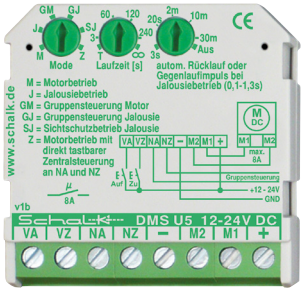
Open/Close controller for 12–24V DC drives

DMS 5 (rail mounting version)
DMS U5 (flush mounting version)

With auxiliary inputs for group and central control
Convenient DC motor control with electronic push-button interlock and run-time limiting, suitable for DC-powered louver blinds or skylights, etc.



Special features

- One-button or two-button actuation
- Electronic button interlock enables use of normal push-buttons
- Specific louver blind modes for convenient louver adjustment and privacy function
- Automatic closing with configurable closing time; long button press doubles closing time
- Run-time limiting for motor protection

General information

The DMS 5 and DMS U5 electronic controllers are general-purpose DC motor controllers for clockwise or anti-clockwise operation. They support both one-button and two-button motor control.
The overriding auxiliary inputs allows several DMS 5 or DMS U5 units to be grouped together in group control or central control configurations.
The motor run time can be limited to prevent motor overload due to mechanical jamming or other causes. A convenient and configurable automatic closing function ensures that skylights or other fixtures are not inadvertently left open. In louver blind mode the louvers can be adjusted precisely or automatically returned to a defined angle after switch-off.

Applications

Roller shutters and louver blinds, shutters, skylights, smoke extraction hoods in fire protection systems, door drives, valve drives, etc.

Operation

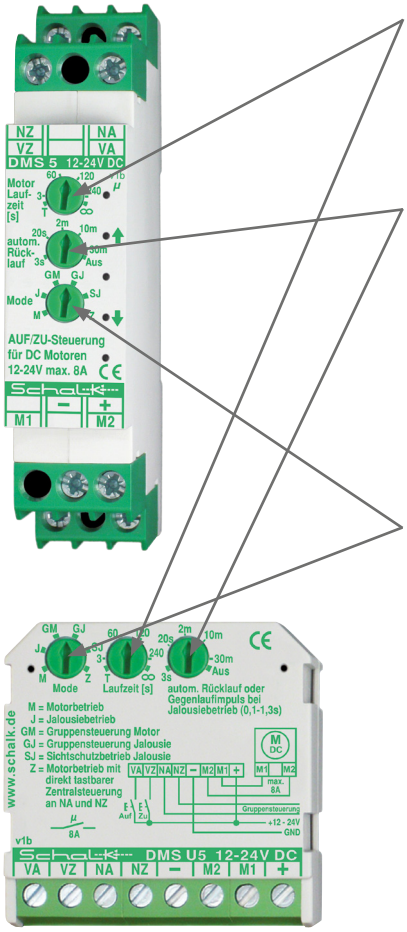
The DMS U5 is actuated by standard push-buttons with no need for mechanical interlocking.
The desired operation direction is selected by a short pulse (momentary-action signal) from a push-button connected to the VA (Local Open) or VZ (Local Close) input. The drive runs to its end stop and the configured time expires.
A subsequent pulse on the VA or VZ input while the drive is running stops the motor. For **one-button motor control** it is also possible to actuate both local inputs at the same time with just one push-button (not in SJ mode). With this actuation arrangement, each button pulse changes the direction (Open–Stop–Close–Stop).
The auxiliary inputs NA (Open) and NZ (Close) allow any desired number of drives to be operated simultaneously in the opening or closing direction, regardless of their current state. When actuated by the auxiliary inputs, the motor runs only as long as the actuation signal from the higher-level group controller is active. The NA input has priority when NA and NZ signals are active at the same time. The local inputs are blocked as long as NA or NZ is active.
When the DMS 5 or DMS U5 is used as a **group controller**, there is no time monitoring of the auxiliary inputs. This allows the lower-level controllers to be held in the desired position for an indefinite period (e.g. wind sensors).
In **louver blind mode** the drive is stopped immediately after a short pulse is applied to a local input. With a longer pulse the drive continues running to the end position. This enables louver angle adjustment by short button presses. In one-button louver blind mode, the direction of motion is not altered by a sequence of short pulses. Here again, this makes it easy to adjust the louvers.
If automatic closing is enabled, the drive starts moving in the closing direction after the set closing time delay. The time-out is started by the signal on the VA local input.
If the signal on the VA input is active longer than 2 seconds, the closing time is doubled. In louver blind mode a reverse pulse is configured instead of the closing function, so that

the louvers are automatically reset after the motor stops.

Central push-button motor control mode (Z) enables simple central control in relatively small systems without a higher-level group controller. The auxiliary inputs can be actuated by push-buttons in the same way as the local inputs, but they take priority.

In **SJ mode (louver blind privacy)** a short push-button signal on the VA or VZ local input changes the angle of the louvers, for example from vertical to horizontal (privacy on/off). The motor run time for this angle adjustment can be set from 0.1 to 1.4 s. A triple button press initiates the full motor run time (setting range 3 to 240 s).

Controls and indicators



Motor run time setting „Motor-Laufzeit [s]“:
This sets the motor run time:

T	Button mode (motor runs only when an input signal is active)
3...240	Motor run time in seconds
∞	No run time limit

Automatic closing time setting „autom. Rücklauf“:
This sets the automatic closing time, reverse pulse time or louver run time:
In motor control mode (M):
Time for automatic closing function **3 s to 30 min** or **Off** (function disabled)
In louver blind control mode (J):
Duration of reverse pulse 0.1 to 1.3 s or Off (function disabled)

In louver blind privacy mode (SJ):
*Louver run time **0.1 to 1.4 s***

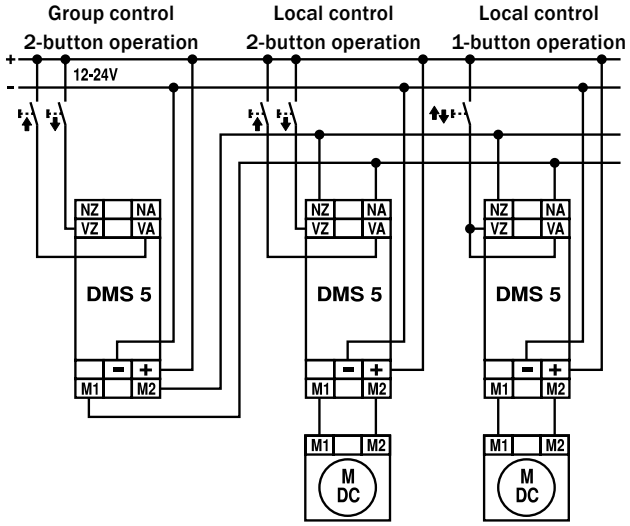
Mode setting „Mode“:
This sets the operating mode:

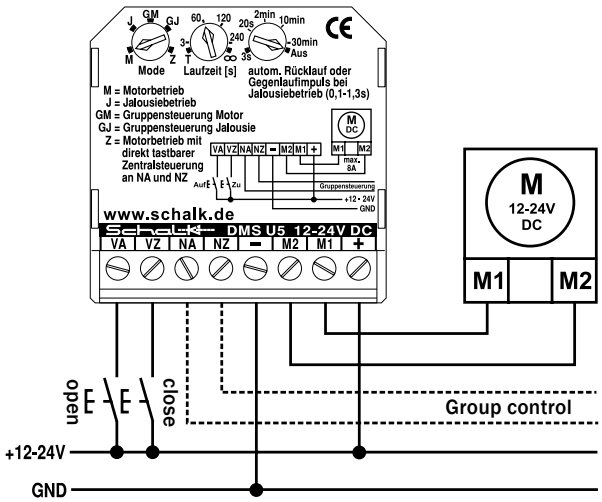
M	Motor control (short button press for Open, Close or Stop)
J	Louver blind control (short button press for fine adjustment of louver angle or stop; long but ton press for open/close)
GM	Group device for motor control* (no time monitoring)
GJ	Group device for louver blind control* (no time monitoring)
SJ	Louver blind privacy (short button press sets privacy on or off; triple button press to adjust blind position)
Z	Central push-button motor control (all inputs operated by push-buttons)

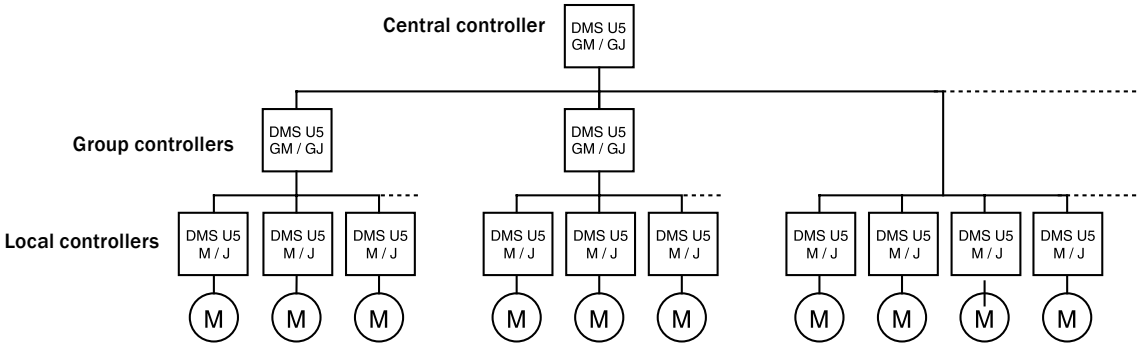
** In mode GM or GJ, relay output M1 or M2 (14 or 24) is continuously closed as long as an active signal is present on an auxiliary input. This enables override actuation (with local inputs blocked) by sensors (wind sensor, rain sensor, etc.).*

Status indicator LEDs
○ LED off
● LED lit red
◍ LED blinks red
● LED lit green
◍ LED blinks green
◍ LED blinks alternating red/green

Example connection diagram







Attention!

Due to the supply voltage tolerance of ± 10% it is mandatory to use a regulated power supply - unregulated power supplies cause high voltage spikes which can destroy the device!

Technical data

Operating voltage	12-24 V DC ±10% **(regulated power supply)**
Control voltage	Same as operating voltage
Power consumption	max. 0.6 W
Run time	3-240 s
Automatic closing time	3 s to 30 min
Reverse pulse	0.1-1.3 s
Relay switching dead time	0.6 s
Relay output	12-24 V DC, max. 8 A
Ambient temperature	-10°C to+45°C
DMS 5 mounting	Click-mount on standard 35-mm rail (EN 60715)
DMS 5:	
- Connections	Socket terminals with captive screws M3.5
- Clamping range	0.5 mm^2 - 4.0 mm^2
- Strip length	6.0 mm - 6.5 mm
- Screwing torque	0.80 Nm
DMS U5:	
- Connections	Socket terminals with captive screws M3
- Clamping range	0.5 mm^2 - 2.5 mm^2
- Strip length	6.5 mm - 7.0 mm
- Screwing torque	0.50 Nm
DMS 5 outside dimensions	18 x 88 (45) x 58 mm^3
DMS 5 installed depth	55 mm
DMS U5 outside dimensions	43 x 43 x 18,5 mm
RAL colour	Grey 7035 / Green 6029

Order data

Part no.	EAN	Type	Designation
DMS50K	4 046929 401104	DMS 5	Open/close controller 12-24V DC
DMSU5K	4 046929 401098	DMS U5	Open/close controller (UP) 12-24V DC