

# Instructions for mounting secondary clock movements with synchronous second NU90 /SYN and NU90 /t / SYN

This movement is based on advanced technology. The secondary movement can be operated with 12, 24, 48 or 60 VDC polarised minute impulses. The movement for the synchronous second has to be operated with 230 VAC / 50 Hz. The movement is suitable for in- and outdoor clocks with protected hands up to  $\varnothing$  80 cm.

## 1. Operating voltage

### 1.1 Secondary Movement

The operating voltage is factory set to 24 V DC. If other voltage required, set DIP-switch according to diagram on back side of movement.



### 1.2 Synchronous movement

Connect to 230 VAC / 50 Hz

## 2. Dial

### 2.1 For clocks with metal / plastic dial (NU 90 / SYN)

Insert the movement with the rubber washer from the backside into the centre hole of the dial and fasten the movement with the central fixing screw to the dial (thickness max. 8mm). The NU 90 / SYN movement can be operated in any position. It's recommended to fasten the movement with the hand setting shaft down.

### 2.2 For illuminated clocks with transparent dial (NU 90 t / SYN)

For transparent clocks with acryl / glass dial (thickness max. 8 mm) movement NU 90 t / SYN with long hand shaft 36 mm/43 mm must be used. Place spacer piece (one or two as per thickness of dial), cardboard disk and rubber washer and insert movement from backside into centre hole of dial. The rubber washer has to be placed next to the dial. Now tighten the movement with the central fixing screw. The NU 90/ SYN movement can be operated in any position. It's recommended to fasten the movement with the hand setting shaft down.

## 3. Mounting of hands

Place hour hand on hour shaft. The bushing can be compressed so that the hand fits tight. Then place minute hand on minute shaft and second hand on second shaft. Tighten the hands with the screw on the side of the split clamp block. Both hands should be aligned to be on an exact hour before clamping. Make sure that the hands do not touch each other.

## 4. Connection

### 4.1 Secondary movement

Connect the cables from master clock to the green two-pole plug. If there would be a difference of 1 min. between master clock and secondary clock time, move the plug to the opposite pair of pins to reverse polarity.

### 4.2 Synchronous movement

Connect to 230 VAC / 50 Hz using the plug that's supplied with the movement (middle pole is not used). Order No. for the counter part of the plug: G 496 1300 0000.

Note: The second hand is moving synchronous with the first minute impulse.

### 5. Hand setting

The hands can be set by the hand setting shaft.

**Important:** Never turn the second hand manually, as this will damage the movement. Also, the minute hand may only be turned in clockwise direction.