded bushing or clearance hole:
Resin can be recessed for the bolt head to allow flush mounting. Ideal for minimizing height; more rugged than the standard (dished plate) mounting kit.



Metal mounting frame (H-frame):
Suggested for 1000VA and above and / or applications with extremes of shock and vibration.

L-bracket or omega bracket (not shown):
For vertical mounting.

Please photocopy this form, fill out, and FAX to 860/354-8597 for fastest service.

Name: _____
 Company: _____
 Address: _____

 Phone: _____ FAX: _____
 e-mail: _____

Description of Application:

 Quantities: _____
 Desired delivery date: _____

Input(s)	Primaries
<input type="checkbox"/> 115V	0-115V
<input type="checkbox"/> 115V, 230V (US and EU)	0-115V x 2
<input type="checkbox"/> 100V, 115V, 230V (Japan, US, EU)	0-100-115V x 2
<input type="checkbox"/> Other: _____	

Note: a series/parallel primary is more cost effective than a multi-tapped (ladder primary)

Frequency:

60 Hz only 50/60 Hz 400 Hz nominal
 Other, or special frequency considerations:

Secondary outputs:

Voltages @ load current

A) _____ V _____ A AC RMS DC
 If DC, Regulated Unregulated

B) _____ V _____ A AC RMS DC
 If DC, Regulated Unregulated

C) _____ V _____ A AC RMS DC
 If DC, Regulated Unregulated

D) _____ V _____ A AC RMS DC
 If DC, Regulated Unregulated

E) _____ V _____ A AC RMS DC
 If DC, Regulated Unregulated

F) _____ V _____ A AC RMS DC
 If DC, Regulated Unregulated

Optional:

No-load to full-load regulation: _____ %

Duty cycle: 100% Other: _____

Terminations:

Solid-conductor leads, length: _____
 Stranded-conductor leads, length: _____
 PCB mount Tabs
 Crimped terminals or connectors,
 specify manufacturer and part number:

Finish:

Polyester tape wrap Varnish impregnated
 Encapsulated Metal can
 Other: _____

Mounting:

Standard mounting kit
 (Dished metal washer, insulating pads, bolt)

Epoxy resin-filled center
 Threaded bushing, threads: _____
 Clearance hole, diameter: _____

H-frame (Applications above 1 KVA load, and/or shock exceeding 10 G.)

Max. diameter: _____ Max. height: _____

Shielding:

Exterior Primary-secondary copper screen
 Other: _____

Safety standards: _____

Special environmental considerations:
