



## The Clock as an Effective Eye-Catcher in City and Building Architecture

Advertising clocks, large-size clocks and facade clocks are more than mere public displays of time. They attract the attention of many people, bring cityscapes to life, grace facades and enrich the atmosphere of various buildings as artistic objects of design. This explains the desire for customized clock designs. By combining various housing

designs, dials and hands with the latest clock technology, such as time over Ethernet and LED illumination, we have the experience and know how to help you realize your most ambitious projects.

Mounting	Model	Fig.	Movement	Attachment/ wall bushing Ø in mm	Dials	Ø 25	Ø 30	Ø 40	Ø 50	Ø 60	Ø 80	Ø 100	Ø 120	Ø 140	Ø 150	Ø 160	Ø 180	Ø 200	Ø 220	Ø 230	Ø 250	Ø 280	Ø 300	Ø 350	Ø 400	Ø 450	Ø 500					
Indoor	A509b	1	NU 90t	Z Ø 12	ZB 1	✓	✓	✓	✓	✓																						
	ZB 17				✓	✓	✓																									
	F509b	IBU 190t S	ZB 1		✓	✓	✓	✓	✓																							
	ZB 17		✓		✓	✓																										
Indoor	DMU 140 <sup>1</sup>	1	DMU 140	Z Ø 20	ZB 1						✓	✓	✓	✓																		
Indoor or outdoor	DMU 160F	2	DMU160F	with front mounting plate	ZB 1				✓	✓	✓	✓	✓	✓	✓	✓																
					ZB 45					✓	✓	✓	✓	✓	✓	✓	✓	✓														
					ZB 46						✓	✓	✓	✓	✓	✓	✓	✓	✓													
	DMU 160S	3	DMU160S	RW Ø 52	ZB 1				✓	✓	✓	✓	✓	✓	✓	✓	✓															
					ZB 45					✓	✓	✓	✓	✓	✓	✓	✓	✓														
					ZB 46						✓	✓	✓	✓	✓	✓	✓	✓	✓													
	DMU160M or DMU160V	4	DMU160M or DMU160V	RW Ø 52	ZB 1				✓	✓	✓	✓	✓	✓	✓	✓	✓															
					ZB 45					✓	✓	✓	✓	✓	✓	✓	✓	✓														
					ZB 46						✓	✓	✓	✓	✓	✓	✓	✓	✓													
	A610 F610	4	MW 10 MWS 10	RW Ø 52/80	ZB 1							✓	✓		✓		✓	✓	✓	✓	✓	✓	✓ <sup>(2)</sup>	✓ <sup>(2)</sup>	✓ <sup>(2)</sup>							
					ZB 45									✓	✓		✓		✓	✓	✓	✓	✓	✓	✓ <sup>(2)</sup>	✓ <sup>(2)</sup>	✓ <sup>(2)</sup>					
					ZB 46									✓	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓ <sup>(2)</sup>	✓ <sup>(2)</sup>	✓ <sup>(2)</sup>				
					ZB 50									✓	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓ <sup>(2)</sup>	✓ <sup>(2)</sup>	✓ <sup>(2)</sup>				
	A611 F611	3a	MW 10 MWS 10	with front mounting plate	ZB 50						✓	✓		✓		✓	✓	✓	✓	✓	✓											
A620	4	MW 20	RW Ø 65/120	ZB 1																			✓	✓	✓	✓						
F620	4	MWS 20	RW Ø 65/120	ZB 1																	✓	✓	✓	✓	✓							
A624a	4	MW 24	RW Ø 65/120	ZB 60										✓		✓	✓		✓	✓	✓	✓										
A624b	4	MW 24	RW Ø 65/120	ZB 60																			✓	✓	✓	✓						
MWS 24	4	MWS 24	RW Ø 65/120	ZB 60										✓		✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓					
DMU 350	4	DMU 350	RW Ø 65/120	ZB 1										✓		✓	✓		✓	✓	✓	✓	✓	✓	✓	✓						

Larger diameters upon request

<sup>1</sup> cover glass required for exterior mounting, <sup>2</sup> for MW 10 only

We can offer customized solutions for any specific project. Please do not hesitate to contact us.

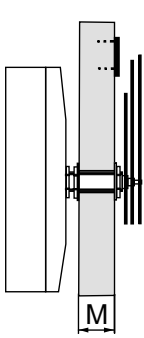


Fig. 1  
Z  
Central mounting

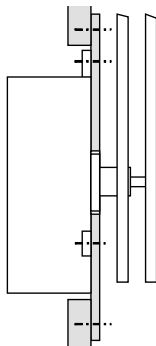


Fig. 2  
Front mounting plate for  
MW 10, MWS 10,  
DMU 350  
Art. no. 23345  
for DMU 160 F  
Art. no. 206460

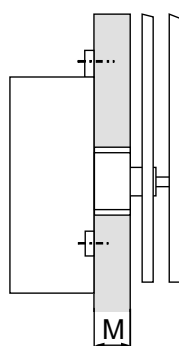


Fig. 3  
RW  
Rear sided wall mounting

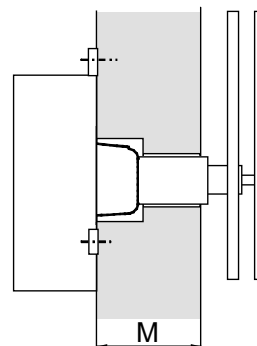
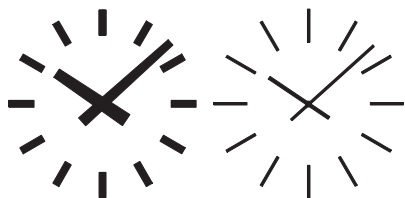


Fig. 4  
RW  
Rear sided wall surface mounting

Movement	Wall thickness M max. (mm)
NU 90t	24
IBU 190t S	28
DMU 160 F	-
DMU 160 S	35
DMU 160 M	345
DMU 160 V	495
MW 10	600
MW 20	800
MW 24	800
DMU 140	28
DMU 350	600

## Available Dials



### ZB 1 / ZB 17

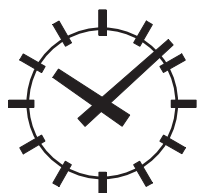
12 individual block-shaped hour markers to mount on wall, 1 pair of block-shaped hands.

ZB 1: bold design, ZB 17: slim design



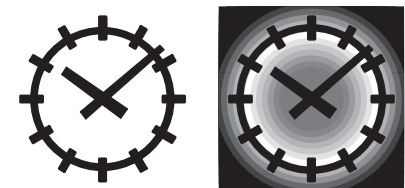
### ZB 45

12 hour markers mounted on 2 rings, with bolts for mounting on wall, 1 pair of block-shaped hands.



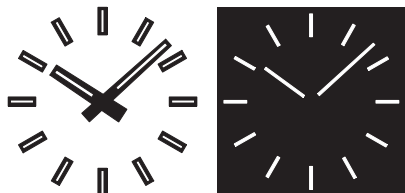
### ZB 46

12 hour markers mounted on 1 ring, with bolts for mounting on wall, 1 pair of block-shaped hands.



### ZB 50

The 12 hour markers are mounted on a U-section ring which contains highly efficient LEDs facing the wall on its inside. The skeleton dial and hands appear as silhouette at night. For the best effect at night, the background should be kept in a light color.



### ZB 60

The 12 individual hour markings and hands are in box design. On the front, the slits are covered with white acrylic glass. LEDs in white (other colors on request) are integrated into the hour markers and hands.



### ZB R

12 Roman numerals made of light metal to mount on a wall, 1 pair of sword-shaped hands.

Available for the whole range of facade clocks upon request.

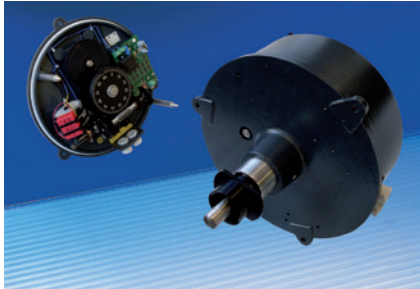
## Impulse movements for facade clocks (wall clocks) in indoor applications

Also available with MOBALine (SAM/SEM 100t) or NTP (NBU 190t (S)) movements

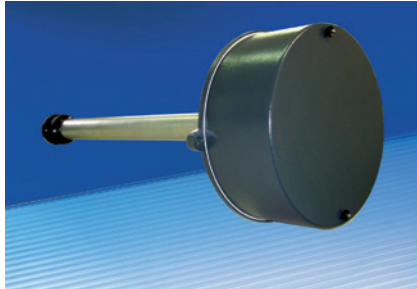
Technical data	NU 90t (Art. no. 251530)	IBU 190t S (Art. no. 202837)
Dial diameter	Up to 80 cm	
Synchronization	polarized minute pulses	
Impulse voltage	12, 24, 48 or 60 VDC (selectable with DIP switch)	24V / 36V / 48V / 60V (selectable with DIP switch)
Impulse current	12 mA @ 12 VDC, 6 mA @ 24 - 60 VDC	6 mA
Power supply	none	45 V - 265 VAC or 48 VDC, < 2VA (max. 30 mA)
Temperature range	-30 to +70 °C	
Relative humidity	0 to 95%, non-condensing	
Protection degree	IP 54 / IP 65	
Hand dimensions	According to DIN 41092/3	
Weight	180 g	380 g

# MW series - impulse movements for big facade clocks

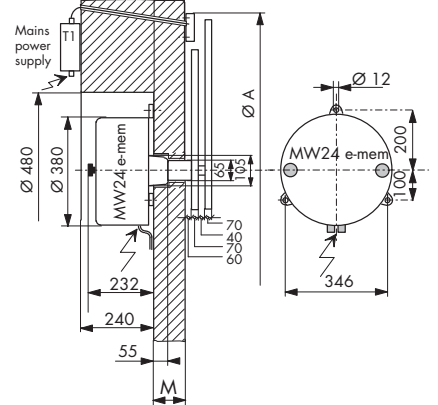
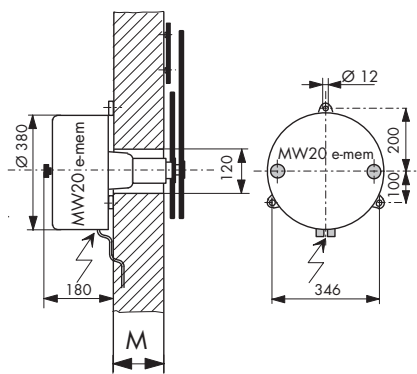
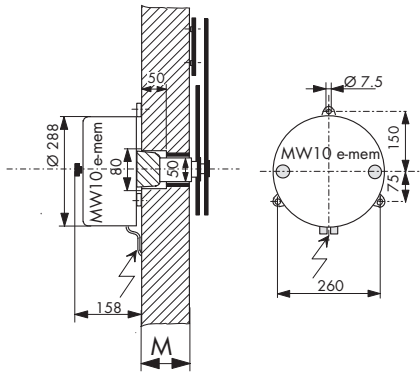
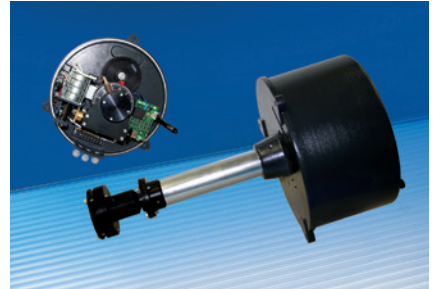
MW 10 / MWS 10



MW 20



MW 24 / MWS 20

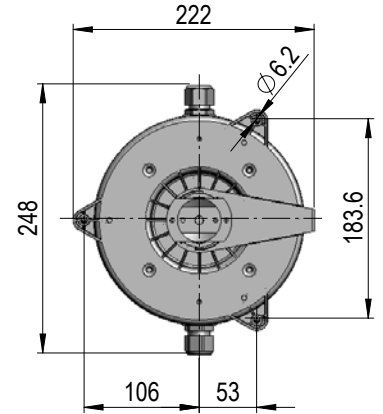
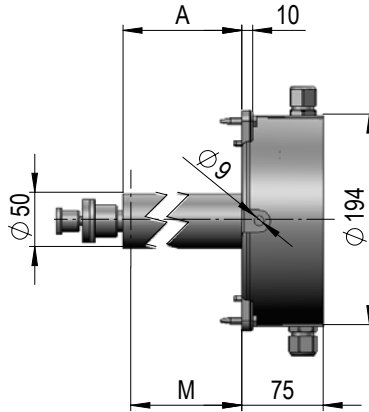


Technical data	MW 10	MWS 10	MW 20	MWS 20	MW 24	MWS 24
Design	h/min	h/min/s	h/min	h/min/s	h/min	h/min/s
Dial diameter	1 - 3,5 m	1 - 2,5 m	3,5 - 5 m	2,5 - 4 m	1,5 - 5 m	1,5 - 5 m
Synchronization	polarized minute pulses					
Impulse voltage/current	12 - 60 VDC / max. 4 mA					
Power supply	230 VAC / 50 Hz, < 10 VA					
Temperature range	-30 to +55 °C					
Relative humidity	0 to 95%, non-condensing					
Protection degree	IP 54 / IP 65					
Weight	< 9 kg	< 11 kg	< 22 kg	< 26 kg	< 24 kg	< 28 kg
Illuminated hands	-	-	-	-	✓	✓
Impulse storage	electronic impulse storage (e-mem)					



## DMU series - self-setting facade clock movements

### DMU 160 (outdoor)



Technical data	DMU 160F	DMU 160S	DMU 160M	DMU 160V
Dial diameter	max. 1600 mm			
Shaft length A (mm)	5	40	350	40 - 500
Wall thickness M (mm)	-	35	345	35 - 495 (state in order)
Synchronization	- MOBALine (local time) (ETC, DTS, NMI...) - DCF (current loop, active) (GPS/DCF 4500, time zone adjustable)			
Power supply	24 VDC $\pm$ 20% or MOBALine			
Consumption	DC supply: < 100 mA @ 24 VDC MOBALine: via NMI (1 movement) via ETC, DTS: < 200 mA			
Temperature range	-30 ... +70 °C			
Relative humidity	0 to 95%, non-condensing			
Protection degree	IP 54 / IP 65			
Weight	1.2 kg	1.5 kg	2.5 kg	approx. 4 kg
Diameter hour shaft	20 mm			
Diameter minute shaft	8 mm			
Accessories	- front mounting plate $\varnothing$ 600 mm (art. no. 206 460) - flush-mounting box for front mounting (art. no. 702 622) (dimensions: 390x280x120mm)			



## DMU series - self-setting facade clock movements

### DMU 140 (indoor)

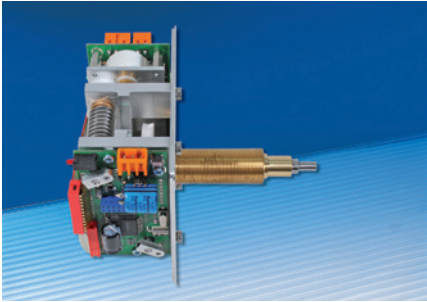
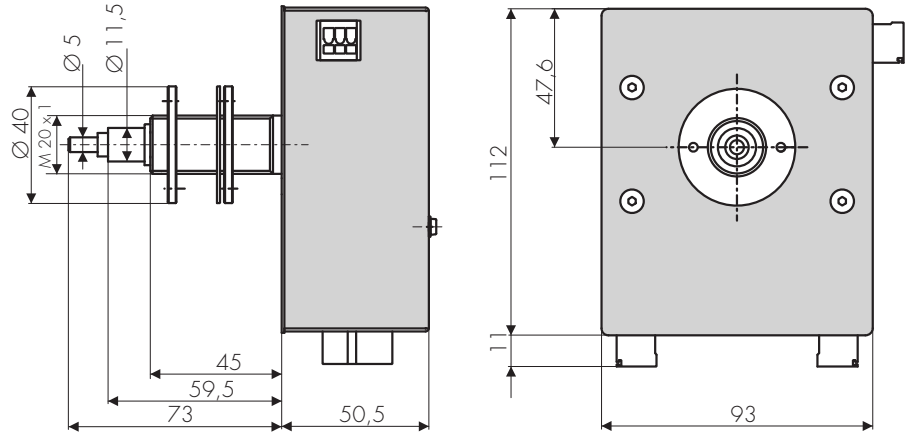


Illustration with removed dust protection hood



### DMU 350 (outdoor)

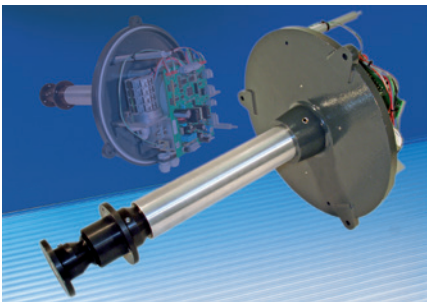
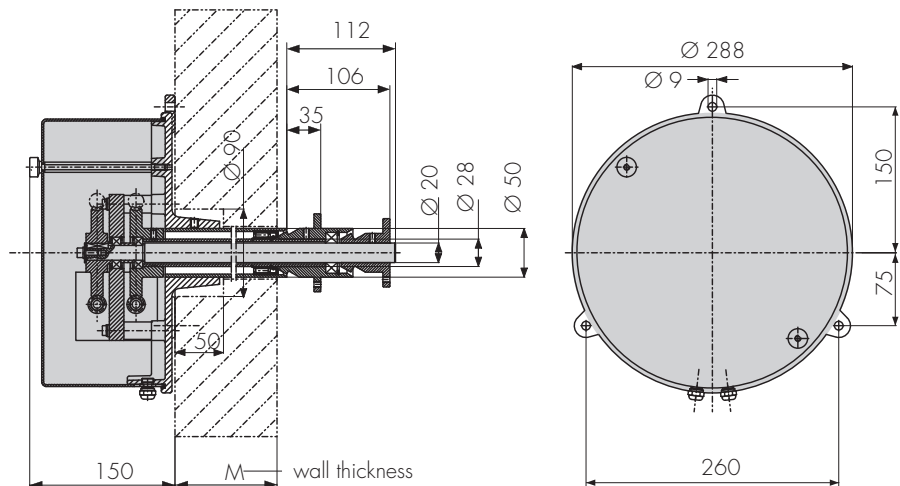


Illustration with removed dust protection hood



Technical data	DMU 140 [Art. No.: 201828]	DMU 350 [Art. No.: 202460]
Dial diameter	up to 140 cm	up to 350 cm
Synchronization	<ul style="list-style-type: none"> <li>- GPS (GPS 4500, UTC, active current loop)</li> <li>- DCF 77 / MSF (active current loop)</li> <li>- MOBALine (local time)</li> <li>- RS 485 monitored or with IF 482 serial telegrams</li> </ul>	
Power supply	10 - 30 VDC or through MOBALine, < 1.5 VA (< 60 mA @ 24 VDC)	90 - 265 VAC 50/60 Hz, < 25VA
Temperature range	-30 to +70 °C	-30 to +55 °C
Relative humidity	0 - 95 %, non condensing	
Protection degree	IP 54 / IP 65	
Weight	680 g	< 9 kg

#### Order specifications:

Clock type - Dial type - Dial  $\varnothing$  - Color - Wall thickness M - Illumination LED - optionally pulse voltage

#### Ordering examples:

DMU 160 M - ZB 46 -  $\varnothing$  120 cm - black hands and hour markers - M = 350 mm

DMU 350 - ZB 1 -  $\varnothing$  300 cm - black hands and hour markers - M = 500 mm

A624 - ZB 60 -  $\varnothing$  380 cm - black illuminated hands and hour markers - M = 450 mm - LED - pulse voltage 24 V