

ELECTRONIC BALLASTS FOR FLUORESCENT LAMPS, RANGE EL-HFC

- Control voltage 1-10 VDC
- Control range 5 - 100 %
- Energy savings 15 - 30 % at 100 % light
- Flickerless light
- Warm start at the whole dimming range
- Switches off deactivated lamps
- Stand-by is reset automatically when lamps are changed
- No blinking or noise during start-up
- Covers EMC/LV requirements
- Very low magnetic field
- Very low mains current harmonics
- High power factor
- Designed for use with standard T8-krypton lamps
- Stabilized output
- ENEC - approved

TECHNICAL DATA

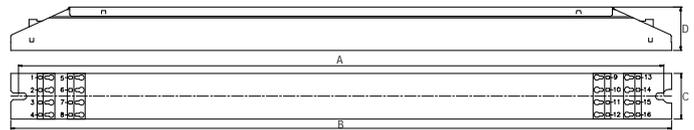
Type	Lamp wattage (W)	Total circuit power (W)	Mains current (230) (A)	Power in lamp (W)	Frequency (kHz)	Power losses (W)	Dimensions	Wiring
EL 1x18 HFC 230-240 V 50-60 Hz	1x18	20	0.11	16	32-70	4	1	1
EL 1x36 HFC 230-240 V 50-60 Hz	1x36	38	0.17	32	40-70	6	1	1
EL 1x58 HFC 230-240 V 50-60 Hz	1x58	58	0.26	50	40-70	8	1	1
EL 2x18 HFC 230-240 V 50-60 Hz	2x18	38	0.18	16	34-62	6	2	2
EL 2x36 HFC 230-240 V 50-60 Hz	2x36	72	0.32	32	30-60	8	2	2
EL 2x58 HFC 220-240 V 50-60 Hz	2x58	113	0.48	50	32-80	13	2	2

BALLAST DIMENSIONS

1.



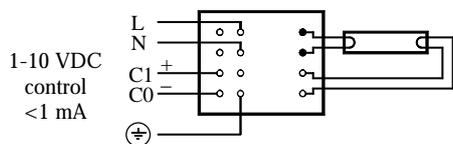
2.



Dimensions	1	2
A (mm)	350	420
B (mm)	360	430
C (mm)	30	30
D (mm)	28	28
Weight (g)	320	400

CONNECTION DIAGRAMS

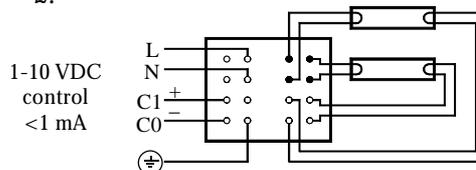
1.



1-10 VDC
control
<1 mA

Note: All wiring to the connectors
marked with a black dot; ● (hot
wires) shall be as short as possible

2.



1-10 VDC
control
<1 mA

CHARACTERISTICS

- Maximum allowed temperature at test point 75/80 °C
- Ambient temperature range 0...+50 °C
- Maximum relative humidity no condensation
- Storage temperature range -40...+80 °C
- Warm start, cathode pre-heat acc. to EN 60929
- Standard (IEC 81) fluorescent lamps used
- Lamp life according to EN 60081, 3 h cycle
- Fulfils the standards:
 - General and safety requirements EN 60928
 - Performance requirements EN 60929
- High number of starts per lamp ca. 20 000
- Life time 90 000 h, 50 °C at test point
- Mains voltage tolerance $U_n \pm 10\%$
- Mains quality; all data is based on a pure sinusoidal mains supply, see Helvar document AL 702006
- Can be used on DC, acc. to VDE 0108 DC range; 180 - 300 VDC
- Fulfils immunity standard EN 61547
- Emission according to
 - Mains current harmonics EN 61000-3-2
 - Radio frequency interference EN 55015
- Over voltage endurance 300 VAC
- Power factor 0.98
- Earth leakage current < 0.5 mA
- Control bus (1-10V DC) acc. to EN 60929
- Control current <1.0 mA/Ballast

"STAND-BY"-STATE

"Stand-by" is an internal safety circuit in the ballast. When a lamp becomes deactivated, the ballast goes into the "Stand-by"-state and switches off the lamps. If the supply is connected during relamping, the ballast will start automatically.

If the lamp is not connected, the ballast will go into the "Stand-by"-state.

LAYOUT RECOMMENDATION

In order to minimize radio interference problems we recommend that the mains, control and the lamp wiring are kept as far as possible from each other. In no case must they be bunched together for long distances. They can however cross each other. The ballast shall be installed in the same fixture with the lamps. The ballast must be connected to protective earth (PE).

The wires from the ballast to a lamp may not be longer than 2 m. Solid Core Conductor - type 0.5 - 1.5 mm² is to be used as connecting wire. Do not use multistranded wires. Control wires must have an insulation rating greater or equal to mains supply wires. The minimum recommended distance between these wires is 1 cm inside the fitting.