MDT Dimming Actuator 2/4-fold, MDRC

Version		
AKD-0201.02	Dimming Actuator 2-fold	3TE MDRC, 230VAC, 2 x 250W or 1 x 500W
AKD-0401.02	Dimming Actuator 4-fold	6TE MDRC, 230VAC, 4 x 250W, 1 x 500W + 2 x 250W or 2 x 500W

The MDT Dimming Actuator receives KNX/EIB telegrams and dimms/switches up to 4 independent electrical loads. Each output can be operated manually via a push button.

The dimming actuator supports the usual loads and is optimized for dimmable LED lamps from 2W. In trailing edge phase operation mode, universal or ECO lamps up to 200W are supported. Older lamps which can not be operated in trailing edge operation mode are supported in leading edge operation mode up to 50W.

The connected lamps can be dimmed depending on the time of day. By the automatic dimming the evening operation with high brightness lightning can be avoided. The brighness can be adjusted individually depending on the time of day or the position of the sun.

The integrated active power meter records the current consumption per channel and sends the value to the bus. The diagnostics function calculates the utilization of the channel and sends it in plain text as a 14-byte telegram. Additionally the dimmer has overload/short circuit and temperature protection with alarm message.

The parallel operation of two channels allows dimming of loads up to 500W (LED lights up to 400W).

The MDT Dimming Actuator 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 Dimming Actuator it is recommended to use the ETS. Please download the application software at www.mdt.de/Downloads.html

AKD-0201.02   AKD-0401.02

- Production in Germany, certified according to ISO 9001
- **Comprehensive application**
- **Optimized for dimmable LED lights > 2W**
- For HV- Halogen lights and NV- Halogen lights with transformer/EVG
- Operation in leading-edge or trailing-edge selectable
- **Active power measurement**
- **Integrated diagnostic function with plain text message**
- Overload-/short circuit- and temperature protection with message
- Time functions (switch-on/switch-off delay, staircase light function)
- **Automatic time dependent dimming**
- **Softstart, global and individual dimming speed**
- Day/Night function
- **Parallel operation of 2 channels with 500W total power output**
- Push Button for manual operation and indicator for each channel
- Separate L-/N connections for each channel (different phases possible L1, L2, L3)
- 3 years warranty

MDT Dimming Actuator

Technical Data	AKD-0201.02	AKD-0401.02
Number of outputs	2	4
Supply voltage outputs	230VAC/50Hz	230VAC/50Hz
Max. fuse per channel	10A	10A
Possible load distribution	2 x 250W or 1 x 500W	4 x 250W or 1 x 500W + 2 x 250W or 2 x 500W
Max. load for each channel		
HV halogen lamps	250W	250W
Universal/ECO lamps in trailing edge phase operation mode*	200W	200W
Old LED lamps in leading edge phase operation mode*	50W	50W
Wound transformators	200W	200W
Minimum lamp load per channel**	2W	2W
Specification KNX interface	TP-256	TP-256
Available application software	ETS 4/5	ETS 4/5
Permitted wire gauge		
Screw terminal (max. 0,5Nm tightening torque)	1 x (0,5 - 4,0mm²) 2 x (0,5 - 2,5mm²)	1 x (0,5 - 4,0mm²) 2 x (0,5 - 2,5mm²)
KNX busconnection terminal	0,8mm Ø, solid core	0,8mm Ø, solid core
Power supply	KNX bus	KNX bus
Power consumption KNX bus typ.***	< 0,3W	< 0,3W
Power dissipation no load****	< 0,5W	< 0,5W
Power dissipation nominal load****	< 4W	< 4W
Operation temperature range	0 to + 45°C	0 to + 45°C
Enclosure	IP 20	IP 20
Dimensions MDRC (Space Units)	3SU	6SU

* The maximum load and the maximum number of lamps depends on the used lamps. The built-in diagnostics gives an indication of the percentage utilization of the channel.
  For trailing edge phase operation mode, usually up to 20 LED lamps can be connected.
** Minimum load for dimmable LED lamps is 2W, depending on the LED lamp manufacturer. Correct function of the LED lamps has to be checked before installation.
*** Power consumption from KNX Bus   **** Power dissipation for each channel

Exemplary circuit diagram AKD-0401.02 (Operation with 2 different phases)
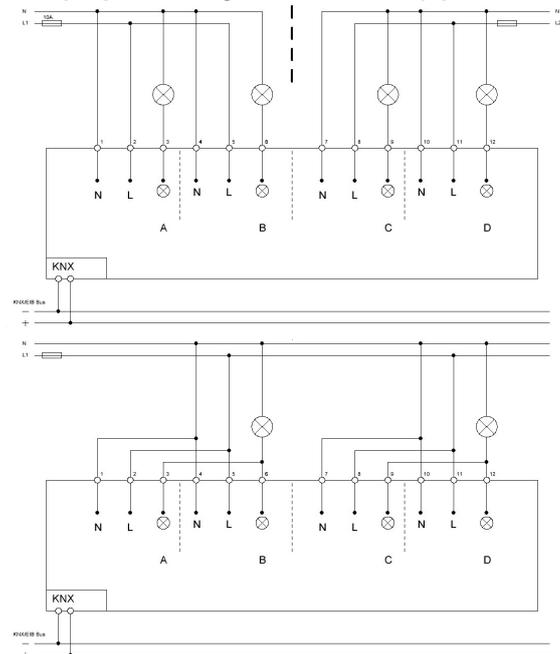
Important assembly notes:

- Conventionel transformers must be fused on primary side with adequate fuse according to the size of the transformator.

- The AC power line has to be connected separately to each Dimming Actuator. Connecting of several devices is not allowed.

- The neutral line has to be connected separately to each channel. Do not bypass directly on the screw terminals.

- Separate L-/N connections for each channel (different phases possible L1, L2, L3)

Exemplary circuit diagram AKD-0401.02 (Parallel operation of 2 channels)