

Clocks

Profil 930-940



NTP slave clock

INSTALLATION AND OPERATING INSTRUCTIONS



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When receiving goods please check nothing is broken otherwise make a claim near shipping company.

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I - INITIAL VERIFICATION

Thank you for choosing a BODET clock. This product has been carefully designed for your satisfaction based on ISO9001 quality requirements. We advise you to read this manual thoroughly before attempting to manipulate the clock.

Keep this booklet during all the life of your clock, so that you can refer to it each time it will be necessary.

Bodet accepts no responsibility for accidents resulting from any use not conforming with the above provisions.

Any modification to the product will invalidate the guarantee.

1.1 Unpacking the clock

Unpack with caution and check the contents of the packaging. It must contain :

- The Profil clock,
- A cleaning kit (impregnated antistatic cloth),
- option, the clock support which is delivered separately.,
- This booklet.

Version : a descriptive label is fixed to the back of the clock :

NTP = The clock is a slave clock driven by a master clock or a NTP server and powered by the Ethernet network (PoE).

1.2 Cleaning

Use an antistatic product of similar type to the one shipped in the original packaging. Never use alcohol, acetone or any other solvent liable to damage the casing and filter on your clock.

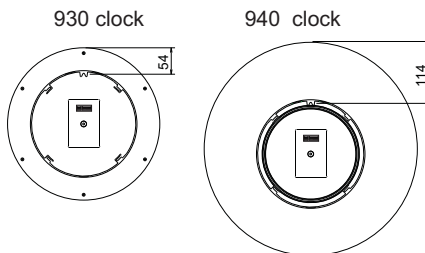
II - INSTALLATION

Select the location where your clock is to be installed, if possible in a place that is free from electrical interference (cathode tube, transformers, etc.).

2.1 Single Face clock

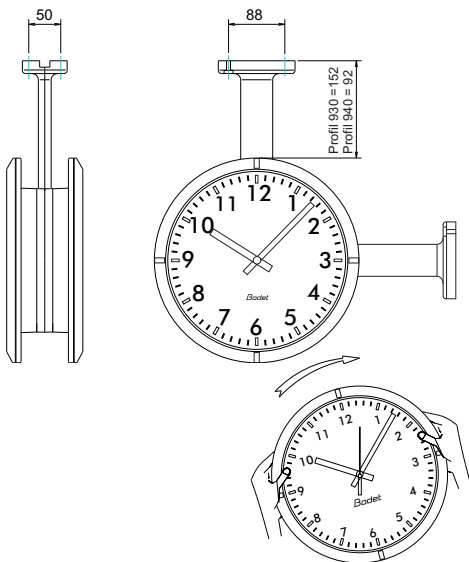
Clocks are simply hung on a screw head.

- Place the screw ($\varnothing 4$) at the desired height leaving the head 3 mm outside.
- Carry out the connections to the time distribution network.
- Hang the clock.



2.2 Double Face clock

- Fit the bracket on the wall or on the ceiling with 2 screws $\varnothing 6$.
- Carry out the connections to the time distribution network.
- Present both clock on the bracket, then turns it a quarter turn in the clockwise so that the clocks are in the correct position.



III - POWER SUPPLY

The NTP slave clocks are powered and synchronised through the Ethernet network (PoE).

IV - SETTING

The NTP server (Sigma, ...) has to be set with the multicast address 239.192.54.1.

It is possible to modify the multicast address on the NTP clock (see Addendum 1 page) in coherence with the NTP server (Sigma, ...).

If necessary, set the DIP switches (D) as described page 6.

Connect the network on RJ45 connector (R).

2 LEDs (on each side of the RJ45 connector) give information as follow :

Yellow LED: activity (flashes when sending/receiving information),

Green LED: connectivity (flashes in presence of LAN network).

- At power up, the hands are positioned at 4:00, 8:00 or noon until reception of a time message. After validation of NTP synchronisation data, the clock set itself rapidly. Validation may take a few minutes.

In the absence of synchronisation, the clock continues to operate for 24 hours on its time base and then moves to 12:00.

The NTP server must have a transmission (Poll) period of less than 128 seconds.



Addendum I - DIP configuration of NTP slave clocks

DIPs 1 to 4 allow to set the multicast address used by the NTP server.



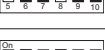
The multicast address used is : 239.192.54.**XXX**.

XXX is set by default to 1. It can be set between 1 and 15 (0 is already reserved).

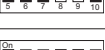
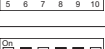
 239.192.54. 1	 239.192.54. 2	 239.192.54. 3
 239.192.54. 4	 239.192.54. 5	 239.192.54. 6
 239.192.54. 7	 239.192.54. 8	 239.192.54. 9
 239.192.54. 10	 239.192.54. 11	 239.192.54. 12
 239.192.54. 13	 239.192.54. 14	 239.192.54. 15

Dips 5 to 10 allow to set the offset from UTC and the time changeovers depending on the time zone.

Dip setting	City / State	UTC Offset	Time changeover	Summer time	Winter time
	UTC	0	No		
	Eur -1 (London, Dublin, Edinburgh, Lisbon)	0	Yes	Last Sun. Mar. (01:00)	Last Sun. Oct. (02:00)
	Eur (Paris, Bruxelles, Amsterdam, Berlin, Berne, Copenhagen, Madrid, Oslo, Rome, Stockholm, Vienne, Belgrade, Bratislava, Budapest, Ljubljana, Prague, Sarajevo, Sofia, Vilnius, Varsovie, Zagreb)	+1	Yes	Last Sun. Mar. (02:00)	Last Sun. Oct. (03:00)

Dip setting	City / State	UTC Offset	Time changeover	Summer time	Winter time
	Eur +1 (Athens, Istanbul, Minsk)	+2	Yes	Last Sun. Mar. (03:00)	Last Sun. Oct. (04:00)
	Bucharest, Romania	+2	Yes	Last Sun. Mar. (03:00)	Last Sun. Oct. (04:00)
	Cairo, Pretoria	+2	No		
	Dhaka	+6	No		
	Tel Aviv	+2	Yes	Last fri. Mar. (02:00)	2nd Sun. Sept. (02:00)
	Kuweit	+3	No		
	Moscow, St. Petersburg, Volgograd	+3	Yes	Last Sun. Mar. (02:00)	Last Sun. Oct. (03:00)
	Tehran	+3,5	Yes	22 March ¹	22 September
	Abu Dhabi, Muscat, Baku, Tbilisi	+4	No		
	Kabul	+4,5	No		
	Yekaterinburg, Russia	+5	Yes	Last Sun. Mar. (02:00)	Last Sun. Oct. (03:00)
	Islamabad, Karachi, Tashkent	+5	No		
	Mumbai, Calcutta, Madras, New Delhi, Colombo	+5,5	No		
	Astana, Thimphu	+6	No		
	Bangkok, Hanoi, Jakarta	+7	No		

1 for a leap year, March 21 and September 21.

Dip setting	City / State	UTC Offset	Time changeover	Summer time	Winter time
	Beijing, Chongping, Hong Kong, Singapore, Taipei, Urumqi	+8	No		
	Tokyo, Osaka, Sapporo, Séoul	+9	No		
	Yakutsk	+9	Yes	Last Sun. Mar. (02:00)	Last Sun. Oct. (03:00)
	Adelaide	+9,5	Yes	1st Sun. Oct. (02:00)	1st Sun. April (03:00)
	Darwin	+9,5	No		
	Brisbane, Guam, Port Moresby	+10	No		
	Sydney, Canberra, Melbourne	+10	Yes	Last Sun. Oct. (02:00)	Last Sun. April (03:00)
	Hobart, Tasmanie	+10	Yes	1st Sun. Oct. (02:00)	Last Sun. April (03:00)
	Vladivostok	+10	Yes	Last Sun. Mar. (02:00)	Last Sun. Oct. (03:00)
	Solomon Il., New Caledonia	+11	No		
	Auckland, Wellington	+12	Yes	Last Sun. Sept. (02:00)	1st Sun. April (03:00)
	Marshall Il.	+12	No		
	Azores	-1	Yes	Last Sun. Mar. (02:00)	Last Sun. Oct. (01:00)
	Middle Atlantic	-2	No		
	Brasilia	-3	Yes	3rd Sun. Oct. (00:00)	3rd Sun. Feb. (00:00)
	Buenos aires	-3	No		

Dip setting	City / State	UTC Offset	Time changeover	Summer time	Winter time
	Newfoundland, Labrador	-3,5	Yes	2nd Sun. Mar. (00:01)	1st Sun. Nov. (00:01)
	Atlantic Time (Canada)	-4	Yes	2nd Sun. Mar. (02:00)	1st Sun. Nov. (02:00)
	La Paz, Indiana	-4	No		
	Bogota, Lima, Quito	-5	No		
	New York, Eastern Time (US & Canada)	-5	Yes	2nd Sun. Mar. (02:00)	1st Sun. Nov. (02:00)
	Chicago, Central Time (US & Canada)	-6	Yes	2nd Sun. Mar. (02:00)	1st Sun. Nov. (02:00)
	Tegucigalpa, Honduras	-6	No		
	Phoenix, Arizona	-7	No		
	Denver, Mountain Time	-7	Yes	2nd Sun. Mar. (02:00)	1st Sun. Nov. (02:00)
	Los Angeles, Pacific Time	-8	Yes	2nd Sun. Mar. (02:00)	1st Sun. Nov. (02:00)
	Anchorage, Alaska	-9	Yes	2nd Sun. Mar. (02:00)	1st Sun. Nov. (02:00)
	Honolulu, Hawaii	-10	No		
	Apia, Samoa	-11	No		
	Mexico	-6	Yes	1st Sun. Apr. (02:00)	Last Sun. Oct. (02:00)
	Samara, Russia	+4	Yes	Last Sun. Mar. (02:00)	Last Sun. Oct. (03:00)
	Novosibirsk, Russia	+6	Yes	Last Sun. Mar. (02:00)	Last Sun. Oct. (03:00)

Dip setting	City / State	UTC Offset	Time changeover	Summer time	Winter time
	Krasnoyarsk, Russia	+7	Yes	Last Sun. Mar. (02:00)	Last Sun. Oct. (03:00)
	Irkutsk, Russia	+8	Yes	Last Sun. Mar. (02:00)	Last Sun. Oct. (03:00)
	Magadan, Russia	+11	Yes	Last Sun. Mar. (02:00)	Last Sun. Oct. (03:00)
	Anadyr, Russia	+12	Yes	Last Sun. Mar. (02:00)	Last Sun. Oct. (03:00)
	Iltoqqortoormiit, Greenland, Denmark	-1	Yes	Last Sun. Mar. (00:00)	Last Sun. Oct. (01:00)
	Nuuk, Greenland, Denmark	-3	Yes	Last Sun. Mar. (22:00)	Last Sun. Oct. (23:00)
	Qaanaaq, Greenland, Denmark	-4	Yes	2nd Sun. Mar. (02:00)	1st Sun. Nov. (02:00)
	Western Australia: Perth	+8	No		
	Caracas	-4.5	No		
	Alger, Tunis	+1	No		

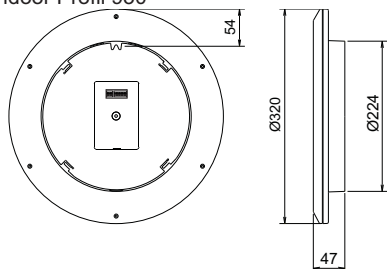
Dip 11 must be set to OFF. In this position, it will take into account the time zone defined by DIPs 5 to 10. In position ON, the NTP clock movement will manage the time changeovers only if it receives a table of time changeovers from a season server.

Dip 12 must be set to OFF. It is used for maintenance purpose. In position ON, the clock movement will be set automatically to 12h.

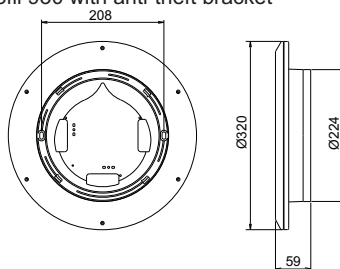
V - TECHNICAL FEATURES

Dimensions :

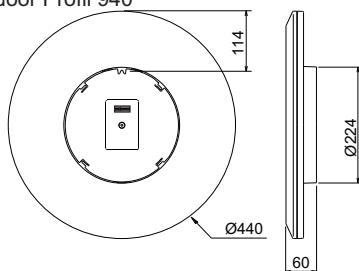
Indoor Profil 930



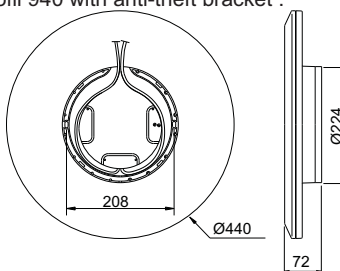
Profil 930 with anti-theft bracket



Indoor Profil 940

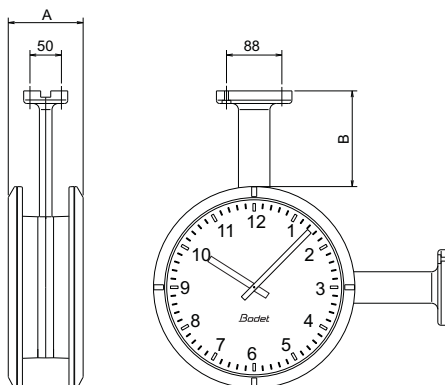


Profil 940 with anti-theft bracket :



Mounting on bracket

	Profil 930	Profil 940
A	119	143
B	152	92



Protection class : II.

Protection index : IP40.

PoE (Power over Ethernet).

Consumption : 25 mA @48 V.

Accuracy: +/- 100ms with automatic summer/winter time changeover.

Operating temperature : 0°C to +50°C.

Readability : Profil 930 = 20m, Profil 940 = 35m.

Weight : Profil 930 = 1kg, Profil 940 = 1,9kg.

VI - WHAT TO DO IF...? ...CHECK.

What to do if...?	... Check.
– No synchronisation after installation.	– Check that the type of signal transmitted by the master clock (NTP or SNTP) is the same type as the one of the clock. – Check that the multicast address is identical on the NTP server and on the NTP clock. – The NTP server has to be on the same Ethernet network as the NTP clock.
– The NTP clock is not on time.	– Check the position of the DIP switches, see page 6.