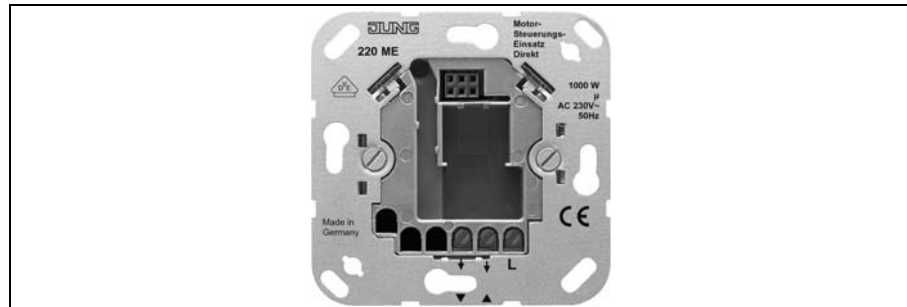


Operating Instructions JM Motor Control Insert „Direkt“



1. Safety instructions



Attention: Electrical equipment must be installed and fitted by qualified electricians only.

Only for connection of a motor with limit switches and a power consumption of max. 1000 W. Non-observance of the fitting instructions may damage the device and cause fire or other hazards.

The blind/shutter control is designed for the automatic operation of window blinds and shutters. Any other use as, for instance, the operation of roller-shutter gates may involve hazards. These risks must be excluded by the user by providing supplementary and suitable safety devices (e.g. light barriers).

2. Function

The motor control insert 'Direkt' is used in electrical installations without neutral conductor (N).

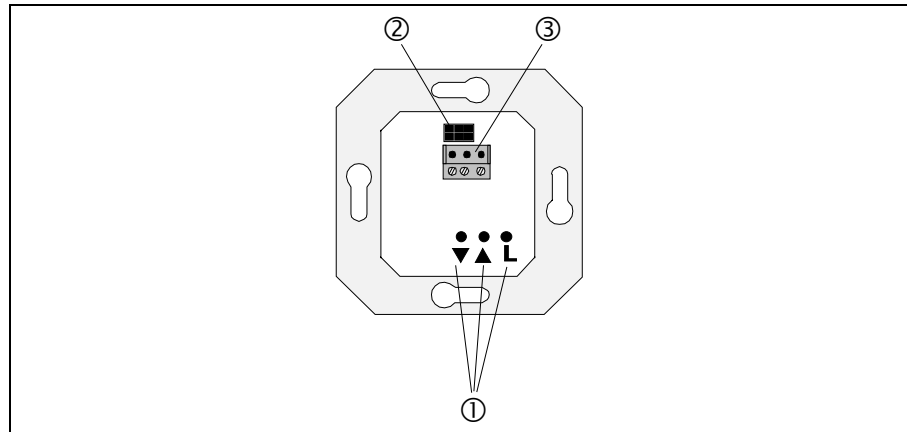
The existing mechanical shutter switch can therefore be replaced directly by a comfortable control unit with the motor control insert 'Direkt'. The motor control insert 'Direkt' is a component of the Jalousie Management and is used in conjunction with attachments of the Jalousie Management in a mounting box acc. to DIN 49073 (deep box recommended).

By replacing the attachment it is therefore possible to realize systems with manual operation, comfortable operation by radio remote control or timercontrolled fully automatic operation.

The insert is equipped with two mechanically interlocked relay power contacts. The simultaneous activation of both moving directions of the shutter motor connected is thus excluded.

Attention: Connect only one motor with limit switches and a power consumption of 1000 W max. to each insert. Do not use isolating relays. It is absolutely necessary to check the motor for suitability as described in chapter 4.

The insert has 3 connecting terminals (1) and a 6-pole interface connector (2) for connection of the attachment. In addition, a 3-pole terminal block (3) can be placed into the insert (supplied with inserts with sensor input).



This terminal block can be used to connect different sensors to the insert when attachments with sensor input are installed:

- Sun protection / twilight sensor (art. no. 32 SD)
- Glass breakage sensor (art. no. 32 G)

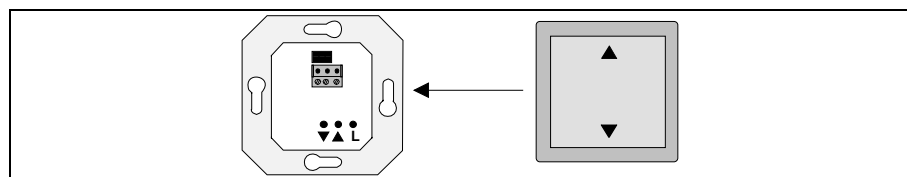
2.1. Equipment combinations

Depending on the attachment used, the following functions can be implemented:

JM push-button attachment, (Art. no. ..5232 .., ..5252 S..)

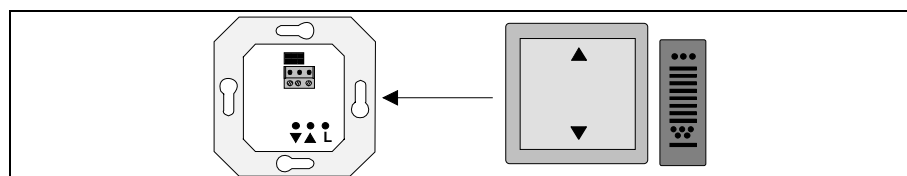
Pushbutton for manual operation.

(see 'JM push-button attachment' operating instructions).



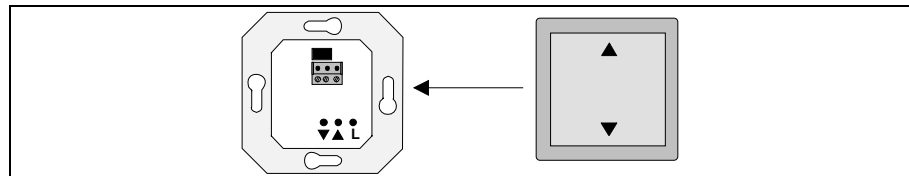
JM radio receiver attachment, (Art. no. ..5232 F., ..5252 FS..)

Pushbutton for manual and radio remote-control operation (see 'JM radio receiver attachment' operating instructions).



JM push-button attachment with memory function, (Art. no. ..5232 M., ..5252 MS..)

Pushbutton for manual operation with additional automatic control. With its memory function for an UP and a DOWN movement, this attachment permits simple and individual programming. Both shutter movement times are repeated once every 24 hours (see 'JM pushbutton attachment with memory function' operating instructions)

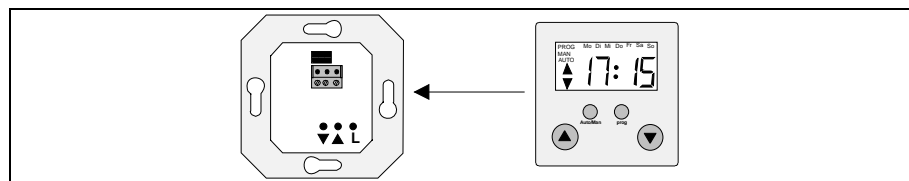


If the above attachments are used in the versions with sensor input, the glass breakage alarm and sun protection functions can also be implemented.

JM timer attachment standard or JM timer attachment universal

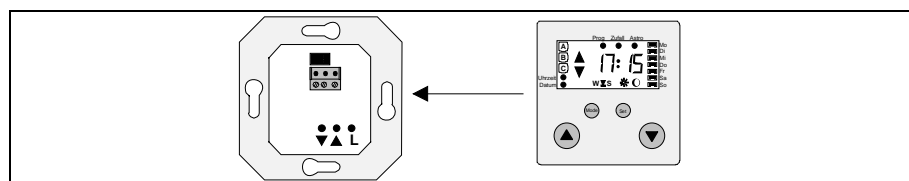
Timer for automatic control with programmable switching times. See also the operating instructions of: JM timer attachment standard (Art. no. ..5232 ST..) and

JM timer attachment standard (Art. no. ..5232 ST..)



and

JM timer attachment universal Art no. ..5232 T.., ..5232TS..



When the versions with sensor input are used, the following functions are available in addition:

- glass breakage alarm
- sun protection function
- twilight function

3. Instructions

Use blind/shutter motors with mechanical or electronic limit switches only.

Check the blind/shutter motor for suitability in compliance with the instructions set out in chapter 4 before using it in conjunction with the JM motor control insert 'Direkt'..

Do not use isolating relays. With such relays, the blind/shutter control has no power supply through the motor winding. Risk of malfunction.

Observe the instructions of the motor manufacturers concerning the switchover time and the maximum load factor (c.d.f.)

The JM motor control insert 'Direkt' must only be used in conjunction with one of the following attachments:

- JM push-button attachment
- JM radio receiver attachment
- JM push-button attachment with memory function
- JM timer attachment standard
- JM timer attachment universal

The electronic interlocking of the attachment permits to obtain a minimum switch-over time of approx. 1 second in the continuous run mode.

If a shutter motor is to be activated or deactivated – besides by local operation – also from higher-level systems (e.g. centralized control), the motor control insert JM with inputs for extension controls must be used (neutral wire required).

If it is necessary to prolong the sensor line, use an appropriate type of sensor cable. Recommendation: J-Y(ST)Y 2x2x0.6 mm.

3.1. Prüfung der Eignung von Motoren

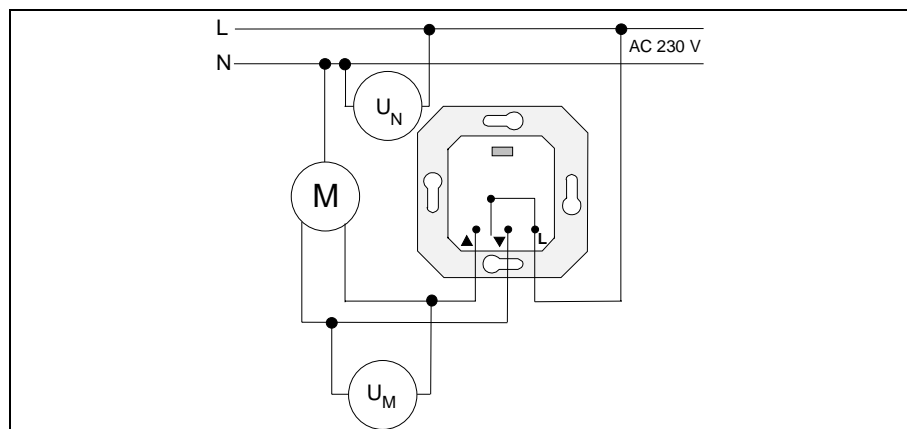
Often, it is not known whether the motor installed is equipped with mechanical or electronic limit switches.



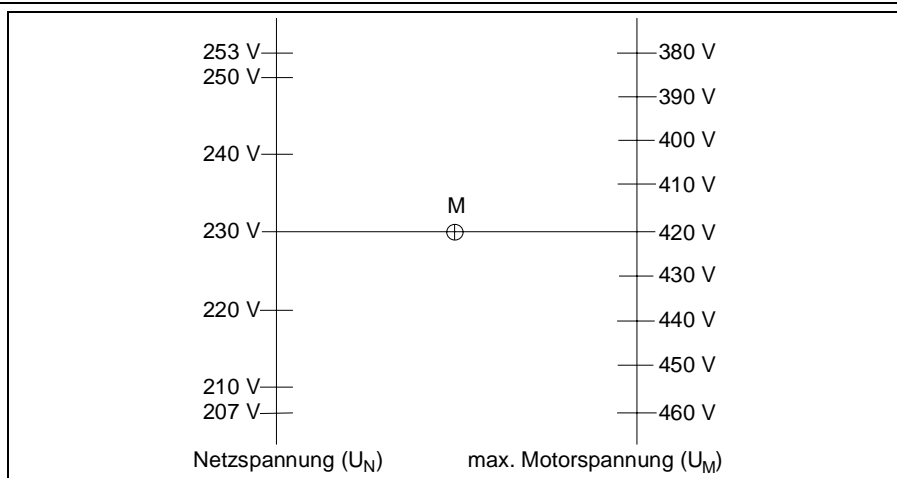
Therefore: Check the motor first for suitability. Some motors with mechanical limit switches tend to build up a high motor voltage in operation which may irreparably damage the JM motor control insert 'Direkt'. Checking is therefore effected with a commercial mechanical shutter switch (possibly still installed) and not with the JM motor control insert 'Direkt'.

Carry out the following measurement using a voltmeter:

- Measure the actual mains voltage UN.



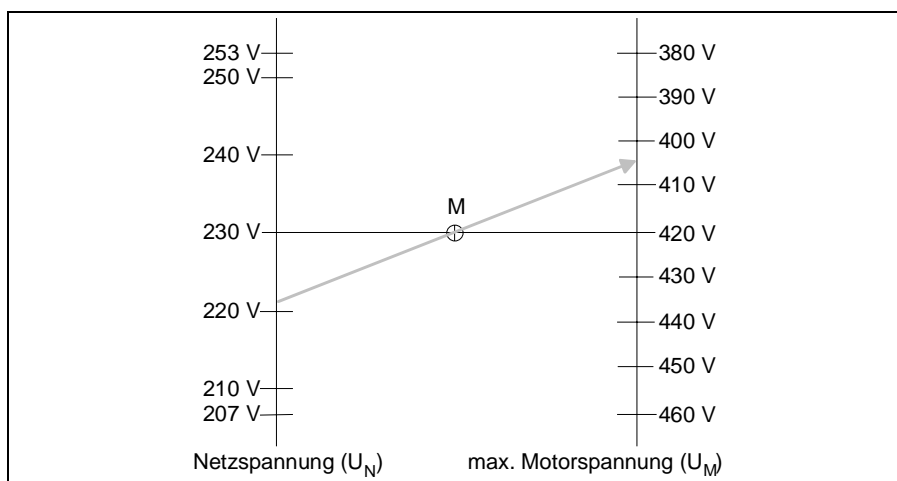
- Go to the measured mains voltage on the left side of the diagram opposite.



- Draw a straight line from the value found through the center M to the righthand axis. The intersection of the line and the right axis is the maximum permissible motor voltage U_M.
- Measure the motor voltage U_M in the UP and DOWN direction on the installed mechanical shutter switch. The maximum value as determined above must not be exceeded when the measurements are made.

Example:

The measured mains voltage U_N is 221 V. Draw a straight line from 221 V on the left through the center of the diagram (M) to the right side with motor voltage U_M. The the maximum permissible motor voltage in this case is 404 V. The voltages measured for the UP and DOWN directions must therefore be below 404 V.



Approximate values for typical maximum motor voltages U_M as a function of the mains voltage U_N are set out in the table opposite.

| U _N | max. U _M |
|----------------|---------------------|
| 207 V | 380 V |
| 215 V | 393 V |
| 220 V | 403 V |
| 225 V | 412 V |

| | |
|-------|-------|
| 230 V | 420 V |
| 235 V | 429 V |
| 240 V | 438 V |
| 245 V | 447 V |
| 253 V | 460 V |

Motor with electronic limit switches

If it is certain that the motor used is one with electronic limit switches, the measurement described above can be dispensed with.

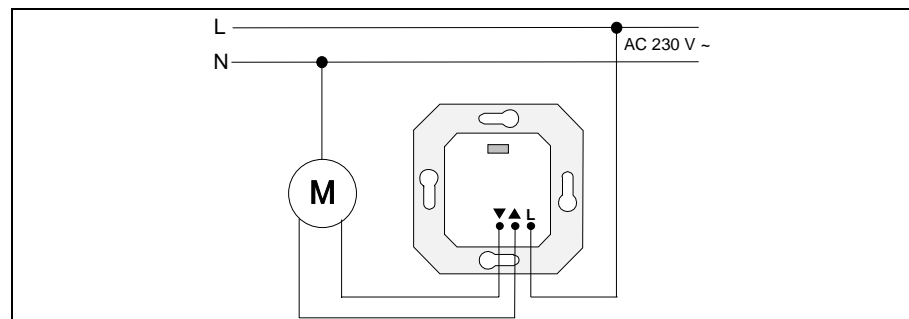
It is not possible to damage the insert with motors equipped with electronic limit switches if these are used in conformity with their designated use.

In this case, check the basic functions of the motor in combination with the JM motor control insert 'Direkt' as follows:

- Install the JM motor control insert 'Direkt' as described in chapter 5.
- Plug a shutter control attachment into the insert.
- Test the functions of the shutter control in several trial runs with the motor connected.

4. Connection and fitting

The JM motor control insert 'Direkt' is connected in acc. with the opposite figure.

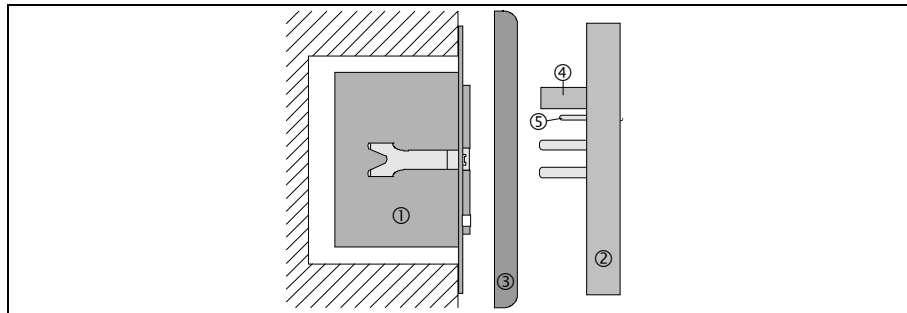


Install the JM motor control insert 'Direkt' (1) in a mounting box in acc. With DIN 49073 (deep box recommended). The connecting terminals of the insert must be at the bottom.

Plug the attachment (2) together with frame (3) into the insert.

The electrical contact is established through connector (4).

The additional contact pins (5) in attachments with sensor input make automatic contact with the 3-pole terminal block placed into the insert.



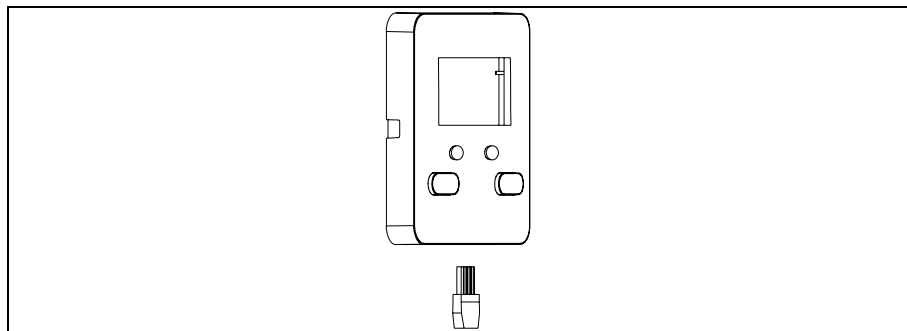
6. Installation with sensors

Important: The sensor cable carries safety extra low voltage (SELV). Observe the installation rules in acc. with VDE 0100.

The installation of the sensors varies with the type of installation (flushmounting or surface-mounting) and with the attachment used. The sensor cable is factory-equipped with a connector.

Direct connection of the sensor cable to the attachment

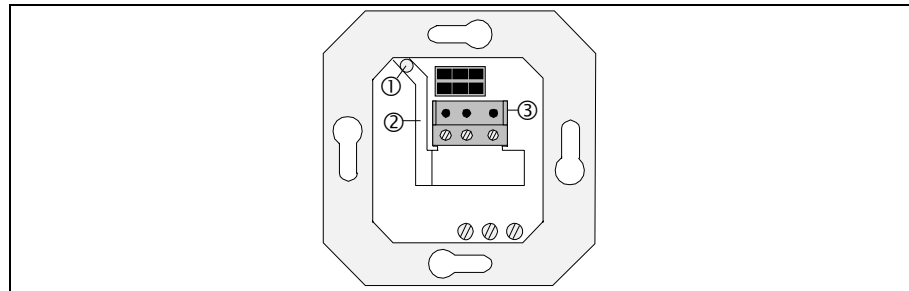
If the attachment is equipped with a jack, the sensor is simply connected to the attachment by plugging the connector into the jack. The connector is polarized so that it can be plugged in only in the correct position (see attachment operating instructions).



Flush-mounting installation of sensor cable

The sensor cable is laid in a cable duct inside the insert.

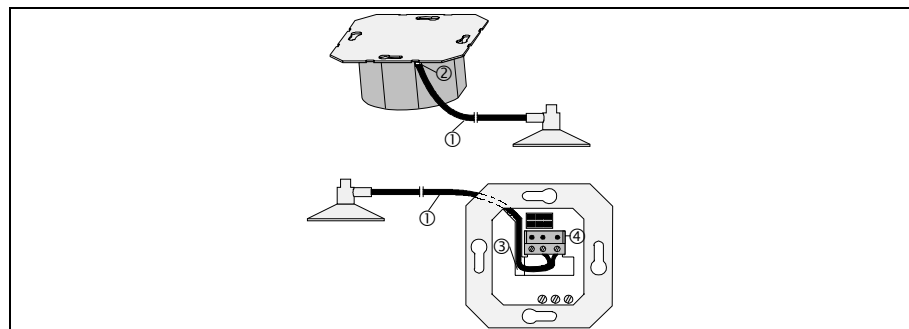
- Cut off the connector at the end of the sensor cable.
- Slide the insulating sleeve (supplied with attachments with sensor input) over the sensor cable.
- Stick the sleeved cable through the hole (1) of the insert. The insulating sleeve must cover the sensor cable over the full length from the flush-mounting box to the cable duct (2).
- Pass the cable with the insulating sleeve through the duct (2) to the terminal block (3). The cable must follow the duct closely without any loops in the 230 V section of the insert.
- Place the terminal block (supplied with attachments with sensor input) into the insert as shown in the illustration (screws at the bottom).



Surface-mounting of sensor cable, version 1

The cable is passed through the cable duct in the insert.

- Pass the the sensor cable (1) through opening (2) behind the supporting frame (between wall and supporting frame) into the cable duct (3) in the insert.
- Lead the cable directly through the duct to the terminal block (4). The cable must follow the duct closely without any loops in the 230 V section of the insert.



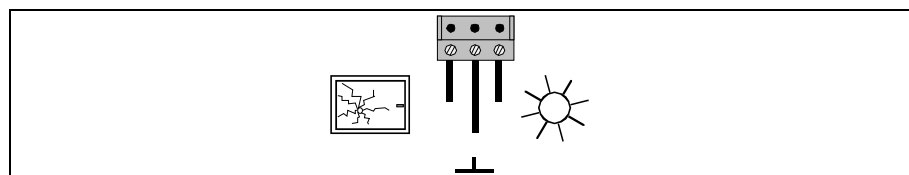
Connection to the terminal block in the insert:

Connect the sensor cable in acc. with fig. E.
The screws of the block must be at the bottom.

Left: glass breakage sensor signal line
Center: ground
Right: sun / twilight sensor signal line

Wire marking:

Sensors:
'Ground' = marked grey
Adapter and extension cable:
'Sun' = marked grey
'Ground' = middle wire



If the the sun / twilight sensor and the glass breakage sensor are to be used at the same time, an adapter must be installed (to be ordered

separately). Connect the adapter directly to the attachment by means of the connector or to the insert with the 3-pole terminal block (connector cut off). The adapter is equipped with 2 jacks for connection of the sensor plugs

5. Technical data

| | |
|--|--|
| Rated voltage: | AC 230 V ~, 50 Hz N-conductor not required |
| Switching capability: | max. 1 Motor 1000 W |
| Relay output: interlocked) | 2 non-floating n.o. contacts (mutually |
| Pulse time | |
| JM push-button attachment | 2 minutes |
| JM push-button attachment with memory function: | 2 minutes |
| JM radio receiver attachment: | 2 minutes |
| JM timer attachment standard | 2 minutes |
| JM timer attachment universal | standardwert 2 minutes programmed :1 second - 12 minutes |
| Switch-over in continuous run mode: | min. 1 second (electronic interlock in attachment) |
| Connecting terminals: | screw terminals for 2.5 mm ² max. or 2 x 1.5 mm ² |
| Circuit-breaker | 16 A max. |

6. Guarantee

We accept the guarantee in accordance with the corresponding legal provisions.

Please return the unit postage paid to our central service department giving a brief description of the fault:

ALBRECHT JUNG GMBH & CO. KG
Service-Center
Kupferstr. 17-19
D-44532 Lünen
Service-Line: 0 23 55 . 80 65 51
Telefax: 0 23 55 . 80 61 89
E-Mail: mail.vki@jung.de

General equipment

Service-Line: 0 23 55 . 80 65 55
Telefax: 0 23 55 . 80 62 55
E-Mail: mail.vkm@jung.de

instabus EIB equipment

Service-Line: 0 23 55 . 80 65 56
Telefax: 0 23 55 . 80 62 55
E-Mail: mail.vkm@jung.de