DMX REFERENCE

# DTW BLINDER 700 IP

Elation



| | |
|---|---|
| **Manufacturer** | Elation |
| **GDTF file** | Elation_DTW_BLINDER_700_IP_156197.gdtf |
| **GDTF revision** | Fix 2 · 2026-08-19 |
| **Generated** | 2026-11-24 |

# Contents

**1 About this manual** 2
**2 Quick reference** 3
**3 Safety instructions** 4
**4 Product description** 5
**5 Installation** 5
**6 Connections** 5
**7 Operation** 6
**8 Functions at a glance** 6
**9 DMX channels** 8
Mode 01CH 8
Mode 2CH 9
Mode 4Cell 9
Mode Standard 10
Mode Extended 12
Mode 4WA 13
Mode Basic 14
**10 Technical specifications** 15
**11 Maintenance and cleaning** 15
**12 Troubleshooting** 16
**13 Disposal** 16

# 1 About this manual

This document describes the DTW BLINDER 700 IP by Elation. It was compiled from the GDTF file Elation_DTW_BLINDER_700_IP_156197.gdtf from the GDTF-Share library.

File revision: “Fix 2”.

The DMX modes, the channel functions and the technical data are given as the GDTF file states them. Installation, operation from the device's control panel, service and safety instructions are described in the manufacturer's original user manual, which takes precedence over this document.

This document was not issued or endorsed by Elation; product names and trademarks belong to their owners.

Safety notices are marked with signal words according to the severity of the hazard: DANGER – an imminent hazard that will result in death or serious injury; WARNING – a potential hazard that could result in death or serious injury; CAUTION – a potential hazard that could result in minor injury or property damage; NOTE – additional information for correct and safe use.

> **NOTE** This product is designed for stage and effect lighting. It is not suitable for household room illumination.

# 2 Quick reference

| Parameter | Value |
|---|---|
| Weight | 12.7 kg |
| Ingress protection | IP65 |

### DMX modes

| Mode | Channels | Units in one universe | First start addresses |
|---|---|---|---|
| 01CH | 1 | 512 | 1, 2, 3, 4, ... |
| 2CH | 2 | 256 | 1, 3, 5, 7, ... |
| 4Cell | 4 | 128 | 1, 5, 9, 13, ... |
| Standard | 7 | 73 | 1, 8, 15, 22, ... |
| Extended | 13 | 39 | 1, 14, 27, 40, ... |
| 4WA | 8 | 64 | 1, 9, 17, 25, ... |
| Basic | 4 | 128 | 1, 5, 9, 13, ... |

### No light? Check these channels

- 4Cell: CH 1 Dimmer 1 above 0; CH 2 Dimmer 2 above 0; CH 3 Dimmer 3 above 0; CH 4 Dimmer 4 above 0
- Standard: CH 1 Shutter at 32–63, 96–127, 160–191 or 224–255 “Open”
- Extended: CH 1 Shutter at 32–63, 96–127, 160–191 or 224–255 “Open”



Read the manual before use



Do not stare into the light

# 3 Safety instructions



Read the manual before use



Do not stare into the light

**⚠ WARNING**

- This device is intended for professional use. Installation, connection, setup and maintenance must be carried out only by suitably qualified persons who have read this manual.
- Use the device only for its intended purpose and as described in this manual.
- Do not open the housing and do not modify or tamper with the device. Refer all repairs to an authorized service center.
- Do not use the device if its housing, power or data cable, or a connector is damaged, if the device has been dropped, or if liquid or a foreign object has entered it. In such a case, have it checked by a service center.
- Disconnect the device from the power supply before cleaning, maintenance or any work on the connections.
- After moving the device from a cold to a warm environment, let it reach room temperature before switching it on to prevent condensation inside.
- The device is not a toy; keep it out of the reach of children.

**⚠ CAUTION**

- The device is rated IP65 and may be used outdoors within the limits of this rating.
- This protection is effective only when all connectors are mated or closed with their protective caps and all seals are intact. Use cables and connectors with the same or a higher protection rating.
- Do not open the housing; opening it breaks the seals and the protection rating can no longer be guaranteed.
- Install the device so that water cannot collect around connectors and cable glands, and inspect seals and cables regularly.

**⚠ CAUTION**

- This device emits intense light. Do not look directly into the light source or the beam at close range; doing so may damage your eyes.
- Do not aim the beam at the eyes of people or animals at close range, and do not view the light source through optical instruments (binoculars, camera lenses).
- Do not aim the beam at flammable or heat-sensitive materials at close range.

**⚠ CAUTION**

- Strobe and fast flashing light effects can trigger epileptic seizures in susceptible people (photosensitive epilepsy) and can cause nausea or disorientation.
- Inform the audience and performers in advance that strobe effects will be used, for example with a notice at the entrance, and do not use them longer than necessary.

> ⚠ **WARNING**
> - This device produces very intense flashes of light.
> - Flash rates of about 3 to 30 flashes per second carry the highest risk for people with photosensitive epilepsy.
> - Do not aim the device into the eyes of the audience or performers at close range.
> - At public events, always give clear advance notice that strobe effects will be used.

# 4 Product description

**Description in the GDTF file**

“The IP65 rated DTW Blinder 700 IP™ features (4) high powered 175W 2-in-1 Warm White/Amber COB LEDs, a wide 67° beam angle, full color temperature range control plus independent Dim-to-Warm channel control (1,800K - 3,200K), easily attachable 15° narrow beam filters (included), pixel control, manual adjustable pan focus, variable dimming curve modes, strobe effects, flicker free operation for TV and Film, RDM (Remote Device Management), IP rated DMX and power in/out connections, LCD menu display with 4 touch button control panel, integrated yoke and side mounting brackets, and a multi-voltage universal auto switching power supply (100-250v).”

# 5 Installation

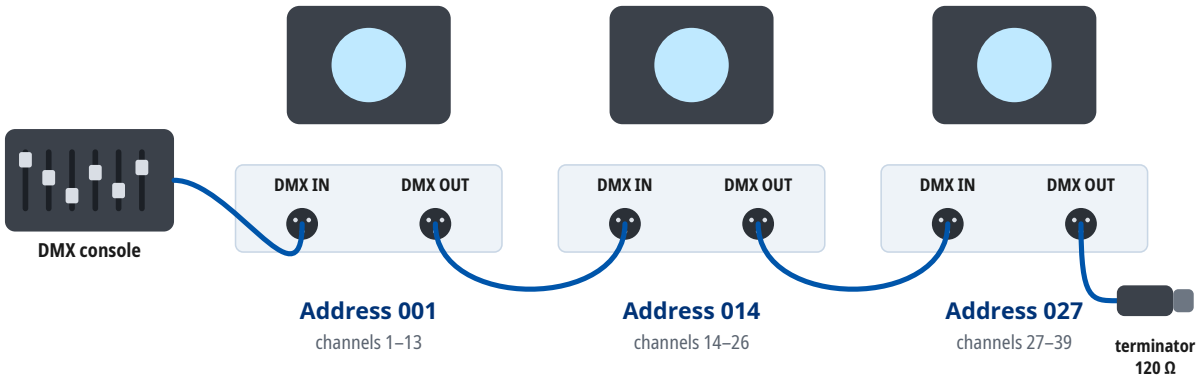
> ⚠ **WARNING**
> - Rigging must be carried out only by qualified persons in accordance with applicable regulations, in particular those for work at height.
> - The supporting structure and fixings must safely carry the weight of all suspended devices; verify their load capacity in advance.
> - Weight of the device: 12.7 kg.
> - Use suitable mounting hardware (for example truss clamps) and tighten all screw connections properly.
> - Always secure the suspended device against falling with a safety cable of adequate load capacity, routed through a fixed point of the device and around the supporting structure.
> - During installation and removal, keep people out of the area below the work position.
> - Regularly inspect the fixings and the safety cable for damage, corrosion and loosening.

# 6 Connections

- Use shielded cable designed for DMX512 with an impedance of 110 Ω. Ordinary microphone cable is not suitable for DMX, especially over longer distances.
- Connect the devices in a daisy chain: connect the DMX OUT of one device to the DMX IN of the next. Do not split the line with Y-cables or wire it in a star; the line may be split only with a DMX splitter.
- Connect the shield to pin 1 only. Do not connect the shield (ground) to the metal shell of the connector; this can cause short circuits or erratic behavior.
- XLR pin assignment: pin 1 – shield (ground), pin 2 – Data- (Data Complement), pin 3 – Data+ (Data True). On 5-pin connectors, pins 4 and 5 are not connected; a 5-pin connector can be connected to a 3-pin one with a cable adapter.
- Terminate the end of the line (for impedance matching): plug an XLR connector with a 120 Ω, ¼ W resistor between pins 2 and 3 into the DMX OUT of the last device. This reduces the risk of erratic behavior.

- Connect no more than 32 devices to one DMX line. For more devices or longer runs, use a DMX splitter or booster.

### DMX line




Mode Extended: every unit occupies 13 channels from its address. At most 32 units on one line; for more units or longer runs use a DMX splitter. A 120 Ω terminator closes the last DMX OUT.

# 7 Operation

### Setting the DMX address

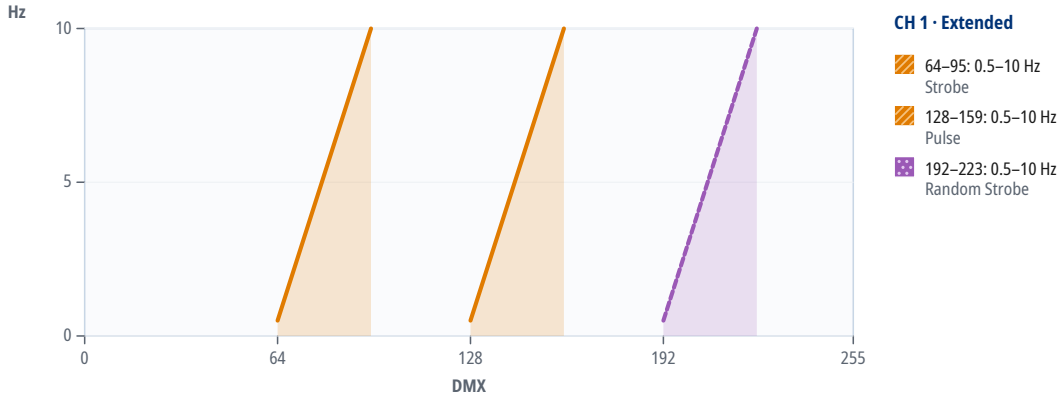
- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “Extended”: 13.
- Choose start addresses so that the channels of individual devices do not overlap and the last occupied channel does not exceed 512. Devices with the same start address and mode respond identically.
- For several devices in a row in the DMX mode “Extended”, you can use, for example, the start addresses 1, 14, 27, 40.
- The DMX mode set on the device must match the fixture profile (personality) used in the controller.
- The device supports RDM (Remote Device Management), two-way communication with the controller over the DMX line.

# 8 Functions at a glance

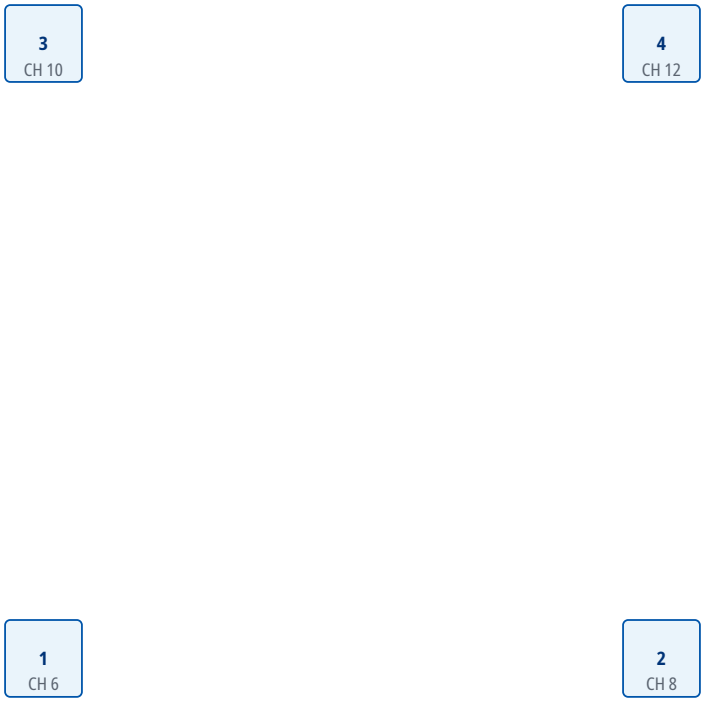
### Functions in each DMX mode

| | 01CH<br>1 channel | 2CH<br>2 channels | 4Cell<br>4 channels | Standard<br>7 channels | Extended<br>13 channels | 4WA<br>8 channels | Basic<br>4 channels |
|---|---|---|---|---|---|---|---|
| Dimmer | 1 | | 1–4 | 2 | 2 | | 1 |
| Dimmer resolution | 8 bit | | 8 bit | 16 bit | 16 bit | | 16 bit |
| Shutter / strobe | | | | 1 | 1 | | |
| Color mixing | | 1, 2 | | 6, 7 | 6–13 | 1–8 | 3, 4 |
| Pixel control | | | ✓ | | ✓ | ✓ | |

## Strobe rate



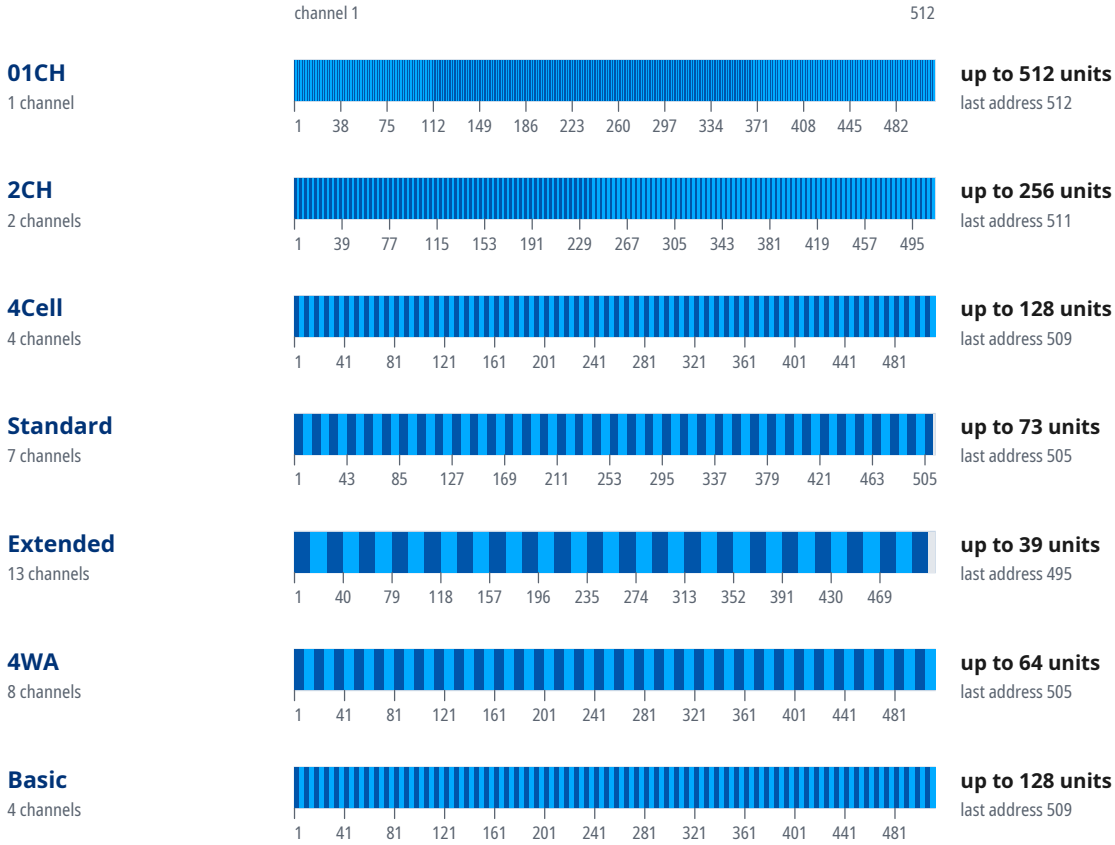

## Cells (pixels)




4 cells where the GDTF file places them (seen from above), numbered by their first DMX channel (CH) in the mode “Extended ”.

# 9 DMX channels

### Units in one DMX universe




### Start addresses of 20 units in the mode “Extended”

| Unit | Start address | Unit | Start address | Unit | Start address | Unit | Start address |
|---|---|---|---|---|---|---|---|
| 1 | 1 | 6 | 66 | 11 | 131 | 16 | 196 |
| 2 | 14 | 7 | 79 | 12 | 144 | 17 | 209 |
| 3 | 27 | 8 | 92 | 13 | 157 | 18 | 222 |
| 4 | 40 | 9 | 105 | 14 | 170 | 19 | 235 |
| 5 | 53 | 10 | 118 | 15 | 183 | 20 | 248 |

## Mode 01CH

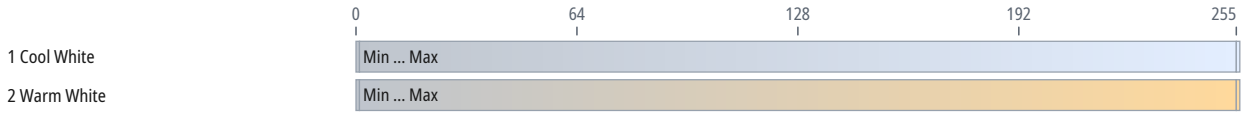
### Channel functions at a glance




| CH | Function | DMX | Description |
|---|---|---|---|
| **1** | Dimmer | | Dim to Warm All Pixels |
| | | 0 | Min Dimmer |
| | | 1–254 | Min Dimmer ... Max Dimmer |
| | | 255 | Max Dimmer |

## Mode 2CH

### Channel functions at a glance

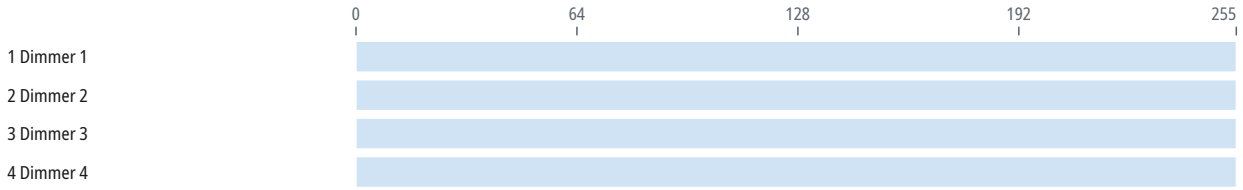



| CH | Function | DMX | Description |
|---|---|---|---|
| **1** | Cool White | 0 | Min |
| | | 1–254 | Min ... Max |
| | | 255 | Max |
| **2** | Warm White | 0 | Min |
| | | 1–254 | Min ... Max |
| | | 255 | Max |

## Mode 4Cell

If the device receives DMX in this mode but gives no light, check these channels: CH 1 Dimmer 1 above 0; CH 2 Dimmer 2 above 0; CH 3 Dimmer 3 above 0; CH 4 Dimmer 4 above 0.

### Channel functions at a glance



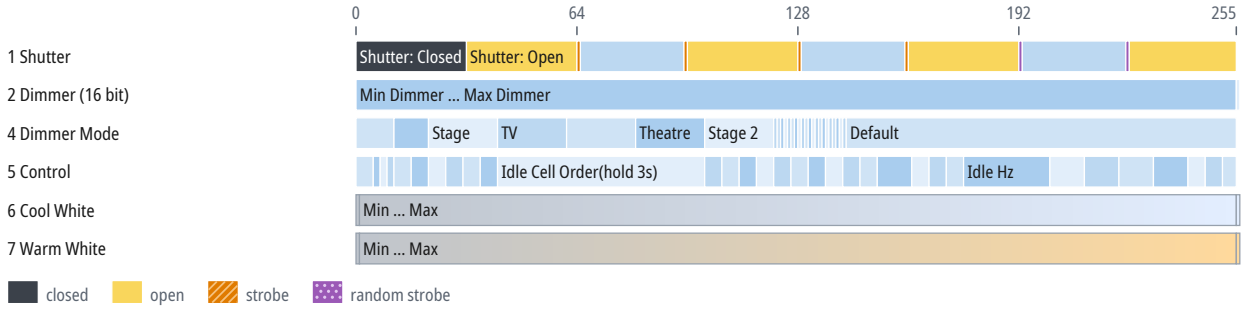

| CH | Function | DMX | Description |
|---|---|---|---|
| **1** | Dimmer 1 | 0–255 | |
| **2** | Dimmer 2 | 0–255 | |
| **3** | Dimmer 3 | 0–255 | |
| **4** | Dimmer 4 | 0–255 | |

## Mode Standard

16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 1 Shutter at 32–63, 96–127, 160–191 or 224–255 “Open”. The GDTF file gives these values for a console's Highlight function: CH 1 Shutter 32.

### Channel functions at a glance




| CH | Function | DMX | Description |
|---|---|---|---|
| **1** | Shutter | 0–31 | Shutter: Closed |
| | | 32–63 | Shutter: Open |
| | | 64 | Strobe Min |
| | | 65–94 | Strobe Min ... Strobe Max |
| | | 95 | Strobe Max |
| | | 96–127 | Shutter Open: Open |
| | | 128 | Strobe Pulse Min |
| | | 129–158 | Strobe Pulse Min ... Strobe Pulse Max |
| | | 159 | Strobe Pulse Max |
| | | 160–191 | Shutter Open_: Open |
| | | 192 | Random Strobe Min |
| | | 193–222 | Random Strobe Min ... Random Strobe Max |
| | | 223 | Random Strobe Max |
| | | 224–255 | Shutter Open__: Open |
| **2** | Dimmer | | Dim to Warm All Pixels |
| | | 0–255 | Min Dimmer ... Max Dimmer |
| | | 255 | Max Dimmer |
| **3** | Dimmer Fine | 0–255 | Fine adjustment of CH 2 |
| **4** | Dimmer Mode | 0–10 | Standard |
| | | 11–20 | Tungsten |
| | | 21–40 | Stage |
| | | 41–60 | TV |
| | | 61–80 | Architectural |
| | | 81–100 | Theatre |
| | | 101–120 | Stage 2 |
| | | 121 | 0ms Dimmer Delay Time |
| | | 122 | 100ms Dimmer Delay Time |

| CH | Function | DMX | Description |
|---|---|---|---|
| **4** | Dimmer Mode (continued) | 123 | 200ms Dimmer Delay Time |
| | | 124 | 300ms Dimmer Delay Time |
| | | 125 | 400ms Dimmer Delay Time |
| | | 126 | 500ms Dimmer Delay Time |
| | | 127 | 600ms Dimmer Delay Time |
| | | 128 | 700ms Dimmer Delay Time |
| | | 129 | 800ms Dimmer Delay Time |
| | | 130 | 900ms Dimmer Delay Time |
| | | 131 | 1s Dimmer Delay Time |
| | | 132 | 1500ms Dimmer Delay Time |
| | | 133–141 | 2...10s Dimmer Delay Time |
| | | 142–255 | Default |
| **5** | Control | 0–4 | Idle |
| | | 5–6 | Fan silent |
| | | 7–8 | Fan auto (default) |
| | | 9–10 | Fan high |
| | | 11–15 | Standard Cell Order(hold 3s) |
| | | 16–20 | Inverted Cell Order(hold 3s) |
| | | 21–25 | Idle Cell Order(hold 3s) |
| | | 26–30 | Snake Cell Order(hold 3s) |
| | | 31–35 | Snake Inverted Cell Order(hold 3s) |
| | | 36–40 | Snake Rotated Cell Order(hold 3s) |
| | | 41–100 | Idle Cell Order(hold 3s) |
| | | 101–105 | 900Hz |
| | | 106–110 | 1000Hz |
| | | 111–115 | 1100Hz |
| | | 116–120 | 1200Hz (default) |
| | | 121–125 | 1300Hz |
| | | 126–130 | 1400Hz |
| | | 131–135 | 1500Hz |
| | | 136–140 | 2500Hz |
| | | 141–145 | 4000Hz |
| | | 146–150 | 5000Hz |
| | | 151–160 | 10000Hz |
| | | 161–165 | 15000Hz |
| | | 166–170 | 20000Hz |
| | | 171–175 | 25000Hz |
| | | 176–200 | Idle Hz |
| | | 201–210 | Linear |
| | | 211–220 | Square |
| | | 221–230 | Inverse Square |
| | | 231–240 | S-Curve (default) |

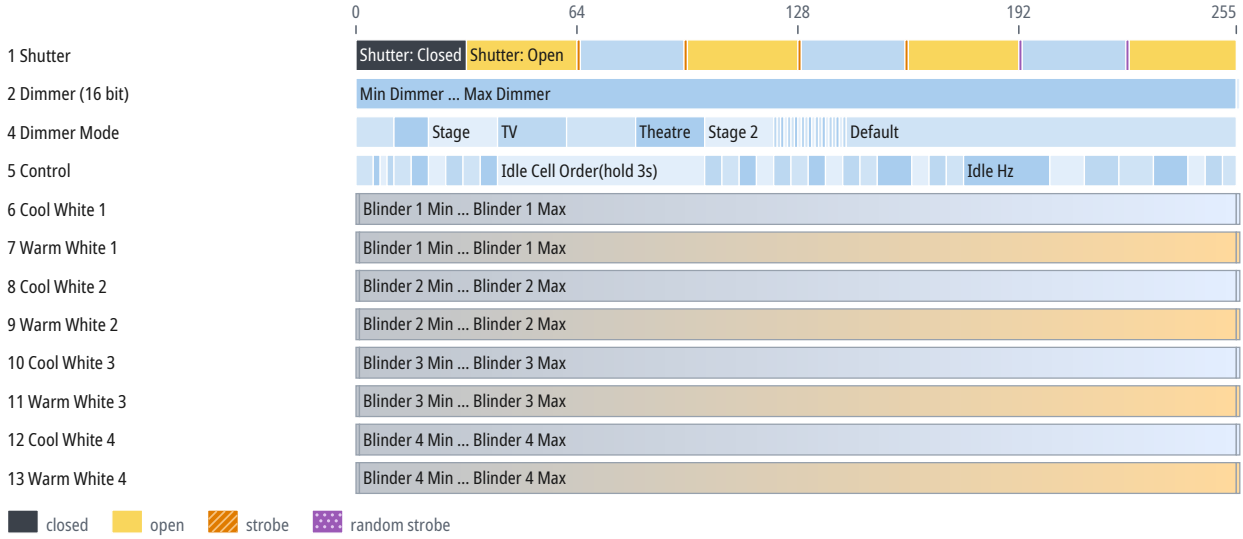
| CH | Function | DMX | Description |
|---|---|---|---|
| **5** | Control (continued) | 241–245 | Dim to warm ON |
| | | 246–250 | Dim to warm OFF |
| | | 251–255 | Idle |
| **6** | Cool White | | Same as CH 1 in the mode “2CH” (p. 9) |
| **7** | Warm White | | Same as CH 2 in the mode “2CH” (p. 9) |

## Mode Extended

16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 1 Shutter at 32–63, 96–127, 160–191 or 224–255 “Open”. The GDTF file gives these values for a console's Highlight function: CH 1 Shutter 32.

### Channel functions at a glance

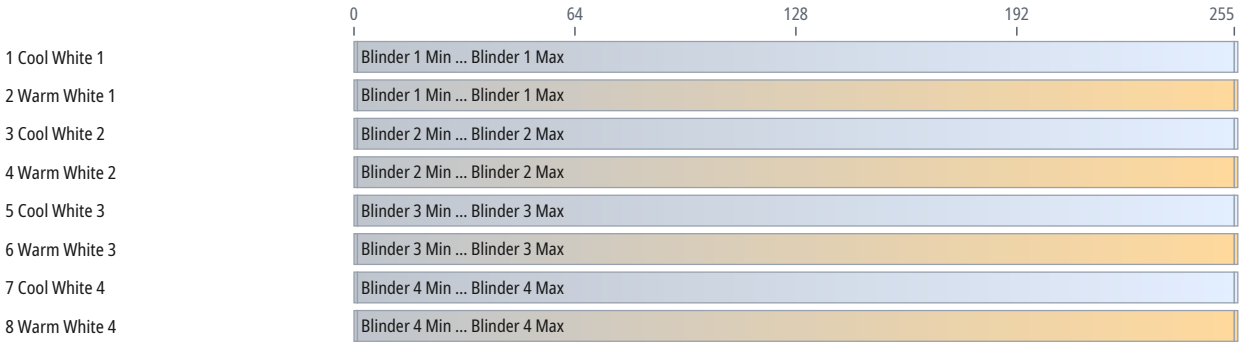



| CH | Function | DMX | Description |
|---|---|---|---|
| **1** | Shutter | | Same as CH 1 in the mode “Standard” (p. 10) |
| **2** | Dimmer | | Same as CH 2 in the mode “Standard” (p. 10) |
| **3** | Dimmer Fine | 0–255 | Fine adjustment of CH 2 |
| **4** | Dimmer Mode | | Same as CH 4 in the mode “Standard” (p. 10) |
| **5** | Control | | Same as CH 5 in the mode “Standard” (p. 11) |
| **6** | Cool White 1 | 0 | Blinder 1 Min |
| | | 1–254 | Blinder 1 Min ... Blinder 1 Max |
| | | 255 | Blinder 1 Max |
| **7** | Warm White 1 | 0 | Blinder 1 Min |
| | | 1–254 | Blinder 1 Min ... Blinder 1 Max |
| | | 255 | Blinder 1 Max |
| **8** | Cool White 2 | 0 | Blinder 2 Min |
| | | 1–254 | Blinder 2 Min ... Blinder 2 Max |
| | | 255 | Blinder 2 Max |
| **9** | Warm White 2 | 0 | Blinder 2 Min |

| CH | Function | DMX | Description |
|---|---|---|---|
| **9** | Warm White 2 (continued) | 1–254 | Blinder 2 Min … Blinder 2 Max |
| | | 255 | Blinder 2 Max |
| **10** | Cool White 3 | 0 | Blinder 3 Min |
| | | 1–254 | Blinder 3 Min … Blinder 3 Max |
| | | 255 | Blinder 3 Max |
| **11** | Warm White 3 | 0 | Blinder 3 Min |
| | | 1–254 | Blinder 3 Min … Blinder 3 Max |
| | | 255 | Blinder 3 Max |
| **12** | Cool White 4 | 0 | Blinder 4 Min |
| | | 1–254 | Blinder 4 Min … Blinder 4 Max |
| | | 255 | Blinder 4 Max |
| **13** | Warm White 4 | 0 | Blinder 4 Min |
| | | 1–254 | Blinder 4 Min … Blinder 4 Max |
| | | 255 | Blinder 4 Max |

## Mode 4WA

### Channel functions at a glance

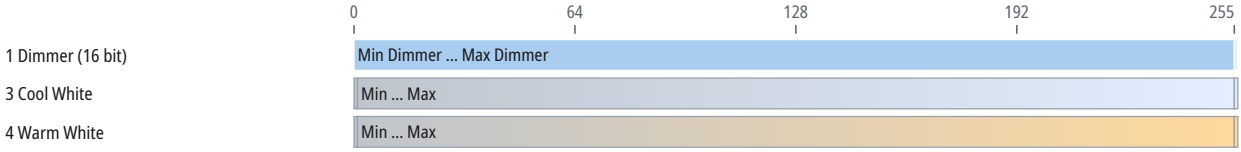



| CH | Function | DMX | Description |
|---|---|---|---|
| **1** | Cool White 1 | | Same as CH 6 in the mode “Extended” (p. 12) |
| **2** | Warm White 1 | | Same as CH 7 in the mode “Extended” (p. 12) |
| **3** | Cool White 2 | | Same as CH 8 in the mode “Extended” (p. 12) |
| **4** | Warm White 2 | | Same as CH 9 in the mode “Extended” (p. 12) |
| **5** | Cool White 3 | | Same as CH 10 in the mode “Extended” (p. 13) |
| **6** | Warm White 3 | | Same as CH 11 in the mode “Extended” (p. 13) |
| **7** | Cool White 4 | | Same as CH 12 in the mode “Extended” (p. 13) |
| **8** | Warm White 4 | | Same as CH 13 in the mode “Extended” (p. 13) |

## Mode Basic

16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

### Channel functions at a glance




| CH | Function | DMX | Description |
|---|---|---|---|
| **1** | Dimmer | | Same as CH 2 in the mode “Standard” (p. 10) |
| **2** | Dimmer Fine | 0–255 | Fine adjustment of CH 1 |
| **3** | Cool White | | Same as CH 1 in the mode “2CH” (p. 9) |
| **4** | Warm White | | Same as CH 2 in the mode “2CH” (p. 9) |

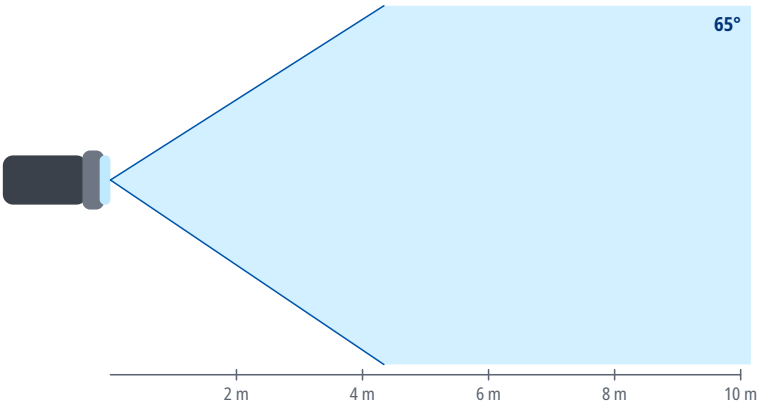
# 10 Technical specifications

| Parameter | Value |
|---|---|
| Light source | tungsten lamp |
| RDM | yes (manufacturer ID 0x22A6, device model ID 0x0026) |
| Weight | 12.7 kg |
| Ingress protection | IP65 |
| Meaning of the IP code (IEC 60529) | Dust-tight; protected against water jets |
| Operating temperature | -15 to 45 °C |

### Speeds and ranges

| Parameter | Value |
|---|---|
| Strobe frequency | 0.5–10 Hz |

### Spot diameter




| Distance | Ø 65° |
|---|---|
| 2 m | 2.5 m |
| 4 m | 5.1 m |
| 6 m | 7.6 m |
| 8 m | 10.2 m |
| 10 m | 12.7 m |
| 15 m | 19.1 m |

Spot diameter square to the beam axis, calculated from the beam angle.

# 11 Maintenance and cleaning

- Before cleaning and maintenance, switch the device off, disconnect it from the power supply and let it cool down.
- Clean the housing with a soft, dry or slightly damp cloth. Do not use solvents, abrasive cleaners or pressure washers, and make sure no liquid gets into the device.
- Clean optical parts (lenses, front glass), if the device has any, with a soft lint-free cloth and a cleaner intended for optics or glass.
- Regularly inspect the housing, cables, connectors and fixings. Have damaged parts replaced by a service center.
- How often to clean depends on the environment; dust, smoke and fog make the device dirty much faster.

# 12 Troubleshooting

| Problem | Remedy |
|---|---|
| The device does not switch on | Check the supply voltage, the cables and the fuse, if the device has one. |
| The device does not respond to DMX | Check the start address, the selected DMX mode and whether it matches the profile in the controller, the cable connection to DMX IN, and the controller output (universe). |
| The device behaves erratically or flickers | Check the terminator at the end of the line, the condition and wiring of the cables (shield on pin 1 only), the number of devices on the line (32 at most), and that the line is not split without a splitter. |
| Only some devices on the line respond | Check the cable and connectors between the last working and the first non-working device, and make sure all devices on the line are switched on. |
| Devices respond to the wrong channels or affect each other | Check that the addresses do not overlap and that the DMX mode on the devices matches the patch in the controller. |
| The device or the connected load does not light up although it receives DMX | Check the values of the dimmer, shutter and strobe channels against the DMX channel table. For the DMX modes for which the sources state it, the chapter DMX channels gives under the mode's heading which channels must be open. |

# 13 Disposal

The crossed-out wheeled bin symbol on the product, in the manual or on the packaging means that the product must not be disposed of with unsorted household waste at the end of its life.

Take the end-of-life equipment to a collection point, for example a municipal collection site or a retailer. Proper disposal enables materials to be recycled and helps prevent possible negative effects on the environment and human health.

Follow the regulations applicable in your country; in the Czech Republic, take-back is governed by Act No. 542/2020 Coll., on End-of-Life Products.

Recycle the packaging materials according to their type.