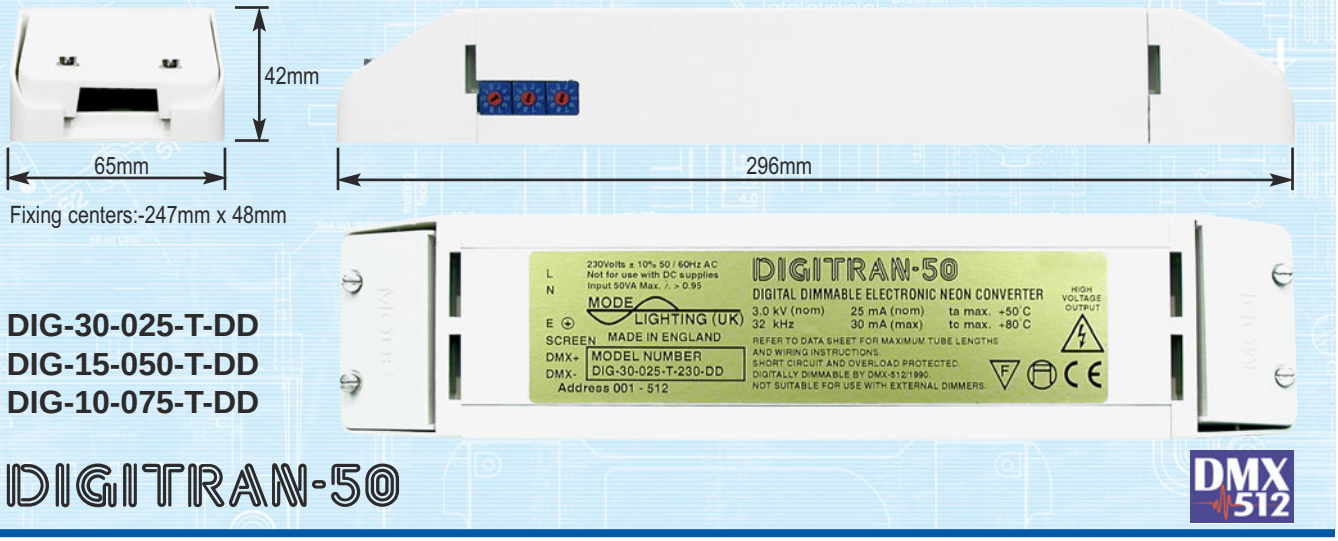
MODE LIGHTING (UK)

Neon Convertors

DIGITRAN-50



- Dimmable to 1% with DMX512 digital input.
- Individual channel selection from 001-512.
- Constant current high frequency output.
- No minimum length of tubing.
- Open circuit, short circuit and overload protected.
- Lightweight and compact size.
- Complies with EC EMC and Low Voltage Directives (CE).
- Designed to meet EN 61050 and EN 50107/EN61347-2-10 (Draft)
- Terminal covers and cable clamps.
- Mode products are guaranteed for two years.

TECHNICAL DATA		DIG-30-025-T-DD	DIG-15-050-T-DD	DIG-10-075-T-DD
INPUT	**Voltage** **Power** **Power Factor** **Frequency** **Connection**	* 230 Volts +/-10% 50 watts maximum 0.99 50/60 Hz Screw terminals	* 230 Volts +/-10% 50 watts maximum 0.99 50/60 Hz Screw terminals	* 230 Volts +/-10% 50 watts maximum 0.99 50/60 Hz Screw terminals
OUTPUT	**Voltage** **Current** **S/C Current** **Frequency** **Connection**	3000V maximum 25mA nominal 30mA maximum 32kHz Brass terminals	1500V maximum 50mA nominal 60mA maximum 32kHz Brass terminals	995V maximum (low voltage) 75mA nominal 90mA maximum 32kHz Brass terminals
DMX INPUT	**Standard** **No.of channels** **Connection** **DMX error**	DMX512/1990 (USITT) Addressable 001-512 Screw terminals Last level until signal restored	DMX512/1990 (USITT) Addressable 001-512 Screw terminals Last level until signal restored	DMX512/1990 (USITT) Addressable 001-512 Screw terminals Last level until signal restored
EFFICIENCY		92% typical	92% typical	92% typical
REGULATION		5% typical	5% typical	5% typical
ISOLATION		4240 volt to EN 60065	4240 volt to EN 60065	4240 volt to EN 60065
TEMPERATURE	**Ambient** **Case**	-20°C to +50°C maximum. +90°C maximum.	-20°C to +50°C maximum. +90°C maximum.	-20°C to +50°C maximum. +90°C maximum.
DIMENSIONS		296mm x 65mm x 42mm	296mm x 65mm x 42mm	296mm x 65mm x 42mm
FIXING CENTRES		247mm x 48mm	247mm x 48mm	247mm x 48mm
WEIGHT		500 grammes	500 grammes	500 grammes
PROTECTION	**Open Circuit** **Overload**	Shut down Shut down Short circuit proof	Shut down Shut down Short circuit proof	Shut down Shut down Short circuit proof
FUSING	**Primary**	Fusible PCB link	Fusible PCB link	Fusible PCB link
EMC EMISSION		EN 55015	EN 55015	EN 55015
EMC IMMUNITY		EN 61547	EN 61547	EN 61547
HARMONICS		EN 61000-3-2	EN 61000-3-2	EN 61000-3-2
SAFETY		EN 61050 EN 50107 EN 61347-2-10 (Draft) EN 60950 (DMX Input)	EN 61050 EN 50107 EN 61347-2-10 (Draft) EN 60950 (DMX Input)	EN 61050 EN 50107 EN 61347-2-10 (Draft) EN 60950 (DMX Input)
CASE MATERIAL		Flame retardant to UL94 - V0	Flame retardant to UL94 - V0	Flame retardant to UL94 - V0
CASE COLOUR		White	White	White

* 115 Volts ±10% versions available to special order.

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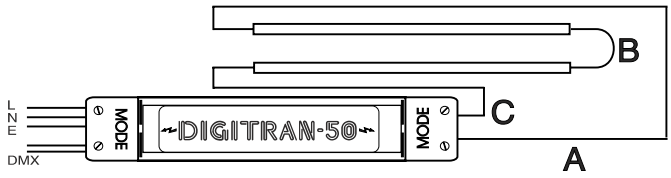
DESCRIPTION

Mode DIGITRAN High Frequency Electronic Neon and Argon Convertors have a DMX512 digital input for fast flashing and smooth dimming with all DMX512 controllers. They are an ideal choice for animated displays, interior signs, cornice lighting, discotheque and stage lighting. They have a considerable weight and size advantage over similarly rated wirewound transformers.

Under load fault conditions the DIGITRAN will shut down requiring the mains supply to be switched off ten seconds to reset the convertor.

CONNECTION



INSTALLATION INSTRUCTIONS

The DIGITRAN operates at high frequency (32kHz) and it is important that the HT lead capacitance is kept to a minimum. Observe the following:-

- Keep all HT leads as short as possible. See maximum cable length chart below.
- Use the correct type of HT cable. Do not use screened HT cable types A, D, or E. For HT wiring use either of these low capacitance cables:
  i) Type C - 8.0 mm PVC sheathed silicone with a minimum silicone diameter of 6.5 mm.
  ii) Type H - 6.5 mm PVC sheathed polyethylene with a minimum polyethylene diameter of 3.0 mm.
- Separate all HT cables and tubes of different circuits by at least 30 mm.
- Observe the maximum total tube length as specified in the loading charts as below.

The Mode DIGITRAN should be mounted in a well ventilated position and should not be covered by insulation materials. It can be safely mounted onto any metal surface. Ensure that all cables are secured by the cable clamps and that the terminal covers are correctly fitted. Installation should be in accordance with the relevant National Wiring Regulations and other applicable Regulations. Compliance with the EC EMC and Low Voltage Directives may be invalidated if not used or installed according to the published specification.

IMPORTANT

It is essential that the DIGITRAN mains earth connections and the mains earth connections of all DMX transmitters and receivers on the system are connected. The data cable must be kept at least 100mm away from any H.T. cables. Screened data cable must be used for all control interconnections and the screen must be connected to the screen terminal of the DMX transmitter. The DMX512 control protocol specifies use within the data transmission Standard EIA485 (RS485). This supports networking of up to 32 "unit loads" over a maximum distance or length of 1000m. The DIGITRAN data inputs have a high impedance representing 0.1 "unit loads" per unit. Up to 320 DIGITRANS may be connected to a DMX data line without the need for DMX repeaters. DMX data lines should always be "terminated" with a 120R resistor connected across the data input of the load or DIGITRAN at the end of the data line. DIGITRAN is not suitable for use with external dimmers or flasher units.

MAXIMUM CABLE LENGTH: A + B + C (see connection diagram)			
MOUNTING SURFACE	**DIGITRAN 30-025-T-DD**	**DIGITRAN 15-050-T-DD**	**DIGITRAN 10-075-T-DD**
Mounted directly onto Metal. Use only type C cable.	4m	8m	12m
Mounted directly onto Brick or Concrete	5m	10m	15m
Mounted on 35 mm supports above any surface	10m	20m	30m

LOADING CHARTS (50VA)

All tubes must be connected in series up to the total maximum tube length as detailed below. All tube lengths are in metres, and are measured between electrodes.

MODEL 30-025	ARGON GAS (BLUE)				
	Nº OF TUBES				
ømm	1	2	3	4	5
	Total length (metres)				
20	6.4	6.1	5.8	5.5	5.2
18	5.5	5.2	4.9	4.6	4.3
15	4.6	4.4	4.2	4.0	3.8
12	3.7	3.5	3.3	3.1	2.9
10	3.2	3.0	2.8	2.6	2.4

MODEL 15-050	ARGON GAS (BLUE)				
	Nº OF TUBES				
ømm	1	2	3	4	5
	Total length (metres)				
20	3.2	3.0	2.9	2.7	2.6
18	2.8	2.6	2.5	2.4	2.3
15	2.3	2.1	2.0	1.9	1.8

MODEL 10-075	ARGON GAS (BLUE)				
	Nº OF TUBES				
ømm	1	2	3	4	5
	Total length (metres)				
25	2.3	2.2	2.1	2.0	1.9
20	2.1	2.0	1.9	1.8	1.7
18	1.8	1.7	1.6	1.5	1.4
15	1.5	1.4	1.3	1.2	1.1

MODEL 30-025	NEON GAS (RED)				
	Nº OF TUBES				
ømm	1	2	3	4	5
	Total length (metres)				
20	5.3	5.1	4.9	4.7	4.5
18	4.5	4.3	4.1	3.9	3.7
15	3.8	3.6	3.4	3.2	3.0
12	3.0	2.8	2.6	2.4	2.2
10	2.7	2.5	2.3	2.1	1.9

MODEL 15-050	NEON GAS (RED)				
	Nº OF TUBES				
ømm	1	2	3	4	5
	Total length (metres)				
20	2.7	2.6	2.5	2.4	2.3
18	2.3	2.2	2.1	2.0	1.9
15	1.9	1.8	1.7	1.6	1.5

MODEL 10-075	NEON GAS (RED)				
	Nº OF TUBES				
ømm	1	2	3	4	5
	Total length (metres)				
25	1.9	1.8	1.7	1.6	1.5
20	1.8	1.7	1.6	1.5	1.4
18	1.5	1.4	1.3	1.2	1.1
15	1.3	1.2	1.1	1.0	0.9

CE Complies with EC EMC and Low Voltage Directives. Independent convertor. HIGH VOLTAGE OUTPUT High Output Voltage

Mode Lighting (UK) Limited reserve the right without notice to amend the technical information and specifications.