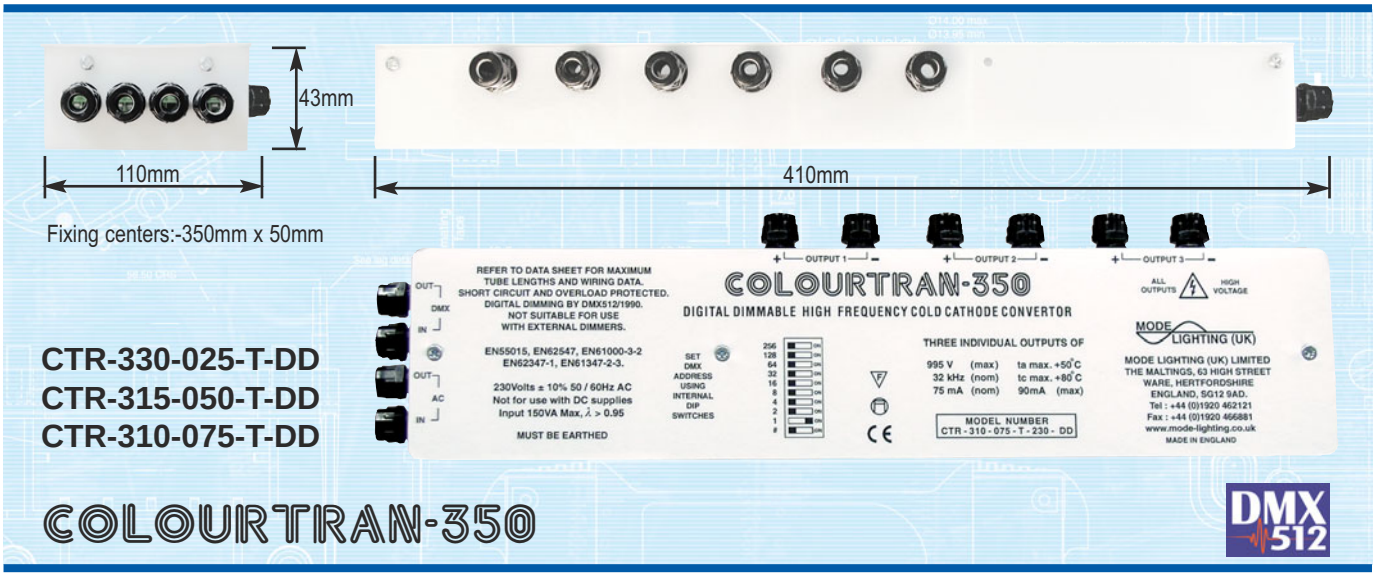
MODE LIGHTING (UK)

Neon Convertors

COLOURTRAN-350



- Three convertors in a single enclosure.
- Dimmable to 1% with DMX512 digital input.
- Silent throughout the dimming range.
- Ideal for colour mixing applications.
- Optional infra-red remote control package available.
- Constant current High Frequency output.
- No minimum length of tubing.
- Open circuit, short circuit and overload protected.
- Complies with EC EMC and Low Voltage Directives (CE).
- EN 61050 and EN 50107/EN 61347-2-10 (Draft).
- Fitted cable glands (ten).
- Mode products are guaranteed for two years.

TECHNICAL DATA		CTR-30-025-T-DD	CTR-15-050-T-DD	CTR-10-075-T-DD
INPUT	Voltage Power Power Factor Frequency Connection	* 230 Volts +/-10% 165 watts maximum >0.95 50/60 Hz Screw terminals	* 230 Volts +/-10% 165 watts maximum >0.95 50/60 Hz Screw terminals	* 230 Volts +/-10% 165 watts maximum >0.95 50/60 Hz Screw terminals
OUTPUT	Voltage Current S/C Current Frequency Connection	3 x 3000V maximum 25mA nominal 30mA maximum 32kHz Brass terminals	3 x 1500V maximum 50mA nominal 60mA maximum 32kHz Brass terminals	3 x 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		410mm x 110mm x 43mm	410mm x 110mm x 43mm	410mm x 110mm x 43mm
FIXING CENTRES		350mm x 50mm	350mm x 50mm	350mm x 50mm
WEIGHT		970 grammes	970 grammes	970 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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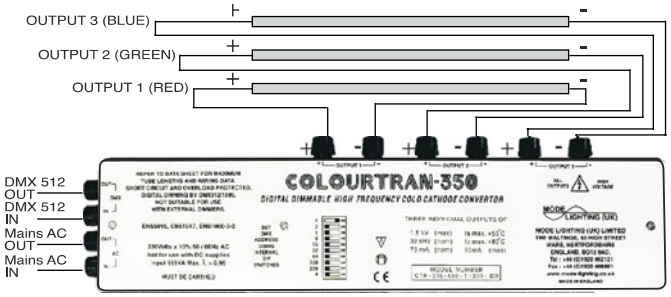
DESCRIPTION

The Mode COLOURTRAN is a High Frequency Neon and Argon Convertor with three outputs in a single, easy to install, enclosure. The COLOURTRAN was designed for, but not limited to, colour mixing applications utilising three cold cathode tubes, normally red, green and blue. By varying the brightness of each output a vast palette of colours can be created. The control input can be either a DMX512 digital input or it can be controlled by an optional infra-red remote control and detector (part no. CTR-IR-00-08 and CTR-DT-00-01). The Infra-red option allows eight pre-programmed colours to be recalled or cross-faded from colour to colour. The COLOURTRAN is an ideal choice for cold cathode colour mixing in most types of commercial and residential installations.

CONNECTION



INSTALLATION INSTRUCTIONS

The COLOURTRAN operates at high frequency (32kHz) and it is important that the HT lead capacitance is kept to a minimum. Under load fault conditions the COLOURTRAN will shut down requiring the mains supply to be switched off to reset the convertor. Observe the following:-

- Keep all HT leads as short as possible. See maximum cable length chart below.
- Observe polarity of high voltage output cables when tubes are installed parallel to each other (see above drawing).
- Use the correct type of HT cable. Do not use screened 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 COLOURTRAN should be mounted in a well ventilated position and should not be covered by insulation materials. It can be safely mounted onto a metal surface. Ensure that all cables are secured by the cable glands and that the lid is 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 (CE) may be invalidated if not used or installed according to the published specification.

IMPORTANT

It is essential that the COLOURTRAN mains earth connections and the mains earth connections of all DMX transmitters and receivers 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 COLOURTRAN data inputs have a high impedance representing 0.1 "unit loads" per unit. Up to 300 COLOURTRANS 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 COLOURTRAN at the end of the data line. COLOURTRAN is not suitable for use with external dimmers or flasher units.

MAXIMUM TOTAL HT CABLE LENGTH PER OUTPUT			
MOUNTING SURFACE	**COLOURTRAN 330-025-T-DD**	**COLOURTRAN 315-050-T-DD**	**COLOURTRAN 310-075-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

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. Lengths shown are for each output of the COLOURTRAN.

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