

MAGNETIC NEON UNT SERVICE PRO™ TRANSFORMERS WIRING GUIDE

The UNT series is a universal transformer and can be used as a replacement for individual 30mA transformers. Available in 120 volts. All UNT Tank® Service Pro™ neon transformers come with a secondary ground fault protection bypass switch. This feature will aid the service technician in troubleshooting secondary side installation problems by temporarily disabling the secondary ground fault protection for up to 29 minutes. After 29 minutes, the SGFP circuit reverts to normal mode while the unit remains on. Turn the power "OFF" and then "ON"; the SGFP is now restored automatically.

Our unique tri-LED sensor lamp gives the user a visual indicator for easy operation. The transformer signals function mode changes automatically: Green (ON); Red (SGFP trip to OFF); and Amber (SGFP bypass). Blinking Green: 3 times = reversed polarity; 4 times = ungrounded.

Replace the transformers with the following voltage ratings:

- UNT1512N3G: 10,500 – 15,000 volts
- UNT912N3G: 4,500 – 9,000 volts

Be sure to:

- Mount transformer securely. Use star washer to bond the base plate to the sign enclosure.
- Polarized transformer, line and neutral are marked as required by UL
- A proper ground should be present and connected to the terminal marked
- Make sure the identified Midpoint Return ("RETURN") terminal is not connected to any ground
- First determine that power is removed from transformer if ground fault occurs. The transformer will automatically make 3 attempts within 10 seconds to reset.
- **See recommended secondary wiring methods on reverse side and select the method best suited for your application. Remember, keep length of GTO from transformer to first connection as short as possible.**
- Outdoor Type 2 transformer – an additional metal enclosure is required for all locations

Revised Luminous Tube Chart

Transformer Size Specifications		Normal average number of feet of tubing operated													
Open circuit secondary voltage (Volts)	Short circuit secondary current (mA)	Red neon, clear or fluorescent Tube size, millimeters							Mercury-filled tubes, clear or fluorescent All colors for all applications Tube size, millimeters						
		15	14	13	12	11	10	9	15	14	13	12	11	10	9
15,000	60	60	54	50	46	43	40	38	72	65	60	55	51	48	45
	30	60	54	50	46	43	40	38	72	65	60	55	51	48	45
12,000	60	46	42	38	35	33	31	28	55	50	46	42	39	37	34
	30	46	42	38	35	33	31	28	55	50	46	42	39	37	34
10,500	60	39	36	34	31	28	25	22	48	43	40	37	33	30	27
	30	39	36	34	31	28	25	22	48	43	40	37	33	30	27
9,000	60	33	30	28	26	24	23	21	40	36	33	31	29	28	25
	30	33	30	28	26	24	23	21	40	36	33	31	29	28	25
7,500	60	27	25	23	22	20	19	18	33	30	28	26	24	23	21
	30	27	25	23	22	20	19	18	33	30	28	26	24	23	21
6,000	60	22	21	19	18	16	15	14	27	25	23	21	19	18	17
	30	22	21	19	18	16	15	14	27	25	23	21	19	18	17
5,000	60	18	17	15	14	13	13	12	22	20	18	17	16	15	14
	30	18	17	15	14	13	13	12	22	20	18	17	16	15	14
4,000	60	15	13	13	12	11	10	9	18	16	15	14	13	12	11
	30	15	13	13	12	11	10	9	18	16	15	14	13	12	11
3,000	60	11	10	9	8	8	8	7	13	12	11	10	9	9	8
	30	11	10	9	8	8	8	7	13	12	11	10	9	9	8
Recommended gas pressure MM/Hg		9	10	10	11	12	13	15	9	10	10	11	12	13	15

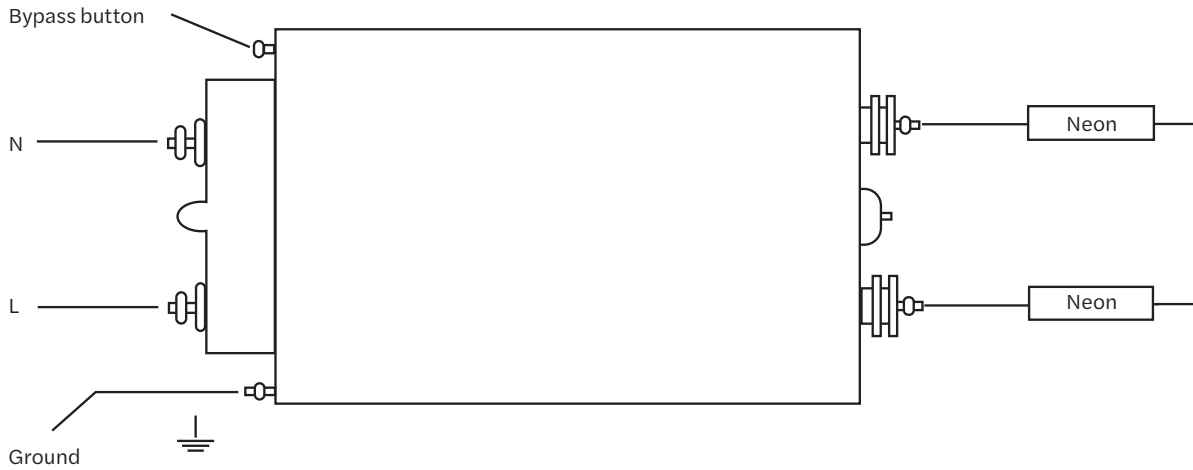
Revised based on (1) average grade of tubing, (2) correct gas pressure, (3) High Voltage Cable (GTO 15) restricted to length of cable of transformer, (4) primary voltage supply at 120 volts ±10%.

The above chart is a guideline. More accurate data can only be obtained if you load by instrument. An A/C milliammeter (0-75 mA) can be obtained from your nearest Ventex distributor.

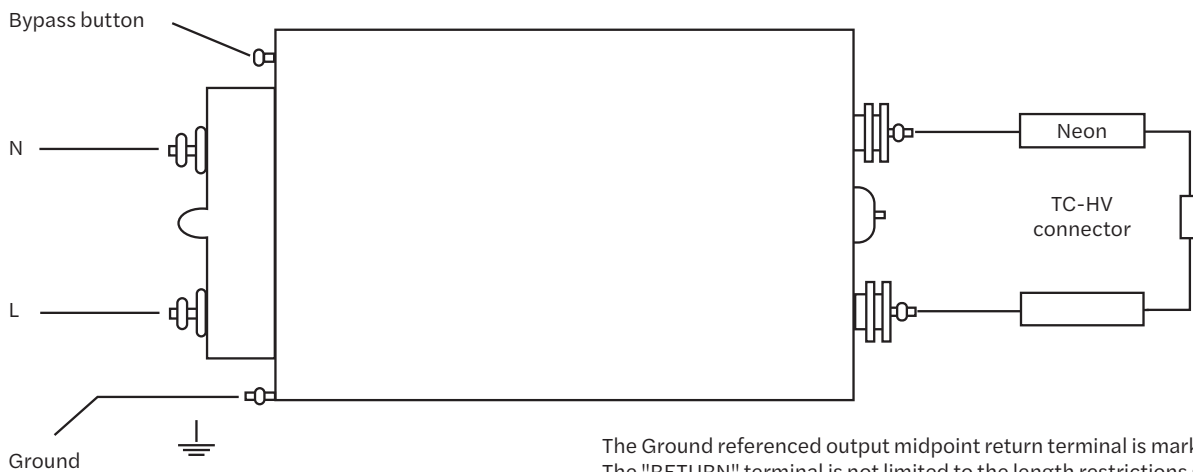
Deduct approximately one (1) foot from the above figures for each pair of electrodes. Add 10% to the recommended gas pressure measured in MM/Hg when the length of the tube is less than ten (10) feet.

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Standard Series Wiring Method

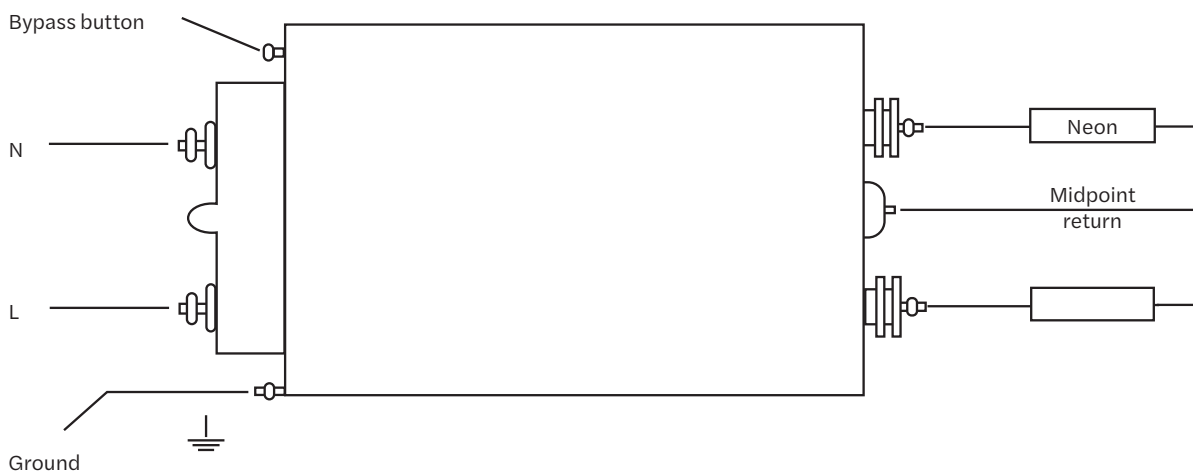


Virtual Wiring Method



The Ground referenced output midpoint return terminal is marked "RETURN".
The "RETURN" terminal is not limited to the length restrictions specified in the standard for electric signs, UL48, for the output lead. Do not connect return wiring to the service ground terminal or transformer enclosure.

Midpoint Return Wiring Method



Customer service and technical support

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