# FOS 100 FC
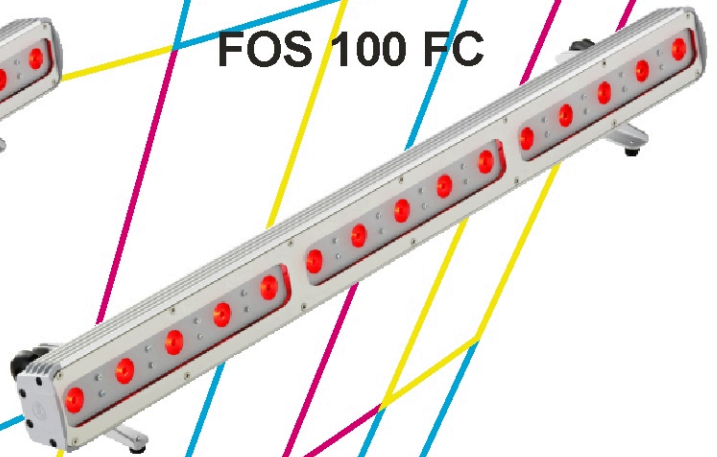# FOS 100 CT

**FOS 100 SOLO FC**

**FOS 100 FC**

**FOS 100 SOLO CT**

**FOS 100 CT**

User's Manual rel 4.2   **GB**

D.T.S. Illuminazione s.r.l. - ITALY
http://www.dts-lighting.it

**DTS**

The Lighting Company

**Made in Italy**

## FOS 100 FC - FOS 100 CT

**D.T.S. Product codes:**
03.LBB010E11FC10         FOS 100 IP 65 FC Narrow lenses Black finish
03.LBB010E11FC25         FOS 100 IP 65 FC Medium flood lenses Black finish
03.LBB010E11FC40         FOS 100 IP 65 FC Wide flood lenses Black finish

03.LBB010E11FB10         FOS 100 IP 65 CT Narrow lenses Black finish
03.LBB010E11FB25         FOS 100 IP 65 CT Medium flood lenses Black finish
03.LBB010E11FB40         FOS 100 IP 65 CT Wide flood lenses Black finish

**LED technology**
FOS 100 FC: 15 x FULL RGBW LEDs; 4608 Lumens
16 million colours; colour temperature range 2700K ÷ 8000K
FOS 100 CT: 15 x FULL WHITE LEDs; 6720 Lumens
16 million colours; colour temperature range 2700K ÷ 6500K
LEDs average lifespan: 75.000 hours (70% lumen output)

**Optical units**
3 lenses sets available: Spot, Medium flood and Wide flood

**Control**
Via any DMX lighting console (External Power supply / LED Controller is needed)

**Protection**
IP 65 protection level

**Construction**
Extruded aluminium

**Power supply**
Electronic full-range 90-260Vac  50-60 Hz
Z1 PLUS IP 20 LED Controller (D.T.S. Code 03.LA.009P)
Z1 PLUS IP 65 LED Controller (D.T.S. Code 03.LA.009P.IP65)
Z8 LED Controller M12 outputs (D.T.S. Code 03.LA.075.V2)
Z8 LED Controller Screw terminals outputs (D.T.S. Code 03.LA.080.V2)
DRIVENET 832 LED Controller Screw terminals outputs (D.T.S. Code 03.LA.177)

**Power consumption**
100W Max

**Connection**
Cable with M12 male connector

**Weight**
5,5 Kg

## FOS 100 FC - FOS 100 CT

**UNIT DIMENSIONS**

7

69

89

46

10

795.2

867.4

990

84.5

140.5
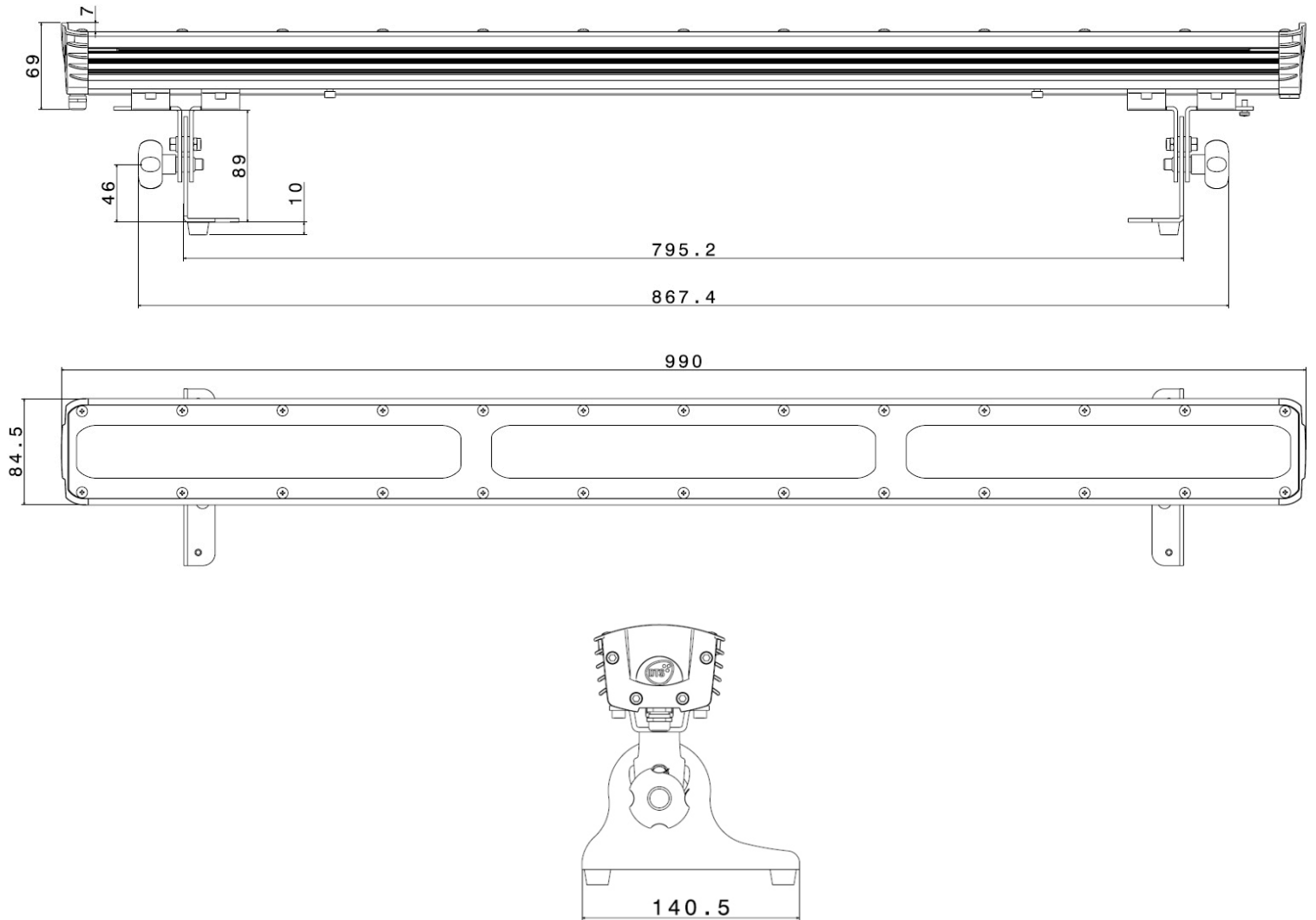
Packing Dimensions
(LxWxH)
1060 x 160 x 200 mm

Weight
7 Kg

H

W

L
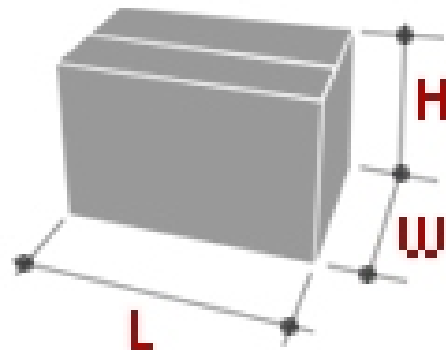
# FOS 100 SOLO FC - FOS 100 SOLO CT

**D.T.S. Product codes:**

| | |
|---|---|
| 03.LBB014S11FC10 | FOS 100 SOLO IP 20 FC Narrow lenses Black finish |
| 03.LBB014S11FC25 | FOS 100 SOLO IP 20 FC Medium flood lenses Black finish |
| 03.LBB014S11FC40 | FOS 100 SOLO IP 20 FC Wide flood lenses Black finish |
| 03.LBB010S11FC10 | FOS 100 SOLO IP 65 FC Narrow lenses Black finish |
| 03.LBB010S11FC25 | FOS 100 SOLO IP 65 FC Medium flood lenses Black finish |
| 03.LBB010S11FC40 | FOS 100 SOLO IP 65 FC Wide flood lenses Black finish |
| | |
| 03.LBB014S11FB10 | FOS 100 SOLO IP 20 CT Narrow lenses Black finish |
| 03.LBB014S11FB25 | FOS 100 SOLO IP 20 CT Medium flood lenses Black finish |
| 03.LBB014S11FB40 | FOS 100 SOLO IP 20 CT Wide flood lenses Black finish |
| 03.LBB010S11FB10 | FOS 100 SOLO IP 65 CT Narrow lenses Black finish |
| 03.LBB010S11FB25 | FOS 100 SOLO IP 65 CT Medium flood lenses Black finish |
| 03.LBB010S11FB40 | FOS 100 SOLO IP 65 CT Wide flood lenses Black finish |

**LED technology**
FOS 100 SOLO FC: 15 x FULL RGBW LEDs; 4608 Lumens
16 million colours; colour temperature range 2700K ÷ 8000K
FOS 100 SOLO CT: 15 x FULL WHITE LEDs; 6720 Lumens
16 million colours; colour temperature range 2700K ÷ 6500K
LEDs average lifespan: 75.000 hours (70% lumen output)

**Optical units**
3 lenses sets available: Spot, Medium flood and Wide flood

**Control**
Via any DMX lighting console

**Protection**
IP 20 or IP 65 protection level

**Construction**
Extruded aluminium

**Power supply**
Integrated Z10 IP 20 or IP 65 Power supply / LED Controller
Electronic full-range 90-260Vac  50-60 Hz

**Power consumption**
100W Max

**Connection**
FOS 100 SOLO IP 20: POWERCON In/Out + XLR 5 poles In/Out
FOS 100 SOLO IP 65: Power input cable with cable gland; HARTING power re-send panel connector;
HARTING DMX 4 poles In/Out

**Weight**
7 Kg

**FOS 100 SOLO IP 20 FC - FOS 100 SOLO IP 20 CT**

**UNIT DIMENSIONS**
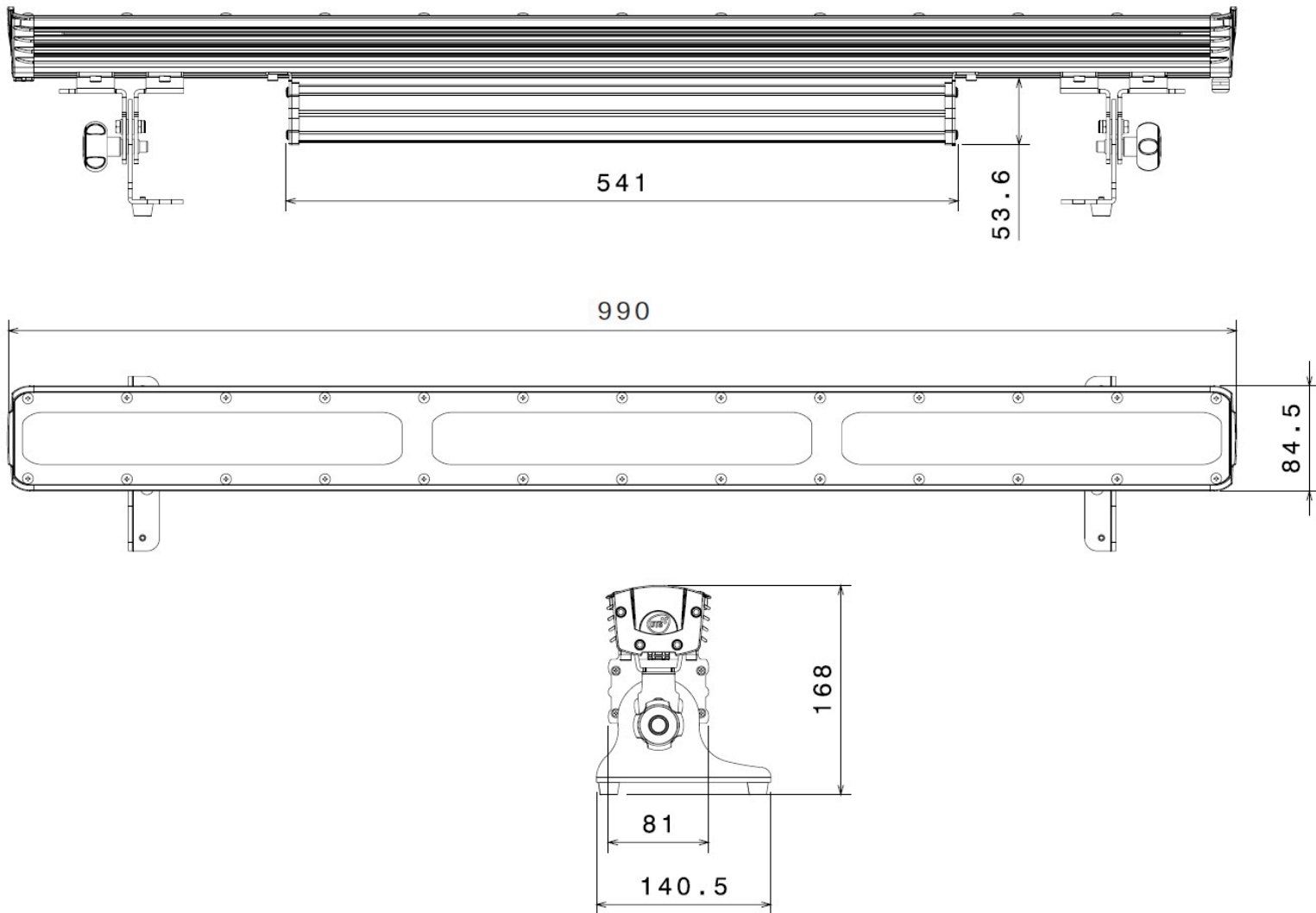
541

53.6

990

84.5

168

81

140.5

Packing Dimensions
(LxWxH)
1060 x 160 x 200 mm

Weight
8,5 Kg

H

W

L
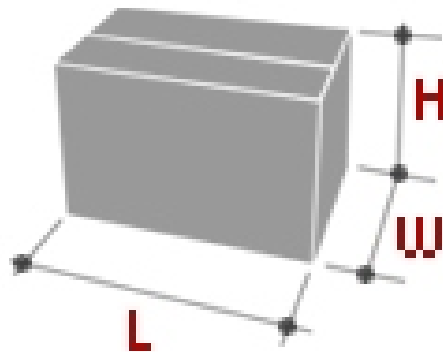
## FOS 100 SOLO IP 65 FC - FOS 100 SOLO IP 65 CT

**UNIT DIMENSIONS**

541

53.6

990

84.5

168

81

140.5

Packing Dimensions
(LxWxH)
1060 x 160 x 200 mm

Weight
8,5 Kg

H

W

L
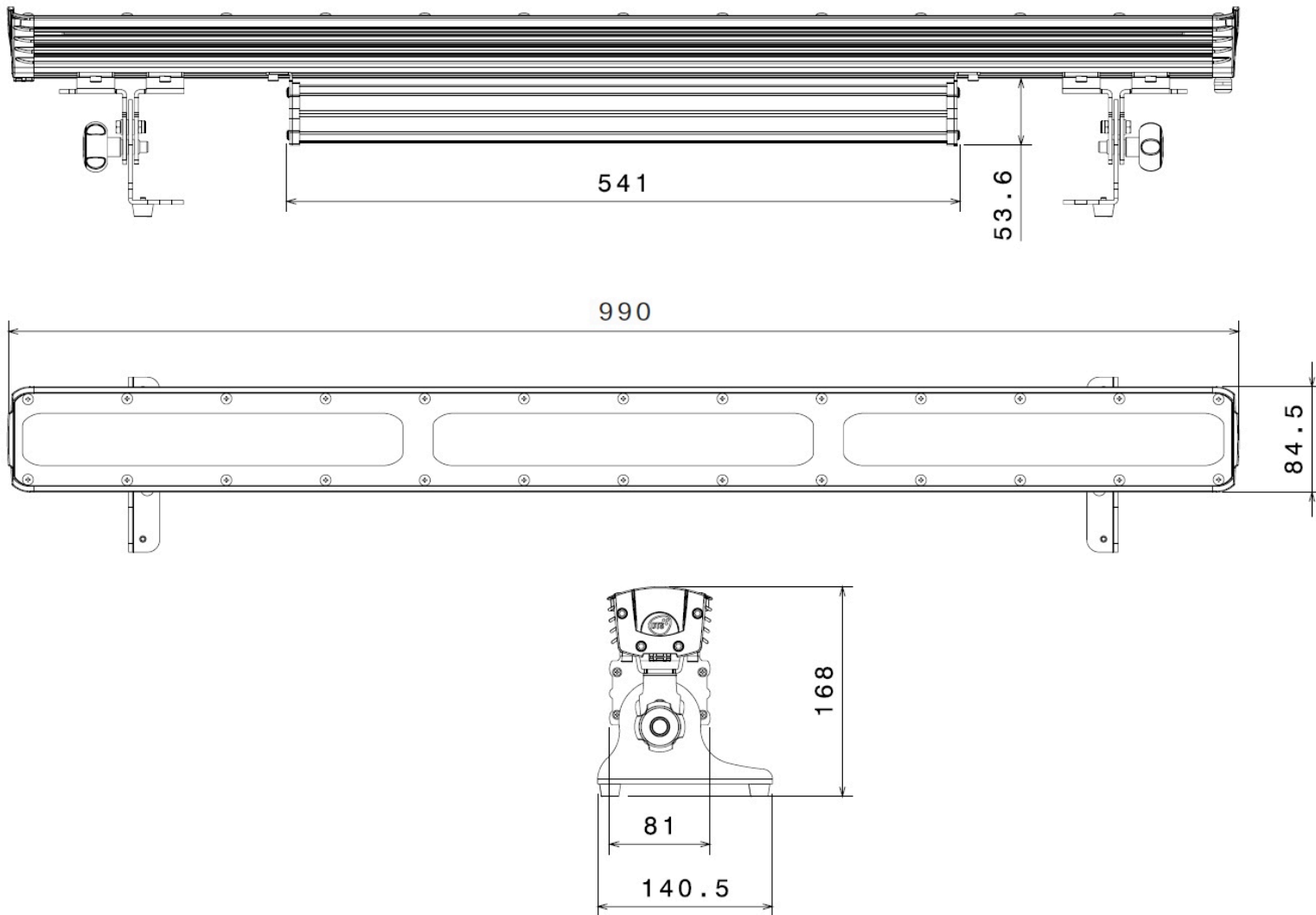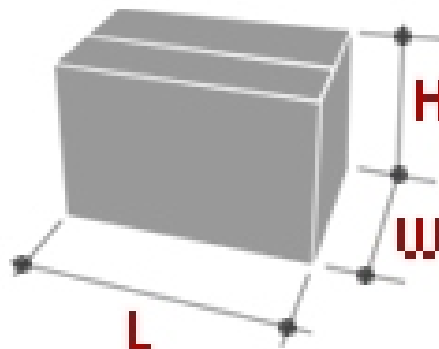
## IMPORTANT SAFETY INFORMATION

**Fire prevention:**

It is permissible to place the unit on normally flammable surfaces.
Suitable for mounting on normally flammable materials surfaces greater than 200°C with some combustion time lag.

**Prevention from electric shock:**

High voltage is present inside the unit.
Unplug the unit prior to performing any operation which involves touching the inside of the unit.
Do not open the unit. The level of technology inherent in the unit requires the assistance of specialised personnel for all servicing. Please refer to an authorised D.T.S. service centre.
This equipment must be grounded, do not connect to non-grounded supplies.
The use of a thermal magnetic circuit breaker is recommended for each unit.
Use only AC supplies 90-260V, 50-60Hz.
The unit should never be located in position exposed to rain or in areas of extreme humidity.
A good air ventilation is essential for proper equipment work.

**Safety:**

The unit is not for residential use and must be installed by a qualified electrician or experienced person.
In case lenses sets replacement is needed, frontal gasket must be replaced so as to maintain IP 65 rate protection. LEDs are not replaceable.
The external surface of the unit may exeed 50°C; never handle the unit until at least 5 minutes have elapsed since the unit was turned off.
Never install the unit in an enclosed area lacking sufficient air flow.
The ambient temperature should not exeed 40°C and should not be lower than -10°C.

## INPUT/OUTPUT CONNECTIONS

**FOS 100 SOLO IP 20 FC**
**FOS 100 SOLO IP 20 CT**

**LED OUTPUT**
M12 Female panel connector

**DMX IN / OUT**
XLR 5 poles Male / Female panel connectors
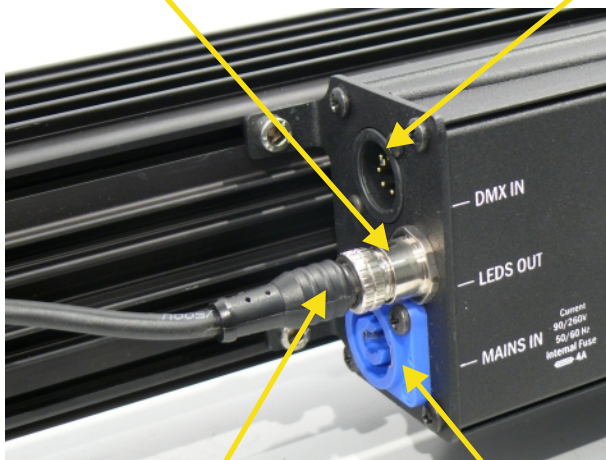
**MAINS INPUT**
90-260Vac  50-60 Hz
POWERCON panel connector

**MAINS OUTPUT**
90-260 Vac  50-60 Hz
POWERCON panel connector
MAX Load:
230 Vac = 20 FOS 100 SOLO
110 Vac = 10 FOS 100 SOLO

**LED INPUT**
M12 Male cable connector
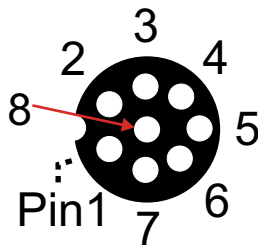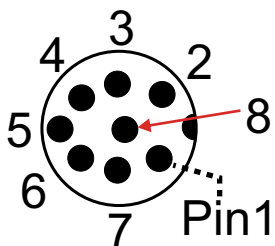
**LED OUTPUT**
M12 Female panel connector

**LEDs Connector PinOut**

1-RED +    /    WHITE 1 +
2-RED -    /    WHITE 1 -
3-GREEN + / WHITE 2 +
4-GREEN - /  WHITE 2 -
5-BLUE +  /   WHITE 3 +
6-BLUE -   /   WHITE 3 -
7-WHITE - / WHITE 4 -
8-WHITE + / WHITE 4 +

# INPUT/OUTPUT CONNECTIONS

**FOS 100 SOLO IP 65 FC**
**FOS 100 SOLO IP 65 CT**

GND 1
DATA- 2 3 DATA+
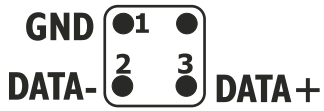
**DMX IN**
ILME 4 poles female
panel connector

**MAINS INPUT**
90-260 Vac  50-60 Hz
Power cable with cable gland

GND 1
DATA- 2 3 DATA+
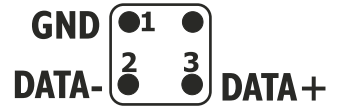
**DMX OUT**
ILME 4 poles female
panel connector

LEDS OUT — Pin1
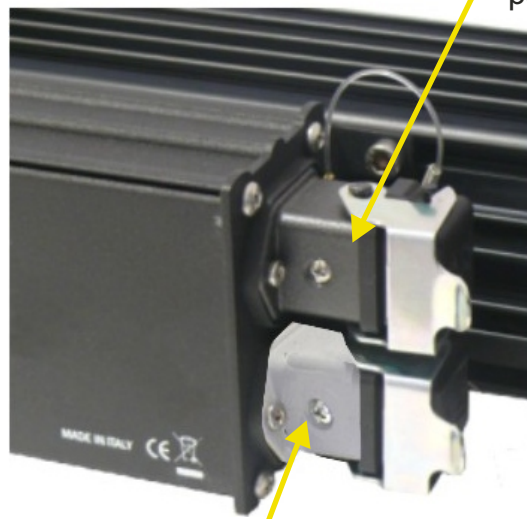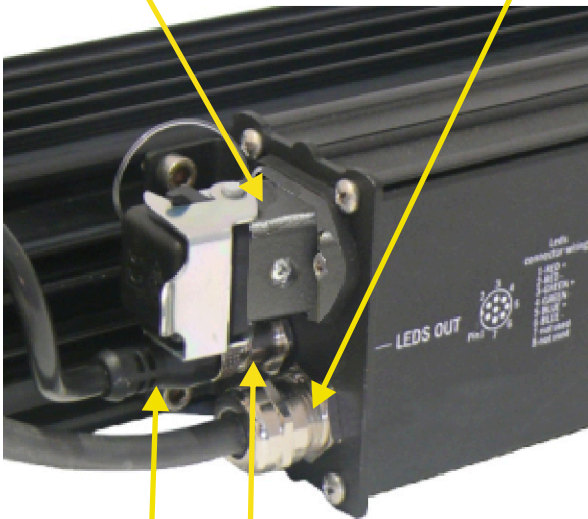
**MAINS OUTPUT**
90-260Vac  50-60 Hz
ILME 5 poles panel connector
MAX Load:
230 Vac = 20 FOS 100 SOLO
110 Vac = 10 FOS 100 SOLO
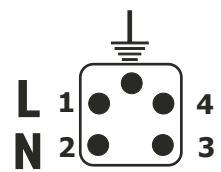
L 1    4
N 2    3

**LED INPUT**
M12 Male cable connector

**LED OUTPUT**
M12 Female panel connector

## LEDs Connector PinOut

1-RED +    /    WHITE 1 +
2-RED -    /    WHITE 1 -
3-GREEN + / WHITE 2 +
4-GREEN - /  WHITE 2 -
5-BLUE +  /    WHITE 3 +
6-BLUE -   /    WHITE 3 -
7-WHITE - / WHITE 4 -
8-WHITE + /  WHITE 4 +

# INPUT/OUTPUT CONNECTIONS

**FOS 100 FC**
**FOS 100 CT**
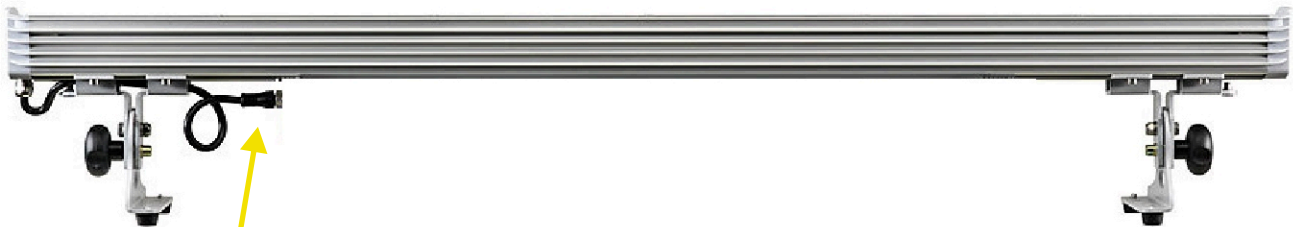
**LED INPUT**
M12 Male cable connector
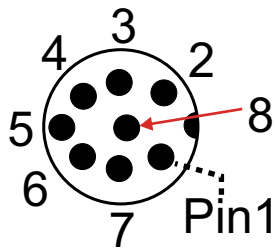
## LEDs Connector PinOut

1-RED +    /    WHITE 1 +
2-RED -    /    WHITE 1 -
3-GREEN + / WHITE 2 +
4-GREEN - /  WHITE 2 -
5-BLUE +  /   WHITE 3 +
6-BLUE -   /   WHITE 3 -
7-WHITE - / WHITE 4 -
8-WHITE + / WHITE 4 +

# INSTALLATION

The unit is suitable for use in wet locations.
The unit may be either floor or ceiling mounted.

## FLOOR MOUNTING INSTALLATION:



Rubber mounting feet
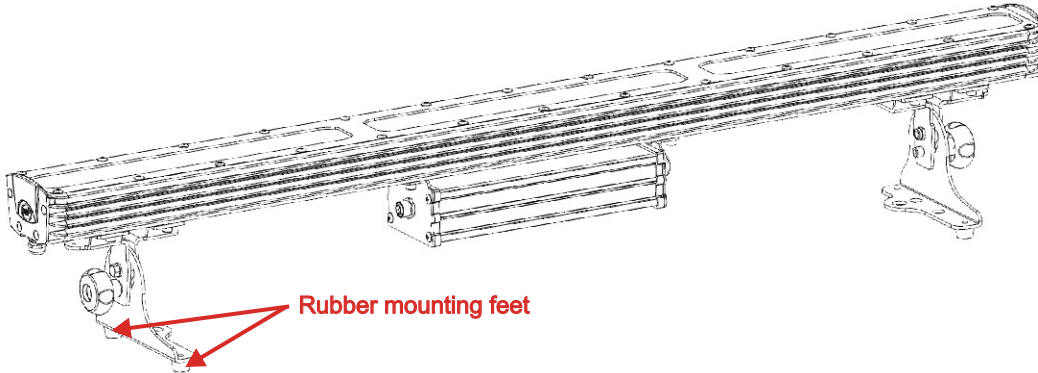
## CEILING MOUNTING INSTALLATION:



STANDARD BRACKET

SHORT BRACKET



140.5

Ø10.5   Ø10.5

15

31

Ø12.5

50.5   40   50

58   Ø10.5

28.5   40

29   29
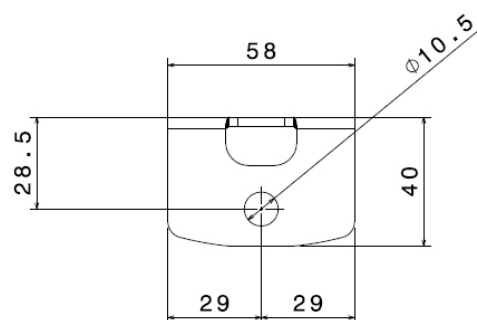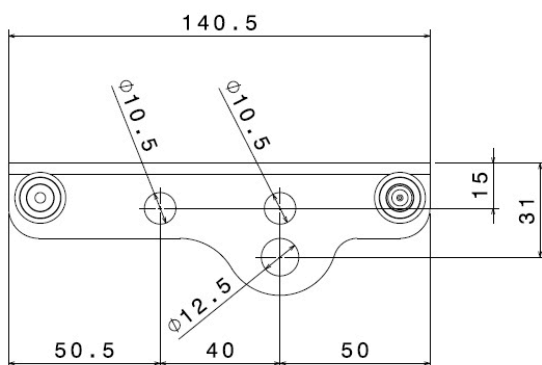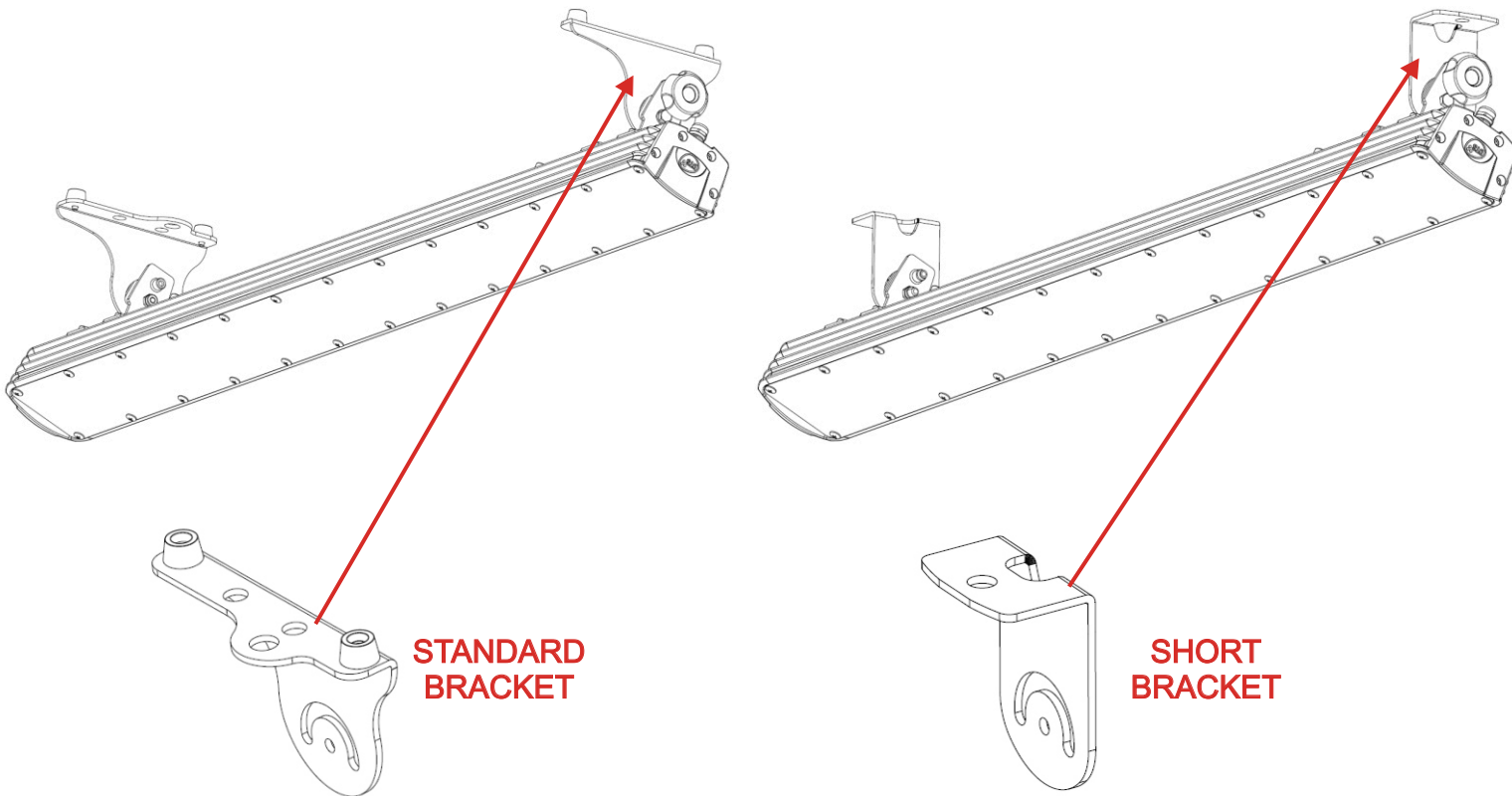
## DMX SIGNAL CONNECTION:

**FOS 100 SOLO IP 20 FC**
**FOS 100 SOLO IP 20 CT**

The unit operates using a digital DMX 512 signal. Connection between the controller and the unit or between units must be carried out using a two pair screened ø 0.5 mm.
Ensure that the conductors do not touch each other. Do not connect the cable ground to the DMX connector chassis. The plug housing must be isolated. Connect the mixer  signal to the DMX IN projector plug and connect it to the next projector by connecting the DMX OUT plug on the first unit to the DMX IN plug of the second one.
In this way, all the projectors are cascade connected.



P.S:
If the display showing the DMX address flashes, then one of the following errors has occurred:
- DMX signal not present
- DMX reception problem

For Installations where long distance DMX cable connections are needed, we suggest to use a DMX terminator.
The DMX terminator is a male XLR 3-5 pins connector with a 120 ohm resistor Between pin 2 and 3.
The DMX terminator must be plugged into the last unit (DMX out panel connector) of the DMX line.
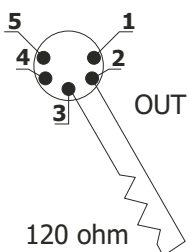


PLACE A 120 OHM  RESISTOR BETWEEN  PIN 2 AND 3 OF A MALE  XRL CONNECTOR  AND PLUG IT INTO THE DMX OUT PANEL CONNECTOR OF THE LAST UNIT CONNECTED TO THE DMX LINE
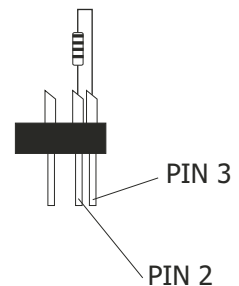
The standard configuration of the FOS 100 SOLO is with XLR 5 pins connectors.

## DMX SIGNAL CONNECTION:

**FOS 100 SOLO IP 65 FC**
**FOS 100 SOLO IP 65 CT**

The unit operates using a digital DMX 512 signal. Connection between the controller and the unit or between units must be carried out using a two pair screened ø 0.5 mm.
Ensure that the conductors do not touch each other. Do not connect the cable ground to the DMX connector chassis. The plug housing must be isolated. Connect the mixer signal to the DMX IN projector plug and connect it to the next projector by connecting the DMX OUT plug on the first unit to the DMX IN plug of the second one.
In this way, all the projectors are cascade connected.

CONTROLLER
STANDARD
DMX 512

5   1
4   2
3

1=GND
2=DATA-
3=DATA+

P.S:
If the display showing the DMX address flashes, then one of the following errors has occurred:
- DMX signal not present
- DMX reception problem

For Installations where long distance DMX cable connections are needed, we suggest to use a DMX terminator.
The DMX terminator is a male DMX cable connector with a 120 ohm resistor Between pin 2 and 3.
The DMX terminator must be plugged into the DMX out panel connector of the last unit connected to the DMX line.

**DMX**
**MALE CABLE**
**CONNECTOR**

**GND**

**1**

**2**   **3**

**DATA-**   **DATA+**
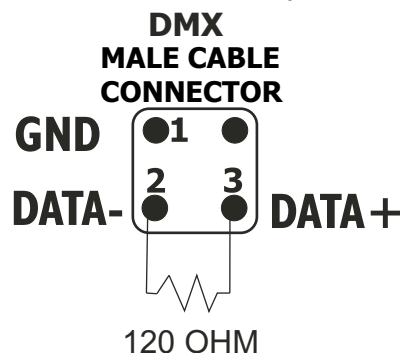
120 OHM

PLACE A 120 OHM RESISTOR BETWEEN PIN 2
AND 3 OF A MALE DMX CONNECTOR AND PLUG IT
INTO THE DMX OUT PANEL CONNECTOR OF THE
LAST UNIT CONNECTED TO THE DMX LINE

## DMX ADDRESS

FOS 100 SOLO FC and FOS 100 SOLO CT can be used in seven different modes: 10 DMX channels mode (default), 6 DMX channels mode (Shutter + Dimmer + RGBW), WALL mode (6 DMX channels; for use with DTS Wall mounted DMX controller 0514L007), M4CH mode (5 DMX channels; Dimmer + RGBW), RGBW mode (4 channels), 1 DMX channel mode or CUSTOM DMX mode (not yet implemented).

If you want to use the FOS 100 SOLO FC or CT in "WALL" mode, select the "WALL" mode from the MODE menu and set the following addresses on the mixer: **(To be used only with DTS Wall mounted DMX controller 0514L007)**

Projector 1    A001
Projector 2    A006          If you want to select the next projector, just add "6"
Projector 3    A012          **DTS Wall mounted DMX controller 0514L007 assign 6 DMX**
.....          A....          **channels per unit also if some channels are not used**
projector 6    A030

If you want to use the FOS 100 SOLO FC or CT in 10 channels mode, select the 10 CH mode from the MODE menu and set the following addresses on the mixer:

Projector 1    A001
Projector 2    A011          If you want to select the next projector, just add "10"
Projector 3    A021
.....          A....
projector 6    A051

## Selecting the DMX address

1) Press the UP-DOWN key until you reach the required DMX address. The numbers on the display will start to flash (but the new DMX address hasn't yet been set).
2) Press ENTER to confirm your selection. The numbers on the display will stop flashing and the projector is now controlled by the new DMX address.

TIPS: if you keep pushed the UP or DOWN keys, the channels are calculated more quickly and you get a faster selection.

## DISPLAY FUNCTIONS

**FOS 100 SOLO FC**
**FOS 100 SOLO CT**
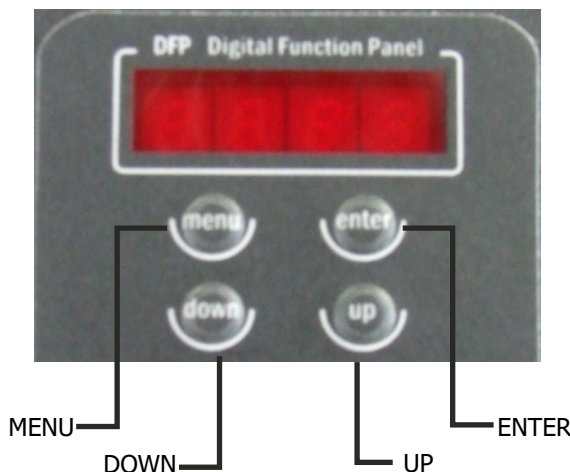
## DISPLAY FUNCTIONS

The FOS 100 SOLO display panel shows all the available functions . Using these functions, it is possible to change some of the parameters and add some functions. Changing the D.T.S. setting can vary the functions of the unit so that it does not respond to the DMX 512 signal used to control it. Carefully follow the instructions below before carrying out any variations or selections.
NOTE: the symbol 👉 shows which key has to be pushed to obtain the desired function.

### Software version 5.16

| `A001` | 👉 MENU | 👉 Up-Down | `dISP` | 👉 ENTER | 👉 Up-Down | `POSI` | 👉 ENTER | 👉 Up-Down | `AA` Floor position | 👉 ENTER |

**REVERSE DISPLAY**
Reverses display's reading depending on the mounting position (On the ground or suspended).

`BB` Suspension position 👉 ENTER

Up-Down

**DISPLAY STAND BY**
To turn off the display (after 5 seconds) or leave it always on.

👉 `Stby` 👉 ENTER 👉 Up-Down

`oFF` Display OFF 👉 ENTER

`on` Display always ON 👉 ENTER

---

👉 MENU 👉 Up-Down `ModE` 👉 ENTER 👉 Up-Down `10CH` 10 CHANNELS 👉 ENTER Default DMX Mode = 10 CH

**DMX MODE**
To select DMX mode : 10 DMX channels mode (default), 6 DMX channels mode (Shutter + Dimmer + RGBW), 15 DMX channels mode, WALL mode (6 DMX channels; for use with DTS Wall mounted DMX controller 0514L007), M4CH mode (5 DMX channels; Dimmer + RGBW), RGBW mode (4 channels), 1 DMX channel mode.

AUX mode let you activate an external ON-OFF control on IR connector. (not implemented on FOS 100 SOLO)

CUSTOM DMX mode let you set the parameters for Shutter, Dimmer, Red, Green, Blue, White, White pre-programmed, CTC, Macro and Function to the desired DMX channels.

👉 Up-Down `6CH` 6 CHANNELS 👉 ENTER

👉 Up-Down `15CH` 15 CHANNELS 👉 ENTER

👉 Up-Down `UALL` WALL (6 CHANNELS) 👉 ENTER

👉 Up-Down `M4cH` M4CH (5 CHANNELS) 👉 ENTER Shutter + Dimmer + RGBW

👉 Up-Down `rGbA` RGBA (4 CHANNELS) 👉 ENTER Dimmer + RGBW

👉 Up-Down `1CH` 1 CHANNEL

`CUSt` 👉 ENTER 👉 Up-Down `SEL` 👉 ENTER Custom mode enabled

`ShoU` 👉 ENTER Show Custom settings

`SEt` 👉 ENTER Parameters Setting on Custom Mode

# FOS 100

👉 MENU   👉 Up-Down   `NOdE`   👉 ENTER   👉 Up-Down   `AUX`   AUX MODE   👉 ENTER   External ON - OFF control on IR connector (not implemented on FOS 100 SOLO)

**MACRO**
MACRO Function, enable channel mapping macro rainbow effects
STD (default)

👉 Up-Down   `NACr`   👉 ENTER   👉 Up-Down   `Std`   👉 ENTER   Standard mode enabled: (Default).

`EXt`   👉 ENTER   Extended mode enabled: Rainbow effects on MACRO channel.

---

👉 MENU   👉 Up-Down   `LEd`   👉 ENTER   👉 Up-Down   `rEd`   👉 ENTER   👉 Up-Down   `NIn`   Default = 0   👉 ENTER

**LED**
RGBW Min/Max, Smooth, Compression, Sync and Boost level values settings

`NAX`   Default = 255   👉 ENTER

**RGBA MINIMUM VALUES**
This menu allow to select the minimum levels for Red, Green, Blue and White

👉 Up-Down   `GrEE`   👉 ENTER   👉 Up-Down   `NIn`   Default = 0   👉 ENTER

`NAX`   Default = 255   👉 ENTER

**RGBA MAXIMUM VALUES**
This menu allow to select the maximum levels for Red, Green, Blue and White

👉 Up-Down   `bLUE`   👉 ENTER   👉 Up-Down   `NIn`   Default = 0   👉 ENTER

## These settings have priority on Master Dimmer channel

`NAX`   Default = 255   👉 ENTER

**SMOOTH VALUE**
This menu allow to select the value of the delay (in milliseconds) for RGBW and Dimmer channels reaction to DMX or Program variation.
Off=25 ms delay (Fast response)
20=250 ms delay (Slow response)

👉 Up-Down   `ANbr`   👉 ENTER   👉 Up-Down   `NIn`   Default = 0   👉 ENTER

`NAX`   Default = 255   👉 ENTER

**COMPRESSION**
This menu allow to select between Linear current output or Quadratic current output for LEDs
Default = Linear

👉 Up-Down   `SNtH`   👉 ENTER   👉 Up-Down   `4`   Range = Off-20 Default = 4   👉 ENTER

Off = 25 ms
Istant responce to DMX variation

20 = 250 ms
Smooth response to DMX variation

**SYNC**
This menu allow to adjust the PWM frequency value (Hz) in order to reduce flickering in the process of your camera recordings

👉 Up-Down   `CONP`   👉 ENTER   👉 Up-Down   `LInE`   Linear = Linear current output   👉 ENTER

`9UAd`   Quadratic = Linear light output   👉 ENTER

**BOOST DRIVING**
This menu allow to increase the LED's current from 350 mA to 500 mA

👉 Up-Down   `54nc`   👉 ENTER   👉 Up-Down   `610`   Range = 610 Hz -10 KHz Default = 610 Hz   👉 ENTER

`bSt`   👉 ENTER   👉 Up-Down   `On`   Boost mode activated   👉 ENTER

👉 Up-Down   `OFF`   Boost mode deactivated   👉 ENTER

With BOOST active, the LED's current is set to 500 mA (30% more gain).
Default = Disabled

👉 MENU 👉 Up-Down `AUtO` 👉 ENTER `5UrE` 👉 ENTER 👉 Up-Down `ChPr` 👉 ENTER `SPEE` 👉 Up-Down `0010` 👉 ENTER

`UAIt` `0010`

**AUTOMATIC MODE**
Automatic demo game without DMX controller

**ChPr**
Chase with 16 steps previously created in REC MODE
Speed and Wait time selectable by user

`CUPr` 👉 ENTER `rEd` 👉 Up-Down `120` 👉 ENTER

`GrEE` `255`

`bLUE` `104`

`ANbr` `255`

**CUPr**
RGB values selectable by user

**Rainbow (rAIn)**
Rainbow colours effect.
Speed time selectable by user

`rAIn` 👉 ENTER `SPEE` 👉 Up-Down `0010` 👉 ENTER

**CU01-CU16**
Color Macros as on DMX channel 8 (Macro)

`CU01` 👉 ENTER 👉 Up-Down 👉 ENTER

`CU02`

`CU16`

**WHITE MACROS**
16 macros for White color from 2700K to 8000K (FOS 100 FC) or 2700K to 6500K (FOS 100 CT)

`UH01` 👉 ENTER 👉 Up-Down 👉 ENTER

`UH02`

`UH03`

`UH04`

`UH05`

`UH......`

`UH16`

**DIMMER**
Dimmer level selectable by user as on DMX channel 2 (Dimmer)
Dimmer level is active for all the programs and macros

`dINN` 👉 ENTER 👉 Up-Down `255` 👉 ENTER

**SHUTTER**
Shutter level selectable by user as on DMX channel 1 (Shutter)
Shutter level is active only for CU01/CU16 and Wh01/Wh16 macros

`SHUt` 👉 ENTER 👉 Up-Down `255` 👉 ENTER

**ESC**
Esc from Automatic Mode Menu

`ESC`

👉 MENU 👉 Up-Down `rEC` 👉 ENTER `10CH` 👉 ENTER `r001`
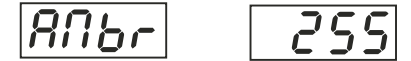
**REC MODE**
In DMX Recorder Mode, it is possible to create and store the scenes of the ChPr by using an external DMX controller.
The unit must be set to 10 channels MODE

`N001`

`N002`

`N0......`

`N016`

DMX Recorder Mode
For the programming of ChPr by using a DMX controller, besides the 10 channels necessary to control the unit a further 3 DMX channels are needed.
So that in RECORDER mode (via DMX) the unit will need 13 channels to be correctly programmed.
The three new DMX channels are:

DMX channel 11 = SCENES channel
From 0-10 = no function (r001)
From 11-255 are displayed the programmable scenes (max 16 scenes from M001 to  M0016 )

DMX channel 12 = EDIT channel:
-From 0-19 = no function
-From 20-234 the unit runs the configuration given by the received input DMX values.
With the channel SCENES it is possible to pass from one step to the next while with REC it is possible to record the selected scene.
-From 235-255 the unit runs the configuration given by the received input DMX values closing the sequence as last scene.
With the channel  REC it is possible to record the selected scene as last scene.

DMX channel 13 = RECORDING channel
 Records the set scene with a variation  between  0 to 255 (the display flashes indicating that the scene has been recorded).It is advised that you keep the REC channel set to 0 and to run through the 255 only once you have decided to save the scene. If ChPr is not closed, by indicating the last scene ( Edit channel between 235-255),  in playback mode all 16 scenes will be played through even if not programmed

---

MENU   Up-Down    `SLAU`   ENTER   `SUrE`   ENTER   Up-Down   `SLU`   ENTER
                                           `ESC`

SLAVE MODE
Slave mode for ChPr program.
All slave units will be
synchronised with master unit,
running their own Chpr program.

---

MENU   Up-Down    `I r`   ENTER   Up-Down   `On`   ENTER
                                     `OFF`

INFRARED MODE
Infrared remote control.
By activating Ir MODE, it will be
possible to navigate trought the
unit functions by using the D.T.S.
infrared remote control.
D.T.S. Code :0514L008

NOTE:
External infrared remote sensor needed.
D.T.S. Code :03.LA.016

NOT IMPLEMENTED ON FOS 100

---

MENU   Up-Down    `UdNH`   ENTER   Up-Down   `SEL`   ENTER   `On`
                                                  `OFF`
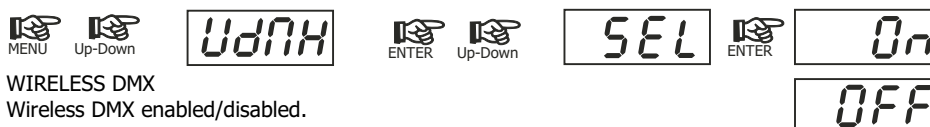
WIRELESS DMX                            WIRELESS DMX Disabled (Default)
Wireless DMX enabled/disabled.

Wireless DMX receiver kit on FOS
100 is available on request.              Up-Down   `UnL`   ENTER    UNLINK = LOG OUT

WIRELESS DMX Enabled

---

MENU   Up-Down    `FAn`   ENTER   Up-Down   `12U`   ENTER
                                       `OFF`

FAN SPEED CONTROL
Internal Fan Speed control
selectable by user.
Range: OFF - 24 volt
Default : 12 volt

Fan Speed Control
Range: OFF - 24 volt
Default = 12 volt

---

MENU   Up-Down    `ENEr`   ENTER   Up-Down   `SEL`   ENTER   Up-Down   `On`   ENTER
                                                                       `OFF`      Default = OFF
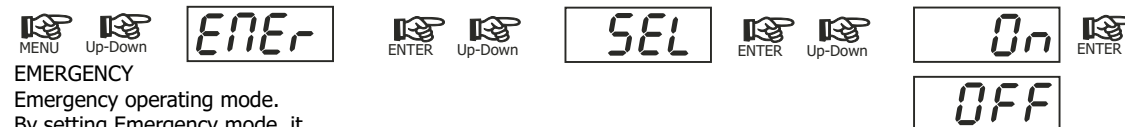
EMERGENCY
Emergency operating mode.
By setting Emergency mode, it
will be possible to select one of
the 16 preprogrammed WHITE
cues that will then ran if DMX
signal is missing or not available.
Usefull for Emergency EXIT
ilumination on public areas.

`UhIt`   ENTER      Default = White 1

`dINN`   ENTER      Default = 255

MENU Up-Down `dFSE` ENTER `SUrE` ENTER
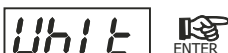
**DEFAULT**
To restore default settings

MENU Up-Down `tENP` ENTER `025.0` ENTER     Internal Unit temperature.
(° Celsius)

**TEMPERATURE**
Internal Unit temperature
visualisation

MENU Up-Down `tINE` ENTER Up-Down `rEd` ENTER

`GrEE`

`bLUE`

`ANbr`

`UnIt`

**LIFE TIME**
This menu show the total UNIT life time
and the RGBW life time

MENU Up-Down `tESt` ENTER `tESt`

**TEST MODE**
RGBW colours test with rainbow

MENU Up-Down `SOFt` ENTER `u.5.03`

**SOFTWARE**
Software version

## AUTOMATIC OPERATION (AUTO):

FOS 100 SOLO can work in automatic mode without a DMX controller. First of all connect the projectors with a DMX cable (picture below). A maximum quantity of 32 slave units can be connected to the same Master unit.

MASTER          SLAVE 1          SLAVE 2          SLAVE 32



To activate Auto mode on the first unit, use the menu to run through the different modes until AUTO appears on the display, and press enter.
Now it is possible to choose between the different pre-programmed games (CUPr-RAIn-CU01/CU16-Wh01/Wh16) or ChPr which is user programmable through REC mode. To confirm game activation press ENTER on the selected GAME.

### CUPr-RAIn-CU01/CU16-Wh01/Wh16

The first unit that will work as a Master should be placed in Automatic mode (AUTO), the other units have to be placed in 10 DMX channels mode (MODE 10CH) and the DMX address should be set at A001.
For RaIn (rainbow) game  it is possible to select the speed for  the colour changhing  (SPEE).
DIMMER function (in AUTOMATIC MODE) is active for all the programs.
SHUTTER function (in AUTOMATIC MODE) is active only for CU01/CU16 and Wh01/Wh16 macros.

### ChPr MASTER/SLAVE

The first unit that will function as a Master must be set to Automatic mode (AUTO), the other units must be set to Slave mode (SLAV), selectable through the menu.  In this way all the Slave units will be synchronised with the master  and running  their own ChPr game.
On the master unit it is possible to vary the Speed time (SPEE) for the colour changhing  and the Wait time (UAIt) between the steps.
Speed time and Wait time on the Master, have priority on the slave units.
NB: It is possible to run GA.Pr on the other units even though these do not have GA.Pr programmed.
You can do this by setting the units to 10 DMX channels mode and selecting DMX address A001.

**Rec mode**

It is possible to program your own game on the FOS 100 SOLO FULL RGBW / FOS 100 SOLO FULL WHITE CT that will then run it in AUTO mode (ChPr).
Each unit can have its own programmed game.
In REC mode the unit must be set to 10 DMX channels mode.
To program the ChPr by using a DMX controller, you need 3 more channels in addition to the 10 channels necessary to control the unit.
So that in RECORDER mode (via DMX) the unit will need 12/13 DMX channels to be correctly programmed.
The three new DMX channels are:


DMX channel 11 = SCENES channel
From 0-10 = no function (r001)
From 11-255 are displayed the programmable scenes (max 16 scenes from M001 to  M0016)

DMX channel 12 = EDIT channel:
-From 0-19 = no function
-From 20-234 the unit runs the configuration given by the received input DMX values.
With the channel SCENES it is possible to pass from one step to the next while with REC it is possible to record the selected scene.
-From 235-255 the unit runs the configuration given by the received input DMX values closing the sequence as last scene.
With the channel  REC it is possible to record the selected scene as last scene.

DMX channel 13 = RECORDING channel
 Records the set scene with a variation  between  0 to 255 (the display flashes indicating that the scene has been recorded).It is advised that you keep the REC channel set to 0 and to run through the 255 only once you have decided to save the scene. If ChPr is not closed, by indicating the last scene (Edit channel between 235-255),  in playback mode all 16 scenes will be played through even if not programmed.

# DMX PROTOCOL

FOS 100 SOLO FC

## 10 CHANNELS MODE (Default)

| | |
|---|---|
| 1 | **SHUTTER** |
| 2 | **DIMMER** |
| 3 | **RED** |
| 4 | **GREEN** |
| 5 | **BLUE** |
| 6 | **WHITE** |
| 7 | **WHITE PRE-PROGRAMMED** |
| 8 | **CTC** |
| 9 | **COLOURS MACRO** |
| 10 | **FUNCTIONS** |

| DMX CHANNEL | 1 | Parameter: **SHUTTER** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-9** | **5** | | | | **Black-out** |
| **10-19** | **14** | | | | **Open** |
| **20-29** | **24** | | | | **Black-out** |
| **30-119** | | | | | **Strobe at variable speed from slow to fast (3,27 s - 30 ms)** |
| **120-149** | | | | | **Pulse open at variable speed from slow to fast (42,6 s - 120ms)** |
| **150-179** | | | | | **Pulse close at variable speed from slow to fast (42,6 s - 120ms)** |
| **180-204** | **192** | | | | **Random Strobe (Master and RGBA active)** |
| **205-229** | **218** | | | | **Random Strobe (Full)** |
| **230-234** | | | | | **Red, Yellow, Cyan and Blue colour effects at variable speed** |
| **235-255** | **245** | | | | **Open** |

| DMX CHANNEL | 2 | Parameter: **DIMMER** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional dimmer** |

| DMX CHANNEL | 3 | Parameter: **RED** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional colour** |

| DMX CHANNEL | 4 | Parameter: **GREEN** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional colour** |

| DMX CHANNEL | 5 | Parameter: **BLUE** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional colour** |

| DMX CHANNEL | 6 | Parameter: **WHITE** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional colour** |

| DMX CHANNEL | 7 | Parameter: **WHITE PRE-PROGRAMMED** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-55** | **23** | | | | **No Function** |
| **56-105** | **80** | | | | **Full (Red-Green-Blue-White at Full)** |
| **106-155** | **130** | | | | **White DTS** |

**IF CHANNEL 10 (FUNCTIONS) = CUSTOM WHITE RECALL (Dmx range value 0 - 79)**

| | | | |
|---|---|---|---|
| **156-205** | **180** | | **Custom White Recall** |
| **206-255** | **225** | | **White CTC (Channel 8 CTC enabled 256 color temp. Correction Macros: 2700K - 8000K)** |

**IF CHANNEL 10 (FUNCTIONS) = CUSTOM WHITE CREATE (Dmx range value 80 - 160)**

| | | | |
|---|---|---|---|
| **156-205** | **180** | | **Custom White Create (RGBW levels selectable by DMX)** |
| **206-255** | **225** | | **White CTC (Channel 8 CTC enabled 256 color temp. Correction Macros: 2700K - 8000K)** |

**FOS 100**

| DMX CHANNEL | 8 | Parameter: **CTC  (Color temperature correction)** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|

**IF CHANNEL 7 (White) = WHITE CTC (Dmx range value 206 - 255)**

| DMX range Value | Function |
|---|---|
| **0-255** | **256 color temp. Correction Macros: 0 = 2700K / 128 = 5500K / 255 = 8000K** |

**IF CHANNEL 7 (White) = NO FUNCTION (Dmx range value 0 - 43)**

| DMX range Value | Function |
|---|---|
| **0-255** | **No Function** |

| DMX CHANNEL | 9 | Parameter: **COLOUR MACROS** |
|---|---|---|

**IF:** ☞ MENU ☞ Up-Down `NOdE` ☞ ENTER ☞ Up-Down `NACr` ☞ ENTER ☞ Up-Down `Std` ☞ ENTER  **PLEASE CHECK PAGE 13**

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-14** | | | | | **No Function** |
| **15-29** | | | | | **Macro 1** |
| **30-44** | | | | | **Macro 2** |
| **45-59** | | | | | **Macro 3** |
| **60-74** | | | | | **Macro 4** |
| **75-89** | | | | | **Macro 5** |
| **90-104** | | | | | **Macro 6** |
| **105-119** | | | | | **Macro 7** |
| **120-134** | | | | | **Macro 8** |
| **135-149** | | | | | **Macro 9** |
| **150-164** | | | | | **Macro 10** |
| **165-179** | | | | | **Macro 11** |
| **180-194** | | | | | **Macro 12** |
| **195-209** | | | | | **Macro 13** |
| **210-225** | | | | | **Macro 14** |
| **226-239** | | | | | **Macro 15** |
| **240-255** | | | | | **Macro 16** |

| DMX CHANNEL | 9 | Parameter: **COLOUR MACROS** |
|---|---|---|

**IF:** 👉 👉 *ΠOdE* 👉 👉 *ΠACr* 👉 👉 *EHt* 👉 **PLEASE CHECK PAGE 13**

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-14** | | | | | **No Function** |
| **15-22** | | | | | **Macro 1** |
| **23-30** | | | | | **Macro 2** |
| **31-38** | | | | | **Macro 3** |
| **39-46** | | | | | **Macro 4** |
| **47-54** | | | | | **Macro 5** |
| **55-62** | | | | | **Macro 6** |
| **63-70** | | | | | **Macro 7** |
| **71-78** | | | | | **Macro 8** |
| **79-86** | | | | | **Macro 9** |
| **87-94** | | | | | **Macro 10** |
| **95-102** | | | | | **Macro 11** |
| **103-110** | | | | | **Macro 12** |
| **111-118** | | | | | **Macro 13** |
| **119-126** | | | | | **Macro 14** |
| **127-134** | | | | | **Macro 15** |
| **135-142** | | | | | **Macro 16** |
| **143-150** | | | | | **Rainbow Speed 1 (1 Sec.)** |
| **151-158** | | | | | **Rainbow Speed 2 (5 Sec.)** |
| **159-166** | | | | | **Rainbow Speed 3 (10 Sec.)** |
| **167-174** | | | | | **Rainbow Speed 4 (20 Sec.)** |
| **175-182** | | | | | **Rainbow Speed 5 (30 Sec.)** |
| **183-190** | | | | | **Rainbow Speed 6 (60 Sec.)** |
| **191-198** | | | | | **Rainbow Speed 7 (120 Sec.)** |
| **199-206** | | | | | **Rainbow Speed 8 (180 Sec.)** |
| **207-214** | | | | | **Random Speed 1 (0.5 sec.)** |
| **215-222** | | | | | **Random Speed 2 (1 Sec.)** |
| **223-230** | | | | | **Random Speed 3 (2 Sec.)** |
| **231-238** | | | | | **Random Speed 4 (5 Sec.)** |
| **239-246** | | | | | **Random Speed 5 (10 Sec.)** |
| **247-255** | | | | | **Random Speed 6 (30 Sec.)** |

| DMX CHANNEL | 10 | Parameter: **FUNCTIONS (Recall, Create and Store the Custom white)** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-79** | | | | | **Custom White Recall (Enable CH 7 for Custom white Recall)** |
| **80-160** | | | | | **Custom White Create (Enable CH 7 for Custom white Creation)** |
| **161-255** | | | | | **Custom White Store (Store the Custom White created )** |

# DMX PROTOCOL

## FOS 100 SOLO FC

**6 CHANNELS MODE** (Shutter + Dimmer + RGBW)

**1**     **SHUTTER**
**2**     **DIMMER**
**3**     **RED**
**4**     **GREEN**
**5**     **BLUE**
**6**     **WHITE**

| DMX CHANNEL | 1 | Parameter: **SHUTTER** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| 0-9 | 5 | | | | **Black-out** |
| 10-19 | 14 | | | | **Open** |
| 20-29 | 24 | | | | **Black-out** |
| 30-119 | | | | | **Strobe at variable speed from slow to fast (3,27 s - 30ms)** |
| 120-149 | | | | | **Pulse open at variable speed from slow to fast (42,6 s - 120ms)** |
| 150-179 | | | | | **Pulse close at variable speed from slow to fast (42,6 s - 120ms)** |
| 180-204 | 192 | | | | **Random Strobe (Master and RGBW active)** |
| 205-229 | 218 | | | | **Random Strobe (Full)** |
| 230-234 | | | | | **Red, Yellow, Cyan and Blue colour effects at variable speed** |
| 235-255 | 245 | | | | **Open** |

| DMX CHANNEL | 2 | Parameter: **DIMMER** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| 0-255 | | | | | **Proportional dimmer** |

| DMX CHANNEL | 3 | Parameter: **RED** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| 0-255 | | | | | **Proportional colour** |

| DMX CHANNEL | 4 | Parameter: **GREEN** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional colour** |

| DMX CHANNEL | 5 | Parameter: **BLUE** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional colour** |

| DMX CHANNEL | 6 | Parameter: **WHITE** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional colour** |

## "WALL" 6 CHANNELS MODE (For use with DTS Wall mounted DMX controller 0514L007)

| 1 | GREEN |
| 2 | RED |
| 3 | BLUE |
| 4 | DIMMER |
| 5 | NOT USED |
| 6 | SHUTTER |

☞ MENU　☞ Up-Down　│ ∣⊓⟊⫶⟊ │ ☞ ENTER　☞ Up-Down　│ ⊔⨆⟊⟊ │　6 CHANNELS ☞ ENTER

| DMX CHANNEL | 1 | Parameter: **GREEN** |
| --- | --- | --- |

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
| --- | --- | --- | --- | --- | --- |
| **0-255** | | | | | **Proportional colour** |

| DMX CHANNEL | 2 | Parameter: **RED** |
| --- | --- | --- |

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
| --- | --- | --- | --- | --- | --- |
| **0-255** | | | | | **Proportional colour** |

| DMX CHANNEL | 3 | Parameter: **BLUE** |
| --- | --- | --- |

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
| --- | --- | --- | --- | --- | --- |
| **0-255** | | | | | **Proportional colour** |

| DMX CHANNEL | 4 | Parameter: **DIMMER** |
| --- | --- | --- |

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
| --- | --- | --- | --- | --- | --- |
| **0-255** | | | | | **Proportional dimmer** |

| DMX CHANNEL | 5 | Parameter: **NOT USED** |
| --- | --- | --- |

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
| --- | --- | --- | --- | --- | --- |
| **0-255** | | | | | **No Function** |

| DMX CHANNEL | 6 | Parameter: **SHUTTER** |
| --- | --- | --- |

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
| --- | --- | --- | --- | --- | --- |
| **0-9** | **5** | | | | **Black-out** |
| **10-19** | **14** | | | | **Open** |
| **20-29** | **24** | | | | **Black-out** |
| **30-119** | | | | | **Strobe at variable speed from slow to fast (3,27 s - 30ms)** |
| **120-149** | | | | | **Pulse open at variable speed from slow to fast (42,6 s - 120ms)** |
| **150-179** | | | | | **Pulse close at variable speed from slow to fast (42,6 s - 120ms)** |
| **180-204** | **192** | | | | **Random Strobe (Master and RGBW active)** |
| **205-229** | **218** | | | | **Random Strobe (Full)** |
| **230-234** | | | | | **Red, Yellow, Cyan and Blue colour effects at variable speed** |
| **235-255** | **245** | | | | **Open** |

## DMX PROTOCOL

## FOS 100 SOLO FC

**M4CH mode**   | $\overline{\Pi 4cH}$ |   (5 DMX channels; Dimmer + RGBW)
1    **DIMMER**
2    **RED**
3    **GREEN**
4    **BLUE**
5    **WHITE**

| DMX CHANNEL | 1 | Parameter: **DIMMER** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional dimmer** |

| DMX CHANNEL | 2 | Parameter: **RED** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional colour** |

| DMX CHANNEL | 3 | Parameter: **GREEN** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional colour** |

| DMX CHANNEL | 4 | Parameter: **BLUE** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional colour** |

| DMX CHANNEL | 5 | Parameter: **WHITE** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional colour** |

## DMX PROTOCOL

## FOS 100 SOLO FC

### RGBW mode (4 DMX channels)

**1    RED**
**2    GREEN**
**3    BLUE**
**4    WHITE**

| DMX CHANNEL | 1 | Parameter: **RED** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional colour** |

| DMX CHANNEL | 2 | Parameter: **GREEN** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional colour** |

| DMX CHANNEL | 3 | Parameter: **BLUE** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional colour** |

| DMX CHANNEL | 4 | Parameter: **WHITE** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional colour** |

### 1 CHANNEL MODE

**1    DIMMER**

| DMX CHANNEL | 1 | Parameter: **DIMMER** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional dimmer** |

## DMX PROTOCOL

# FOS 100 SOLO CT

### 10 CHANNELS MODE (Default)

| | |
|---|---|
| 1 | SHUTTER |
| 2 | DIMMER |
| 3 | RED = WHITE 1 |
| 4 | GREEN = WHITE 2 |
| 5 | BLUE = WHITE 3 |
| 6 | WHITE = WHITE 4 |
| 7 | WHITE PRE-PROGRAMMED |
| 8 | CTC |
| 9 | COLOURS MACRO |
| 10 | FUNCTIONS |

| DMX CHANNEL | 1 | Parameter: **SHUTTER** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| 0-9 | 5 | | | | **Black-out** |
| 10-19 | 14 | | | | **Open** |
| 20-29 | 24 | | | | **Black-out** |
| 30-119 | | | | | **Strobe at variable speed from slow to fast (3,27 s - 30 ms)** |
| 120-149 | | | | | **Pulse open at variable speed from slow to fast (42,6 s - 120ms)** |
| 150-179 | | | | | **Pulse close at variable speed from slow to fast (42,6 s - 120ms)** |
| 180-204 | 192 | | | | **Random Strobe (Master and RGBW active)** |
| 205-229 | 218 | | | | **Random Strobe (Full)** |
| 230-234 | | | | | **Red, Yellow, Cyan and Blue colour effects at variable speed** |
| 235-255 | 245 | | | | **Open** |

| DMX CHANNEL | 2 | Parameter: **DIMMER** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| 0-255 | | | | | **Proportional dimmer** |

| DMX CHANNEL | 3 | Parameter: **RED = WHITE 1** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| 0-255 | | | | | **Proportional colour** |

| DMX CHANNEL | **4** | Parameter: **GREEN = WHITE 2** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional colour** |

| DMX CHANNEL | **5** | Parameter: **BLUE = WHITE 3** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional colour** |

| DMX CHANNEL | **6** | Parameter: **WHITE = WHITE 4** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional colour** |

| DMX CHANNEL | **7** | Parameter: **WHITE PRE-PROGRAMMED** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-55** | **23** | | | | **No Function** |
| **56-105** | **80** | | | | **Full (Red-Green-Blue-White at Full)** |
| **106-155** | **130** | | | | **White DTS** |

**IF CHANNEL 10 (FUNCTIONS) = CUSTOM WHITE RECALL (Dmx range value 0 - 79)**

| | | | |
|---|---|---|---|
| **156-205** | **180** | | **Custom White Recall** |
| **206-255** | **225** | | **White CTC (Channel 8 CTC enabled 256 color temp. Correction Macros: 2700K - 6500K)** |

**IF CHANNEL 10 (FUNCTIONS) = CUSTOM WHITE CREATE (Dmx range value 80 - 160)**

| | | | |
|---|---|---|---|
| **156-205** | **180** | | **Custom White Create (RGBW levels selectable by DMX)** |
| **206-255** | **225** | | **White CTC (Channel 8 CTC enabled 256 color temp. Correction Macros: 2700K - 6500K)** |

| DMX CHANNEL | 8 | Parameter: **CTC  (Color temperature correction)** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|

**IF CHANNEL 7 (White) = WHITE CTC (Dmx range value 206 - 255)**

| 0-255 | 256 color temp. Correction Macros: 0 = 2700K / 128 = 4500K / 255 = 6500K |
|---|---|

**IF CHANNEL 7 (White) = NO FUNCTION (Dmx range value 0 - 43)**

| 0-255 | No Function |
|---|---|

| DMX CHANNEL | 9 | Parameter: **COLOUR MACROS** |
|---|---|---|

**IF:** 👉 👉 `ПОдЕ` 👉 👉 `ПАСг` 👉 👉 `Std` 👉 **PLEASE CHECK PAGE 13**
MENU Up-Down · ENTER Up-Down · ENTER Up-Down · ENTER

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| 0-14 | | | | | **No Function** |
| 15-29 | | | | | **Macro 1** |
| 30-44 | | | | | **Macro 2** |
| 45-59 | | | | | **Macro 3** |
| 60-74 | | | | | **Macro 4** |
| 75-89 | | | | | **Macro 5** |
| 90-104 | | | | | **Macro 6** |
| 105-119 | | | | | **Macro 7** |
| 120-134 | | | | | **Macro 8** |
| 135-149 | | | | | **Macro 9** |
| 150-164 | | | | | **Macro 10** |
| 165-179 | | | | | **Macro 11** |
| 180-194 | | | | | **Macro 12** |
| 195-209 | | | | | **Macro 13** |
| 210-225 | | | | | **Macro 14** |
| 226-239 | | | | | **Macro 15** |
| 240-255 | | | | | **Macro 16** |

**FOS 100**

| DMX CHANNEL | **9** | Parameter: **COLOUR MACROS** |
|---|---|---|

IF: MENU Up-Down `NOdE` ENTER Up-Down `NACr` ENTER Up-Down `EHt` ENTER **PLEASE CHECK PAGE 13**

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-14** | | | | | **No Function** |
| **15-22** | | | | | **Macro 1** |
| **23-30** | | | | | **Macro 2** |
| **31-38** | | | | | **Macro 3** |
| **39-46** | | | | | **Macro 4** |
| **47-54** | | | | | **Macro 5** |
| **55-62** | | | | | **Macro 6** |
| **63-70** | | | | | **Macro 7** |
| **71-78** | | | | | **Macro 8** |
| **79-86** | | | | | **Macro 9** |
| **87-94** | | | | | **Macro 10** |
| **95-102** | | | | | **Macro 11** |
| **103-110** | | | | | **Macro 12** |
| **111-118** | | | | | **Macro 13** |
| **119-126** | | | | | **Macro 14** |
| **127-134** | | | | | **Macro 15** |
| **135-142** | | | | | **Macro 16** |
| **143-150** | | | | | **Rainbow Speed 1 (1 Sec.)** |
| **151-158** | | | | | **Rainbow Speed 2 (5 Sec.)** |
| **159-166** | | | | | **Rainbow Speed 3 (10 Sec.)** |
| **167-174** | | | | | **Rainbow Speed 4 (20 Sec.)** |
| **175-182** | | | | | **Rainbow Speed 5 (30 Sec.)** |
| **183-190** | | | | | **Rainbow Speed 6 (60 Sec.)** |
| **191-198** | | | | | **Rainbow Speed 7 (120 Sec.)** |
| **199-206** | | | | | **Rainbow Speed 8 (180 Sec.)** |
| **207-214** | | | | | **Random Speed 1 (0.5 sec.)** |
| **215-222** | | | | | **Random Speed 2 (1 Sec.)** |
| **223-230** | | | | | **Random Speed 3 (2 Sec.)** |
| **231-238** | | | | | **Random Speed 4 (5 Sec.)** |
| **239-246** | | | | | **Random Speed 5 (10 Sec.)** |
| **247-255** | | | | | **Random Speed 6 (30 Sec.)** |

| DMX CHANNEL | **10** | Parameter: **FUNCTIONS (Recall, Create and Store the Custom white)** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-79** | | | | | **Custom White Recall (Enable CH 7 for Custom white Recall)** |
| **80-160** | | | | | **Custom White Create (Enable CH 7 for Custom white Creation)** |
| **161-255** | | | | | **Custom White Store (Store the Custom White created )** |

## DMX PROTOCOL

# FOS 100 SOLO CT

### 6 CHANNELS MODE (Shutter + Dimmer + RGBW)

| | |
|---|---|
| **1** | **SHUTTER** |
| **2** | **DIMMER** |
| **3** | **RED = WHITE 1** |
| **4** | **GREEN = WHITE 2** |
| **5** | **BLUE = WHITE 3** |
| **6** | **WHITE = WHITE 4** |

| DMX CHANNEL | 1 | Parameter: **SHUTTER** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-9** | **5** | | | | **Black-out** |
| **10-19** | **14** | | | | **Open** |
| **20-29** | **24** | | | | **Black-out** |
| **30-119** | | | | | **Strobe at variable speed from slow to fast (3,27 s - 30ms)** |
| **120-149** | | | | | **Pulse open at variable speed from slow to fast (42,6 s - 120ms)** |
| **150-179** | | | | | **Pulse close at variable speed from slow to fast (42,6 s - 120ms)** |
| **180-204** | **192** | | | | **Random Strobe (Master and RGBA active)** |
| **205-229** | **218** | | | | **Random Strobe (Full)** |
| **230-234** | | | | | **Red, Yellow, Cyan and Blue colour effects at variable speed** |
| **235-255** | **245** | | | | **Open** |

| DMX CHANNEL | 2 | Parameter: **DIMMER** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional dimmer** |

| DMX CHANNEL | 3 | Parameter: **RED = WHITE 1** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional colour** |

| DMX CHANNEL | 4 | Parameter: **GREEN = WHITE 2** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional colour** |

| DMX CHANNEL | 5 | Parameter: **BLUE = WHITE 3** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional colour** |

| DMX CHANNEL | 6 | Parameter: **WHITE = WHITE 4** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional colour** |

## "WALL" 6 CHANNELS MODE (For use with DTS Wall mounted DMX controller 0514L007)

| 1 | GREEN |
|---|-------|
| 2 | RED |
| 3 | BLUE |
| 4 | DIMMER |
| 5 | NOT USED |
| 6 | SHUTTER |

☞ MENU   ☞ Up-Down   `ΠOdE`   ☞ ENTER   ☞ Up-Down   `UALL`   6 CHANNELS ☞ ENTER

| DMX CHANNEL | 1 | Parameter: **GREEN** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional colour** |

| DMX CHANNEL | 2 | Parameter: **RED** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional colour** |

| DMX CHANNEL | 3 | Parameter: **BLUE** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional colour** |

| DMX CHANNEL | 4 | Parameter: **DIMMER** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional dimmer** |

| DMX CHANNEL | 5 | Parameter: **NOT USED** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **No Function** |

| DMX CHANNEL | 6 | Parameter: **SHUTTER** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-9** | **5** | | | | **Black-out** |
| **10-19** | **14** | | | | **Open** |
| **20-29** | **24** | | | | **Black-out** |
| **30-119** | | | | | **Strobe at variable speed from slow to fast (3,27 s - 30ms)** |
| **120-149** | | | | | **Pulse open at variable speed from slow to fast (42,6 s - 120ms)** |
| **150-179** | | | | | **Pulse close at variable speed from slow to fast (42,6 s - 120ms)** |
| **180-204** | **192** | | | | **Random Strobe (Master and RGBW active)** |
| **205-229** | **218** | | | | **Random Strobe (Full)** |
| **230-234** | | | | | **Red, Yellow, Cyan and Blue colour effects at variable speed** |
| **235-255** | **245** | | | | **Open** |

## DMX PROTOCOL

# FOS 100 SOLO CT

**M4CH mode** $\boxed{\Pi 4cH}$ (5 DMX channels; Dimmer + RGBW)

1 **DIMMER**
2 **RED = WHITE 1**
3 **GREEN = WHITE 2**
4 **BLUE = WHITE 3**
5 **WHITE = WHITE 4**

| DMX CHANNEL | 1 | Parameter: **DIMMER** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional dimmer** |

| DMX CHANNEL | 2 | Parameter: **RED = WHITE 1** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional colour** |

| DMX CHANNEL | 3 | Parameter: **GREEN = WHITE 2** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional colour** |

| DMX CHANNEL | 4 | Parameter: **BLUE = WHITE 3** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional colour** |

| DMX CHANNEL | 5 | Parameter: **WHITE = WHITE 4** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional colour** |

## DMX PROTOCOL

## FOS 100 SOLO CT

### RGBW mode (4 DMX channels)
**1    RED = WHITE 1**
**2    GREEN = WHITE 2**
**3    BLUE = WHITE 3**
**4    WHITE = WHITE 4**

| DMX CHANNEL | 1 | Parameter: **RED = WHITE 1** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional colour** |

| DMX CHANNEL | 2 | Parameter: **GREEN = WHITE 2** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional colour** |

| DMX CHANNEL | 3 | Parameter: **BLUE = WHITE 3** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional colour** |

| DMX CHANNEL | 4 | Parameter: **WHITE = WHITE 4** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional colour** |

### 1 CHANNEL MODE

**1    DIMMER**

| DMX CHANNEL | 1 | Parameter: **DIMMER** |
|---|---|---|

| DMX range Value | Mid point DMX value | Move range (degrees) | Mode | Option | Function |
|---|---|---|---|---|---|
| **0-255** | | | | | **Proportional dimmer** |

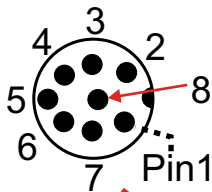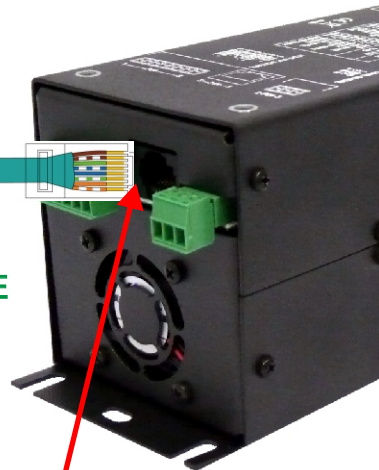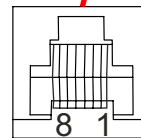## WIRING CONNECTIONS

**FOS 100 FC**

**LED INPUT**
M12 Male cable connector

Pin 1 = RED +
Pin 2 = RED -
Pin 3 = GREEN +
Pin 4 = GREEN -
Pin 5 = BLUE +
Pin 6 = BLUE -
Pin 7 = WHITE +
Pin 8 = WHITE -

**Z1 PLUS IP 20 LED Controller**
**(D.T.S. Code 03.LA.009P)**

**RJ45 MALE TO M12 FEMALE**
**CABLE CONVERTER**
**(D.T.S. Code: 03.LA.061)**

**LEDS**
**CONNECTOR PINOUT**

Pin 1 = RED +
Pin 2 = RED -
Pin 3 = GREEN +
Pin 4 = GREEN -
Pin 5 = BLUE +
Pin 6 = BLUE -
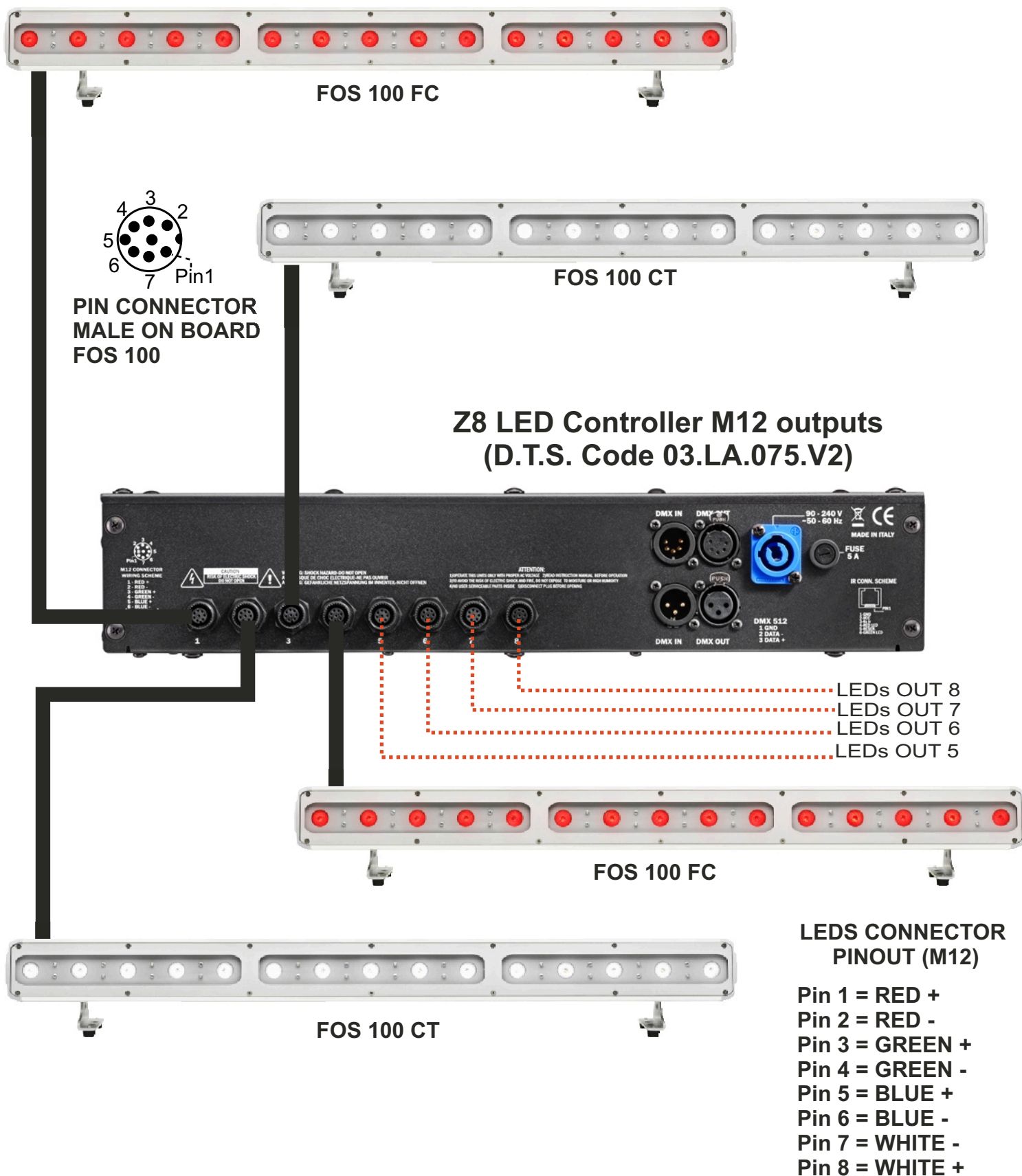Pin 7 = WHITE +
Pin 8 = WHITE -

**8-pin Female (RJ45)**

## IMPORTANT:

**The maximum number of FOS 100 FC or CT connectable to the Z1 PLUS IP20 LED Controller is 1 pcs.**

**NEVER CONNECT OR DISCONNECT A FOS 100 UNIT WHEN THE POWER SUPPLY IS TURNED ON.**

The maximum distance between Z1 PLUS power supply and the unit should not exceed 100 meters.

# WIRING CONNECTIONS

**FOS 100 FC**

**3**
**4** **2**
**5** **1**
**6** **7** Pin1

**PIN CONNECTOR**
**MALE ON BOARD**
**FOS 100**

**FOS 100 CT**

## Z8 LED Controller M12 outputs
## (D.T.S. Code 03.LA.075.V2)

LEDs OUT 8
LEDs OUT 7
LEDs OUT 6
LEDs OUT 5

**FOS 100 FC**

**LEDS CONNECTOR**
**PINOUT (M12)**

**Pin 1 = RED +**
**Pin 2 = RED -**
**Pin 3 = GREEN +**
**Pin 4 = GREEN -**
**Pin 5 = BLUE +**
**Pin 6 = BLUE -**
**Pin 7 = WHITE -**
**Pin 8 = WHITE +**

**FOS 100 CT**

## IMPORTANT:

**The maximum number of FOS 100 FC or CT connectable to each Z8 LEDs output is 1 pcs.**

**NEVER CONNECT OR DISCONNECT A FOS UNIT WHEN THE POWER SUPPLY IS TURNED ON.**

The maximum distance between the Z8 and the FOS 100 FC or CT should not exceed 50 meters.

**NOTES**

**MADE IN ITALY**  CE

## The Lighting Company

# ISO 9001:2008
D.T.S. quality system
is certified to the
ISO 9001:2008 standard

D.T.S. products are designed
and manufactured at the D.T.S.
plants in italy

0517I075

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