

ANALOGUE INDOOR CLOCK

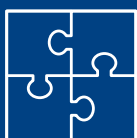
FLEX

The Flex is our high-quality premium analogue indoor clock. With a variety of technical variations and options, it is suitable for nearly every space and purpose.



THE BENEFITS OF THE FLEX ANALOGUE CLOCK

The name Flex stands for excellent flexibility and countless possibilities. Flex adapts to any underlying conditions, whether they relate to technical operating requirements, time codes, installation options or design, and meets requirements with precision.



CUSTOMIZABLE

Installation and operation function smoothly, because technology and design adapt to the application – even when integrated into existing systems.



SELECTABLE TIME CODE

The Flex supports all common synchronization and input types. This also allows it to be well integrated into existing systems.



ROBUST CONSTRUCTION

Flex is a long-term investment. The solid Swiss native is sophisticated, time-tested over many years, durable, and easy to maintain.



HOUSING & INSTALLATION

From shatterproof glass for the gymnasium to hygienic chrome steel covers for hospitals – Flex offers the right housing and several installation options.



SUPPORT

From planning to installation and during operation and maintenance – you can get answers to your questions and, if needed, support from our specialists.



Factory

Flex Ø30, one-sided, illuminated, dial 000



Office

Flex Ø30, one-sided, illuminated, dial 310



School

Flex Ø30, one-sided, dial 120, in concrete case (BD)



Hospital

Flex Ø30, two-sided, dial 160, with 50cm ceiling set (DS.50)



Library

Flex Ø30, two-sided, dial 210, with wall and ceiling set (WS)



Office

Flex Ø30, one-sided, dial 200, in mounting box (ED)



Airport

Flex Ø50, two-sided, dial 210, with ceiling set Ø50 (DS)



Train station

Flex Ø60, two-sided, dial 120, with ceiling set Ø60-80 (DS)



Custom

Flex Ø30, one-sided, with customer-specific dial and hands, in mounting box (ED)

7 STEPS TO YOUR FLEX

To make sure your Flex solution meets all your requirements, you can assemble the components individually. You can also choose from optional parts. Configure the perfect Flex, suited to rooms and general conditions. Naturally, our experts will be happy to help.

1. Are you looking for an illuminated clock?

ILLUMINATION

The Flex is available with or without illumination:

CODE	ILLUMINATION
FL0	none
FL2	LED

With illumination, the following options are possible (see page 3 for examples):

SIZE	TIME CODE	DIAL	GLASS TYPE	HOUSING TYPE
30cm	M00 = SAM 40	120 ¹	0 = Mineral glass	00 = Standard
40cm	M21 = SEM 40	160 ¹		01 = Chrome steel V2A
	N20 = SAN 40	200 ¹		
	N21 = SEN 40	210 ¹		
		230 ¹		
		300 ¹		
		310 ¹		
		360 ¹		
		000 ²		

¹ with white front ring

² with markings on cover glass



2. How big does your Flex need to be?

SIZE

The Flex is available in six dial diameters. The reading distance varies depending on the dial, lighting, viewing angle, etc. These are the options:

Ø	READING DISTANCE
25cm	20-25m
30cm	25-30m
40cm	35-45m
50cm	45-55m
60cm	55-65m
80cm	75-85m

3.

Would you like the one-sided or the two-sided version?

SHAPE

For the two-sided Flex solution, you can order two identical Flex models and the corresponding installation set (see page 9)

4.

The Flex analog clock offers a variety of time code variants. Pick yours:

TIME CODE

Code	Time code	Ø	Power supply	Hands	Movement	Max. power consumption	Accuracy (synchronized)	Loss of signal
MOBALINE SELF-SETTING: MXX								
M00	MOBALine	25–40	MOBALine	h/m	SAM 40	< 6mA @ 17VAC (0.1W)	<+/- 100ms	12:00 position after 24 hours
M21	MOBALine	25–40	MOBALine	h/m/s	SEM 40			
M15	MOBALine	50–80	MOBALine	h/m	SAM 100	< 20mA @ >17VAC (0.34W)	<+/- 100ms	MOBALine: 12:00 position after 24 hours DCF active: 12:00 position after 7 days
M17	MOBALine	50–80	MOBALine	h/m/s	SEM 100	< 30mA @ >17VAC (0.51W)	<+/- 100ms	
NTP (LAN) SELF-SETTING (WITH UNICAST AND MULTICAST): NXX								
N20	NTP	25–40	PoE	h/m	SAN 40	PoEclass 1: <1.9W ⁵ / <3.8W ⁶	<+/- 50ms	12:00 position after 24 hours
N21	NTP	25–40	PoE	h/m/s	SEN 40			
N10	NTP	50–80	PoE	h/m	NBU 190 PoE	PoEclass 2: <1.6W ⁵ / <3.2W ⁶	<+/- 50ms	12:00 position after 24 hours
N12	NTP	50–80	PoE	h/m/s	NBU 190 S PoE			
N00	NTP	50–80	230V (24VDC)	h/m	NBU 190 24 + PS24	< 60mA @ 24VDC (<1.44W)	<+/- 50ms	12:00 position after 24 hours
N02	NTP	50–80	230V (24VDC)	h/m/s	NBU 190 S 24 + PS24			
POLARIZED IMPULSES: IXX								
I00	Min. impulse	25–40	12–60V impulse	h/m	NU 90k	-	-	Standstill
I01	Min. impulse	50–80	12–60V impulse	h/m	NU 90m			
I03	Min. impulse	25–40	24V impulse	h/m	NU 91k	-	-	Standstill
I04	Min. impulse	50–80	24V impulse	h/m	NU 91m			
I20	Min. impulse	30–80	12–60V impulse 45–265VAC	h/m/s	IBU 190 S	30mA @ 230VAC (<6.9W)	-	Standstill
I30	Sec. impulse	25–40	24–60V impulse	h/m/s	SEI 40	-	-	Standstill
SERIAL: SXX								
S00	Serial	30–80	230V	h/m	SU 190 230	50mA @ 24VDC (<1.2W)	<+/- 100ms	12:00 position after 24 hours
S02	Serial	30–80	230V	h/m/s	SU 190 S 230	12mA @ 230VAC (<3W)		
IRIG/AFNOR: TXX								
T50	IRIG/AFNOR	30–80	230V	h/m	ATBU 190 230	10mA @ 230VAC (<2.3W)	<+/- 100ms	12:00 position after 24 hours
T52	IRIG/AFNOR	30–80	230V	h/m/s	ITBU 190 S 230			
WTD WIRELESS TIME DISTRIBUTION: RXX								
R75	WTD	25–30	2x AA battery	h/m	SAW 00	-	<+/- 100ms	12:00 position after 24 hours
R76	WTD	25–30	2x AA battery	h/m/s	SEW 00			
R77	WTD	25–30	12V	h/m	SAW 00 MPS	5mA @ 20VDC (0.1W)	<+/- 100ms	12:00 position after 24 hours
R78	WTD	25–30	12V	h/m/s	SEW 00 MPS	15mA @ 6VDC (<0.1W)		
R79	WTD ¹	40–80	Lithium battery	h/m	BU 192 + RU	-	<+/- 100ms	12:00 position after 7 days
R85	WTD ¹	40	230V (24VDC)	h/m	SAM 40 + RM + PS24	230VAC (<18W)	<+/- 200ms	12:00 position after 24 hours
R86	WTD ¹	40	230V (24VDC)	h/m/s	SEM 40 + RM + PS24			
R87	WTD ¹	50–80	230V (24VDC)	h/m	SAM 100 + RM + PS24	230VAC (<18W)	<+/- 200ms	12:00 position after 24 hours
R89	WTD ¹	50–80	230V (24VDC)	h/m/s	SEM 100 + RM + PS24			
DCF 77 / MSF: RXX								
R21	DCF 77 ²	25–40	AA battery	h/m/s	FWUt	-	<+/- 100ms	12:00 position after 7 days
R25	DCF 77 ²	50–80	Lithium battery	h/m	FU 192	-	<+/- 100ms	12:00 position after 7 days
R32	MSF 60 ²	50–80	Lithium battery	h/m	BU 192 + AM 192	-	<+/- 100ms	12:00 position after 7 days
R00	DCF / MSF ³	30–80	230V	h/m	BU 190 230	230VAC (<3W)	<+/- 100ms	12:00 position after 7 days
R03	DCF / MSF ³	30–80	230V	h/m/s	BU 190 S 230			
GPS: RXX								
R50	GPS ⁷	50–80	Lithium battery	h/m	GU 192 V2	-	<+/- 200ms	12:00 position after 53 days
R60	GPS ⁴	30–80	230V	h/m	BU 190 230 + PS24	230VAC (<18W)	<+/- 100ms	12:00 position after 7 days
R62	GPS ⁴	50–80	230V	h/m/s	BU 190 S 230 + PS24			
QUARTZ: QXX								
Q21	Quartz	25–40	AA battery	h/m/s	DQt	-	<+/- 5min/y ⁸	-
Q01	Quartz	30–80	Lithium battery	h/m	QU 192	-	<+/- 4min/y ⁸	-

¹ with receiver interface ² internal antenna and receiver (not possible with BW or DD housing) ³ without antenna, external antenna required

⁴ coded for GPS 4500 (not included) ⁵ single-sided clock ⁶ cascaded double-sided clock ⁷ mini magnetic antenna and receiver ⁸ without synchronization

For special clockwork/time code variants, see document TE-800800 at www.mobatime.com in the Customers section

5.

Which dial design do you like?

DIAL

The Flex offers the following standard design options. For custom variants, material requests, logo prints, and finishes, please contact our customer service.



dial 120



dial 160



dial 200



dial 210



dial 230



dial 300



dial 310



dial 315



dial 360



dial 000 (LED)

6.

Which type of glass is the right one?

GLASS TYPE

Mineral glass (code 0)

Standard glass.

Ball-throw resistant (code 1)

Extra-stable, shockproof glass.

Polycarbonate (code 2)

Shatterproof. Ø30-40 only.

Plexiglas Resist (code 3)

Nearly indestructible and shatterproof.

Anti-reflection mineral glass (code 4)

Ø30 only.

7.

Which housing type do you need?

HOUSING TYPE

FLEX Standard (code 00)

Standard housing made from aluminium (RAL 9002).

Stainless steel V2A (code 01)

For applications with the highest hygienic requirements.

Steamtight (DD) (Code 02)

Made from aluminium (RAL 9002), for steamy environments.

Ball-throw resistant (BW) (Code 03)

Made from aluminium (RAL 9002). Extra robust when combined with ball-throw resistant glass.

YOUR FLEX IS COMPLETE

You can now order your Flex and calculate the corresponding code. Enter the abbreviation for each component of your choice in the bright field and find your Flex code. It serves as the order code or as the foundation for further steps. The overview on page 8 shows whether your wishes are compatible.

1. Illumination

Code

2. Size

Ø cm

3. Shape

Code

R1

4. Time code

Code

5. Dial

Code

6. Glass type

Code

7. Housing type

Code

Sequence number

Code

0000

Example order code



1.	2.	3.	4.	5.	6.	7.
FL0.	30.	R1.	M21.	120.	0.	00. 0000
Flex no illumination	Ø 30cm	round, single-sided ¹	movement SEM 40	dial 120	mineral glass standard housing	sequence number ²

¹ standard, cannot be changed; see double-sided clock information on page 4

² The sequence number denotes special versions (e.g. clocks with a special dial). When ordering, please indicate the sequence number with 0000 (standard version); we will adapt this for any special version. Special versions can be reordered at any time stating the sequence number.

STANDARDS

Depending on the movement used in your Flex clock, the following standards apply:

MOVEMENT(S)	STANDARDS
SAM 40 SEM 40 SAN 40 SEN 40	2011/65/EU / 2014/30/EU / 2014/35/EU / 2016/797/EU / EN 50121-4 / EN 60950-1 / EN 61000-6-2 / EN 61000-6-3
SAM 100 SEM 100	2011/65/EU / 2014/30/EU / 2014/35/EU / 2016/797/EU / EN 50121-4 / EN 60950-1 / EN 61000-6-2 / EN 61000-6-3
NBU 190 PoE NBU 190 S PoE NBU 190 24 NBU 190 S 24	2011/65/EU / 2014/30/EU / 2014/35/EU / 2016/797/EU / EN 50121-4 / EN 60950-1 / EN 61000-6-2 / EN 61000-6-4
NU 90k NU 90m NU 91k NU 91m	2011/65/EU / 2014/30/EU / EN 61000-6-2 / EN 61000-6-3
IBU 190 S	2011/65/EU / 2014/30/EU / 2014/35/EU / 2016/797/EU / EN 50121-4 / EN 60950-1 / EN 61000-6-3
SEI 40	2011/65/EU / 2014/30/EU / 2014/35/EU / EN 61000-6-2 / EN 61000-6-3
SU 190 230 SU 190 S 230	2011/65/EU / 2014/30/EU / 2014/35/EU / 2016/797/EU / EN 50121-4 / EN 60950-1 / EN 61000-6-1 / EN 61000-6-3
ATBU 190 230 ITBU 190 S 230	2011/65/EU / 2014/30/EU / 2014/35/EU / 2016/797/EU / EN 50121-4 / EN 60950-1 / EN 61000-6-2 / EN 61000-6-3 / IPPS
SAW 00 SEW 00 SAW 00 MPS SEW 00 MPS	2011/65/EU / 2014/30/EU / 2014/35/EU / EN 61000-6-2 / EN 61000-6-3
BU 192 FU 192 QU 192	2011/65/EU / 2014/30/EU / EN 61000-6-2 / EN 61000-6-3
BU 190 230 BU 190 S 230	2011/65/EU / 2014/30/EU / 2014/35/EU / 2016/797/EU / EN 50121-4 / EN 60950-1 / EN 61000-6-1 / EN 61000-6-3
GU 192 V2	2011/65/EU / 2014/30/EU / 2016/797/EU / EN 50121-4 / EN 61000-6-2 / EN 61000-6-3
DQt	2011/65/EU / 2014/30/EU / EN 55024 / EN 55032
FWUt	1999/5/EC / 2011/65/EU / EN 60950-1 / DIN EN 300-300 / DIN EN 300-330-2 / ETSI EN 301 489-1 / ETSI EN 301 489-3

All Flex clocks are compliant with CE, RoHS and REACH.

IS IT COMPATIBLE?

The following overview shows which components can be combined. Please check this before ordering.

	Ø	Ø25	Ø30 normal	Ø30 steamtight	Ø30 ball-throw resistant	Ø40 normal	Ø40 steamtight	Ø40 ball-throw resistant	Ø50 normal	Ø50 steamtight	Ø50 ball-throw resistant	Ø60 normal	Ø60 steamtight	Ø60 ball-throw resistant	Ø80 normal	Ø80 steamtight	Ø80 ball-throw resistant
MOBALine	M00 / M21	•	•	•	•	•	•	•									
	M15								•	•	•	•	•	•	•	•	•
	M17								①	•	•	•	•	•	•	•	•
NTP	N00 / N10								•	•	•	•	•	•	•	•	•
	N02 / N12								①	•	•	•	•	•	•	•	•
	N20 / N21	•	•	•	•	•	•	•									
Pulse	I00 / I03 / I30	•	•	•	•	•	•	•									
	I01 / I04								•	•	•	•	•	•	•	•	•
	I20		②	•	•	②	•	•	①	•	•	•	•	•	•	•	•
Serial	S00		①	•	•	①	•	•	•	•	•	•	•	•	•	•	•
	S02		②	•	•	②	•	•		•	•	•	•	•	•	•	•
IRIG/AFNOR	T50		①	•	•	①	•	•	•	•	•	•	•	•	•	•	•
	T52		②	•	•	②	•	•		•	•	•	•	•	•	•	•
WTD	R75 / R76 / R77 / R78	④	•	•	•												
	R79					①	•	•	•	•	•	•	•	•	•	•	•
	R85 / R86					•											
	R87								•	•	•	•	•	•	•	•	•
	R89					②			①	•	•	•	•	•	•	•	•
DCF 77/MSF	R00		①	•	•	①	•	•	•	•	•	•	•	•	•	•	•
	R03		②	•	•	②	•	•	①	•	•	•	•	•	•	•	•
	R21	④	•			•											
	R25 / R32								•	•	•	•	•	•	•	•	•
GPS	R50								•	•	•	•	•	•	•	•	•
	R60		①	•	•	①	•	•	•	•	•	•	•	•	•	•	•
	R62		②	•	•	②	•	•		•	•	•	•	•	•	•	•
Quartz	Q01		①	•	•	①	•	•	•	•	•	•	•	•	•	•	•
	Q21	④	•	•	•	•	•	•									
Dials	Dial 000		•	•	•	•	•	•									
	Dial 120	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	Dial 160	•	•			•											
	Dial 200	•	•	•	•	•	•	•									
	Dial 210	•	•	•	•	•	•	•									
	Dial 230	•	•	•	•	•	•	•									
	Dial 300	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	Dial 310	•	•	•	•	•	•	•									
	Dial 315								•	•	•	•	•	•	•	•	•
	Dial 360	•	•	•	•	•	•	•									
Cover glass	0 Standard	•	•		•	•		•	•		•	•		•	•		•
	1 Ball-throw resistant	•	•	•		•	•		•	•		•	•		•	•	
	2 Polycarbonate		•			•											
	3 Plexiglas Resist				•			•						•			•
	4 Anti-reflection mineral glass		•														
Housing	00 Standard	•	•			•			•			•			•		
	01 Stainless steel V2A		•			•			•								
	02 Steamtight			•	•		•	•		•	•		•	•		•	•
	03 Ball-throw resistant				•		•			•			•				•
Accessories	Wall/Ceiling set	•	•			•											
	Ceiling suspension		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	Wall mounting ring		•			•											
	Mounting clips			•	•		•	•		•	•	•	•	•	•	•	•
	Mounting box		③														
	Concrete case		③			③											
	Ø	25	30	30	30	40	40	40	50	50	50	60	60	60	80	80	80

① wide housing

② wide housing,
domed glass

③ normal housing only

④ dials 200, 210 only

INSTALLATION VARIANTS

Single-sided installations



FL.Ø.WM

Wall mounting ring
Snap-on installation for
single-sided clocks.
Ø 25/30/40



FL.Ø.MK

Mounting clips
Ball-throw resistant wall fixation
for single-sided clocks.
Ø 25/30/40/50/60/80



FL.30.ED

Mounting box
Flush-mounted box made of
stainless steel.
Ø 30



FL.Ø.BD

Concrete case
Made of wood, with steel front
ring and plexiglass cover.
Ø 30/40

Double-sided installations

FL.Ø.BA

Blind cover
Rear cover of suspended
single-sided clocks, made
of steel.
Ø 30/40



FL.Ø.DF / FL.Ø.DF.V2A

Ceiling flange
Alternative flange for ceiling
set Ø25–40, made of steel.
Ø 25/30/40



FL.Ø.WS / FL.Ø.WS.V2A

Wall and ceiling set
Snap-on installation. Made
of steel.
Ø 25/30/40



FL.Ø.DS.LL / FL.Ø.DS.LL.V2A

Ceiling set Ø25–40
Snap-on installation. Ring made
of steel, pipe and flange made
of plastic. LL = 50/100cm, other
lengths on request.
Ø 25/30/40



FL.50.DS

Ceiling set Ø50
Ceiling suspension with
clamping ring, made of
steel.
Ø 50



FL.Ø.DS

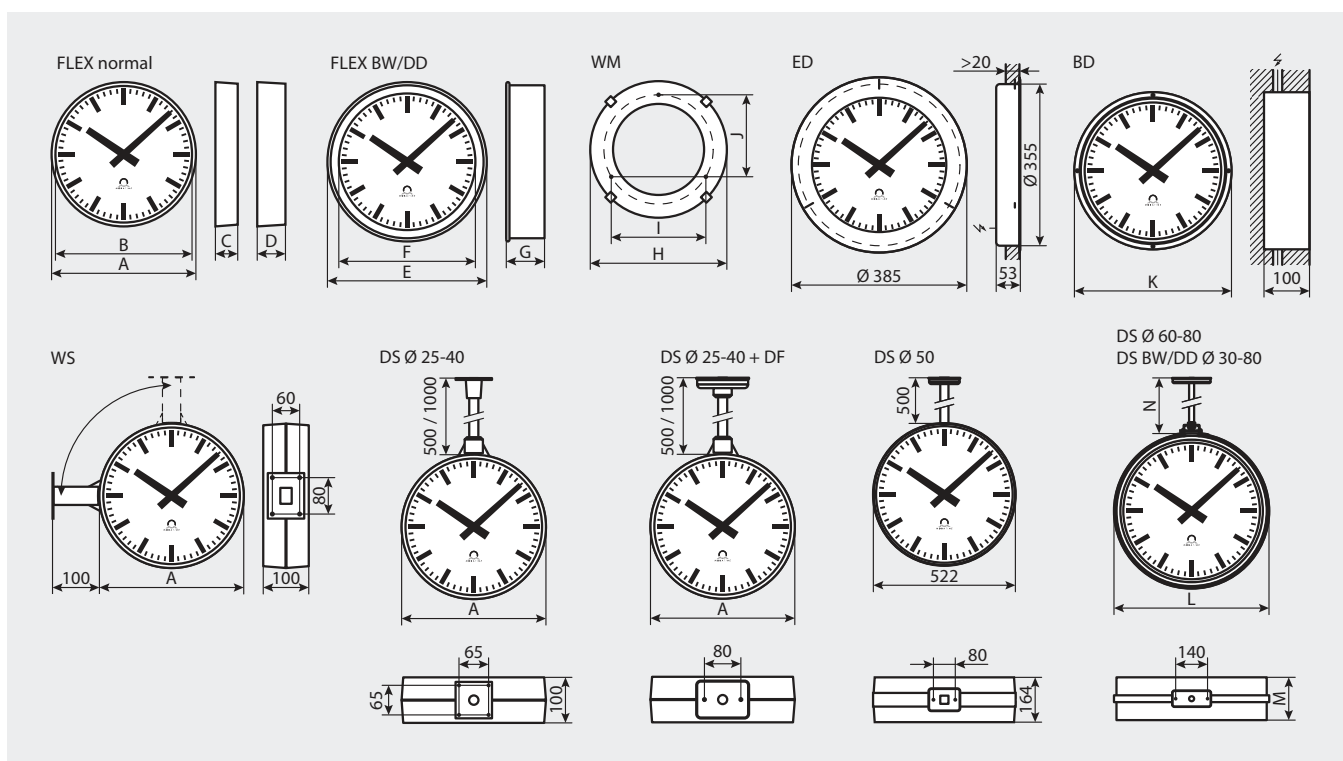
Ceiling set Ø60–80
Ceiling suspension with
clamping, ring made of steel,
for clocks Ø60–80 and
clocks with BW/DD housing.
Ø 60/80

TECHNICAL DATA

TECHNICAL DATA	FLEX
Housing	Standard/BW/DD: aluminium V2A: stainless steel V2A
Operating conditions	-30 to +70 °C (0 to 95% relative humidity, non-condensing) SAW 00/SEW 00/SAW 00 MPS/SEW 00 MPS: 0 to +50 °C (0 to 90% relative humidity, non-condensing)
Housing color	Standard/BW/DD: RAL 9002 V2A: unpainted
Degree of protection	IP 30 (DD: IP 55)

	FLEX NORMAL					FLEX BW/DD				WM			BD	DS		
Ø	A	B	C	D	Weight	E	F	G	Weight	H	I	J	K	L	M	N
25	265	253	49	62*	0,8	-	-	-	-	252	190	154	-	-	-	-
30	317	303	49	62*	1,0	350	300	84	2,5	300	208	180	345	352	168	300
40	417	403	49	62*	1,7	462	395	86	4,2	400	285,8	247,5	447	464	172	400
50	520	504	74	92**	3,2	564	500	92	7	-	-	-	-	566	184	500
60	680	600	94	-	6,5	680	600	94	11	-	-	-	-	682	188	600
80	895	790	108	-	14	895	790	108	22	-	-	-	-	897	216	800

Weights for accessory parts on request. All dimensions in mm and weights in kg.
A/B = normal housing; A/C = broad housing; D/E = BW/DD housing
* for series 100, 190, and 192 clockworks
** for series 100 and 190 clockworks with second hand



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*Do you have any questions?
We are happy to help.*

Moser-Baer AG | Spitalstrasse 7 | CH-3454 Sumiswald
Tel. +41 34 432 46 46 | Fax +41 34 432 46 99
info@mobatime.com | www.mobatime.com



Product specifications are subject to change without notice.