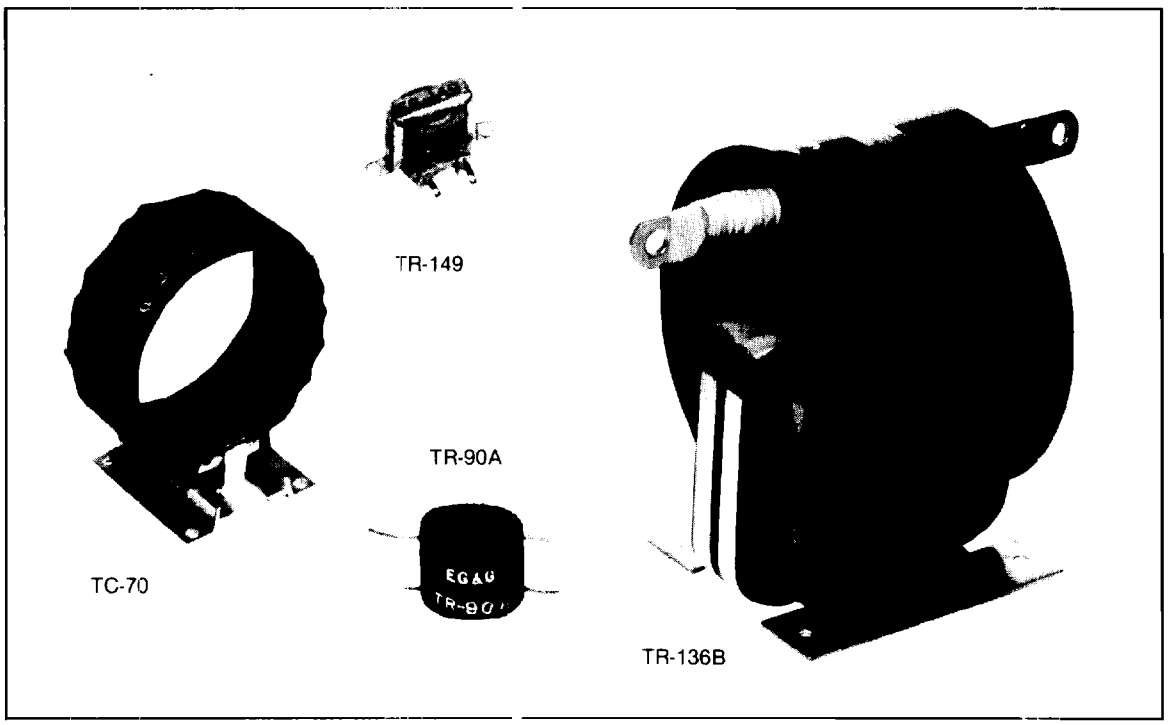
Trigger Transformers and Chokes

Features

- Reliable Performance
- Low or High Voltage Inputs
- Custom Designs
- Compact Designs
- Designed to Meet MIL Specs

Applications

- Xenon Flashtubes
- Triggered Spark Gaps
- Krytrons



Trigger Transformers

Type	Peak Output Range (kV) *	Primary Discharge Capacitor (μF)	Input Range DC Source (Volts)	Primary Current Peak (A) **	Rise Time 10%-90% (μs) **
TR-36A	3-6	1.0	130-250	35	1.0
TR-76A	2.5-6.0	10.0	14-25	30	2.0
TR-90A	2.5-5.5	10.0	10-20	23	3.0
TR-130	0.38-1.4	10.0	10-30	46	0.8
TR-131	0.38-1.4	10.0	10-30	40	0.5
TR-132C	8-20	0.5	150-350	60	2.25
TR-148A	5-12	0.5	200-400	192	0.35
TR-149	0.38-1.0	1.0	15-30	17	0.7
TR-1795	12-35	0.22	250-600	100	0.5
TR-157	0.3-1.2	1.0	10-30	15	0.5
TR-165	0.35-0.7	10.0	7-14	17	1.0
TR-180B	10-20	1.0	100-200	110	1.0
TR-181	5	0.5	5000	835	0.1
TR-1647	4-10	2.0	20-40	40	1.5
TR-1700	15-30	0.5	200-400	70	0.75

Notes:

*1. Open circuit, unloaded secondary, output characteristics.

**2. Measured at maximum voltage input.

3. Secondary finish (SF) is high voltage output lead.

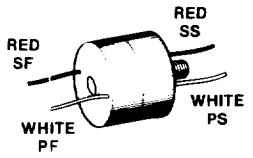


FIG. 1

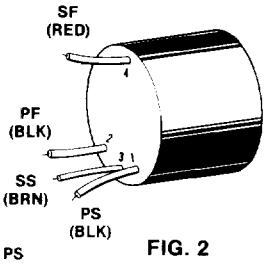


FIG. 2

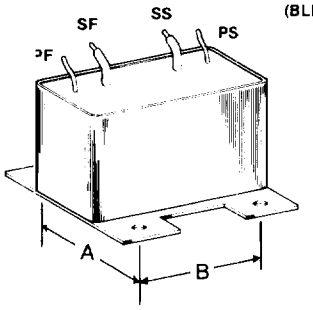


FIG. 3

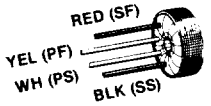


FIG. 4

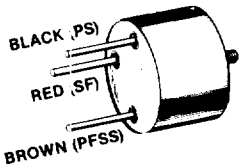


FIG. 5

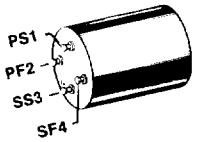


FIG. 6

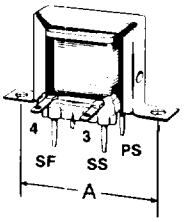


FIG. 7

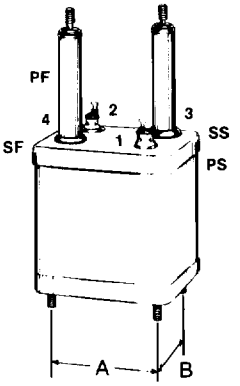


FIG. 8

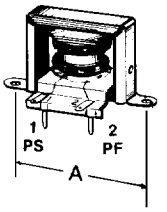


FIG. 9

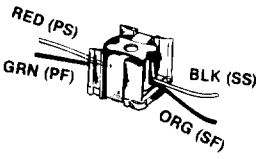


FIG. 10

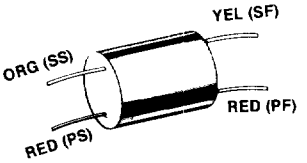


FIG. 11

Series Injection Trigger Transformers

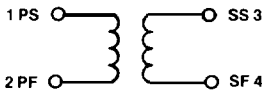
Type	Peak Output Voltage Maximum (kV)	Rise Time 10-90% (μs)	Pulse Width 50% Amplitude (μs)	Maximum Input DC Source (Volts)	Primary Pulse Current (A)	Turns Ratio Secondary to Primary	Holdoff Primary to Secondary (kVdc)	Secondary Winding Inductance Resistance mH unsat	μH sat	ohms	Maximum Current RMS (A)
TS-136B	40	0.5	1.0	1500	1100	30:1	30	4.8	110	0.02	80
TS-146A	30	0.5	0.50	1500	660	30:1	30	4.5	100	0.03	25
TS-170	20	0.15	0.5	2000	150	10:1	5	0.8	18	0.05	20
TS-179	15	0.4	0.7	800	100	25:1	2	3.6	80	0.05	12
TS-185	30	0.48	1.0	600	60	50:1	15	40	550	0.3	15

EG&G

Pulse Width 50% Amplitude (μs) **	Turns Ratio	Hold-Off Voltage Secondary to Primary (kVdc)	Figure	Nominal Dimensions					Mounting Data (Inches Center to Center)	
				Length (Inches)	Width (Inches)	Height (Inches)	Diameter (Inches)	Weight (lb)	A	B
5.0	15:1	0.5	1	—	—	11/16	1-1/16	0.11	Hole Center Mounted[5]	
3.0	188:1	0.5	1	—	—	11/16	1-1/16	0.10	Hole Center Mounted[5]	
4.0	250:1	0.5	1	—	—	11/16	1-1/16	0.10	Hole Center Mounted[5]	
3.8	40:1	2.0	4	—	—	7/16	11/16	0.02	Hole Center Mounted[6]	
0.45	40:1	1.0	4	—	—	1/4	1/2	0.01	Hole Center Mounted[4]	
2.5	72:1	0	5	—	—	1-1/16	1-3/4	0.20	Stud Center Mounted[3]	
0.5	30:1	2.0	6	—	—	1-15/16	1-9/32	0.22	Use Capacitor Clamp	
0.7	32:1	1.0	7	1-5/16	1-3/16	3/4	—	0.03	1-1/16	—[2]
0.5	51:1	15.0	8	3-1/16	2-5/8	6-15/16	—	1.70	Studs 2-5/16	1-7/8[1]
1.0	55:1	1.0	9	1-21/32	1-7/16	1	—	0.04	1-3/8	—[2]
1.5	50:1	0.5	10	17/32	17/32	7/16	—	0.01	Hole Center Mounted[4]	
1.5	112:1	5.0	11	—	—	1-9/16	1-1/32	0.15	Use Capacitor Clamp	
2.0	1:1	10.0	12	3-1/16	2-5/8	5-1/2	—	2.00	Studs 2-19/64	1-55/64[1]
1.2	250:1	1.0	2	—	—	1	1-1/4	0.11	Hole Center Mounted[5]	
1.5	70:1	20.0	3	3-5/8	2-1/8	2	—	2.00	3-3/8	2-1/2[5]

Notes:

1. 8-32 × 3/8 NC-2 Studs
2. 0.125 Diameter (Inches)
3. 6-32 × 3/8 NC-2 Studs
4. 0.062 Diameter (Inches)
5. 0.187 Diameter (Inches)
6. 0.093 Diameter (Inches)



LEAD CODES:
COLOR OF LEADS AS NOTED

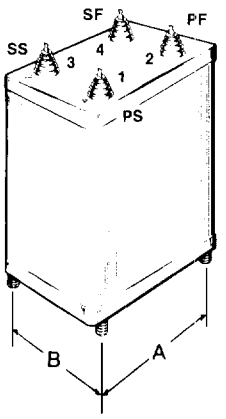


FIG. 12

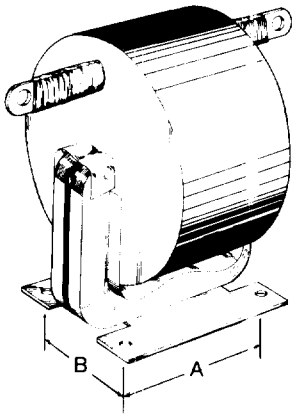


FIG. 13

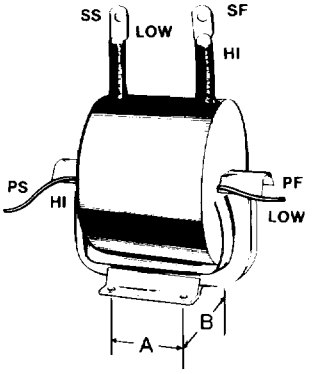


FIG. 14

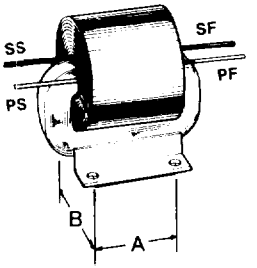


FIG. 15

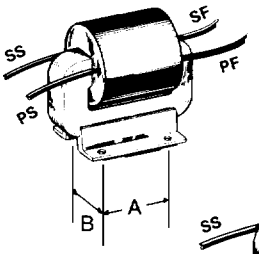


FIG. 16

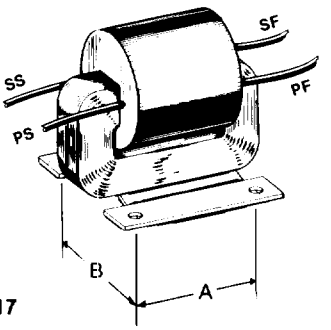


FIG. 17

Figure	Nominal Dimensions				Mounting Holes		
	Length (Inches)	Width (Inches)	Height (Inches)	Weight (lb)	Inches Center to Center A	Inches Center to Center B	Diameter (Inches)
13	7-1/2	5	5-3/4	9.0	3-3/8	2-1/2	0.188
14	4	3-1/2	6-1/2	2.9	1-11/16	1-17/32	0.188
15	2-3/4	2-1/4	2-1/2	0.9	1-7/16	1-5/16	0.188
16	2-3/4	2-1/16	2-1/2	0.8	1-7/16	1-9/32	0.188
17	3-1/4	2-3/4	3-3/4	1.3	1-7/16	1-9/32	0.188

Chokes

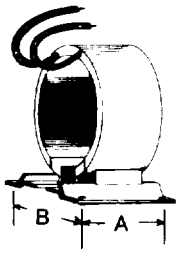


Figure 1.

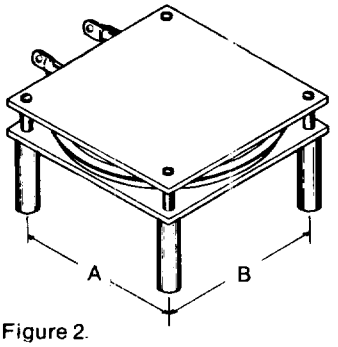


Figure 2.

Mounting

Due to the intense magnetic fields generated during discharge, chokes should be securely mounted away from metallic objects and components influenced by magnetic fields. Flexible leads are desirable. Magnetic coupling should be avoided when two or more chokes are used.

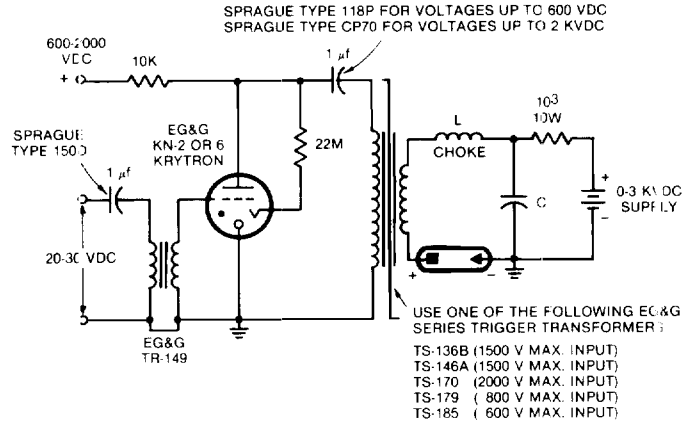
Specifications

Product Type	Inductance (μH)	DC Resistance	Voltage (kV)	Maximum Peak Current 1 ms Pulse (amp)	Maximum RMS Current (amp)	Figure	Nominal Dimensions				Mounting Holes		
							Length (Inches)	Width (Inches)	Height (Inches)	Weight (lb)	Inches Center to Center A	Inches Center to Center B	Diameter (Inches)
TC-70	300	0.19	5	2,000	8	1	3-1/2	2-5/8	4-1/4	3/4	1-3/4	1-25/32	0.188 diameter
TC-71	600	0.25	5	2,000	8	1	3-13/16	2-5/8	4-3/8	1	1-3/4	1-25/32	0.188 diameter
TC-79	550	0.031	5	5,000	35	2	8	8	4-3/4	13	6-1/2	6-1/2	1/4-20 threaded
TC-80	850	0.055	5	5,000	27	2	9	9	4-3/4	17	7-1/2	7-1/2	1/4-20 threaded
TC-102	300	0.025	5	5,000	35	2	8	8	4-3/4	12	6-1/2	6-1/2	1/4-20 threaded
TC-196	22	0.046	5	2,000	8	1	3-1/2	2-5/8	4-1/4	5/8	2-3/16	1-25/32	0.188 diameter
TC-198	775	0.270	2.5	1,000	4	1	4	2-5/8	4-3/4	1-1/4	2-3/16	1-25/32	0.188 diameter

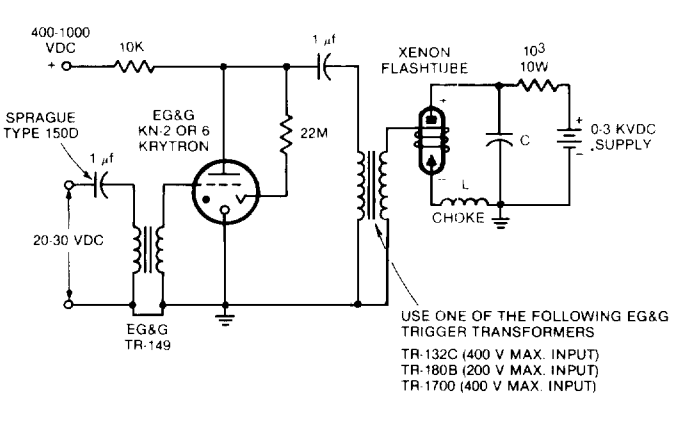
Notes:

1. $I_{rms} = \sqrt{I_{peak} \times I_{average}}$ where $I_{average} = I_{peak} \times$ Duty Cycle.
2. Mounting holes for TC-196 and TC-198 are 3/16″ diameter. Mounting holes for TC-79 and TC-80 are 1/4-20 threaded.
3. Above products recommended for use with EG&G flashtubes but can also be used with other flashtubes having similar ratings. See EG&G Flashlamp Applications Manual.

Typical Flashtube Circuits



SERIES INJECTION TRIGGERING



EXTERNAL TRIGGERING

All Data and Specifications Subject to Change Without Notice

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