



User Manual

HEAVY DUTY MOVEMENT TYPE GMV

115030-00 GMV X
115032-00 GMV X Minute shaft
115034-00 GMV Neon

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1. FUNCTION

Movement type GMV is for connection to 24 V polarized 1/1-min. impulses from master clock (for 1/2-min. impulses upon special request) and to 230 V AC.

The movement comprises:

- Bracket
- Impulse collector
- Synchronous motor
- Gear mechanism for the hands

The impulse collector is a polarized relay and operates in principle as a slave movement. The impulse collector receives impulses from the master clock and activates a micro switch by these impulses. When the micro switch is activated the electric circuit of the synchronous motor is closed and the hands are forwarded one minute.

The motor operates the hands via gear wheels.

In case of power failure, the impulse collector stores the impulses from the master clock. When power returns the impulse collector automatically distributes rapid impulses to the synchronous motor for forwarding of the hands to present (correct) time.

2. MOUNTING INSTRUCTIONS

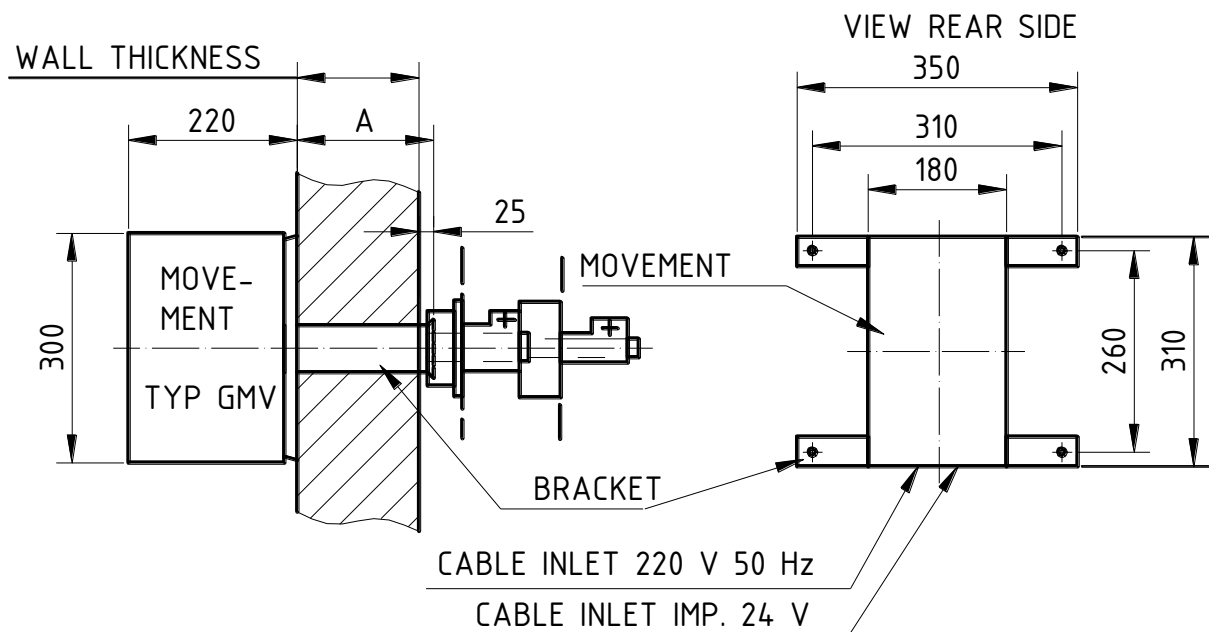
Recessed mounting with inspection shutter.

- Make space for the casing of the movement in the wall. Dimension 410 x470 mm. Minimum deep 225 mm.
 - Drill a hole of \varnothing 70 mm in the wall for the bracket tube. (see below)
 - Fix the bracket into the wall and fasten with bolts.
 - Insert the hour and minute shafts through the bracket tube.
 - Fasten the movement to the casing by the four bolts.
 - Mount the hands on the corresponding hour- and minute shafts.
 - Fasten the locking screws. NOTE! The hands shall be locked in "12-position".
- Connect 230V 50Hz and impulse according to connection diagram.

Cables

Cables for main: 3 x 1,5

Cables for impulse: 2 x 1,0



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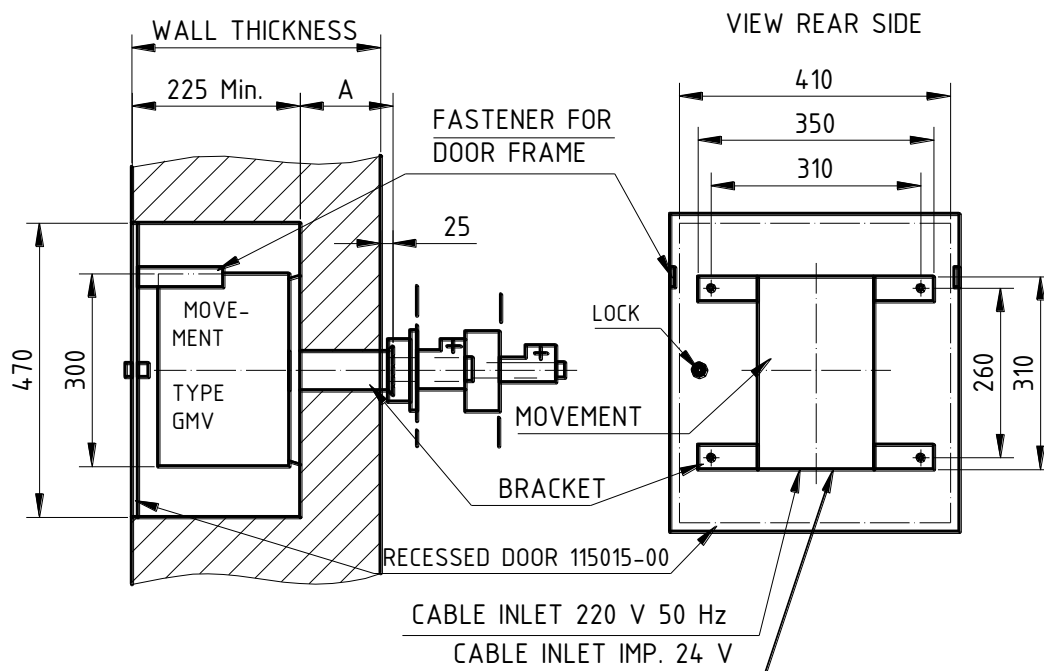
Mounting behind a wall.

- Make of hole of $\text{Ø } 60$ mm in the wall through which the casing tube can be inserted.
- Fix the casing tube and attach it by screws to the wall.
- Insert the hour- and minute shafts through the casing tube.
- Fix the casing of the movement with the four bolts.
- Mount the hands on the corresponding hour- and minute shaft.
- Fasten the locking screws. NOTE! The hands shall be locked in "12-position".
- Connect 230V 50Hz and impulse according to connection diagram.

Cables

Cables for main: 3 x 1,5

Cables for impulses: 2 x 1,0



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3. SETTING INTO OPERATION

At delivery the minute curve of the impulse collector is set to 12.00. (00 indication)

- Put on the hands, and fasten them on 12 position.
- Fasten the hands thoroughly.
- Check that the position of the minute curve hasn't changed by
 - screwing out pin 3
 - put pin 3 into sleeve 4 and run the pin into the hole of the minute curve 5.

The movement is now ready for connection.

Connection – movement (no neon)

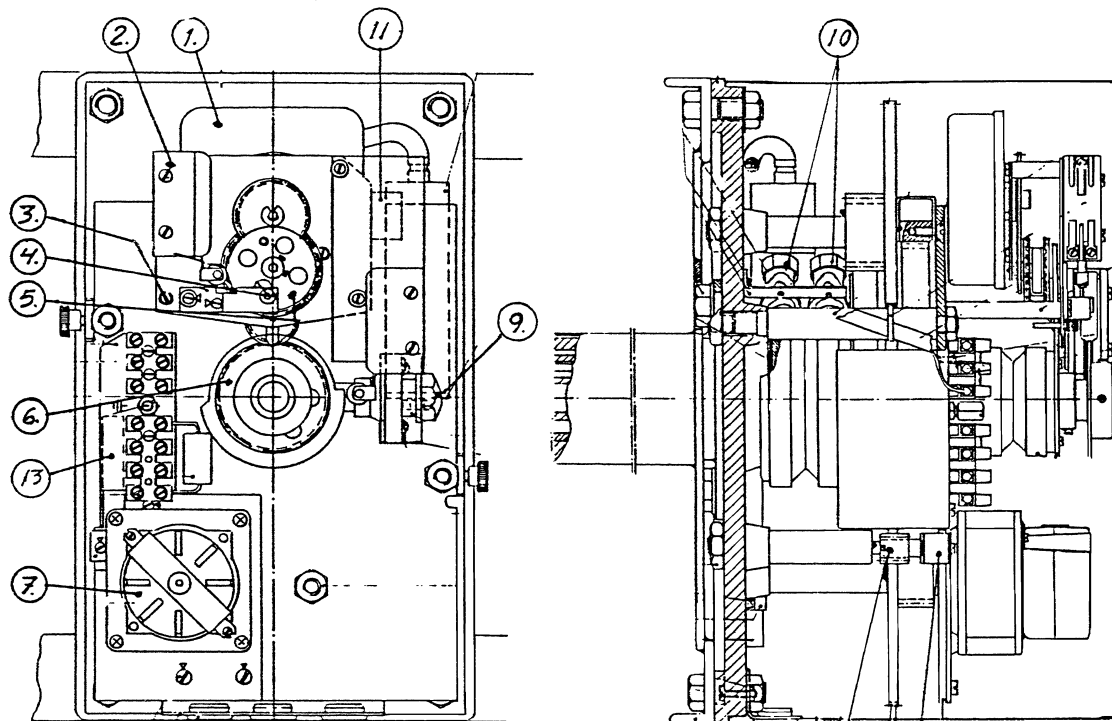
Connect terminal 13 to mains. Connect terminal 11 to the master clock.

Connection – movement for neon

Connect main for minute hand to 9 and main for hour hand to 10.

If the time doesn't correspond to the master clock time

- The impulse connector is not correctly polarized.
- Turn the connector and make a time correction of the movement.



1. Impulsuppsamlare
2. Mikrobrytare
3. Stift
4. Bussning
5. Minutkurva
6. Siffertavla
7. Synkronmotor

8. Kugghjul
9. Kolborstar för minutvisaren
10. Kolborstar för timvisaren
11. Impulsledning
12. Bladfjäder
13. Nätanslutning
14. Driv

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4. MANUAL CORRECTION OF TIME

IMPORTANT! The synchronous motor shall not be connected to mains.

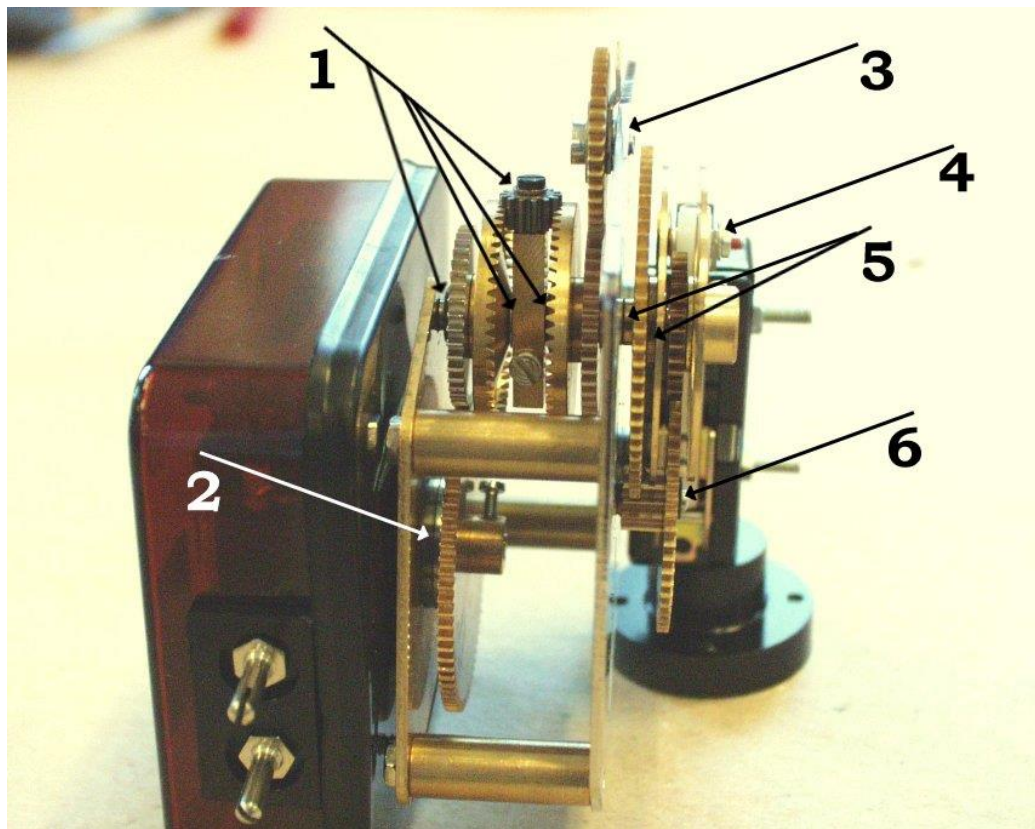
- Put pin "3" into sleeve "4" and put the pin into the hole of the minute curve "5".
- Press the plate spring "12" to disengage the driving gear "14".
- Set the hands by the gear wheel "8".
- The time is read on the dial "6". Only minutes, the hour must be counted 1 hour each turn.
- When required time has been set pin "3" is fastened on its place again.

5. MAINTENANCE

Lubrication of the movement must be done minimum once a year. All positions marked in the pictures on the following pages must be oiled. Movements which are installed in aggressive environment may need more frequent maintenance.

Use high-grade lithium-soap paste, for specification please contact Westerstrand Urfabrik AB. In case of negligence of maintenance, the movement may be damaged or the life cycle considerable reduced.

Lubrication of driving mechanism



1. Angle gear bearing
2. Centre shaft
3. Impulse collector drive

4. Roller for micro breaker
5. Between minute and hour curve
6. Change gear

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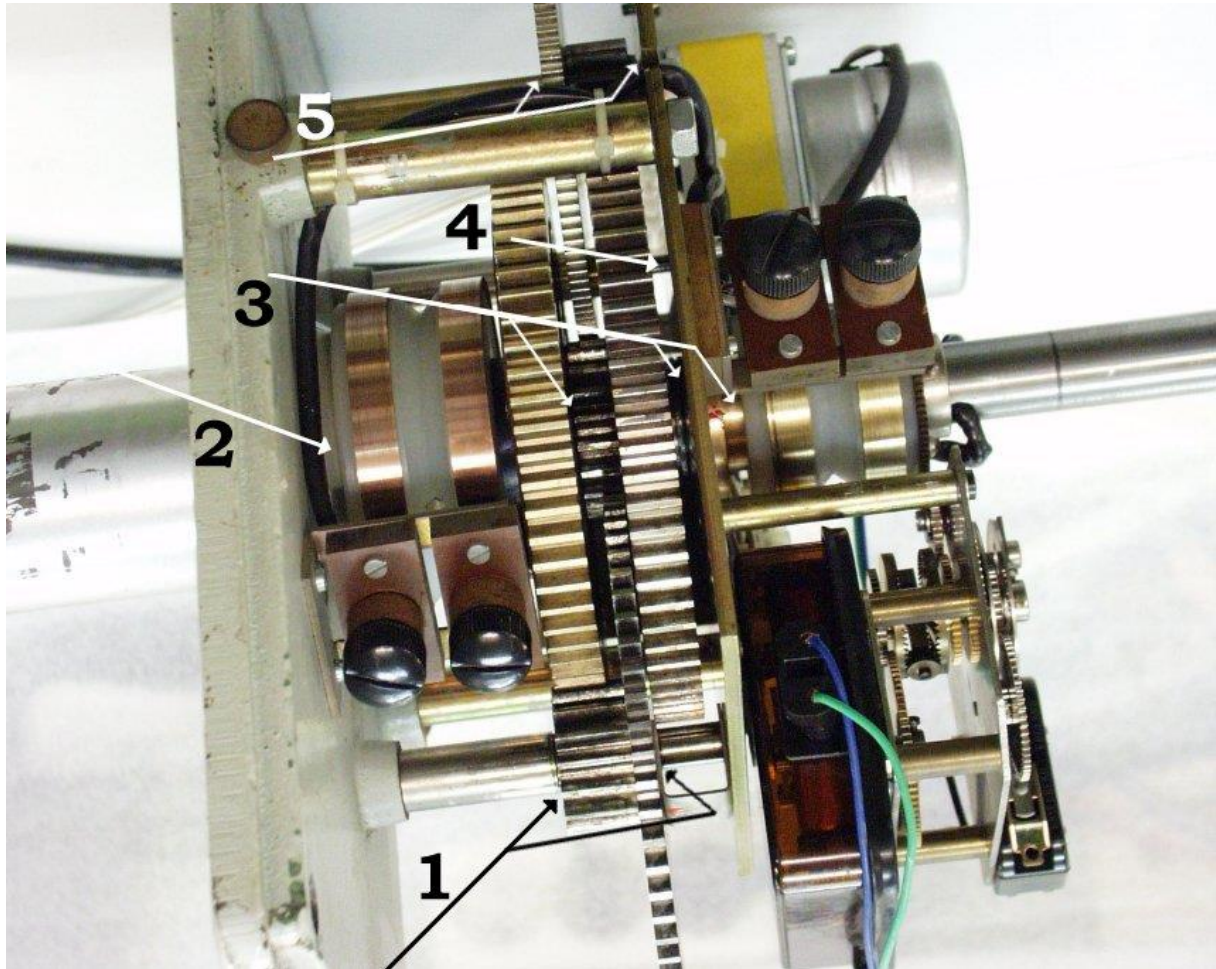
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Lubrication of gear mechanism



1. Change wheel bearing
2. Hour shaft
3. Minute shaft
4. Motor shaft and driving gear
5. Driving gear bearing

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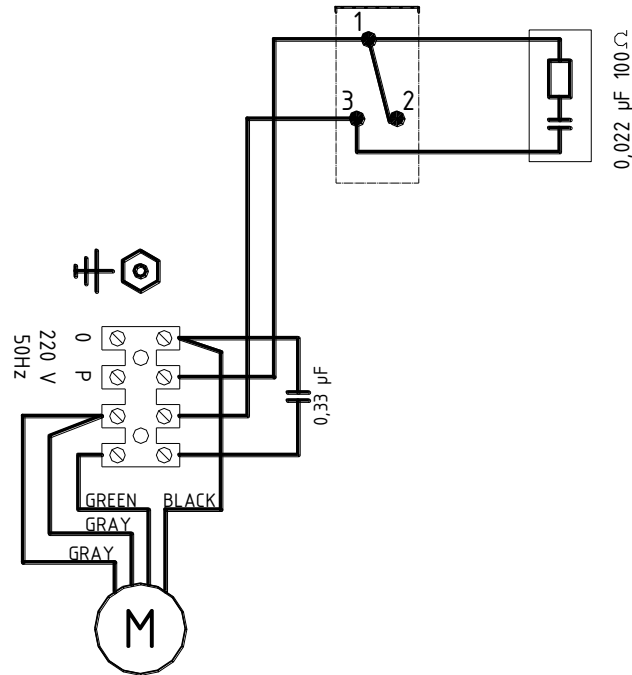
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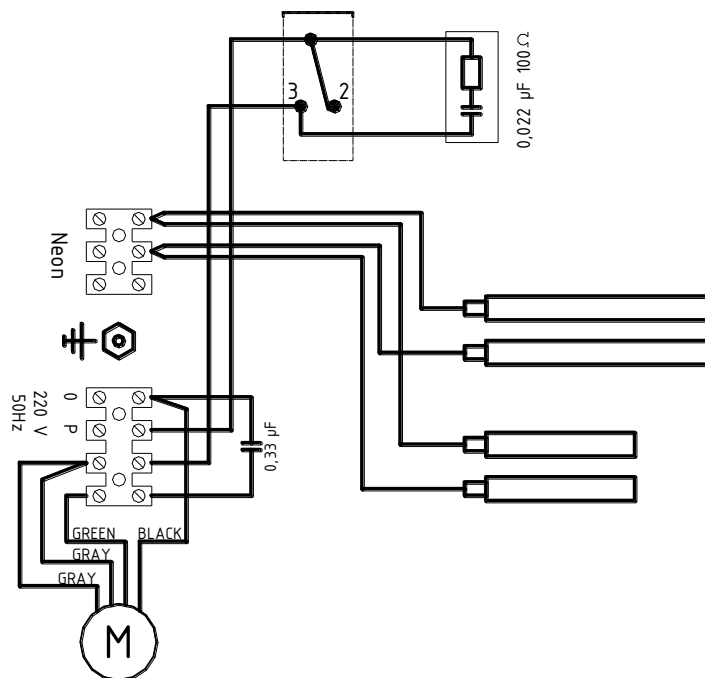
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6. CONNECTIONS DRAWING 115030-00, 115032-00



W.no.078966-00

8. CONNECTIONS DRAWING 115034-00



W.no.078965-00