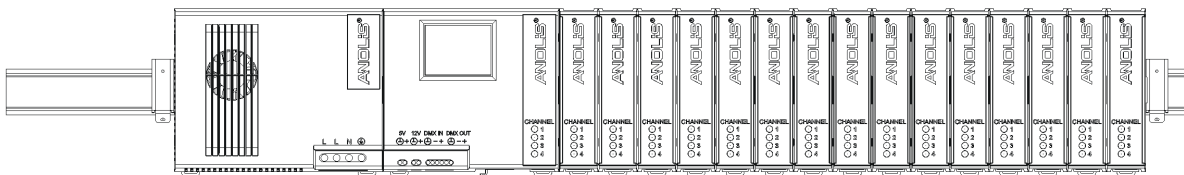




DIN RAIL SYSTEM



USER MANUAL

DIN RAIL SYSTEM

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**FOR YOUR OWN SAFETY, PLEASE READ THIS USER MANUAL CAREFULLY
BEFORE YOU INITIAL START - UP!**

1. Safety and operating instructions

Every person involved with installation and maintenance of this product has to:

- be qualified
- follow all instructions and heed all warnings in this manual

CAUTION!
Before any installation or maintenance work: Disconnect the DIN RAIL SYSTEM from the supply network and protect against switching on.

This product has left our premises in absolutely perfect condition. In order to maintain this condition and to ensure a safe operation, it is absolutely necessary for the user to follow the safety instructions and warning notes written in this manual.

WARNING
To prevent injury, this device set must be securely attached to a 35mm DIN rail in accordance with the installation instructions.

Do not block any ventilation openings of the ArcZone/ArcControl unit and ArcPower 70/200/600 DRS.

Do not install the device set in dirty, dusty or badly ventilated location.

Avoid looking directly into the LED light beam at close range.

Use a source of AC power that complies with local building and electrical rules. AC power has to have both overload and short circuit protection.

The ArcPower 70 DRS (ArcPower 200 DRS, ArcPower 600 DRS) falls under protection class I. Therefore this device has to be connected to a mains socket outlet with a protective earthing connection!

If the device set has been exposed to drastic temperature fluctuation (e.g. after transportation), do not switch it on immediately. The arising condensation water might damage some units. Leave the units switched off until they have reached room temperature.

Only operate the device set after having checked that the housing is firmly closed.

The maximum ambient operating temperature 50° C must never be exceeded.

Operate the device set only after having familiarized with its functions. Do not permit operation by persons not qualified for operating the device set. Most damages are the result of unprofessional operation!

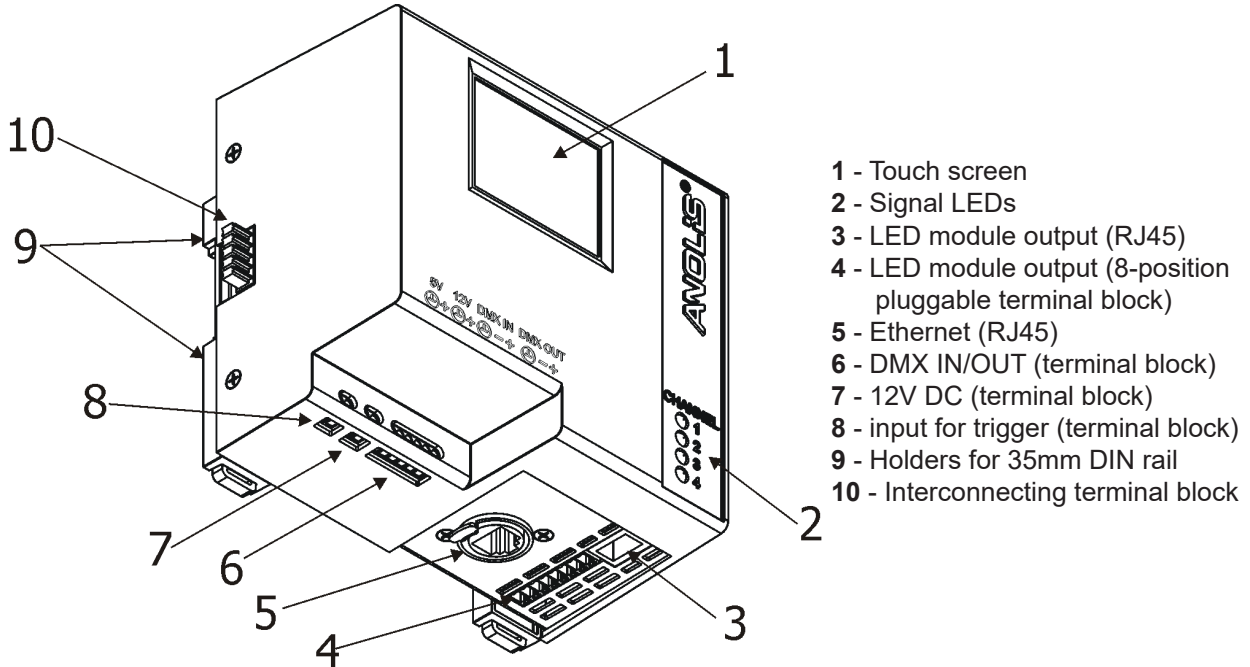
Please use the original packaging if the product is to be transported.

Please consider that unauthorized modifications on the device set are forbidden due to safety reasons!

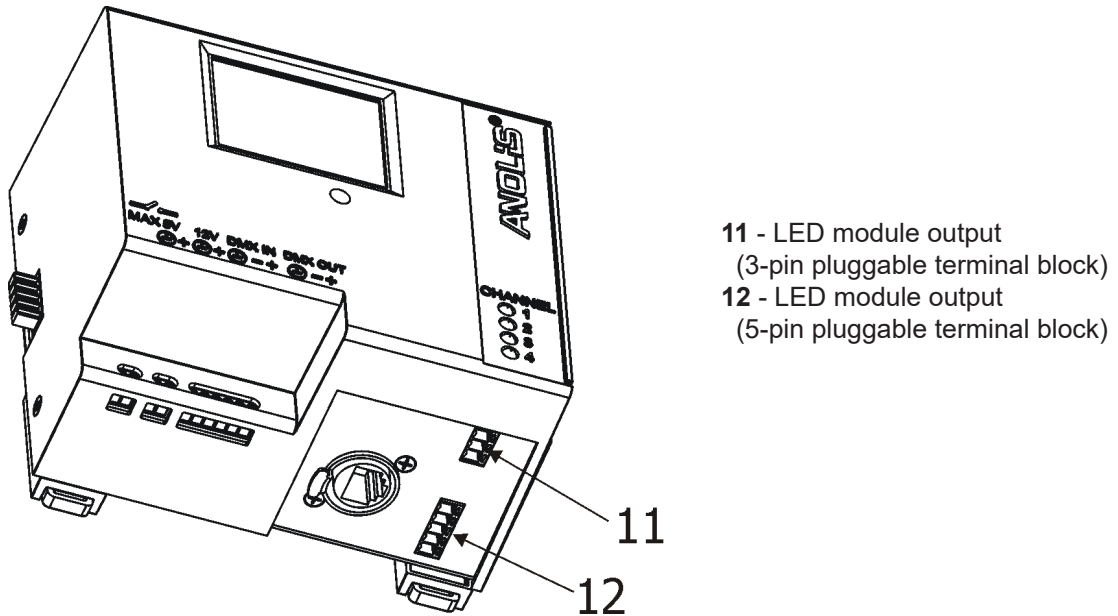
2. Description of the DIN Rail System (DRS)

The configuration of DRS consists of the control unit (ArcControl DRS or ArcControl DRS Pixel), LED supply units (ArcZone DRS or ArcZone DRS Pixel) and one power unit (ArcPower 70 DRS or ArcPower 200 DRS or ArcPower 600 DRS). All the units allow mounting on 35 mm DIN rail.

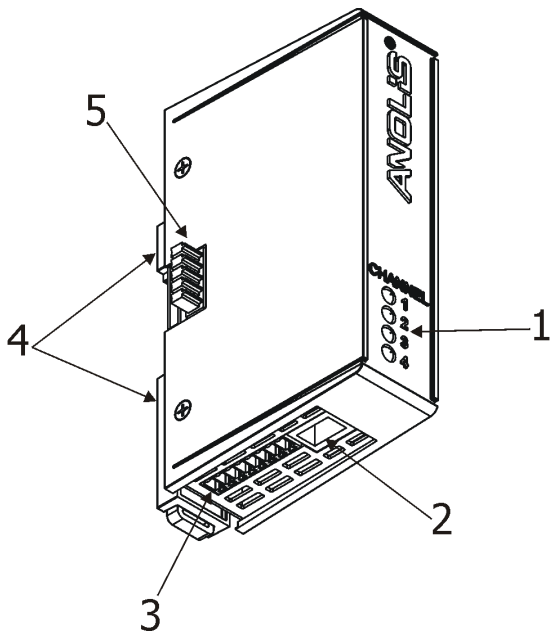
ArcControl DRS



ArcControl DRS Pixel

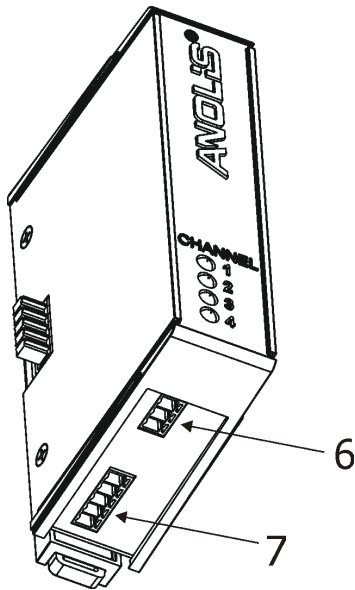


ArcZone DRS



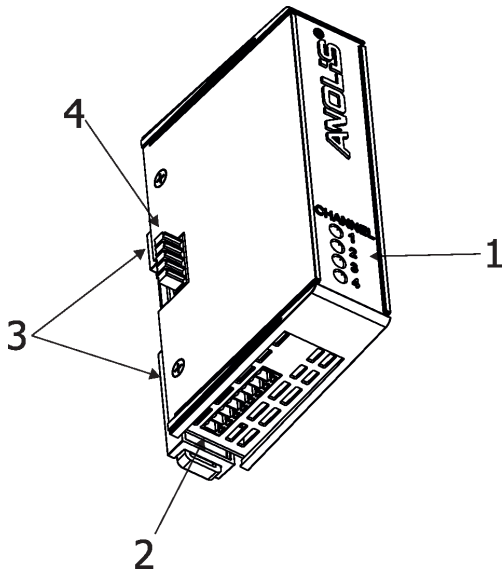
- 1 - Signal LEDs
- 2 - LED module output (RJ45)
- 3 - LED module output (pluggable terminal block)
- 4 - Holders for 35mm DIN rail
- 5 - Interconnecting terminal block

ArcZone DRS Pixel



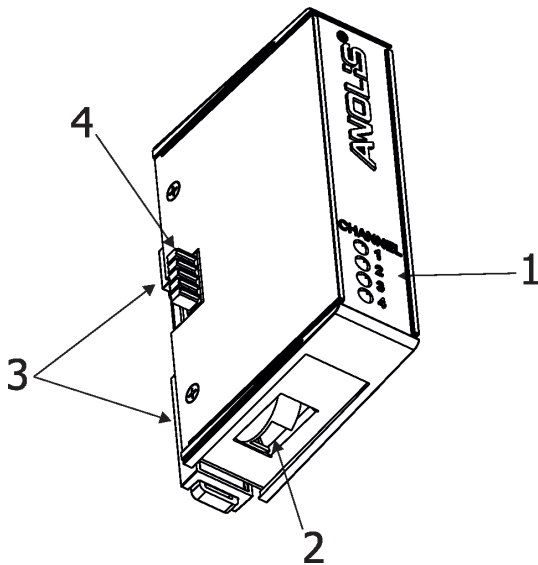
- 6 - LED module output (3-pin pluggable terminal block)
- 7 - LED module output (5-pin pluggable terminal block)

ArcZone DRS 0-10V



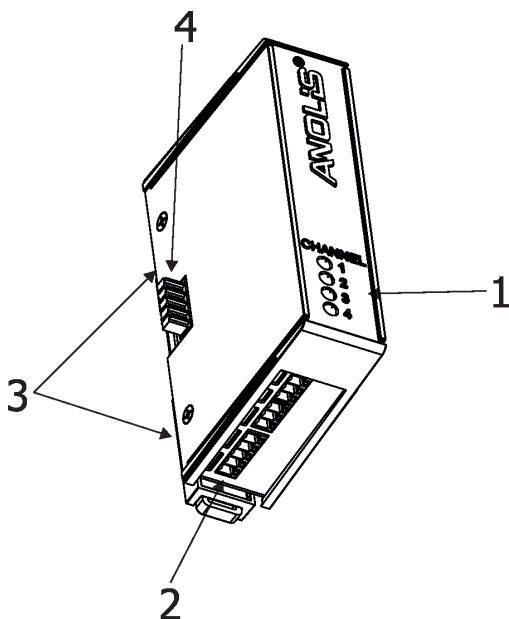
- 1 - Signal LEDs
- 2 - 4 x 0-10V DC input (pluggable terminal block)
- 3 - Holders for 35mm DIN rail
- 4 - Interconnecting terminal block

ArcZone DRS RTC



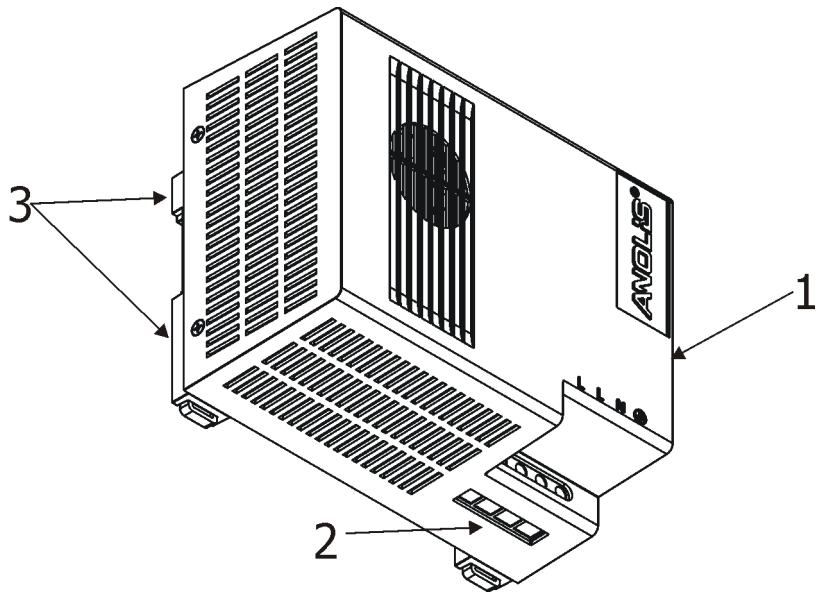
- 1 - Signal LEDs
- 2 - Battery holder
- 3 - Holders for 35mm DIN rail
- 4 - Interconnecting terminal block

ArcZone DRS Fan

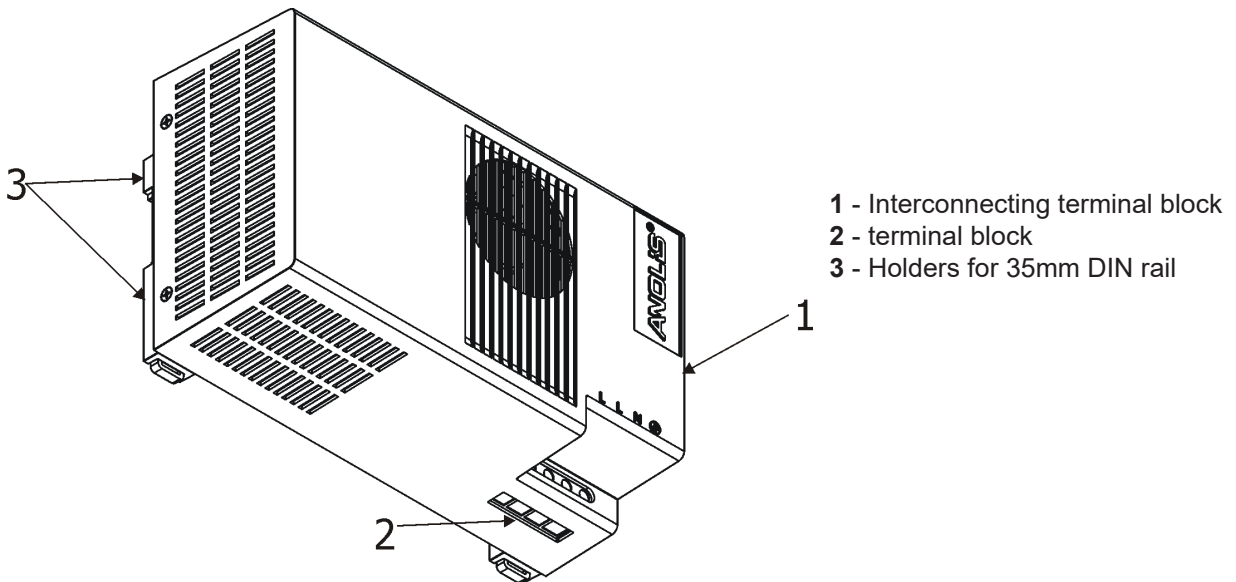


- 1 - Signal LEDs
- 2 - 2 x Fan output + 2 x Temp. sensor input (pluggable terminal blocks)
- 3 - Holders for 35mm DIN rail
- 4 - Interconnecting terminal block

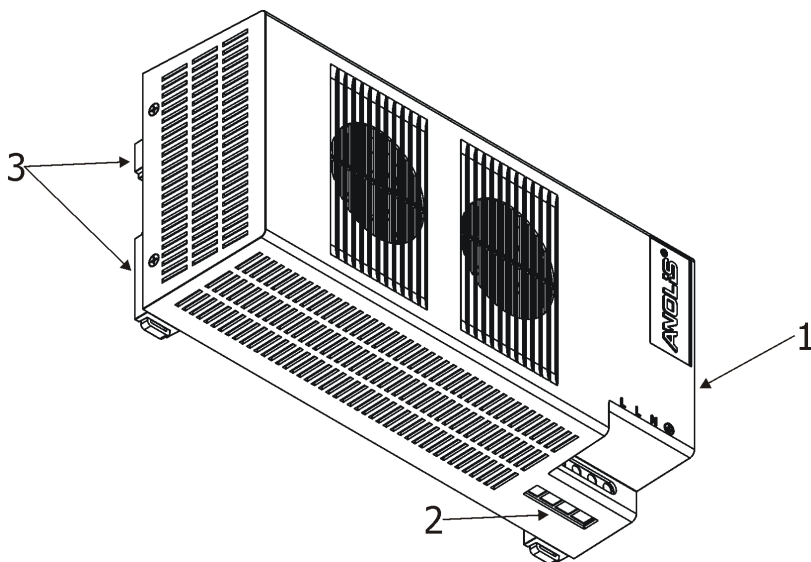
ArcPower 70 DRS



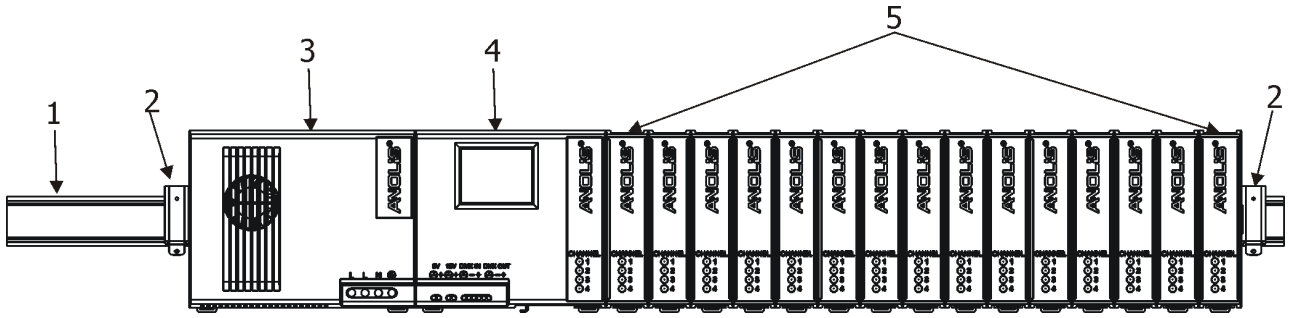
ArcPower 200 DRS



ArcPower 600 DRS



DIN RAIL SYSTEM assembled

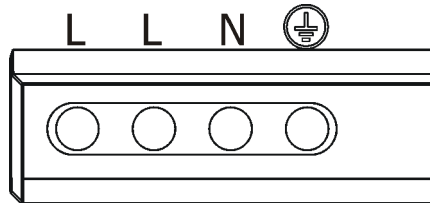


- 1 - 35mm DIN rail
- 2 - Lock
- 3 - ArcPower 70 DRS
- 4 - ArcControl DRS
- 5 - ArcZone DRS 2-16

3. Configuration of terminals

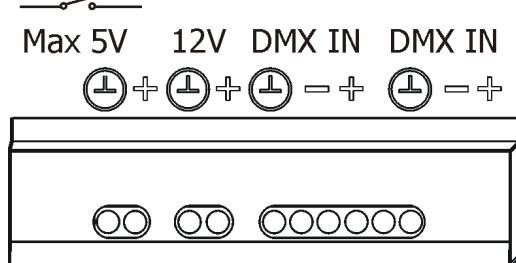
ArcPower 70 DRS/200DRS/600DRS

Power input



ArcControl DRS/ArcControl DRS Pixel

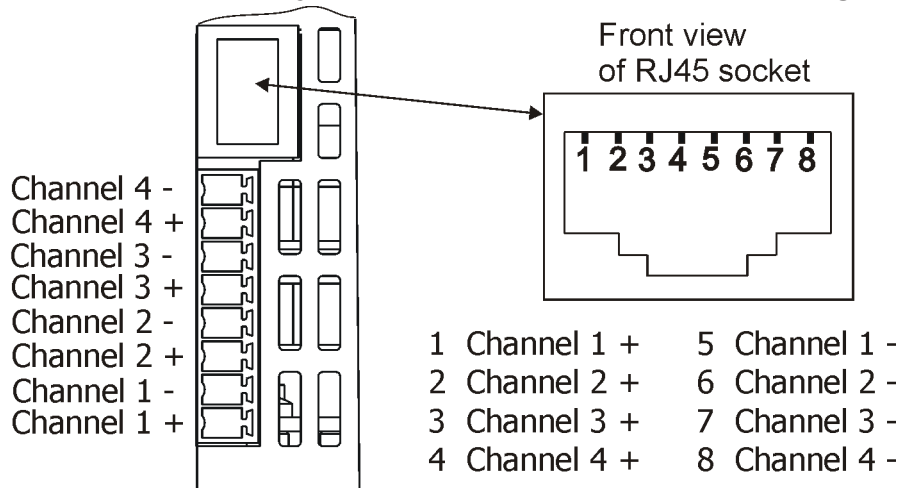
DMX In/Out, 12V,
trigger input (max. 5V)



ArcControl DRS/ArcZone DRS

LED outputs

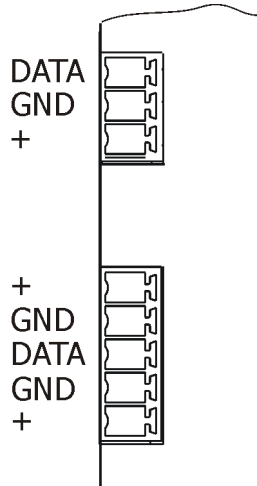
Note: only one output can be used for connecting LED modules!



ArcControl DRS Pixel/ArcZone DRS Pixel

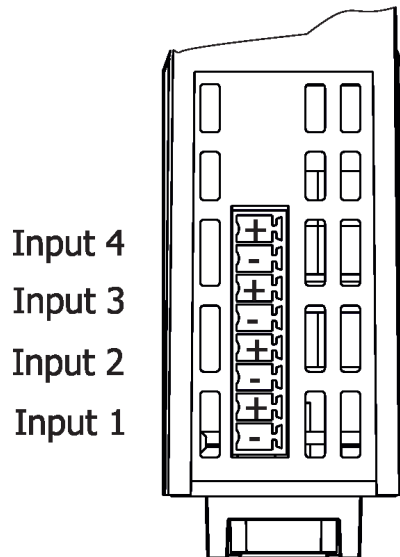
LED outputs

Note: only one output can be used for connecting LED modules!



ArcZone DRS 0-10V

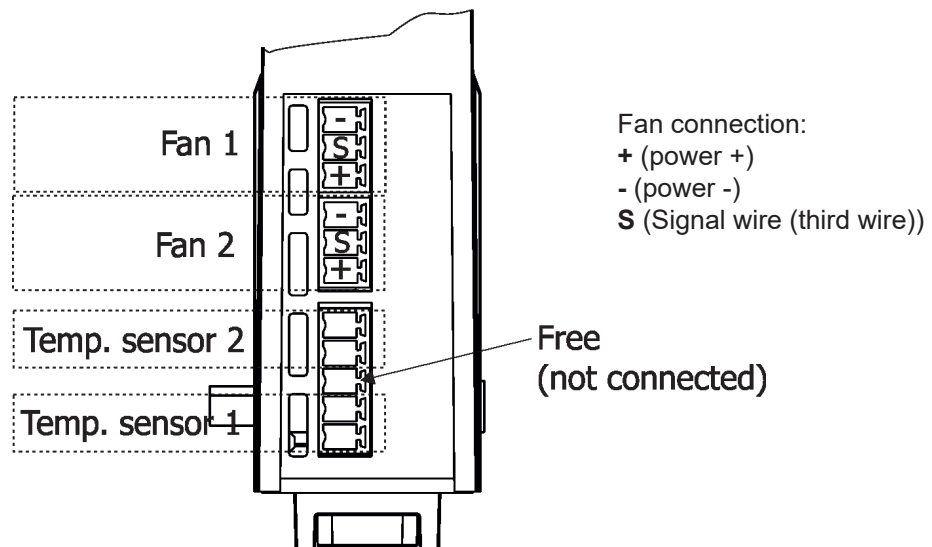
4 x Input 0-10V DC



ArcZone DRS Fan

2 x Fan output (max. current per one fan output is 1A at 12V or 24V or 48V)

2 x Temperature sensor input



4. Installation

CAUTION!

DIN RAIL SYSTEM must be installed by a qualified electrician in accordance with all national and local electrical and construction codes and regulations.

These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

This device falls under protection class I. Therefore the ArcPower 70 DRS (ArcPower 200 DRS, ArcPower 600 DRS) has to be connected to a mains socket outlet with a protective earthing connection.

The ArcPower 70 DRS (ArcPower 200 DRS, ArcPower 600 DRS) is equipped with auto-switching power supply that automatically adjusts to any 50-60Hz AC power source from 100-277 Volts.

Do not overload these ArcPower units. During calculating their loads, take into account besides consumption of connected LED modules also self-consumption of the ArcControl DRS/ArcControl DRS Pixel (4W - without connected LED module) and connected ArcZones DRS/ArcZones DRS Pixel (2W per ArcZone without connected LED module).

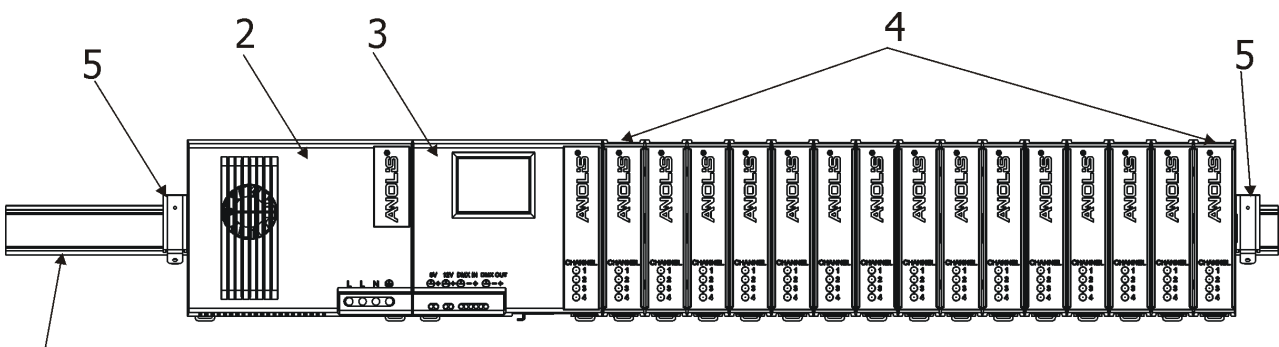
Max.number of connected LEDs to one ArcZone DRS depends on their type, power and max. output power of used ArcPower DRS supply unit.

The used ArcPower DRS unit is loaded by the sum of power consumption of individual ArcZones and their loads (e.g. LED modules, fans for ArcZone DRS Fan etc.).

To make service of DRS easier, it is highly recommended to have each DRS equipped with its circuit breaker in order to switch off only DRS circuit without influencing another electrical devices.

To install DRS

1. Fasten the DIN rail (1) on the non-flammable flat surface in a horizontal mounting position (this position has to be kept to ensure sufficient air accessing to the DRS units).
2. Snap the desired ArcPower DRS (2), ArcControl DRS/ArcControl DRS Pixel (3) and ArcZone DRS/ArcZone DRS Pixel 2-16 (4) on the DIN rail.
3. Interconnect each unit of Din Rail System and secure DRS units against movement by means of two locks (5).
4. Connect DMX controller and LED modules.
5. Connect the ArcPower DRS to the mains.
6. Set the ArcControl DRS. Read documentation of connected LED modules before setting output current for each ArcZone DRS.



Note: If a LED module contains a temperature sensor, only one the LED module can be connected to the ArcControl DRS (ArcZone DRS).

***Disconnect the ArcPower 70/200/600 DRS from AC power before connecting/ disconnecting any ArcControl unit or ArcZone units or LED modules!
Run the option Load Test from the menu Service if you add/remove ArcZone DRS/ ArcZone DRS Pixel or LED module from DRS.***

If the ArcZones are installed in two rows, max. length of the cable connecting both rows of ArcZones must not exceed 2m.

4.1. Dots connection

Dots (ArcDot-CE, ArcDot-US, ArcSource Outdoor 4MC-Pixel-CE, ArcSource Out 4MC Pixel -US) can be interconnected directly or by using T-connectors see the picture below.

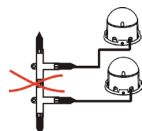
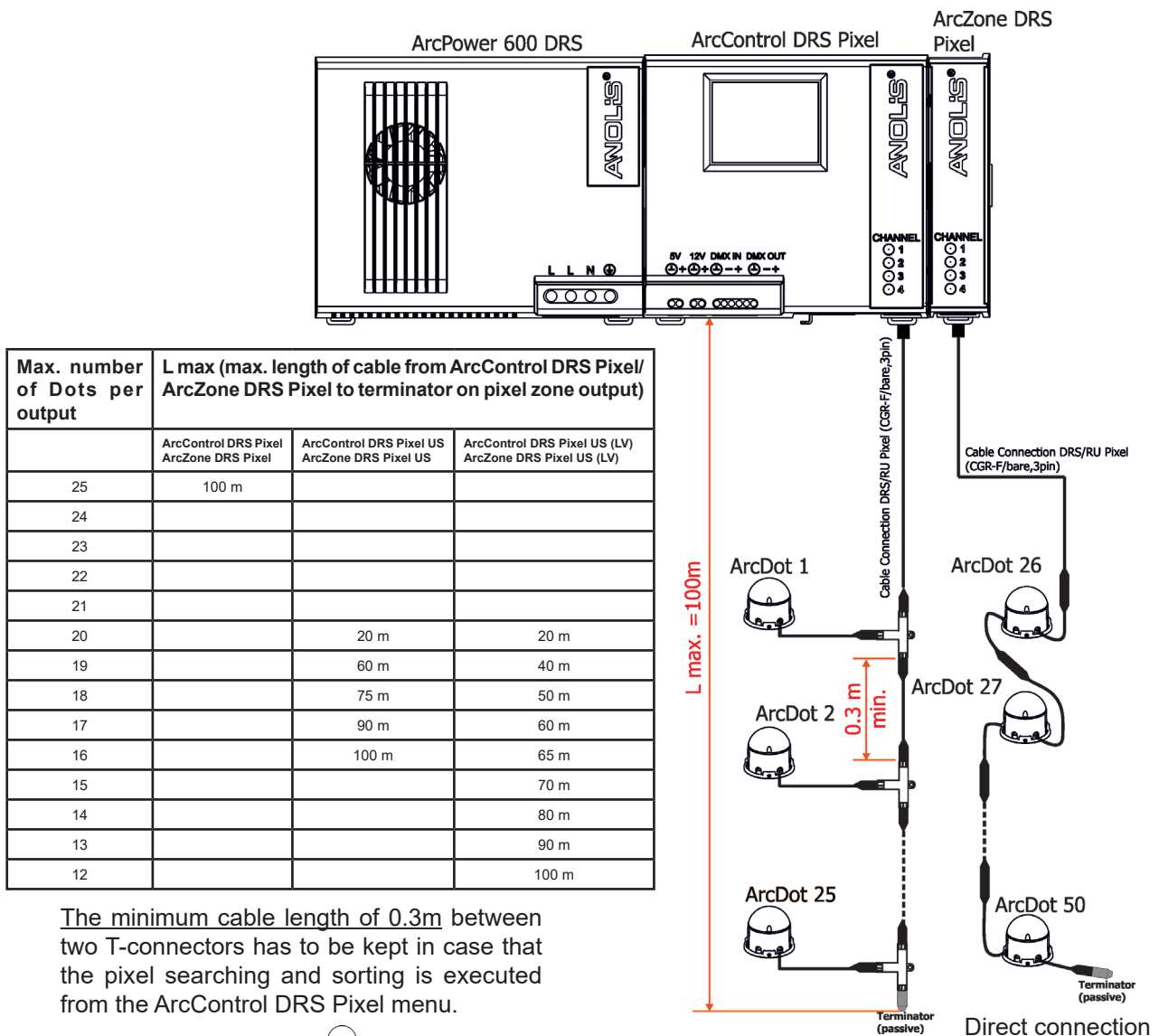
To connect Dots

1. Disconnect the DRS from mains.
2. Connect Dots to the ArcControl DRS Pixel and ArcZones DRS Pixel. Number of dots depends on version of the ArcControl DRS Pixel/ArcZone DRS Pixel, used ArcPower DRS and length of cables in the installation (see table below). Connect active terminators to each Dots line.
3. Connect the DRSI to mains.
4. Run procedures "Search Pix" and "Sort Pix" from the menu "Configuration" (Configuration-->ArcZone Pixel--> Commands) on the ArcControl DRS Pixel.
5. Save adjusted values using the the option "Save" It is important to save Dots configuration at every change in the menu "Commands".
6. Disconnect the DRS from mains and replace active terminators by passive terminators*.
7. Connect the DRS to mains and to the pixel control system (e.g. Robe Media Server).

* Active terminators can remain permanent connected if there is place for them (they are bigger than passive terminators).

Always disconnect the DRS from AC power before connecting/disconnecting pixel module!

Example of installation:



Connection by means of T-connectors

5. Global and local effects

The ArcControl DRS uses two types of effects: global and local.

The global effects have priority to the local effects (= effects of LED modules at each zone).

The global effects always use the first 4 DMX channels from used DMX range (which begins by DMX address).

The global effects go for all LED zones on all zones.

Global effects (non-pixel module only)

The effects are used in DMX mode 1, 2 and 3.

List of global effects (if DMX address=1)

| Used channel | Effect |
|--------------|--------------|
| 1 | Colour Macro |
| 2 | Strobe |
| 3 | Dimmer |
| 4 | Dimmer fine |

Example: DMX address=1, channels 1-4 are used for global effects

DMX address =55, channels 55-58 are used for global effects

You cannot change the order of the effect assignment to DMX channels 1-4 (55-58) and this assignment goes for DMX modes 1, 2 and 3 and all type of LED modules, no matter if all the effects are included in these types of LED modules.

Local effects (non-pixel module only)

The list of local effects depends on selected DMX mode and used LED modules. These effects are not used for pixel control.

Mode 1 (Fixed order) - default

In this mode zones are controlled together, the DRS behaves as one fixture (regardless of number of zones and connected LED modules) with the following channels, order of channels cannot be changed.

| RGBW module | RGB module | SW module | Single C. module | White module |
|-------------|------------|-----------------|------------------|--------------|
| Red | Red | Warm white | Colour | White |
| Red Fine | Red Fine | Warm white Fine | Colour Fine | White Fine |
| Green | Green | Cool white | | |
| Green Fine | Green Fine | Cool white Fine | | |
| Blue | Blue | | | |
| Blue Fine | Blue Fine | | | |
| White | | | | |
| White Fine | | | | |

Custom (number of channels can be set)

CH1 (Channel 1)
 CH1F (Channel 1 Fine)
 CH2 (Channel 2)
 CH2F (Channel 2 Fine)
 CH3 (Channel 3)
 CH3F (Channel 3 Fine)
 CH4 (Channel 4)
 CH4F (Channel 4 Fine)

Mode 2 (8-bit)

Each zone can be controlled separately in 8-bit mode.

| RGBW module | RGB module | SW module | Single C. module | White module |
|--------------|--------------|-----------------------|------------------|--------------|
| Red | Red | Warm white | Colour | White |
| Green | Green | Cool white | Dimmer | Dimmer |
| Blue | Blue | Dimmer | | |
| White | Dimmer | Colour macro (whites) | | |
| Dimmer | Colour macro | | | |
| Colour macro | | | | |

Custom (number of channels can be set)

CH1 (Channel 1)
 CH2 (Channel 2)
 CH3 (Channel 3)
 CH4 (Channel 4)
 Dimmer

Mode 3 (16-bit)

Each zone can be controlled separately in 16-bit mode.

| RGBW module | RGB module | SW module | Single C. module | White module |
|--------------------|-------------------|-----------------------|-------------------------|---------------------|
| Red | Red | Warm white | Colour | White |
| Red Fine | Red Fine | Warm white Fine | Colour Fine | White Fine |
| Green | Green | Cool white | Dimmer | Dimmer |
| Green Fine | Green Fine | Cool white Fine | Dimmer Fine | Dimmer Fine |
| Blue | Blue | Dimmer | | |
| Blue Fine | Blue Fine | Dimmer Fine | | |
| White | Dimmer | Colour macro (whites) | | |
| White Fine | Dimmer Fine | | | |
| Dimmer | Colour macro | | | |
| Dimmer Fine | | | | |
| Colour macro | | | | |

Custom (number of channels can be set)

CH1 (Channel 1)
CH1 Fine (Channel 1 fine)
CH2 (Channel 2)
CH2 Fine (Channel 2 fine)
CH3 (Channel 3)
CH3 Fine (Channel 3 fine)
CH4 (Channel 4)
CH4 Fine (Channel 4 fine)
Dimmer
Dimmer fine

Mode 4 (Fixed order - compatible with the ArcControl 1)

In this mode zones are controlled together, the DRS behaves as one fixture (regardless of number of zones and connected LED modules) , order of channels cannot be changed. DMX address is automatically set at 1 (but can be changed).

This mode does not use global effects.

| RGBW module | RGB module | SW module | Single C. module | White module |
|--------------------|-------------------|------------------|-------------------------|---------------------|
| Red | Red | Warm white | Colour | White |
| Green | Green | Cool white | Dimmer | Dimmer |
| Blue | Blue | Dimmer | | |
| White | Dimmer | | | |
| Dimmer | | | | |

Mode 5 (8-bit without Global effects)

The mode 5 is similar to the Mode 2 but without colour macros, dimmer and Global effects. DMX address is automatically set at 1 (but can be changed)

| RGBW module | RGB module | SW module | Single C. module | White module |
|--------------------|-------------------|------------------|-------------------------|---------------------|
| Red | Red | Warm white | Colour | White |
| Green | Green | Cool white | | |
| Blue | Blue | | | |
| White | | | | |

Custom (number of channels can be set)

CH1 (Channel 1)
CH2 (Channel 2)
CH3 (Channel 3)
CH4 (Channel 4)

Mode 6 (16-bit without Global effects)

The mode 6 is similar to the Mode 5, in addition the mode have fine channels. DMX address is automatically set at 1 (but can be changed)

| RGBW module | RGB module | SW module | Single C. module | White module |
|--------------------|-------------------|------------------|-------------------------|---------------------|
| Red | Red | Warm white | Colour | White |
| Red Fine | Red Fine | Warm white Fine | Colour Fine | White Fine |
| Green | Green | Cool white | | |
| Green Fine | Green Fine | Cool white Fine | | |
| Blue | Blue | | | |
| Blue Fine | Blue Fine | | | |
| White | | | | |
| White Fine | | | | |

Custom (number of channels can be set)

- CH1 (Channel 1)
- CH1 Fine (Channel 1 fine)
- CH2 (Channel 2)
- CH2 Fine (Channel 2 fine)
- CH3 (Channel 3)
- CH3 Fine (Channel 3 fine)
- CH4 (Channel 4)
- CH4 Fine (Channel 4 fine)

DMX table for local and global effects

| DMX Value | Local Effects | Type of control |
|-----------|---|-----------------|
| 0-255 | Red Red LEDs saturation control (0-->100%) | proportional |
| 0-255 | Red Fine Red LEDs saturation control fine (min.-->max.) | proportional |
| 0-255 | Green Green LEDs saturation control (0-->100%) | proportional |
| 0-255 | Green Fine Green LEDs saturation control fine (min.-->max.) | proportional |
| 0-255 | Blue Blue LEDs saturation control (0-->100%) | proportional |
| 0-255 | Blue Fine Blue LEDs saturation control fine (min.-->max.) | proportional |
| 0-255 | White White LEDs saturation control (0-->100%) | proportional |
| 0-255 | White Fine White LEDs saturation control fine (min.-->max.) | proportional |
| 0-255 | Warm White Warm white LEDs saturation control (0-->100%) | proportional |
| 0-255 | Warm White Fine Warm white LEDs saturation control fine (min.-->max.) | proportional |
| 0-255 | Cool White Cool white LEDs saturation control (0-->100%) | proportional |
| 0-255 | Cool White Fine Cool white LEDs saturation control fine (min.-->max.) | proportional |
| 0-255 | Colour Single colour LEDs saturation control (0-->100%) | proportional |
| 0-255 | Colour Fine Single Colour LEDs saturation control fine (min.-->max.) | proportional |
| 0-255 | White White LEDs saturation control (0-->100%) | proportional |
| 0-255 | White Fine White LEDs saturation control fine (min.-->max.) | proportional |
| 0-255 | CH 1/2/3/4 (Channel 1/2/3/4) LEDs saturation control (0-->100%) | proportional |
| 0-255 | CH 1/2/3/4 Fine (Channel 1/2/3/4 fine) LEDs saturation control fine (min.-->max.) | proportional |
| | | |
| DMX Value | Global Effects | Type of control |
| 0-31 | Strobe Shutter closed | step |
| 32-63 | Shutter open | step |
| 64-95 | Strobe-effect from slow to fast | proportional |
| 96-127 | Shutter open | step |
| 128-143 | Opening pulses in sequences from slow to fast | proportional |
| 144-159 | Closing pulses in sequences from fast to slow | proportional |
| 160-191 | Shutter open | step |
| 192-223 | Random strobe-effects from slow to fast | proportional |
| 224-255 | Shutter open | step |

| DMX Value | Local + Global Effects | Type of control |
|-----------|---|-----------------|
| 0-255 | Dimmer Dimmer intensity (0-->100%) | proportional |
| 0-255 | Dimmer Fine Dimmer intensity fine (min.-->max.) | proportional |
| 0 | Colour macro (RGB/RGBW modules) No function | step |
| 1-15 | Whites from warm -->cool | proportional |
| 16 | Blue (Blue=full, Red+Green+White=0) | step |
| 17-55 | Red=0, Green-->up, Blue =full, White=0 | proportional |
| 56 | Light Blue (Red=0, Green=full, Blue =full, White=0) | step |
| 57-95 | Red=0, Green=full, Blue-->down, White=0 | proportional |
| 96 | Green (Red=0, Green=full, Blue =0, White=0) | step |
| 97-134 | Red-->up, Green=full, Blue=0, White=0 | proportional |
| 135 | Yellow-green (Red=full, Green=full, Blue=0, White=0) | step |
| 136-174 | Red=full, Green-->down, Blue=0, White=0 | proportional |
| 175 | Red (Red=full, Green=0, Blue=0, White=0) | step |
| 176-214 | Red=full, Green=0, Blue-->up, White=0 | proportional |
| 215 | Magenta (Red=full, Green=0, Blue=full, White=0) | step |
| 216-254 | Red-->down, Green=0, Blue=full, White=0 | proportional |
| 255 | Blue (Red=0, Green=0, Blue=full, White=0) | step |
| 0 | Colour macro (SW modules) Warm white=full, Cool White=0 | step |
| 1-127 | Warm white=full, Cool white -->up | proportional |
| 128 | Warm white full, Cool White=full | step |
| 129-254 | Cool white=full, Warm white --> down | proportional |
| 255 | Cool white=full, Warm white=0 | step |

Example 1

Order of DMX channels for 2 LED zones (ArcControl DRS+one ArcZone DRS) for different LED modules (one LED module on each LED zone). Each zone is controlled separately.

DMX address=1, DMX mode 3 (16-bit)

| DMX Channel | RGBW modules Effect | SW modules Effect | Single colour modules Effect |
|-------------|----------------------|------------------------|------------------------------|
| 1 | Colour macro (G) | Colour macro (G) | Colour macro* (G) |
| 2 | Strobe (G) | Strobe (G) | Strobe (G) |
| 2 | Dimmer (G) | Dimmer (G) | Dimmer (G) |
| 4 | Dimmer fine (G) | Dimmer fine (G) | Dimmer Fine(G) |
| 5 | Red -zone 1 | Warm white- zone 1 | Colour -zone 1 |
| 6 | Red fine -zone 1 | Warm white fine-zone 1 | Colour fine-zone 1 |
| 7 | Green -zone 1 | Cool white -zone 1 | Dimmer -zone 1 |
| 8 | Green fine -zone 1 | Cool white fine-zone 1 | Dimmer fine-zone 1 |
| 9 | Blue -zone 1 | Dimmer -zone 1 | Colour -zone 2 |
| 10 | Blue Fine -zone 1 | Dimmer Fine-zone 1 | Colour fine-zone 2 |
| 11 | White -zone 1 | Colour macro -zone 1 | Dimmer -zone 2 |
| 12 | White fine - zone 1 | Warm white-zone 2 | Dimmer fine-zone 2 |
| 13 | Dimmer -zone 1 | Warm fine-zone 2 | |
| 14 | Dimmer Fine-zone 1 | Cool white-zone 2 | |
| 15 | Colour macro -zone 1 | Cool white fine-zone 2 | |
| 16 | Red -zone 2 | Dimmer -zone 2 | |
| 17 | Red fine-zone 2 | Dimmer fine-zone 2 | |
| 18 | Green -zone 2 | Colour macro -zone 2 | |
| 19 | Green fine-zone 2 | | |
| 20 | Blue -zone 2 | | |
| 21 | Blue Fine-zone 2 | | |
| 22 | White -zone 2 | | |
| 23 | White Fine -zone 2 | | |
| 24 | Dimmer -zone 2 | | |
| 25 | Dimmer Fine-zone 2 | | |
| 26 | Colour macro -zone 2 | | |

*no function

(G)=Global effect for all zones

Example 2

Order of DMX channels for 2 LED zones (ArcControl DRS+one ArcZone DRS) for different LED modules (one LED module on each LED zone). Both zones controlled together.

Correct type of LED module has to be assigned to the corresponding fixture type via the menu item "System Config" (menu Configuration). If this assigning is not realized, SW modules and single colour modules will use 8 local channels for control (as RGBW modules).

DMX address=1, DMX mode 1 (fixed)

| DMX Channel | RGBW modules Effect | SW modules Effect | Single colour modules Effect |
|--------------------|----------------------------|-----------------------------|-------------------------------------|
| 1 | Colour macro (G) | Colour macro (G) | Colour macro* (G) |
| 2 | Strobe (G) | Strobe (G) | Strobe (G) |
| 3 | Dimmer (G) | Dimmer (G) | Dimmer (G) |
| 4 | Dimmer fine (G) | Dimmer fine (G) | Dimmer Fine(G) |
| 5 | Red (zone 1 + 2) | Warm white (zone 1+2) | Colour (zone 1+2) |
| 6 | Red fine (zone 1+ 2) | Warm white fine (zone 1+2) | Colour fine (zone 1+2) |
| 7 | Green (zone 1+2) | Cool white (zone 1+2) | |
| 8 | Green Fine (zone 1+2) | Cool white fine (zone 1+2) | |
| 9 | Blue (zone 1+2) | | |
| 10 | Blue Fine (zone 1+2) | | |
| 11 | White (zone 1+2) | | |
| 12 | White Fine (zone 1+2) | | |

*no function

(G)=Global effect for all zones

Example 3

Order of DMX channels for 2 LED zones (ArcControl DRS+one ArcZone DRS) for different LED modules (one LED module on each LED zone). Each zone is controlled separately.

DMX address=1, DMX mode 5 (8-bit without Global effects)

| DMX Channel | RGBW modules Effect | SW modules Effect | Single colour modules Effect |
|--------------------|----------------------------|--------------------------|-------------------------------------|
| 1 | Red -zone 1 | Warm white- zone 1 | Colour -zone 1 |
| 2 | Green -zone 1 | Cool white -zone 1 | Colour -zone 2 |
| 3 | Blue -zone 1 | Warm white- zone 2 | |
| 4 | White -zone 1 | Cool white -zone 2 | |
| 5 | Red -zone 2 | | |
| 6 | Green -zone 2 | | |
| 7 | Blue -zone 2 | | |
| 8 | White -zone 2 | | |

DMX table for pixel modules

| 3CH mode (RGB) | 4CH mode (RGBW) | Value | Function | Type of control |
|------------------|-----------------|-------|---|-----------------|
| Pixel 1 | | | | |
| 1 | 1 | 0-255 | Red Red LED saturation control (0-100%) | proportional |
| 2 | 2 | 0-255 | Green Green LED saturation control (0-100%) | proportional |
| 3 | 3 | 0-255 | Blue Blue LED saturation control (0-100%) | proportional |
| - | 4 | 0-255 | White White LED saturation control (0-100%) | proportional |
| Pixel 2 | | | | |
| 4 | 5 | 0-255 | Red Red LED saturation control (0-100%) | proportional |
| 5 | 6 | 0-255 | Green Green LED saturation control (0-100%) | proportional |
| 6 | 7 | 0-255 | Blue Blue LED saturation control (0-100%) | proportional |
| - | 8 | 0-255 | White White LED saturation control (0-100%) | proportional |
| Pixel 3 | | | | |
| 7 | 9 | 0-255 | Red Red LED saturation control (0-100%) | proportional |
| 8 | 10 | 0-255 | Green Green LED saturation control (0-100%) | proportional |
| 9 | 11 | 0-255 | Blue Blue LED saturation control (0-100%) | proportional |
| - | 12 | 0-255 | White White LED saturation control (0-100%) | proportional |
| : | | | | |
| Pixel 128 | | | | |
| 382 | 509 | 0-255 | Red Red LED saturation control (0-100%) | proportional |
| 383 | 510 | 0-255 | Green Green LED saturation control (0-100%) | proportional |
| 384 | 511 | 0-255 | Blue Blue LED saturation control (0-100%) | proportional |
| - | 512 | 0-255 | White White LED saturation control (0-100%) | proportional |
| : | | | | |
| Pixel 170 | | | | |
| 508 | - | 0-255 | Red Red LED saturation control (0-100%) | proportional |
| 509 | - | 0-255 | Green Green LED saturation control (0-100%) | proportional |
| 510 | - | 0-255 | Blue Blue LED saturation control (0-100%) | proportional |
| - | - | 0-255 | White White LED saturation control (0-100%) | proportional |

6. ArcControl DRS menu

The ArcControl DRS menu allows you to set the fixture according to your needs, obtain information on its operation and program it, if it has to be used in a Stand-alone mode.

The fixture's menu can be controlled directly by touching desired icon.








After switching the fixture on, the display shows the initial screen for a few seconds



and after that the main menu screen will appear.



Icons used in the touch screen menu.

-  - [back arrow] used to move to the previous screen
-  - [forward arrow] used to move to the next screen.
-  - [up arrow] used to scroll menu up.
-  - [down arrow] used to scroll menu up.
-  - [confirm] used to save adjusted values, to leave menu or to perform desired action.
-  - [cancel] used to leave menu item without saving changes.
-  - [back arrow] used to move to the main screen

6.1 Configuration



DMX Address ---Use the menu item to set DMX address of the ArcControl DRS, which is defined as the first channel from which the ArcControl DRS will respond to the DMX controller.

Selected DMX address has to allow inserting all channels (in set DMX mode) to the one DMX universe (512 channels). Example: DRS with 4 zones, DMX mode 3 (4 global channels +4 x 11 local channels = 48 channels total), max. DMX address can be set at 465.

Note: If you change DMX address of the LED zone, all channel offsets will be automatically re-counted to the new DMX address.

DMX mode --- The menu item allows you to select desired DMX mode (Mode 1-fixed, Mode 2-8 bit, Mode 3-full 16 bit, Mode 4-fixed order, Mode 5- without global effects).

DMX In --- The menu item allows you to choose type of fixture control:

Wired - DMX signal is received by means of the standard DMX cable.

Ethernet- The signal is received by means of the Ethernet cable, supported protocols are ArtNet, MANet, MANet2, sACN.

Ethernet --- The menu allows needed settings for Ethernet operation

Ethernet mode - The option allows you to select desired protocol: ArtNet, gMA1, gMA2, sACN.

Default IP Address - Preset IP address, you can change only first byte of IP address (2 or 10) e.g. **002**.XXX.XXX.XXX or **010**.XXX.XXX.XXX.

Custom IP Address - The option enables to set up all bytes of IP address.

Net Mask - The option enables to set up all bytes of Net Mask.

ArtNet Universe - Use this item to set a Universe (0-255). The Universe is a single DMX 512 frame of 512 channels.

MANet I/2 Universe - Use this item to set a Universe (1-256).

MaNet session ID - Use this item to set a MANet session ID (1-32).

sACN Universe - Use this item to set a Universe (1-32000).

sACN Priority - The value of this item can be set in range of 0-255.

System config --- The menu allows you to change setting of desired zone. Use + and - icons to select zone. After that you can change setting for the following items (Number of displayed items depends on selected DMX mode and type of zone).

LED Zone

Type of connected LED module

Current

DMX offsets (only for DMX modes which allow this function, the red background of offset cautions that the number is wrong)

Power limiting

Channels (if custom LED module is selected).

Pixel Zone

DMX Offset (The red background of offsets cautions that the number is wrong)

Note: we recommend to use this menu for changing setting of some zone (if it is needed) instead of using menu "Setup Assistant" because in the "Setup Assistant" you have to browse all zones in order to save changes made in one zone and as the Setup Assistant always re-counts DMX channel offsets, some changes in DMX channel offsets have to be set again.

Setup Assistant --- The menu serves as a guide of full configuration of DRS.

Note. Displayed options depends on selected DMX mode. If Mode 1 (fixed) is selected, the Setup Assistant is unavailable.

Procedure.

1. Select type of LED module connected to the zone 1 and touch (➤).

RGBW - red/green/ blue/white LED module

RGB - red/green/blue LED module

SW - smart white LED module (with warm white and cool white LEDs).

Single C. - single colour LED module

White - white LED module

Custom - custom LED module (the item requires to set number of channels)

2. Check offered channel offset for each effect on the zone 1 and touch desired channel if you need to change its offset. If DMX mode with "fine" channels is selected (Mode 3 -16-bit), the fine channels are not shown on the screen, but each fine channel is automatically assigned to the following channel after its coarse channel (e.g. if Red= DMX channel 6, Red Fine= DMX channel 7; if Blue=DMX channel 10, Blue Fine= DMX channel 11). If you are changing offered channel offset, the adjusted channel is displayed at the bottom left corner of the screen and has to be on a white background. The red background cautions that the number of the channel offset is wrong (channel is reserved for global effects) or the number is too high.

Touch (➤) to go on the next screen.

Note: If you change DMX channel offset, the channel offset on the following zone will be re-counted in relation to this changed offset.

Range of used DMX channels you can find out by means of the item "DMX Address Range" in the menu Info.

3. Choose desired current (350mA, 700mA, Custom) for zone 1 and touch (➤).Item Custom allows you to set LED current from 100mA to 1000mA (by 4 mA steps). For SW LED modules is current range: 100mA-900mA.

Note: Always check the max. allowed current for LED modules connected to the LED Zones because current overloading of the LED modules can destroy them.

4. If you wish to copy the setting of the zone 1 to the zone 2 choose option " Copy setting from Zone 01" (this

option is not be offered at last zone) .

If you need to set the zone 2 differently from the zone 1, select option " No, go to next step" and configure the zone 2. In this way set the rest of zones (2-16).

Note: The ArcControl DRS detects the number of connected LED Zones (Pixel Zones) and only this number of zones is available in the menu Setup Assistant. The zone 1 is a zone on the ArcControl DRS. If you wish to set e.g. 8 LED zones in all, 7 ArcZones DRS have to be connected to the ArcControl DRS.

5. Select type of used power supply and wait until load test is completed. In case that some error message will appear on display, go to the menu "Service" and run option "Diagnostic". The DRS has over load protection and correct type of the power supply is very important. In case, when you select (by mistake) power supply with lower power, the current to LED modules will be reduced to keep it at level matches selected power supply. It means, that LED modules will not light on max. intensity.

If the power supply unit is not selected, internal function of a power limiting is not active and the error message "Power supply type not set" will appear.

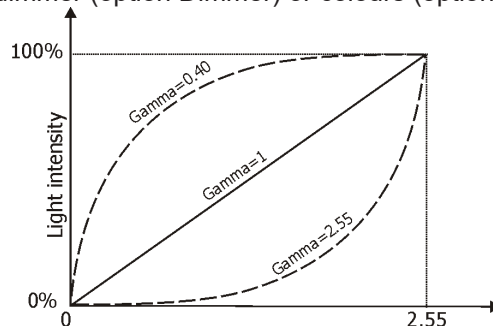
Note: If you change DMX address of the LED Zone (Pixel Zone) (menu "DMX Address") eg. from 001 to 050, all channel offsets will be automatically re-counted to the new DMX address.

Power limiting --- The menu item allows you to reduce LED current on desired zone. If this function is on (red icon), the sum of currents of all channels is limited to 1200mA.

Examples for current setting 350mA:

Channel 1: 300mA
Channel 2: 300mA
Channel 3: 300mA
Channel 4: 300mA
or
Channel 1: 150mA
Channel 2: 350mA
Channel 3: 350mA
Channel 4: 350mA
etc

Linear/Exponential --- This menu item allows you to choose desired dimmer running. Selected dimmer curve can influence local and global dimmer (option Dimmer) or colours (option Channels).



Fade Time --- The menu item allows you to set values from a range of 0.1-25.5 which correspond to a range of 0 sec. to 25.4 sec (0.1=0 sec, 0.2=0.1 sec, 0.32=0.2sec.....)This time influences a response on received DMX value (e.g. dimmer is currently set at 15 DMX, coming DMX value is 50 and the Fade Time=10.1 (=10 sec). The light intensity will go from 15 DMX to 255 DMX during 10 seconds continuously without a jump).

If the Fade Time =0, DRS allows a smooth changing of the light intensity (time between coming DMX values of the light intensity has to be =< 0.5 sec) and also a jump change of the light intensity (if time between coming DMX values of the light intensity is > 0.5 sec).

Pixel Zone Setting --- This menu allows you to set all connected ArcZones DRS Pixel.

Commands

Search Pix - this function checks all pixel modules connected to the ArcZones DRS Pixel.

Sort Pix - conected pixel modules are sorted by the following rule:

ArcPix modules are sorted according to their IDs.

ArcDot modules are sorted according to their distances from the ArcZones DRS Pixel (the active terminator for the ArcDot has to be connected to the last ArcDot at each ArcZone DRS Pixel).

Save - this option saves information found in during running options "Search Pix" and "Sort Pix".

Test - use this menu item to check if all pixel modules light in pre-defined colours.

Test Single - pixels light one by one.

Test All - all pixels light at the same time.

Stop Test - the item finishes a test procedure.

Fade Time For Pix - the menu allows you to set fade time for all pixel modules.

As Global - fade time is taken from global fade time set in the menu item "Fade Time" (menu Configuration)

Separate - allows you you to set fade time (0-25,5sec.) independently on the global fade time.

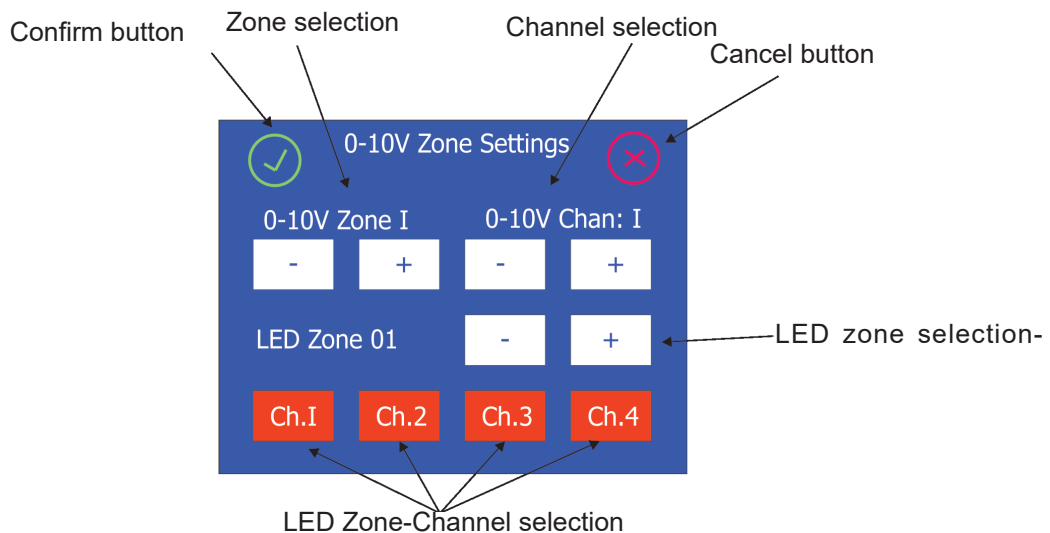
3/4ch Mode - the menu offers 3-channel (RGB) or 4-channel (RGBW) mode for a pixel control.

Pix Curve - the menu allows you to set a dimmer running for all pixel modules.

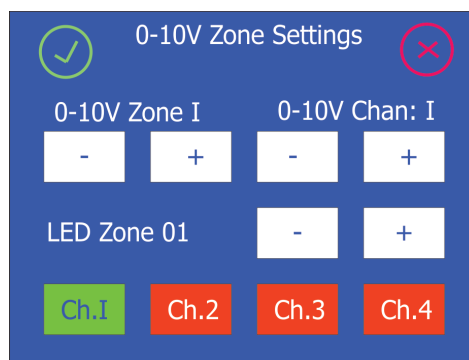
As Global - dimmer curve is taken from a global dimmer curve set in the menu item "Linear/Exponential" (menu Configuration).

Separate - allows you you to set a dimmer curve independently on the global dimmer curve (menu "Linear/Exponential").

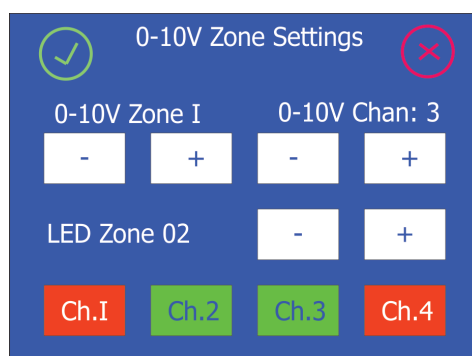
0-10V Zone Setting --- Use the menu item to assign the ArcZone DRS 0-10V channels to the LED Zones channels.



Note: If the ArcZone DRS 0-10V Zone is not installed, the message "no 0-10V zone to control" will appear.
Examples:



The channel 1 from LED Zone 1 is assigned to the channel 1 of the 0-10V Zone 1. When the voltage on the channel 1 is changed in range 0-10V, the channel 1 of the LED Zone 1 is controlled from min. to max. saturation (e.g. red) .



The channels 2 and 3 from LED Zone 2 are assigned to the channel 3 of the 0-10V Zone 1. When the voltage on the channel 3 is changed in range 0-10V, the channels 2 and 3 of the LED Zone 2 are controlled from 0 to full saturation min. to max. saturation (e.g. green + blue together).

Fan Zone Setting --- Use the menu item to set the ArcZone DRS Fan.

Type of Sensor 1 - allows you to select desired type of a temperature sensor (PT500/PT1000/NTC) for temp. sensor input 1.

Type of Sensor 2 - allows you to select desired type of a temperature sensor (PT500/PT1000/NTC) for temp. sensor input 2.

Fan 1 Voltage - allows you to set desired voltage (12V/24V/48V) for supply of a fan connected to the fan output 1

Fan 2 Voltage - allows you to set desired voltage (12V/24V/48V) for supply of a fan connected to the fan output 2.

Note: max. current consumption of 1 A for fan must not be exceeded neither at 12V or 24V or 48V.

Fan 1 Config - allows you to select a way of control of the fan 1:

Min. Pwr - the fan 1 runs at 50% of its set voltage (item "Fan 1 Voltage").
E.g. if the item Fan 1 Voltage is set at 24V, the fan 1 will run at 12V.

Max. Pwr - the fan 1 runs at 100% of its set voltage (item "Fan 1 Voltage").
E.g. if the item Fan 1 Voltage is set at 24V, the fan 1 will run at 24V.

By Sens 1 - the fan 1 runs according to the value set in the menu "Fan 1 Threshold"

By Sens 2 - the fan 1 runs according to the value set in the menu "Fan 2 Threshold".

Fan 2 Config - allows you to select a way of control of the fan 2:

Min. Pwr - the fan 2 runs at 50% of its set voltage (item "Fan 2 Voltage").
E.g. if the item Fan 2 Voltage is set at 48V, the fan 2 will run at 24V.

Max. Pwr - the fan 2 runs at 100% of its set voltage (item "Fan 2 Voltage").
E.g. if the item Fan 2 Voltage is set at 48V, the fan 2 will run at 48V.

By Sens 1 - the fan 2 runs according to the value set in the menu "Fan 1 Threshold"

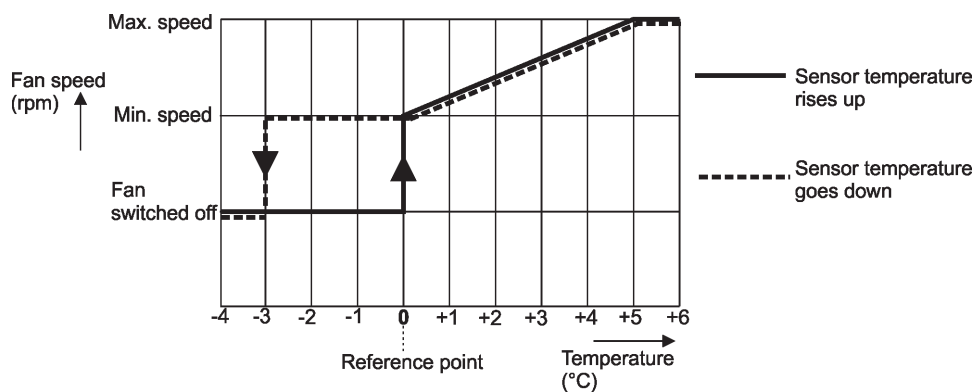
By Sens 2 - the fan 2 runs according to the value set in the menu "Fan 2 Threshold".

Note: Both fans can be controlled by one temperature sensor.

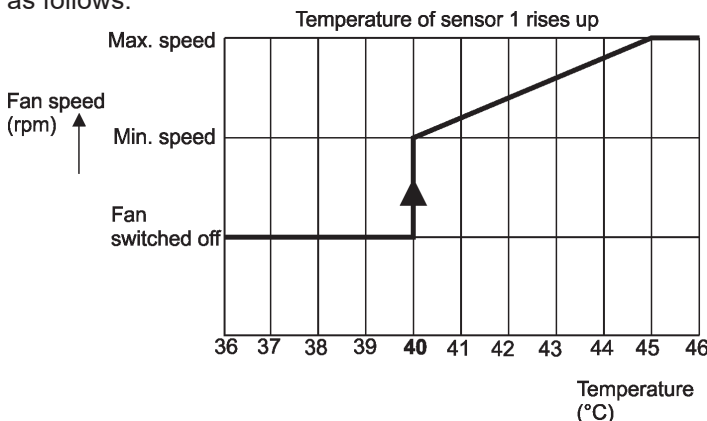
Fan 1 Threshold - allows you to set a temperature (10°-60°) which will be used for a control of the fan 1 speed.

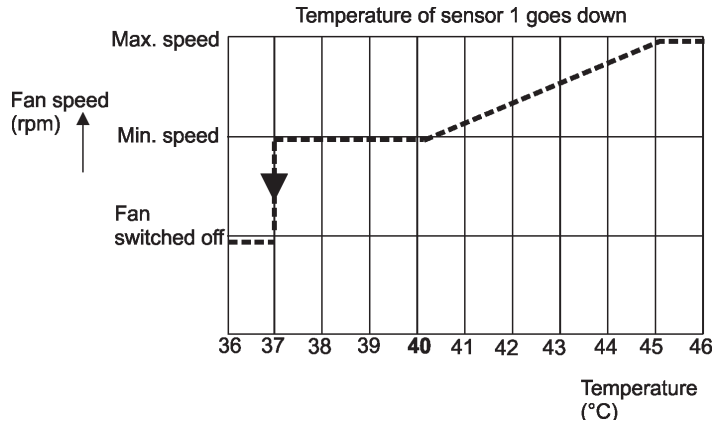
Fan 2 Threshold - allows you to set a temperature (10°-60°) which will be used for a control of the fan 2 speed.

Relationship between a temperature set in the Fan 1 Threshold (Fan 2 Threshold) menu and rpm describes the graph below. Ascending and descending curves do not have the same shape:



E.g. If a temperature in the Fan1 Threshold menu is set at 40°C, the controlled fan will behave as follows:





Fan 1 RPM Sens. - allows you to activate measuring of fan 1 revolutions if the fan is equipped with three lead wires (+,-, output signal).

Not Available - select this option if the fan 1 is not equipped with 3rd wire for measuring of rpm.

Available - select this option if the fan 1 is equipped with 3rd wire for measuring of rpm.

Fan 2 RPM Sens. - allows you to activate measuring of fan 2 revolutions if the fan is equipped with three lead wires (+,-, output signal).

Not Available - select this option if the fan 2 is not equipped with 3rd wire for measuring of rpm.

Available - select this option if the fan 2 is equipped with 3rd wire for measuring of rpm.

Main Power Fan --- Use the menu item to set a way of control of fan(s) in the ArcPower DRS (ArcPower 70 DRS/ArcPower 200 DRS/ArcPower 600 DRS).

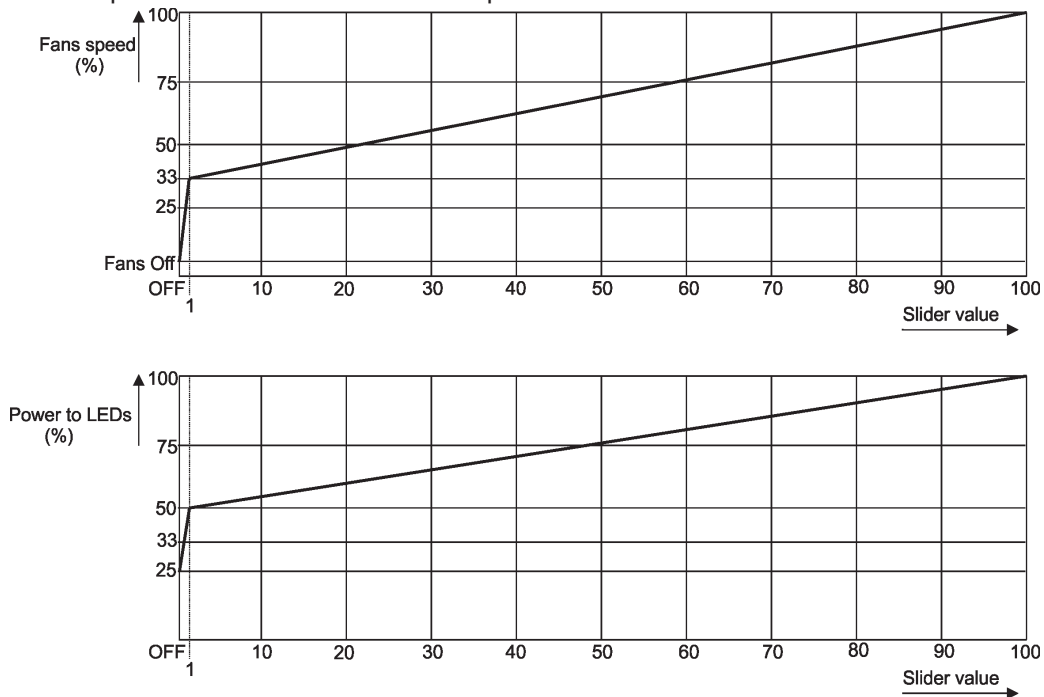
Auto - revolutions of fans depend on used ArcPower DRS and its load. If a current load of used ArcPower DRS falls below 20 W, the fans will stop operation.

If the current load of used ArcPower DRS exceeds 30 W, the fans will start operation at min. revolutions (=35% of max. revolutions). Fans speed will increase depending on increasing load.

Max - fans operate on max. revolutions.

Quiet - fans revolutions (noise) can be set by means of the slider in the range of 1-100 (100=max. rpm). OFF=fans off. Set value is a max. speed limit for fans (revolutions will move in range of min. revs to set max. revs, depend on current load). Set max. revolutions of fans influence power to LEDs.

Relationship between fans revolutions and power to LEDs:



E.g. If the slider is set at 60, fans will operate in the range min. revs - 75% max. revs depend on current load.

Note: fans operate on max. speed for a short time when you switch on DRS or adjust fans speed from off to desired level via the slider.

Power Supply --- Use the menu item to select ArcPower DRS.

Note: The ArcPower 600DRS LV gives 450W instead of 600W.

6.2 Information



DRS overview --- Use the menu item to read:

DMX address

Connected zones

Installed load

Selected input (red letters=no signal is receiving, green letters=signal is receiving)

Power On Time (total number of operation years/days/hours since the ArcControl DRS has been fabricated).

Version --- Use the menu item to read the software version of the ArcControl DRS display and all connected ArcZones DRS/ArcZones DRS Pixel.

DMX address range --- Use this menu item to read the range of used DMX addresses for each type of the ArcZone (LED Zone, Pixel Zone....).

Zone Info --- Use this menu to read detail information of each zone:

Type of zone

Fixture type

Channels used

Power limiting

Current

Pixel Zone (number of connected pixels)

Note: ArcZone DRS 0-10V shows input value (0-255) on each channel (0=0V, 128= 5V, 255=10V).

By means of the + and - icons select desired zone.

Real Time Zone (ArcZone DRS RTC) shows a set time on line below the zone.

Temperatures --- Use this menu to read temperature of each zone and temperature of connected LED module (in case that LED module has a temperature sensor). Temperatures can be displayed in °C or °F.

By means of the + and - icons select desired zone.

Board actual / max. - a current temperature of the ArcZone DRS inside / max. temperature of the ArcZone DRS inside since the unit has been fabricated.

Board max R. - a max temperature of the ArcZone DRS inside since the counter was last reset. To reset this counter, touch the button shows this temperature.

LED actual / max. - a current temperature of the connected LED module / max. temperature of the connected LED module since the LED module has been fabricated.

LED max R. - a max temperature of the LED module since the counter was last reset. To reset this counter, touch the button shows this temperature.

RDM info --- Use this menu item to read the RDM number and the Device label.

DMX Channels overview --- Use this menu to display channels with associated effects, DMX addresses and DMX values for each effect. zone.

By means of the + and - icons select desired zone (or first or second part of desired zone).

Log View --- Use this menu to read important messages which have been recorded during fixture operation.

By means of the + and - icons browse through recorded logs.

Log nr. - number of the log

On date - date of recording of the log

On POT - power on time at recording the log.

Recorded events are colour differentiated:

Notice in red - error

Notice in yellow - warning

Notice in green - change of DRS setting.

6.3 Personality



Display Intensity - Use the menu to adjust the display intensity (1-min., 10- max).

Default Settings --- The menu item sets fixture parameters to the default (factory) values.

Note: All user settings will be lost except changes in the menu "Save Init Position" (menu Personality) and changes in the menu "Edit Program" (menu Stand alone).

Screen saver --- Use this menu item to switch OFF/ON the screen saver and to set time period (30 sec.-600 sec.) after that the display will be turned off. If the option Off is selected, the screen will permanently light.

Lock screen --- Use the menu item to lock the screen.

Set Unlock code --- The menu item allows you to enter password in order to prevent unauthorized person from changing setting of the fixture. This code is required after switching the fixture on and after waking from screen saver.

Disable Unlock code --- The menu item disables "Unlock code" function.

Emergency Trig --- The menu item allows you to set an action, which will be performed after pressing the emergency button (the button connected to the trigger input).

OFF - state of LED modules is without change.

ON - all fixtures full - if the function is on, all LEDs in LED modules (and Pixel modules) will light .

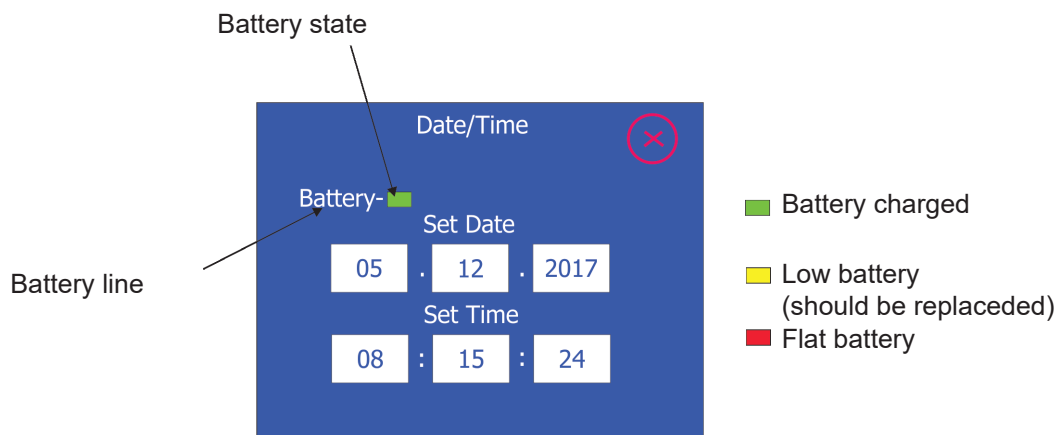
ON - all fixtures off - if the function is on, all LEDs in LED modules (and Pixel modules) will be turned off.

Date/Time --- The menu item allows you to set a current date and time. The date and time is saved in the DRS by one of the the following ways:

1. Into the control display of the ArcControl DRS (ArcControl DRS Pixel) if the ArcZone DRS RTC is not installed. In case that DRS has been disconnected from mains and after a lapse of time is connected to mains, both date and time continue from values before disconnecting mains. You have to set the date and time again to keep them current.

2. Into the ArcZone DRS RTC if the zone is installed.

In case that DRS has been disconnected from mains and after a lapse of time is connected to mains, both date and time run without interruption and still keep current values due to a battery of the ArcZone DRS RTC. A presence of the ArcZone DRS RTC in DRS is indicated by the Battery line on the screen.



ArcZone DRS RTC information.

Accuracy of the ArcZone DRS RTC is typically +/-5 seconds per year. The battery should be replaced when a yellow field is displayed on the battery line. Disconnect DRS from mains before changing the battery. After connecting DRS to mains, a self-test of battery is performed and then every 24 hours. After changing the battery, set the date and time again.

In case of low or flat battery, error messages will appear on the main screen - see the item Diagnostic (in menu Special Functions).

Init Position --- This menu allows you to set behaviour of DRS after switching it on if no DMX (or ArtNet or other Ethernet based protocol) signal is present.

Table - LED modules will light according the values saved in the item "Save As Init Position" in the menu Manual.

Prog.1 - DRS will run the program 1 - see menu Stand alone.

Prog.2 - DRS will run the program 2 - see menu Stand alone.

Prog.3 - DRS will run the program 3 - see menu Stand alone.

all OFF - All LED modules will be off, (default setting)

all ON - All LED modules will light at max. light output.

6.4 Manual mode



This menu serves for LED Zones only.

After entering this menu, both DMX and Ethernet inputs are blocked for the ArcControl DRS.

Channels For All --- Use the menu to set DMX values for local effects on all zones at the same time.

Channels By Zone --- Use the menu to set DMX values for local effects for each zone individually. By means of touching icons - and + you can browse zones.

Other By Zone --- Use this menu to set DMX values for dimmer, dimmer fine and colour macro for each zone.

Manual global --- Use this menu to set DMX values for global effects (go for all zones): dimmer, dimmer fine, colour macro, strobe.

Save Init Position --- Use this menu to set values which will be used after switching the fixture on without present of DMX or Ethernet signal. The item "Table" has to be selected in the menu item "Init Position" (menu Personality).

6.5 Stand-alone setting



After entering this menu, both DMX and Ethernet inputs are blocked for LED Zones. For Pixel Zones Ethernet input stays active.

Test sequence --- This menu item runs test sequence on all zones, you can set step time (1-9 sec.) and fade time (0-9sec.) for the test sequence.

Play Sequence - starts test sequence

Stop Sequence - stops test sequence

Play program --- Use this menu to run a desired program in a loop.

Edit Program --- Use this menu to create program or edit program.

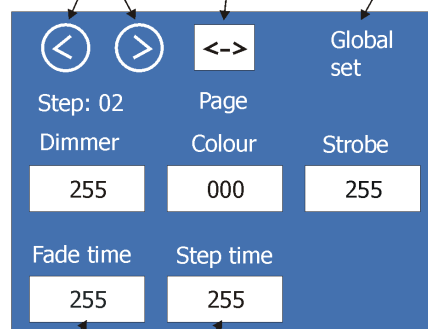
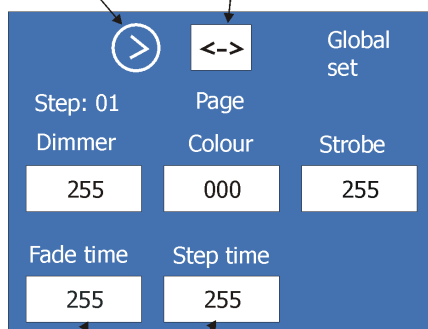
The fixture offers 3 programs with up to 40 steps each.

To create a program

1. After entering the item Edit program, select desired program (Program 1 -Program 3) and enter it.

2. The first programming screen allows you to edit global channels and fade/step time for prog. step. 1.

Step selection Change screen Step selection Change screen Global channels



Fade time (0-25.5 sec.) Step time (0-25.5 sec.)

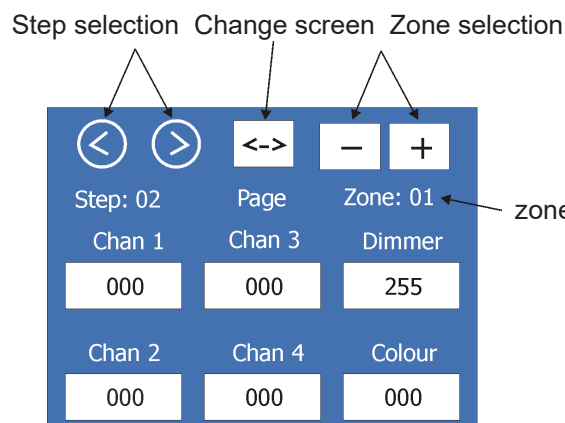
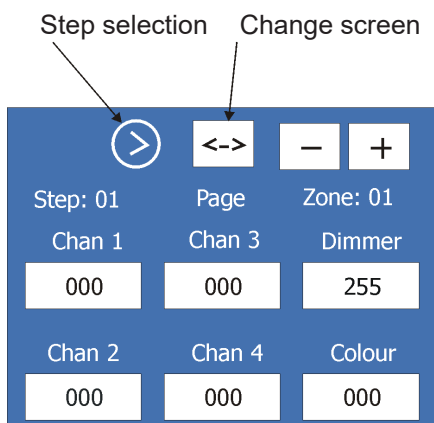
Fade time (0-25.5 sec.) Step time (0-25.5 sec.)

Note: 255=25.5sec., 100=10 sec., 10=1 sec. 1=0,1sec.

Use the buttons to change program step.


3. Touch the button to display the second screen which allows you to edit local channels for actual step.

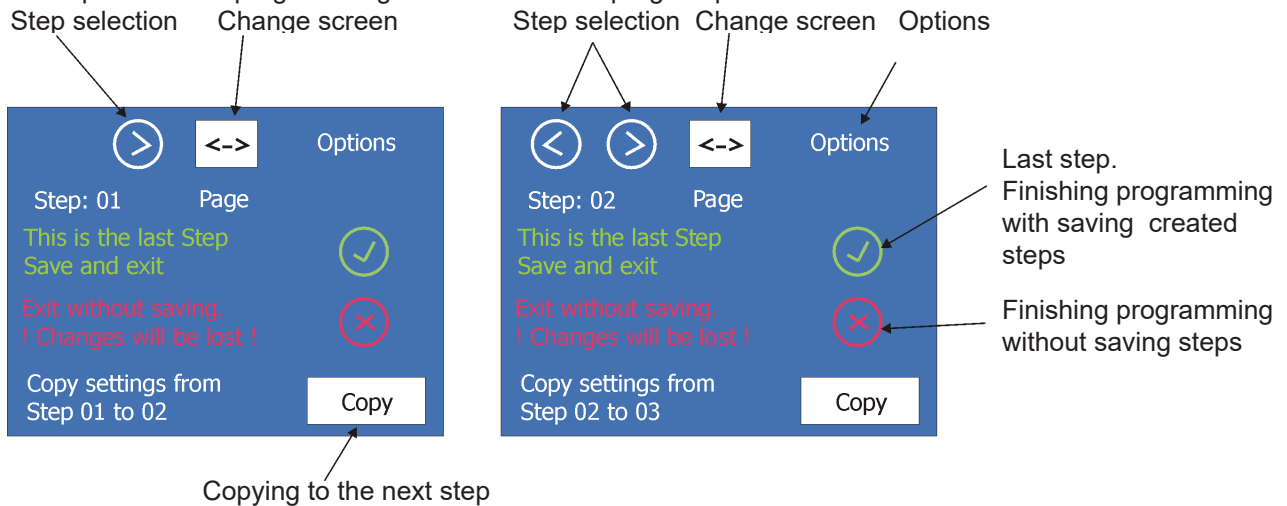
Use the buttons to display desired zone.



zone number

Use the buttons to change program step.

4. Touch the button  to display the third screen which allows you to copy settings from actual step to the next step or to finish programming and save created prog. steps.



Program 1 Run Set --- Use this menu to set a mode of the run of the program 1.

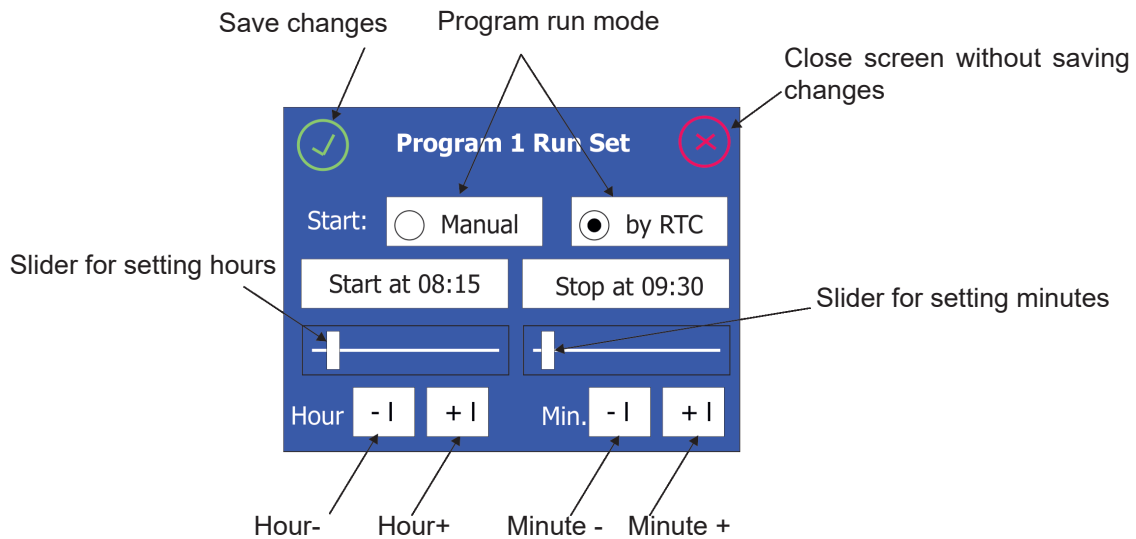
Program 2 Run Set --- Use this menu to set a mode of the run of the program 2.

Program 3 Run Set --- Use this menu to set a mode of the run of the program 3.

Every menu item stated above allows you to choose 2 modes of the program running.

Manual - If this option is selected, corresponding program can be run by the menu "Play Program" only.

by RTC - If this option is selected, the corresponding program will run in time period which is defined in the following screen (e.g. Program 1 Run Set):



The program, which is controlled by the option "by RTC", can be also run via the menu "Play Program".

Note: The only one program can have the option "by RTC" active. If you activate the option "by RTC" at another program (e.g. Program 2 Run Set), the Program 1 Run set will be automatically set to "Manual".

All Chan. Together --- the menu item allows you to saturate all channels of connected LED modules (RGB, RGBW, single colour, smart white and pixel modules) on desired level - all LED modules will light. This function is useful for fast check of functionality of connected LED modules.

All by channels --- the menu item allows you to saturate red, green, blue and white channels on all LED zones (Pixel zones).

6.6 Special Functions



Diagnostic --- The menu item runs diagnostic of DRS. There is a list of error (or warning) messages:

Note: message in red - error, message in yellow - warning

Overload - The used ArcPower DRS is overloaded. Disconnect some LED modules or reduce LED current or install more powerful ArcPower DRS.

Note: in case that you disconnected some LED module, go to the menu "Service" and run "Load test".

To many zones or not identified - Too many ArcZone units are connected to the ArcControl unit (read allowed number of ArcZone units connected to the relevant ArcControl unit as stated in the chapter Technical Specifications) or the number of the ArcZone units was not found (probably some zone is faulty).

If this error message occurs, some fixture menus are unavailable (e.g. "Zone Info", "Temperatures"...), at attempt to enter these menus you will be redirected to the menu "Diagnostic" and also saving of configuration changes is impossible.

Different number of zones - ArcZone DRS was added/removed since last operation of DRS. Run the "Setup Assistant" or "System Config".

If the number of ArcZones DRS is without change, some zone(s) is probably faulty.

LED thermistors - Some LED module with a temperature sensor has been disconnected from the ArcZones DRS since last operation of DRS. Corresponding zone works, but its output power is reduced to 20% (from a safety reason).

DRS is not set - Run the "Setup Assistant" or "System Config".

Power supply type not set - Run the "Setup Assistant" or go to the menu "Power Supply" and set desired ArcPower DRS. If the power supply is not set, DRS behaves as if 70W power supply (LED power is reduced, power supply fan runs at max. speed) although e.g. ArcPower 600 DRS is in fact used.

Communication with A.Z. Pixel - Some ArcZone DRS Pixel does not communicate with an ArcControl unit (the ArcZone DRS Pixel is probably faulty). Try to switch off/on DRS. If the error appears again, switch DRS off and disconnect the ArcZone DRS Pixels from the ArcControl unit to make sure, that problem is in some ArcZone DRS Pixel unit.

The following error messages refer to the ArcZone DRS Fan only. In all cases stated below the corresponding fan does not run.

Fan 1:1 - Fan 1 has been set to 48V (menu Fan 1 Voltage), but the 48V power supply is not available in DRS (ArcPower DRS module does not have 48V output).

Fan 2:1 - Fan 2 has been set to 48V (menu Fan 2 Voltage), but the 48V power supply is not available in DRS (ArcPower DRS module does not have 48V output).

Fan 1:2 - PCB of the fan 1 in the Fan Zone is overheated.

Fan 2:2 - PCB of the fan 2 in the Fan Zone is overheated.

Fan 1:4 - Type of a temperature sensor is not set in the menu Type of Sensor 1.

Fan 2:4 - Type of a temperature sensor is not set in the menu Type of Sensor 2.

Fan 1:8 - Short circuit on output terminals for fan 1.

Fan 2:8 - Short circuit on output terminals for fan 2.

Fan 1:16 - Max. output current (1A) for fan 1 was exceeded.

Fan 2:16 - Max. output current (1A) for fan 2 was exceeded.

Fan 1:32 - Too low revolutions (<400 rpm) of the fan 1 (if measuring of fan rpm was enabled).

Fan 2:32 - Too low revolutions (<400 rpm) of the fan 2 (if measuring of fan rpm was enabled).

The following error messages refer to the ArcZone DRS RTC only.

Battery is not in ideal condition - the battery of the ArcZone DRS RTC has low voltage and should be replaced.

Replace battery - the battery of the ArcZone DRS RTC is flat and has to be replaced.

The item "Servis" at the right bottom corner of the screen Diagnostic serves for service purposes only.

SW update/Reset --- the menu allows you to update software in DRS or reset DRS.

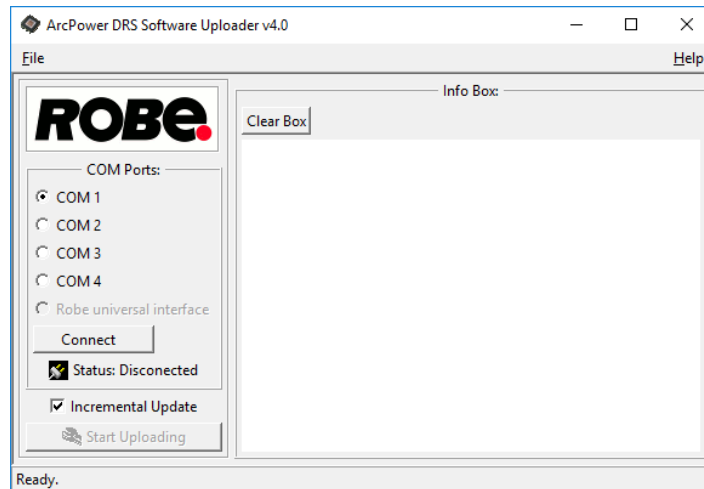
FirmWare Update - the menu item serves for updating software in the ArcControl DRS and all connected ArcZones DRS.

The following items are required in order to update software:

- PC running Windows or Linux or macOS
- DSU file
- Flash cable RS232/DMX ,P/N13050624 (if you want to use a serial port of PC)
- Robe Universal Interface or Robe Universal interface WTX (if you want to use an USB port of PC)

To update software in the fixture:

1. DSU file is available from the Anolis web site at WWW.anolis.cz.
File with extension zip is intended for Windows (used and tested from XP to W10 on 32/64bit systems).
File with extension tbz is intended for Linux (used and tested on Debian and Ubuntu 32/64bit).
File with extension dmg is intended for macOS (used and tested on OSX up to Sierra) XQuartz required, install it from <https://www.xquartz.org/>
Save the download file to a folder on your computer.
In case that you use windows, extract files in the zip file (e.g. DSU_ArcPowerDRS_18020153.zip)
2. Disconnect the fixture from DMX controller.
3. If you use the flash cable RS232/DMX, connect a serial port of your computer with DMX input of the fixture by means of the cable.
If you use the Robe Universal Interface, connect a USB port of your computer with the Robe Universal Interface by means of the USB cable and DMX input of the fixture with the DMX output of the Robe Universal Interface via a DMX cable.
4. Switch the fixture to the update mode (Service --> SW update/Reset --> FirmWare Update).
Note: If you do not want to continue in the software update, you have to switch off and on the fixture to escape from the updating mode.
We recommend to cancel all running programs on your computer before starting the software update.
5. Double-click the software uploader file (e.g. DSU_ArcPowerDRS_18020153.exe) in the extracted files. The Software Uploader program will start running.



6. Select correct "COM " number if you use a Flash cable RS232/DMX or select "Robe Universal Interface " if you use the Robe Universal Interface/Robe Universal Interface WTX and then click on the "Connect" button.
7. If the connection is OK, click the "Start Uploading" button to start software uploading. It will take several minutes to perform software update.
If the option "Incremental Update" is not checked, all processors will be updated (including processors with the same software version).
If you wish to update only processors with not topical versions of software, check the "Incremental Update box".
Avoid interrupting the process. Update status is being displayed in the "Info Box" window.
When the update is finished, the line with the text "Fixture is successfully updated" will appear in this window.

In case upload process is interrupted (e.g. power loss), the fixture stays in "Updating mode" and you will have to repeat the software update again.

Another way, how to update software in the fixtures (especially large installation of fixtures) is to use the ROBE Uploader. It is a software for automatized software update of Anolis fixtures. It can take advantage of Ethernet ports and RDM support if present in the units.

For more information please see <https://www.robe.cz/support/>.

Reset device - use the menu item to reset DRS.

Load test --- Use this menu item to run test whether the used ArcPower DRS is able to supply DRS including connected LED modules. This function has to be always run when you physically add/remove ArcZone DRS/ArZone DRS Pixel or LED module from DRS.

7. LED zone status indicator

The ArcZone DRS LED output is monitored via four green LEDs , one LED per channel. Each LED has the following meaning:

LED is off -corresponding LED channel is without current (corresponding colour on the LED module does not light)

LED is on - corresponding LED channel is under current (corresponding colour on the LED module lights).

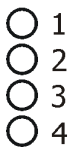
LED fast blinks- there is some error (e.g. short circuit) on corresponding LED channel.

LED slow blinks- some LED channel on connected LED modules is not in use.

All four LEDs blink- there is not connected LED module to the ArcZone DRS.

Example for the ArcZone DRS with connected 3-channel LED module (e.g. RGB):

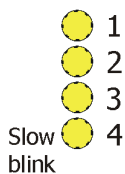
CHANNEL



All signal LEDs are off.

The ArcZone DRS is disconnected from power.

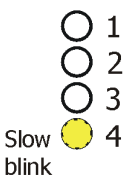
CHANNEL



All signal LEDs blink.

The ArcZone DRS is under voltage without connected LED module.

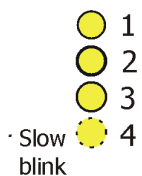
CHANNEL



First three signal LEDs are off.

The 3-channel LED module is connected to the ArcZone DRS but no colour lights.
The fourth control LED blinks slowly as the fourth channel is not connected (3-channel LED module).

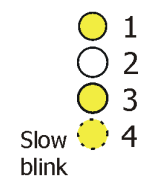
CHANNEL



All control LEDs are on. all colours light on connected LED module.

The 3-channel LED module is connected to the ArcZone DRS and all colours light.
The fourth signal LED blinks slowly as the fourth channel is not connected (3-channel LED module).

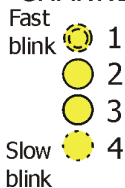
CHANNEL



Two signal LEDs are on, one is off.

The 3-channel LED module is connected to the ArcZone DRS and only two colours light, the third colour is off
The fourth signal LED blinks slowly as the fourth channel is not connected (3-channel LED module).

CHANNEL



The first signal LED blinks fast, the second one and the third one is on.

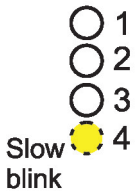
There is some error on the first channel of the connected LED module)

The fourth signal LED blinks slowly as the fourth channel is not connected (3-channel LED module)

Note: examples stated above apply to the ArcZone DRS only. For the ArcZone DRS Pixel, all signal LEDs blink permanently regardless on pixel output status (connected or disconnected pixel module).

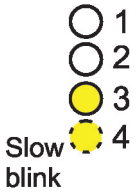
ArcZone DRS RTC only:

CHANNEL



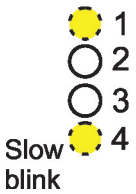
The fourth signal LED blinks slowly.
Battery is OK, the ArcZone DRS RTC is under voltage.

CHANNEL



The third signal LED lits (for a while).
Self-test of the battery is running.
The fourth control LED blinks slowly because the ArcZone DRS RTC is under voltage.

CHANNEL



The first signal LED blinks.
If it blinks slowly (every 0.5 s) - low battery.
If it blinks fast (very 200ms) - flat battery.
The fourth control LED blinks slowly because the ArcZone DRS RTC is under voltage.

8. Technical Specifications

ArcPower 70 DRS

Input voltage: 100-277V AC, 50/60 Hz

Max. power consumption: 80W

Max. output power: 70W

Output voltage:

ArcPower 70 DRS: 49.5V DC

ArcPower 70 DRS (LV): 28V DC

Connection:

Power: terminal block for solid (stranding) wires 0.2mm² - 4mm² (AWG 28-10)

Output: pluggable terminal block (5-pin)

Operating Ambient Temperature: 0°C / +50°C (+32°F / +122°F)

Weight: 0.8 kg

ArcPower 200 DRS

Input voltage: 100-277V AC, 50/60 Hz

Max. power consumption: 220W

Max. output power: 200W

Output voltage:

ArcPower 200 DRS: 48V DC

ArcPower 200 DRS (LV): 29.5V DC

Connection:

Power: terminal block for solid (stranding) wires 0.2mm² - 4mm² (AWG 28-10)

Output: pluggable terminal block (5-pin)

Operating Ambient Temperature: 0°C / +50°C (+32°F / +122°F)

Weight: 1.2 kg

ArcPower 600 DRS

Input voltage: 100-277V AC, 50/60 Hz

Max. power consumption: 650W

Max. output power: 600W

Output voltage:

ArcPower 600 DRS: 49.5V DC

ArcPower 600 DRS (LV): 29.5V DC

Connection:

Power: terminal block for solid (stranding) wires 0.2mm² - 4mm² (AWG 28-10)

Output: pluggable terminal block (5-pin)

Operating Ambient Temperature: 0°C / +50°C (+32°F / +122°F)

Weight: 1.7 kg

ArcControl DRS

Input voltage: 28-49.5V DC

Power consumption: 4W (without connected LED module)

Number of LED zones: 1

Zone load*:

Max. output voltage: <50V DC (at ArcPower 70 DRS, ArcPower 200 DRS, ArcPower 600 DRS)
<30V DC (at ArcPower 70 DRS (LV), ArcPower 200 DRS (LV),
ArcPower 600 DRS (LV))

Output current range: 100mA-1000mA (100mA-900mA for SW LED modules)

Max. output power:

192W (at ArcPower 200 DRS, ArcPower 600 DRS), max. 12 multi chip LEDs or
48 single chip LEDs total (but max. 12 single chip LEDs per channel)

100W (at ArcPower 200 DRS (LV), ArcPower 600 DRS (LV)) max. 6 multi chip LEDs or
24 single chip LEDs total (but max. 6 single chip LEDs per channel)

*Max.number of connected LED modules depend on their power and max. output power of used ArcPower DRS.

Max. number of connected ArcZones**: 15 (for ArcZone DRS) or 8 (for ArcZone DRS Pixel)

Control options: DMX, Art-Net, MANet, MANet2, sACN,
Control: Graphic touch screen for fixture setting and addressing
Max. number of used DMX channels**: 180 (at 16 LED zones)
**depends on the ArcControl DRS configuration

Stand alone operation

3 user programs, each up to 40 steps

Connection:

Power input: Plug-in terminal block (5-pin)

Power output: pluggable terminal block (5-pin)

LED output: RJ45 *

pluggable terminal block (counterpart P/N 13052502 included)*

** Only one type of LED output can be used.*

Ethernet input: RJ 45

DMX input/output: terminal block

Further features: 12V DC output for supply of DMX controller

Input for trigger (5V max.,DC)

Operating Ambient Temperature: 0°C / +50°C (+32°F / +122°F)

Weight: 0.5 kg

ArcControl DRS Pixel

Input voltage:

ArcControl DRS Pixel: 48-49.5V DC

ArcControl DRS Pixel US: 48-49.5V DC

ArcControl DRS Pixel US (LV): 28-29.5V DC

Power consumption: 4W (without connected pixel module)

Number of LED zones: 1

Zone load:

Max. output voltage:

ArcControl DRS Pixel: < 50V DC (at ArcPower 70 DRS, ArcPower 200 DRS, ArcPower 600 DRS)

ArcControl DRS Pixel US: < 50V DC (at ArcPower 70 DRS, ArcPower 200 DRS, ArcPower 600 DRS)

ArcControl DRS Pixel US (LV): <30V (at ArcPower 70 DRS (LV), ArcPower 200 DRS (LV),

ArcPower 600 DRS (LV)

Max. output power*:

ArcControl DRS Pixel: 150W (at ArcPower 200 DRS, ArcPower 600 DRS)

ArcControl DRS Pixel US: 100W (at ArcPower 200 DRS, ArcPower 600 DRS)

ArcControl DRS Pixel US (LV): 100W (at ArcPower 200 DRS (LV), ArcPower 600 DRS (LV))

** Number of connected LED modules depends on their power, max. output power of used ArcPower DRS and length of cables.*

Max. number of connected ArcZones: 7 (for ArcZone DRS Pixel) or 15 (for ArcZone DRS)

Control options: DMX, Art-Net, MANet, MANet2, sACN,

Control: Graphic touch screen for fixture setting and addressing

Stand alone operation

3 user programs, each up to 40 steps

Connection:

Power input: Plug-in terminal block (5-pin)

Power output: pluggable terminal block (5-pin)

LED output: pluggable terminal block 3-pin (counterpart P/N 13052504 included)*

pluggable terminal block 5-pin (counterpart P/N 13052503 included)*

** Only one type of LED output can be used.*

Ethernet input: RJ 45

DMX input/output: terminal block

Maximum cable length between output of the ArcZone1 DRS Pixel and last connected LED module:

ArcPix-CE: 100 m @ 100 ArcPixes per output;

ArcDot-CE/ ArcSource Outdoor 4MC Pixel-CE/ArcDotFlash-CE: 100 m @ 25 LED modules per output

or 65 m @35 LED modules per output

Further features: 12V DC output for supply of DMX controller

Input for trigger (5V max.,DC)

Operating Ambient Temperature: 0°C / +50°C (+32°F / +122°F)

Weight: 0.5 kg

ArcZone DRS

Input voltage: 28-49.5V DC

Power consumption: 2W (without connected LED module)

Number of LED zones: 1

Zone load*:

Max. output voltage: <50V DC (at ArcPower 70 DRS, ArcPower 200 DRS, ArcPower 600 DRS)
<30V DC (at ArcPower 70 DRS (LV), ArcPower 200 DRS (LV),
ArcPower 600 DRS (LV))

Output current range: 100mA-1000mA (100mA-900mA for SW LED modules)

Max. output power:

192W (at ArcPower 200 DRS, ArcPower 600 DRS), max. 12 multi chip LEDs or 48 single chip LEDs total (but max. 12 single chip LEDs per channel)

100W (at ArcPower 200 DRS (LV), ArcPower 600 DRS (LV)) max. 6 multi chip LEDs or 24 single chip LEDs total (but max. 6 single chip LEDs per channel).

**Max.number of connected LEDs depends on their power and max. output power of used ArcPower DRS.*

Connection:

Power input: Plug-in terminal block (5-pin)

Power output: pluggable terminal block (5-pin)

LED output: RJ45*

pluggable terminal block (counterpart P/N 13052502 included)*

** Only one type of LED output can be used.*

Weight: 0.2 kg

Operating Ambient Temperature: 0°C / +50°C (+32°F / +122°F)

ArcZone DRS Pixel

Input voltage:

ArcControl DRS Pixel: 48-49.5V DC

ArcControl DRS Pixel US: 48-49.5V DC

ArcControl DRS Pixel US (LV): 28-29.5V DC

Power consumption: 2W (without connected LED module)

Number of LED zones: 1

Zone load:

Max. output voltage:

ArcZone DRS Pixel: < 50V DC (at ArcPower 70 DRS, ArcPower 200 DRS, ArcPower 600 DRS)

ArcZone DRS Pixel US: < 50V DC (at ArcPower 70 DRS, ArcPower 200 DRS, ArcPower 600 DRS)

ArcZone DRS Pixel US (LV): <30V (at ArcPower 70 DRS (LV), ArcPower 200 DRS (LV),
ArcPower 600 DRS (LV))

Max. output power*:

ArcZone DRS Pixel: 150W (at ArcPower 200 DRS, ArcPower 600 DRS)

ArcZone DRS Pixel US: 100W (at ArcPower 200 DRS, ArcPower 600 DRS)

ArcZone DRS Pixel US (LV): 100W (at ArcPower 200 DRS (LV), ArcPower 600 DRS (LV))

** Number of connected LED modules depends on their power, max. output power of used ArcPower DRS and length of cables.*

Connection:

Power input: Plug-in terminal block (5-pin)

Power output: pluggable 5-pin terminal block (5-pin)

LED output: pluggable terminal block 3-pin (counterpart P/N 13052504 included)*

pluggable terminal block 5-pin (counterpart P/N 13052503 included)*

** Only one type of LED output can be used.*

Maximum cable length between output of the ArcControl DRS Pixel and last connected LED module:

ArcPix-CE: 100 m @ 100 ArcPixes per output;

ArcDot-CE/ ArcSource Outdoor 4MC Pixel-CE/ArcDotFlash-CE: 100 m @ 25 LED modules per output
or 65 m @35 LED modules per output

Weight: 0.2 kg

Operating Ambient Temperature: 0°C / +50°C (+32°F / +122°F)

ArcZone DRS 0-10V

Input voltage: 28-49.5V DC

Power consumption: 1W (without connected LED module)

Connection:

Power input: Plug-in terminal block (5-pin)

Power output: pluggable terminal block (5-pin)

4 x input 0-10V DC: pluggable terminal block 8-pin (counterpart P/N 13052502 included)

Max. 4 ArcZone 0-10V can be connected to the DRS

Weight: 0.2 kg

Operating Ambient Temperature: 0°C / +50°C (+32°F / +122°F)

ArcZone DRS RTC

Input voltage: 28-49.5V DC

Power consumption: 1W

Battery: CR2032/3V Lithium Battery or CR2032 P/H-T Lithium Battery (3V)

Connection:

Power input: Plug-in terminal block (5-pin)

Power output: pluggable terminal block (5-pin)

Operating Ambient Temperature: 0°C / +50°C (+32°F / +122°F)

Weight: 0.2 kg

ArcZone DRS Fan

Input voltage: 28-49.5V DC

Power consumption: 1W (without fans)

Number of fan outputs: 2

Max. fan current: 1A

Max. output power: 96W (at 2 x fan 48V/1A)

Fan voltage: 12V/24V/48V (48V is not available at LV version of DRS)

RPM measurement (if fan has signal wire).

Max. number of connected temperature sensors: 2

Supported temperature sensors: PT500, PT1000, NTC (only NTC thermistor NTC10K-AWG26 500mm,EPCOS, P/N 13052203)

Connection:

Power input: Plug-in terminal block (5-pin)

Power output: pluggable terminal block (5-pin)

Fans output: 2 x pluggable terminal block 3-pin (counterpart P/N 13052504 included)

Temp. sensors input: pluggable terminal block 5-pin (counterpart P/N 13052503 included)

Max. 1 ArcZone DRS Fan can be connected to the DRS

Weight: 0.2 kg

Operating Ambient Temperature: 0°C / +50°C (+32°F / +122°F)

Overview of max. number of connected ArcZones to the ArcControls

There are max. numbers of ArcZones if the ArcPower 600 DRS is used. You have to take into account power of used ArcPower. Do not overload the ArcPower unit.

| Type of ArcZone | Max. number of ArcZones connected to the ArcControl DRS | Max. number of ArcZones connected to the ArcControl DRS Pixel |
|-------------------|---|---|
| ArcZone DRS | 15 | 16 |
| ArcZone DRS Pixel | 8 | 7 |
| ArcZone DRS 0-10V | 4 | 4 |
| ArcZone DRS RTC | 1 | 1 |
| ArcZone DRS Fan | 1 | 1 |

Max. total number of all connected ArcZones (ArcZone DRS/ArcZone DRS Pixel/ArcZone DRS 0-10V/ ArcZone DRS Fan....) to the ArcControl DRS or ArcControl DRS Pixel is 20.

Optional accessories

5-pin plug-in terminal block P/N 13052503***

5-pin pluggable terminal block P/N 13052380***

5-wire cable P/N 13051968 (length according request)***

Cable Cover for ArcPower DRS (P/N 10980321)

ArcZone DRS 0-10V (P/N 10063029)

ArcZone DRS Fan (P/N 10063278)

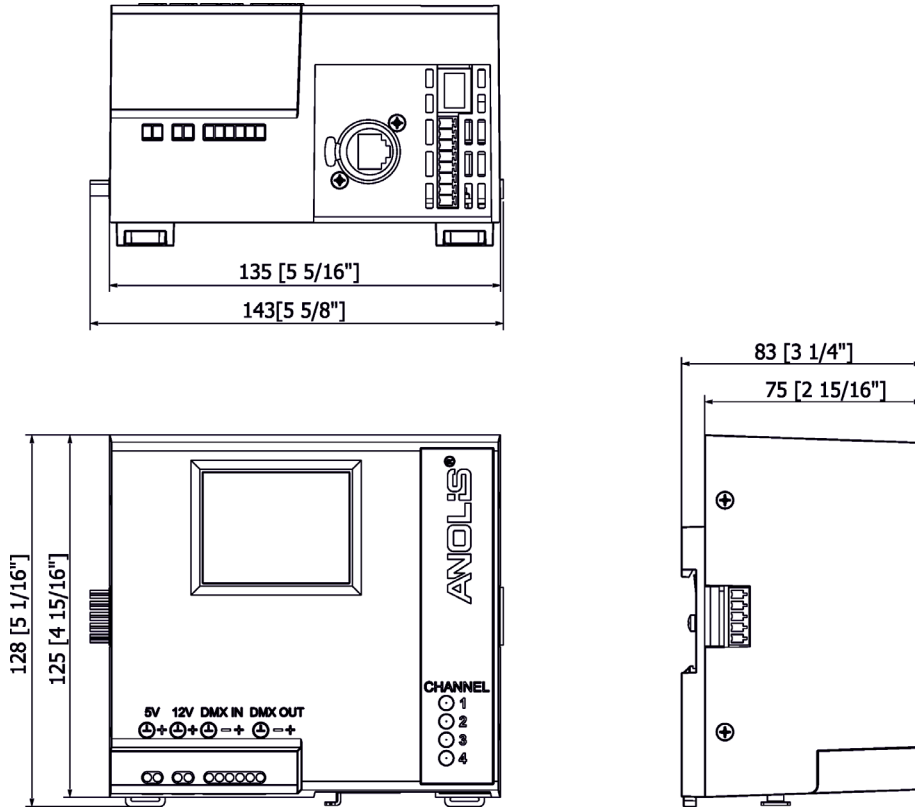
ArcZone DRS RTC (P/N 10063027)

NTC thermistor NTC10K-AWG26, 500mm, for ArcZone DRS Fan (P/N 13052203)

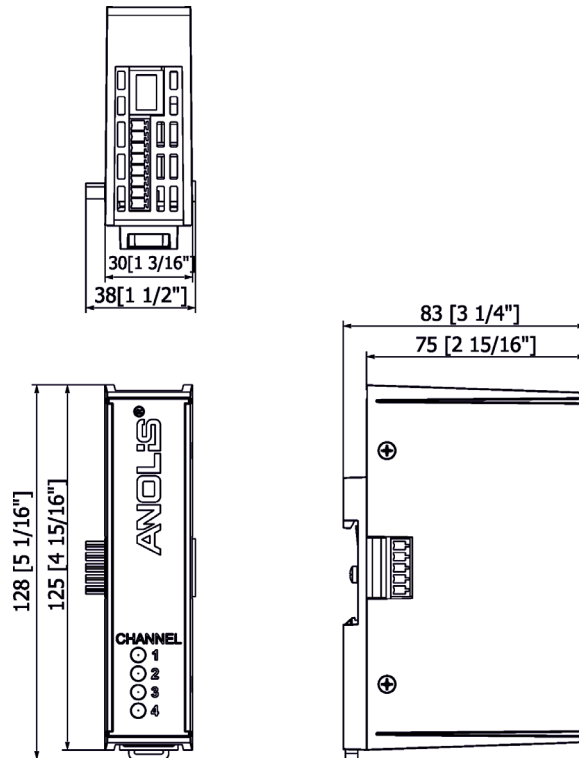
**** Needed parts for power connecting cable between two ArcZones DRS if ArcZones DRS are installed on two separate DIN rails.*

Dimensions in mm [inch]

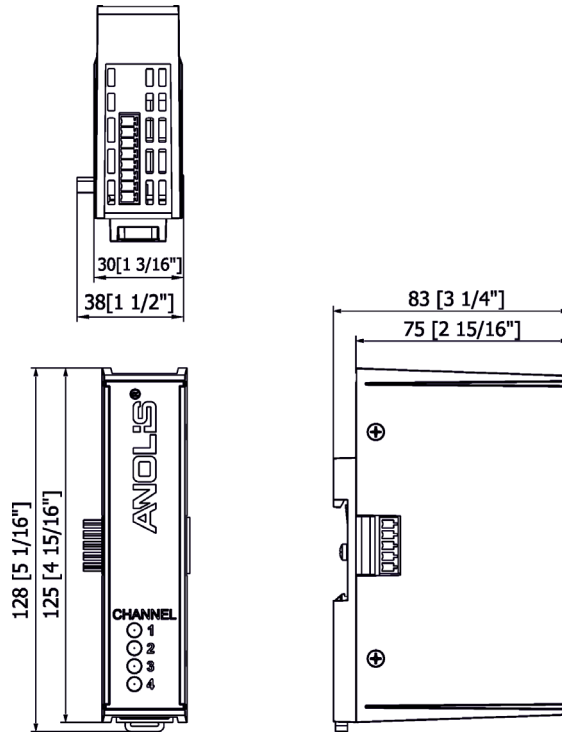
ArcControl DRS/ ArcControl DRS Pixel



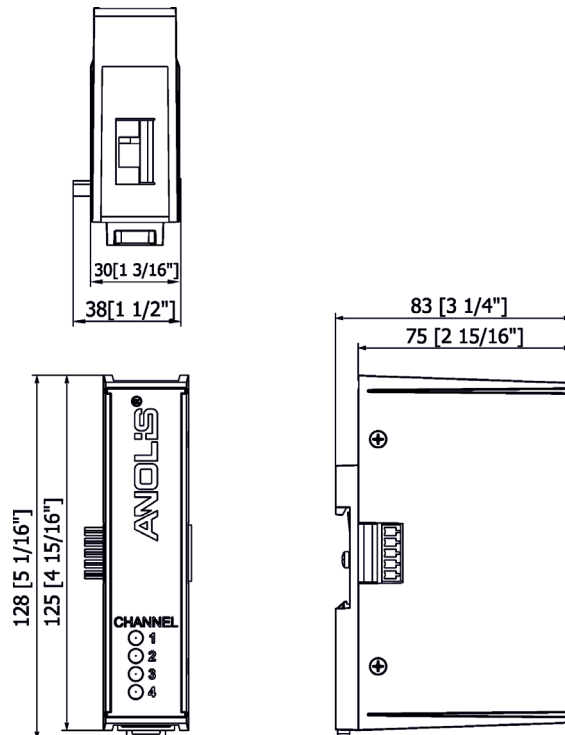
ArcZone DRS/ ArcZone DRS Pixel



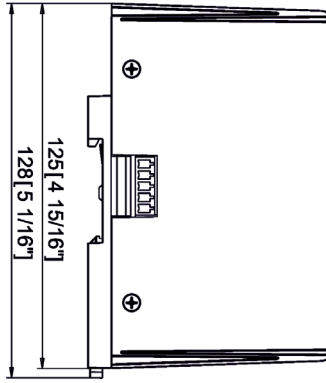
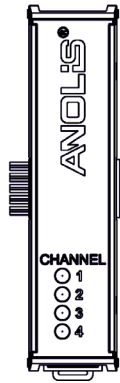
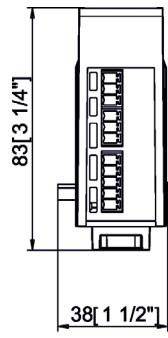
ArcZone DRS 0-10V



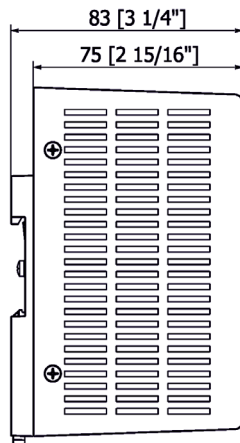
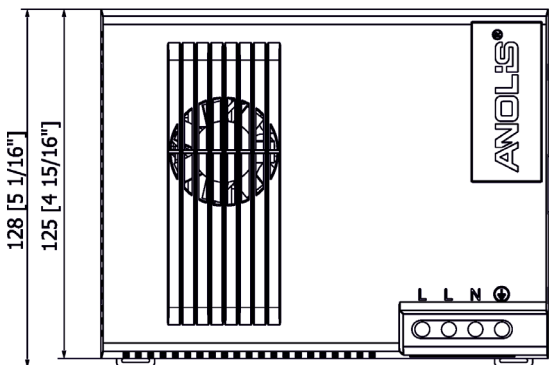
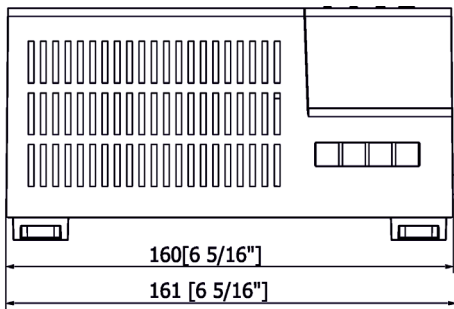
ArcZone DRS RTC



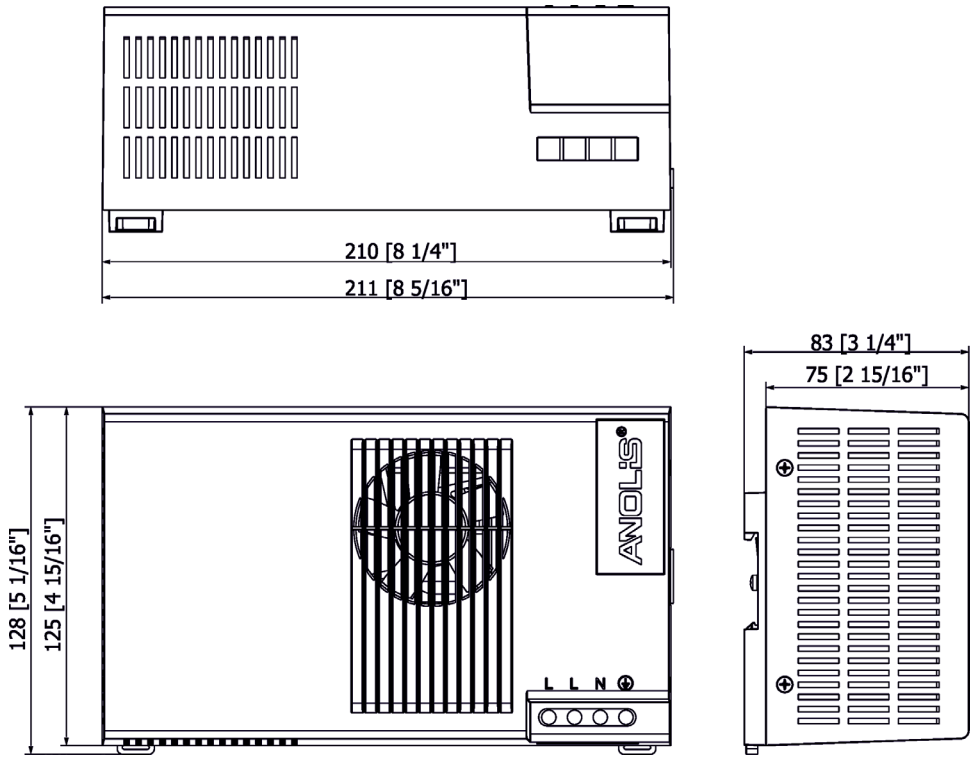
ArcZone DRS Fan



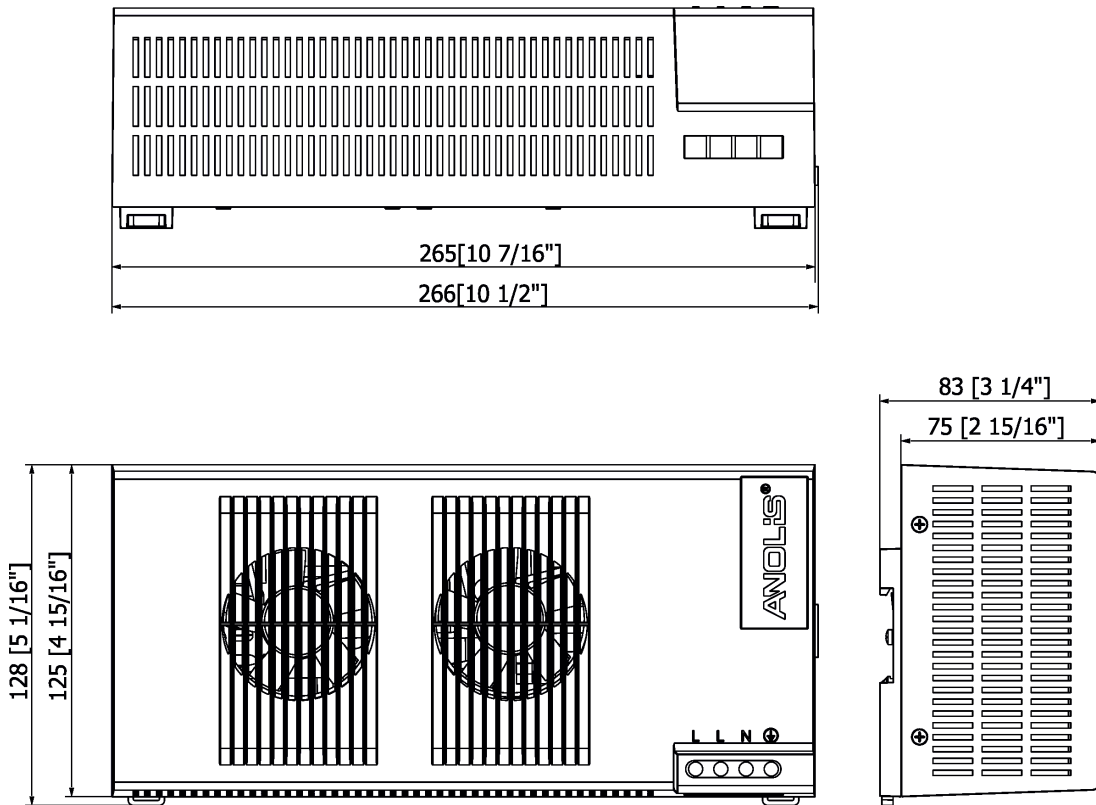
ArcPower 70 DRS



ArcPower 200 DRS



ArcPower 600 DRS



9. ChangeLog

This section summarizes changes in the user manual.

| Version of the manual | Date of issue | Description of changes |
|-----------------------|---------------|--|
| 2.1 | 02/02/2018 | Max. current for SW LED modules reduced to 900mA |
| 2.2 | 12/02/2018 | Software update description changed |
| 2.3 | 07/03/2018 | DMX Mode 6 added |
| 2.4 | 03/04/2018 | Dots installation added |

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All Specifications subject to change without notice

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