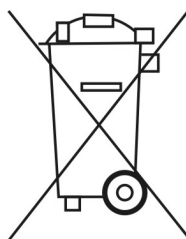


istruzioni per l'uso  
operating instructions  
Bedienungsanleitung  
instrucciones de manejo  
mode d'emploi  
gebruiksaanwijzing

20106020 PDU1 for 1 scroller  
20106160 PDU6 for max 6/8 scrollers  
20106024 PDU24 for max 24 scrollers



## 1.0 Power Distribution Unit

The Power Distribution Unit distributes DC power and control signal to a maximum of 1, 6 or 24 Xpress colour scrollers.

There are 3 models of Power Distribution Units:

PDU1 for 1 scroller

PDU6 for 1 to 6 scrollers (Xpress 13, 19 or 26)

for 1 to 8 scrollers (Xpress 12, 18 or 25)

PDU24 for 1 to 24 scrollers

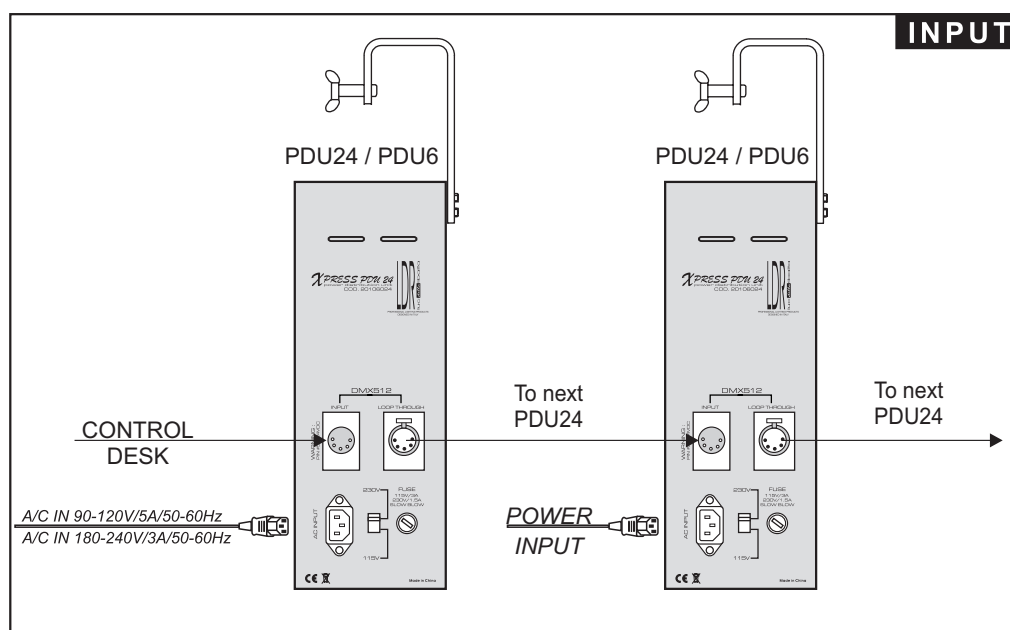
Each PDU is delivered with a hook clamp, CEE22 power cord and steel safety bond.

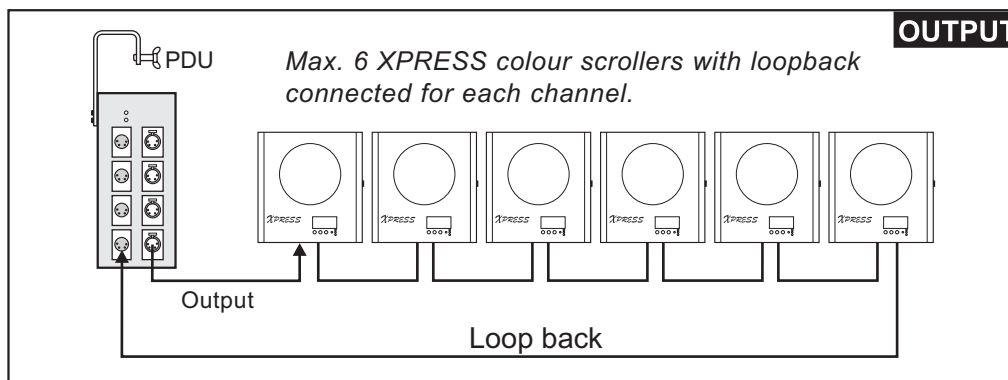
## 2.0 System configuration - PDU1, PDU6 and PDU24

The DMX control signal is sent to the PDU from a digital lighting control desk through a shielded twist pair cable (e.g. Belden 1420A).

The DMX control signal can be daisy-chained to other PDUs to control more colour scrollers. The number of PDUs in 1 group should not exceed 32 sets. The last PDU in the chain should be terminated with a 110 ohm terminator. The length of the signal cable should not exceed 200m in each group.

For a correct configuration of the system, please see the diagrams here below and on following pages.





### 3.0 Power and signal cable

The following cables are required for the system to be properly connected:

#### 3.1 Power cord

Power cord is supplied with the PDU. The Power cord is fitted with a CEE 22 socket at one end and with a Schuko plug at the other end.

#### 3.2 DMX control cable (Digital control desk to PDU)

Control cable (not supplied) should be a standard signal cable as per international DMX512 standards. Belden 1420A, shielded 3 pairs twist cable is recommended.

The signal pair should occupy one pair. Use the other 2 twist pairs for "V+" and "COM" line between the PDU and the control desk.

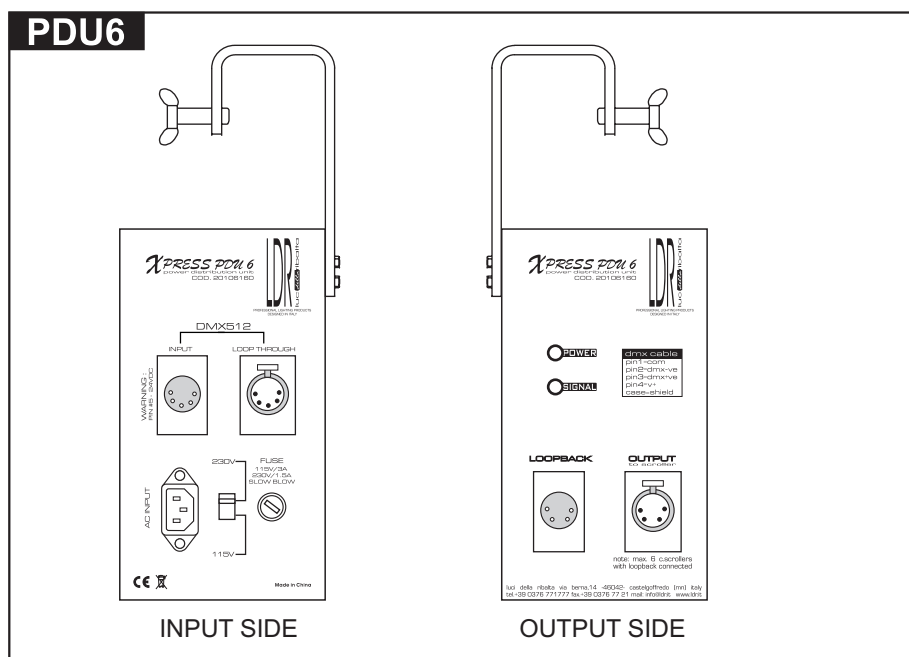
We strongly recommend you reduce the voltage drop in the cable to as low as possible by using low resistance cable.

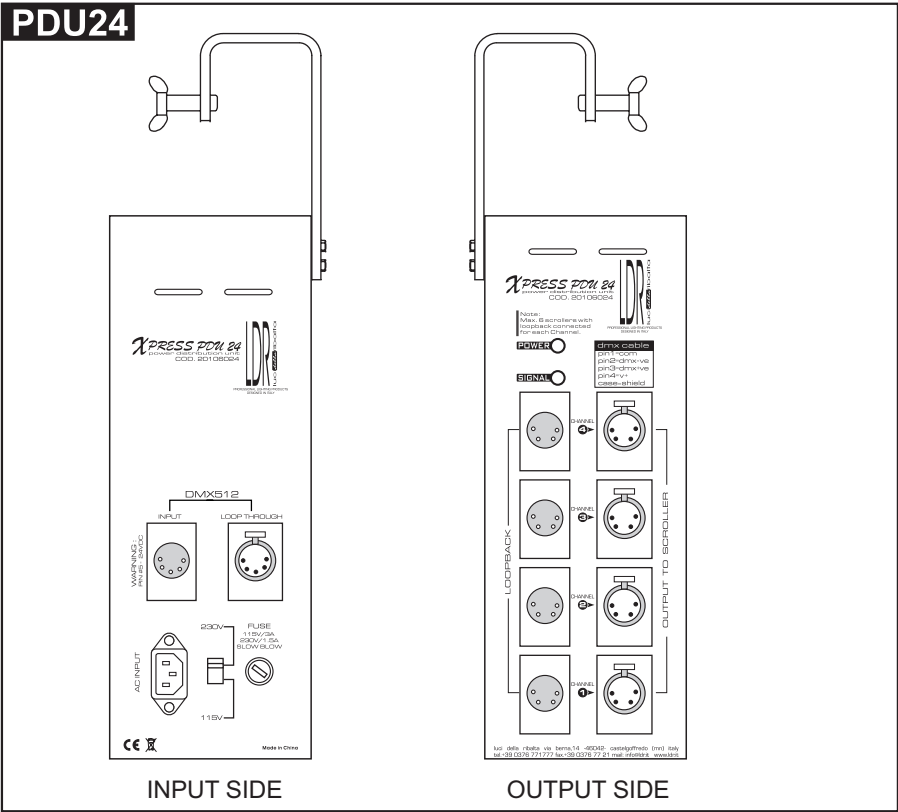
#### 3.3 Scroller control cable

The control cable (not supplied) should be of high quality shielded twist pair type. A good example is Proplex PCCCT, shielded 3 pair twist cable. The signal pair should occupy one pair. Use the other 2 twist pairs for "V+" and "COM" line. Since there is a large power supply current flowing through "V+" and "COM" line between the PDU and the scroller, we strongly recommend the voltage drop in the cable should be reduced to minimum.

|        | Input connector<br>(5 pin male XLR) | Loop-through connector<br>(5 pin female XLR) |
|--------|-------------------------------------|----------------------------------------------|
| Pin No | Signal name                         | Signal name                                  |
| 1      | COM                                 | COM                                          |
| 2      | DMX-ve                              | DMX-ve                                       |
| 3      | DMX+ve                              | DMX+ve                                       |
| 4      | NC                                  | NC                                           |
| 5      | DC26V                               | NC                                           |
| Case   | Shield ground                       | Shield ground                                |

## POWER DISTRIBUTION UNIT





The control cable maximum length should NOT exceed 10m.

|        | Input connector<br>(4 pin male XLR) | Output connector<br>(4 pin female XLR) |
|--------|-------------------------------------|----------------------------------------|
| Pin No | Signal name                         | Signal name                            |
| 1      | COM                                 | COM                                    |
| 2      | DMX-ve                              | DMX-ve                                 |
| 3      | DMX+ve                              | DMX+ve                                 |
| 4      | Power V+                            | Power V+                               |
| Case   | Shield ground                       | Shield ground                          |

## Specifications and compatibility

**Voltage range:** PDU1, PDU6 and PDU24: AC100V/240V

**Fuse current:** 5A

**Control signal (from control desk to PDU):** DMX512 digital control input

**Xpress loop:** each PDU6 controls up to 6 scrollers and each PDU24 controls up to 24 scrollers.

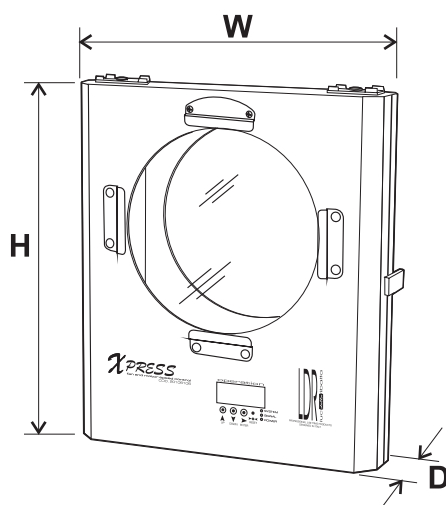
**PDU Loop:** the number of PDUs in a group is usually 16 sets, maximum allowed 32 sets.

**Operation environment:** indoor use only

**Ambient temperature:** 0-50°C

**Compatibility:** the LDR range of PDU's is fully compatible for operation with: Spectra-Q, Roto-Q, Chroma-Q, Color-Q, Forerunner

| Model     | Aperture | Dimensions  | Weight        |
|-----------|----------|-------------|---------------|
|           | Dia mm   | W/H/D mm    | 21 colour, Kg |
| Xpress13  | 135      | 252/288/65  | 2,2           |
| Xpress 19 | 195      | 310/345/65  | 2,7           |
| Xpress 26 | 270      | 390/410/65  | 3,4           |
| PDU1      |          | 45/185/100  | 1.3           |
| PDU6      |          | 205/290/100 | 6,3           |
| PDU24     |          | 300/425/104 | 17,5          |



## Standards compliance

**Safety Standards:** Conform to Council Directive 73/23/EEC (Low Voltage Directive) of CE marking 99

**EN60598-1:** Luminaires Part 1 : General requirements and tests

**EN60598-2-17:** Luminaires Part 2 : Particular requirements Section Seventeen: Luminaires for stage lighting, television, film and Photographic studios (outdoor and indoor)

**Radio Interference Standard:** Conform to Council Directive 89/336/EEC (EMC Directive) of CE marking 99

**EN55103-1:** Electromagnetic compatibility Product family Standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use; Part 1: Emission.

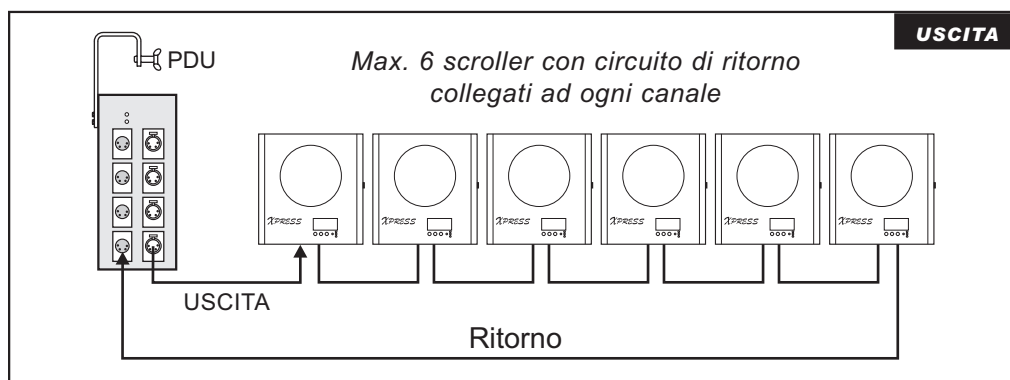
**EN55103-2:** Electromagnetic compatibility Product family Standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use; Part 2: Immunity.

**EN61000-3-2:** Electromagnetic compatibility (EMC); Part 3: Limits; Section 2 : Limits for harmonic current emissions (equipment input current 16 Ampere per phase)

**EN61000-3-3:** Electromagnetic compatibility (EMC); Part 3: Limits; Section 3: Limitation of voltage fluctuations and flicker in low-voltage supply for equipment with rated current 16 Ampere.







### 3.0 Cavo di alimentazione e segnale

Per una corretta connessione del sistema sono necessari i seguenti cavi:

#### 3.1 Cavo di alimentazione

Il cavo di alimentazione viene fornito di serie con il PDU, ed è dotato di presa CEE22 da un lato e spina Schuko dall'altro.

#### 3.2 Cavo di segnale DMX (da banco regia a PDU)

Il cavo di segnale, non fornito, dovrebbe rispondere agli standard internazionali sui cavi di trasmissione di segnale digitale DMX512. Raccomandiamo l'utilizzo di cavo schermato a 3 coppie tipo Belden 1420A o cavi analoghi.

La coppia di segnale dovrebbe occupare una coppia. Utilizzate le altre due per la linea V+ e COM tra il PDU ed il banco regia.

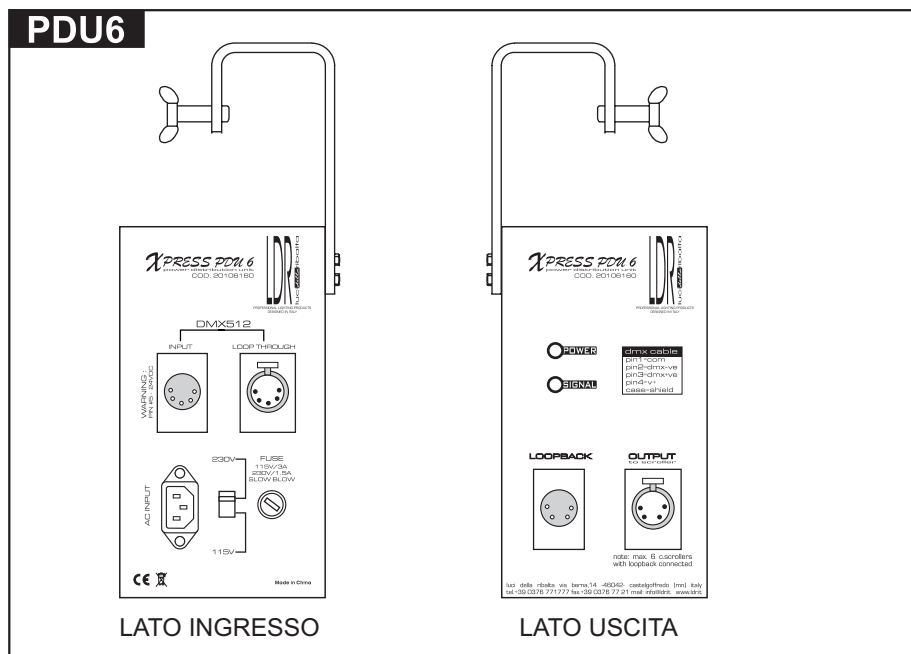
Si raccomanda di ridurre al minimo le cadute di tensione sul cavo utilizzando cavi a bassa resistenza.

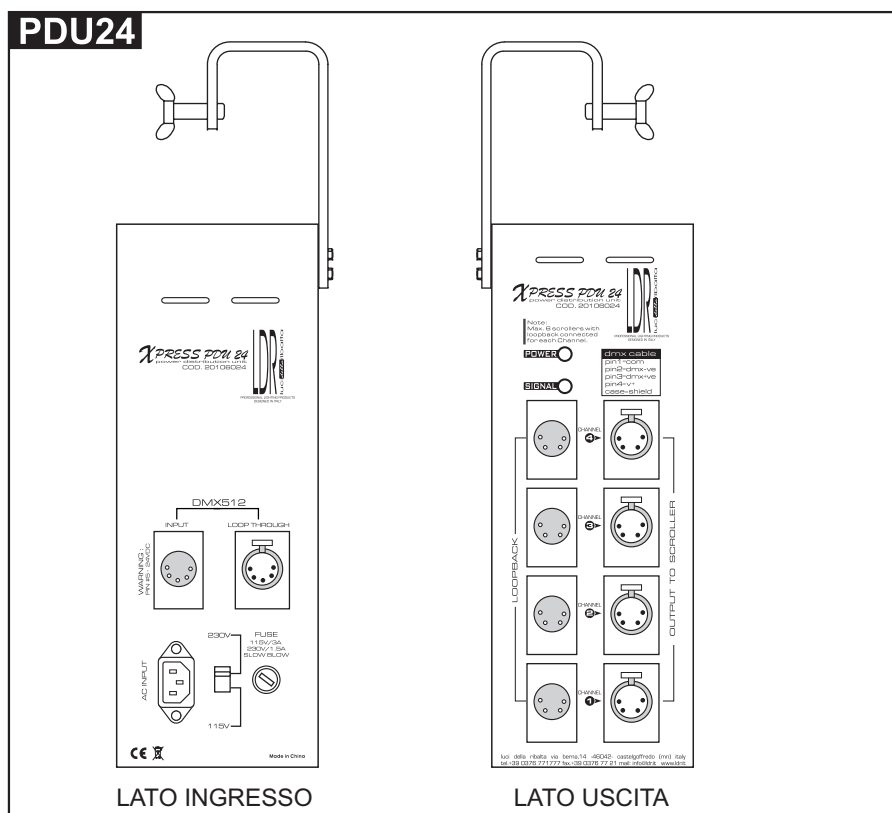
#### 3.3 Cavo di controllo dello scroller

Il cavo di controllo dello scroller non viene fornito di serie ma è disponibile come accessorio. Raccomandiamo l'utilizzo di cavo schermato a 3 coppie tipo Proplex PCCCT o similari. Dato che nel collegamento tra il PDU e lo scroller si verifica un'elevatissimo carico di corrente su "V+" e "COM", si raccomanda di ridurre al minimo la caduta di tensione nel cavo.

|          | Ingresso alimentazione<br>(spina XLR 5 poli) | Collegamento in sequenza<br>(presa XLR 5 poli) |
|----------|----------------------------------------------|------------------------------------------------|
| Polo N   | Segnale                                      | Segnale                                        |
| 1        | COM                                          | COM                                            |
| 2        | DMX-ve                                       | DMX-ve                                         |
| 3        | DMX+ve                                       | DMX+ve                                         |
| 4        | NC                                           | NC                                             |
| 5        | DC26V                                        | NC                                             |
| Custodia | Terra                                        | Terra                                          |

## ALIMENTATORE (PDU)





La lunghezza massima del cavo di controllo non dovrebbe eccedere i 10m

|          | Connettore d'ingresso<br>(spina XLR 4 poli) | Connettore d'uscita<br>(presa XLR 4 poli) |
|----------|---------------------------------------------|-------------------------------------------|
| Polo N.  | Segnale                                     | Segnale                                   |
| 1        | COM                                         | COM                                       |
| 2        | DMX-ve                                      | DMX-ve                                    |
| 3        | DMX+ve                                      | DMX+ve                                    |
| 4        | Alimentazione V+                            | Alimentazione V+                          |
| Custodia | Terra                                       | Terra                                     |

## Caratteristiche elettriche, funzionali e compatibilità

**Voltaggio disponibile:** per i PDU1, PDU6 e PDU24: AC100V/240V

**Fusibile:** 5A

**Segnale di controllo (da banco regia a PDU):** DMX512

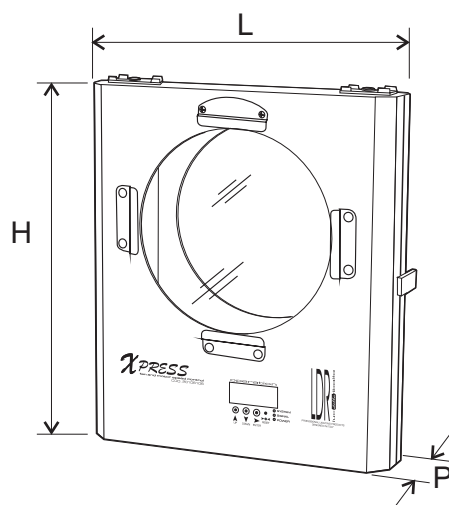
**Collegamento Xpress:** è possibile collegare in sequenza fino ad un massimo di 6 (PDU6) o 24 (PDU24) Xpress

**Collegamento PDU:** il numero standard di PDU collegati in un gruppo è di 16 unità. Massimo collegabile: 32 unità

**Condizioni di utilizzo:** i prodotti della gamma Xpress sono idonei al solo uso in interni con temperatura ambiente tra 0°C e 50°C

**Compatibilità:** i PDU della gamma LDR sono pienamente compatibili con gli scroller Spectra-Q, Roto-Q, Chroma-Q, Color-Q, Forerunner e Rainbow.

| Modello   | Apertura | Dimensioni  | Peso con stringa |
|-----------|----------|-------------|------------------|
|           | Ømm      | L-H-P, mm   | Da 21 colori, Kg |
| Xpress13  | 135      | 252/288/65  | 2,2              |
| Xpress 19 | 195      | 310/345/65  | 2,7              |
| Xpress 26 | 270      | 390/410/65  | 3,4              |
| PDU1      |          | 45/185/100  | 1.3              |
| PDU6      |          | 205/290/100 | 6,3              |
| PDU24     |          | 300/425/104 | 17,5             |



## Conformità

Safety Standards : Conform to Council Directive 73/23/EEC (Low Voltage Directive) of CE marking 99

**EN60598-1** : Luminaires Part 1 : General requirements and tests

**EN60598-2-17** : Luminaires Part 2 : Particular requirements Section Seventeen : Luminaires for stage lighting, television, film and Photographic studios (outdoor and indoor)

**Radio Interference Standard** : Conform to Council Directive 89/336/EEC (EMC Directive) of CE marking 99

**EN55103-1** : Electromagnetic compatibility Product family Standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use; Part 1: Emission.

**EN55103-2** : Electromagnetic compatibility Product family Standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use; Part 2: Immunity.

**EN61000-3-2** : Electromagnetic compatibility (EMC); Part 3 : Limits; Section 2 : Limits for harmonic current emissions (equipment input current 16 Ampere per phase)

**EN61000-3-3** : Electromagnetic compatibility (EMC); Part 3 : Limits; Section 3 : Limitation of voltage fluctuations and flicker in low-voltage supply for equipment with rated current 16 Ampere.



**luci *della* ribalta**

Luci della Ribalta srl - Via Berna 14, Z.I. Bosco dell'Irta, 46042 Castel Goffredo MN, Italy  
tel. +39 0376 771 777 - fax +39 0376 772 140 - email [info@ldr.it](mailto:info@ldr.it) - web [www.ldr.it](http://www.ldr.it)