

MDT RGBW LED Controller

Version		
AKD-0424R.02	RGBW LED Controller	For 12/24V RGBW / 4 x White LED

The MDT LED Controller receives KNX/EIB telegrams and controls 12/24V RGBW LED. If required the channels A/B and C/D can be connected in parallel to control higher loads up to 8A.

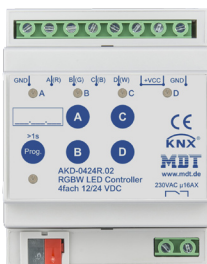
These functions are available:

- Absolute and relative dimming for **HSV color space** and RGB
- Tunable White color temperature control
- Selectable dimming curve and PWM frequency up to **1000Hz**
- Global and individual dimming speeds
- Individual and predefined sequences (e.g. TV Simulator)
- Repetition of sequences for automatic color control
- Suitable for 12/24V CV LED, 4A for each channel (Common Anode)
- **Parallel operation of 2 channels with 8A**
- **Selectable load distribution (4 channels with 4A or 3 channels with 3A / 1 channel 7A)**
- **Operating modes: 4 x White, RGB, RGBW, Tunable White**
- **Automatic color temperature control Dim2Warm**
- **Dynamic daylight control HCL (Human Centric Lighting)**
- **Automatic time-dependent dimming**
- **Day/night function**
- Overcurrent and overtemperature supervision
- Intelligent 16A C-Load Relay output to control external LED power supply

The MDT LED Controller is a modular installation device for fixed installation in dry rooms. It fits on DIN 35mm rails in power distribution boards or closed compact boxes.

For project design and commissioning of the MDT LED Controller it is recommended to use the ETS. Please download the application software at www.mdt.de/Downloads.html

AKD-0424R.02



- Production in Germany, certified according to ISO 9001
- **Extensive function extension**
- Absolute and relative dimming for **HSV color space** and RGB
- Tunable White color temperature control
- Selectable dimming curve and PWM frequency up to **1000Hz**
- Global and individual dimming speeds
- Individual and predefined sequences (e.g. TV Simulator)
- Repetition of sequences for automatic color control
- Suitable for 12/24V CV LED, 4A for each channel (Common Anode)
- **Parallel operation of 2 channels with 8A**
- **Selectable load distribution (4 channels with 4A or 3 channels with 3A / 1 channel 7A)**
- **Operating modes: 4 x White, RGB, RGBW, Tunable White**
- **Automatic color temperature control Dim2Warm**
- **Dynamic daylight control HCL(Human Centric Lighting)**
- **Automatic time-dependent dimming**
- **Day/night function**
- Overcurrent and overtemperature supervision
- Intelligent 16A C-Load Relay output to control external LED power supply
- 3 years warranty

Technical Data	AKD-0424R.02	
Number of outputs	4	
Dimming process****	PWM 600/1000Hz	
Switching voltage relay output	230VAC/50Hz	
Max. fuse relay output	16A	
Maximum current relay output	16A/140µF	
LED power supply*	12/24VDC +10%	
Max. current for each color channel without load distribution**	4/8A**	
Max. current with activated load distribution	3 channels with 3A / 1 channel 7A	
Max. current external LED power supply	16A	
Recommended wire gauge of LED supply line***		
Length < 20m, current 2A	1,5mm ²	
Length < 35m, current 2A	2,5mm ²	
Length < 10m, current 4A	1,5mm ²	
Length < 18m, current 4A	2,5mm ²	
Length < 9m, current 8A**	2,5mm ²	
Specification KNX Interface	TP-256	
Available application software	ETS 4/5	
Permitted wire gauge		
Screw terminal	0,5 - 4,0mm ² solid core 0,5 - 2,5mm ² finely stranded	
KNX busconnection terminal	0,8mm Ø, solid core	
Power supply MCU	KNX bus	
Power consumption KNX bus typ.	< 0,3W	
Operation temperature range	0 to + 45°C	
Enclosure	IP 20	
Dimensions MDRC (Space Units)	4SU	

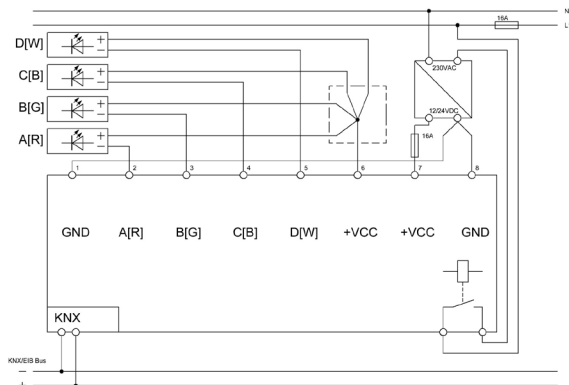
* t is required to use a power supply according to EN 61347-2-13.

** Only if the channels A/B and C/D are connected in parallel. The channels have to be bridged directly at the connection terminals.

*** The declared length refer to a voltage drop below <1V abd separate wiring of go and return line. If a common return line is used the wire gauge has to be increased accordingly.

**** For sensitive persons, we recommend to set the dimming method to 1000Hz.

Exemplary circuit diagram AKD-0424R.02



Exemplary circuit diagram AKD-0424R.02 parallel connection A/B and C/D

