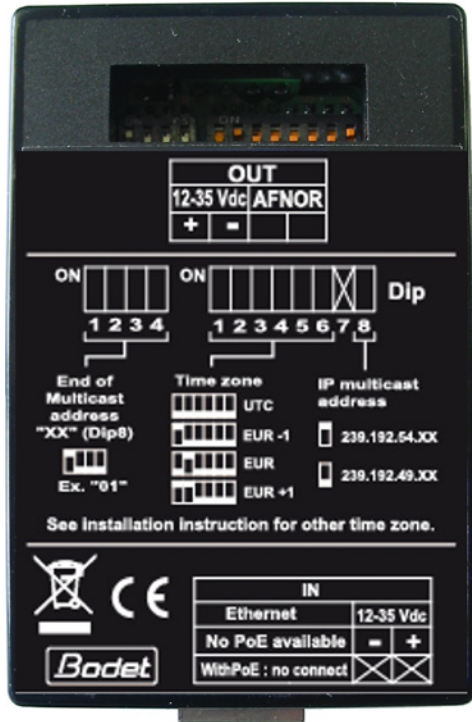


NTP AFNOR interface



Installation instructions



BP1
49340 TRÉMENTINES FRANCE
Tél. 02 41 71 72 00
Fax 02 41 71 72 01
www.bodet.com



Réf. 606547 D

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

Caution: maintenance of this equipment must be carried out by qualified personnel. Any modification on the product renders the guarantee null and void.

Read the document concerning «General safety instructions and precautions for the use of BODET products», in appendix, before installing this equipment.

Wiring

Connect the IP network to the connector A (RJ45) using an Ethernet patch cable Cat5.

If the network is not PoE compliant then connect a 12-35V DC external power supply on the terminal block B.

Connect on the terminal block C the AFNOR line. The 12-35VDC output on this terminal block allows to supply slave clocks within the limit of 100 mA for PoE and 500mA for external power supply (terminal block B). Nota: for external power supply, 250 mA at the input is a minimum to supply 100 mA at the output.



Setting

Multicast address

This is the IP address used to broadcast NTP time packets to a group of NTP clients on the IP network.

Two IP addresses are available and selectable with DIP 8 :

239.192.54.xx if DIP 8 is set to ON

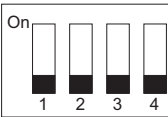
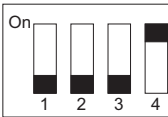
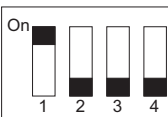
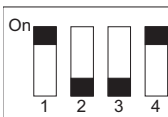
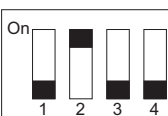
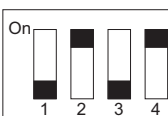
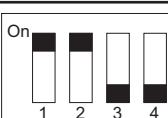
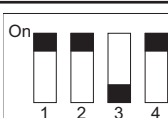
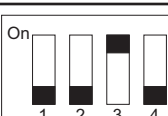
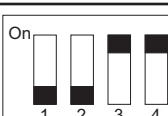
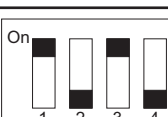
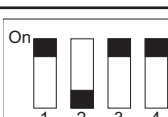
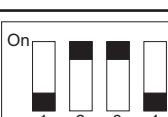
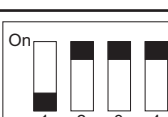
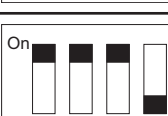
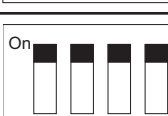
239.192.49.xx if DIP 8 is set to OFF.

If Profil 930/940 NTP clocks are also connected to the network, select Multicast IP address 239.192.54.xx.

The end of the Multicast IP address is configured with DIP 1-2-3-4 :

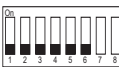
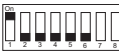
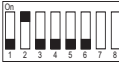
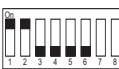
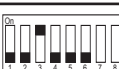
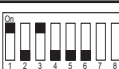

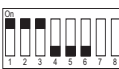

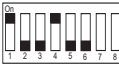




| Default address 239.192.49.xx (dip 8 = OFF) | | | |
|---|----------------------|---------------------|----------------------|
| DIP 1-2-3-4 setting | Multicast IP address | DIP 1-2-3-4 setting | Multicast IP address |
| | 239.192.49.0 | | 239.192.49.8 |
| | 239.192.49.1 | | 239.192.49.9 |
| | 239.192.49.2 | | 239.192.49.10 |
| | 239.192.49.3 | | 239.192.49.11 |
| | 239.192.49.4 | | 239.192.49.12 |
| | 239.192.49.5 | | 239.192.49.13 |
| | 239.192.49.6 | | 239.192.49.14 |
| | 239.192.49.7 | | 239.192.49.15 |






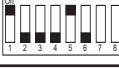


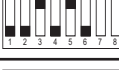



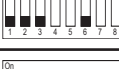


| Default address 239.192.54. XX (dip 8 = ON) | | | |
|--|----------------------|---|-----------------------|
| DIP 1-2-3-4 setting | Multicast IP address | DIP 1-2-3-4 setting | Multicast IP address |
|  | 239.192.54. 0 |  | 239.192.54. 8 |
|  | 239.192.54. 1 |  | 239.192.54. 9 |
|  | 239.192.54. 2 |  | 239.192.54. 10 |
|  | 239.192.54. 3 |  | 239.192.54. 11 |
|  | 239.192.54. 4 |  | 239.192.54. 12 |
|  | 239.192.54. 5 |  | 239.192.54. 13 |
|  | 239.192.54. 6 |  | 239.192.54. 14 |
|  | 239.192.54. 7 |  | 239.192.54. 15 |

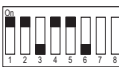



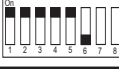

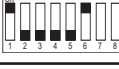

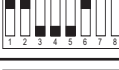

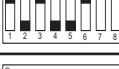
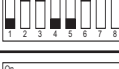
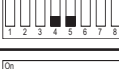


Time zone









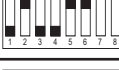

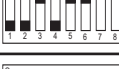

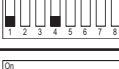


DIP 1 to 6 allows to set time zone.

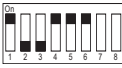
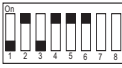
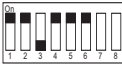
| DIP setting | City/State | UTC offset | Time changeover | Summer time | Winter time |
|--|---|------------|--------------------|----------------------------------|----------------------------|
|  | UTC/ GMT | 0 | No | | |
|  | Eur -1 (London, Dublin, Edinburgh, Lisbon) | 0 | Yes | Last Sun. Mar. (01:00) | Last Sun. Oct. (02:00) |
|  | Eur (Brussels, Amsterdam, Berlin, Bern, Copenhagen, Madrid, Oslo, Paris, Rome, Stockholm, Vienna, Belgrade, Bratislava, Budapest, Liubliana, Prague, Sarajevo, Sofia, Vilnius, Warsaw, Zagreb) | +1 | Yes | Last Sun. Mar. (02:00) | Last Sun. Oct. (03:00) |
|  | Eur +1 (Athens, Istanbul, Minsk, Helsinki, Riga, Tallinn, Kaliningrad) | +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 | No | | |
|  | Kuweit | +3 | No | | |
|  | Moscow, St. Petersburg, Volgograd | +4 | No | | |
|  | Tehran | +3,5 | Yes | 22 ¹ March (00:00) | 22 September (00:00) |
|  | Abu Dhabi, Muscat, Baku, Tbilisi | +4 | No | | |

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

| DIP setting | City/State | UTC offset | Time changeover | Summer time | Winter time |
|--|---|------------|--------------------|---------------------------|---------------------------|
|  | Kabul | +4,5 | No | | |
|  | Yekaterinburg, Russia | +6 | No | | |
|  | Islamabad, Karachi, Tashkent | +5 | No | | |
|  | Mumbai, Calcutta, Madras, New Delhi, Colombo | +5,5 | No | | |
|  | Astana, Thimphu | +6 | No | | |
|  | Bangkok, Hanoi, Jakarta | +7 | No | | |
|  | Beijing, Chongqing, Hong Kong, Singapore, Taipei, Urumqi | +8 | No | | |
|  | Tokyo, Osaka, Sapporo, Séoul | +9 | No | | |
|  | Yakutsk | +10 | No | | |
|  | Adelaïde | +9,5 | Yes | 1st Sun. Oct. (02:00) | 1st Sun. April (03:00) |
|  | Darwin | +9,5 | No | | |
|  | Brisbane, Guam, Port Moresby | +10 | No | | |
|  | Sydney, Cambera, Melbourne | +10 | Yes | Last Sun. Oct. (02:00) | 1st Sun. April (03:00) |
|  | Hobart, Tasmanie | +10 | Yes | 1st Sun. Oct. (02:00) | 1st Sun. April (03:00) |
|  | Vladivostok | +11 | No | | |

| DIP setting | City/State | UTC offset | Time changeover | Summer time | Winter time |
|--|--------------------------------------|------------|--------------------|---------------------------|---------------------------|
|  | 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. (00:00) | Last Sun. Oct. (01:00) |
|  | Middle Atlantic | -2 | No | | |
|  | Brasilia | -3 | Yes | 2nd Sun. Oct. (00:00) | 2nd Sun. Feb. (00:00) |
|  | Buenos aires | -3 | No | | |
|  | 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) |
|  | Caracas, 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 | | |

| DIP setting | City/State | UTC offset | Time changeover | Summer time | Winter time |
|--|--------------------------------------|------------|--------------------|---------------------------|---------------------------|
|  | 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. Avril (02:00) | Last Sun. Oct. (02:00) |
|  | Samara, Russia | +4 | No | | |
|  | Novosibirsk, Russia | +7 | No | | |
|  | Krasnoyarsk, Russia | +8 | No | | |
|  | Irkutsk, Russia | +9 | No | | |
|  | Magadan, Russia | +12 | No | | |
|  | Anadyr, Russia | +12 | No | | |
|  | Ittoqqortoormiit, Greenland, Denmark | -1 | Yes | Last Sun. Mar. (00:00) | Last Sun. Oct. (01:00) |
|  | Nuuk, Greenland, Denmark | -3 | Yes | Last Sat. Mar. (22:00) | Last Sat. Oct. (23:00) |
|  | Qaanaaq, Greenland, Denmark | -4 | Yes | 2nd Sun. Mar. (02:00) | 1st Sun. Nov. (02:00) |

| DIP setting | City/State | UTC offset | Time changeover | Summer time | Winter time |
|---|--------------------------|------------|--------------------|-------------|-------------|
|  <p>The diagram shows a vertical bar with 'On' at the top and numbers 1-8 below. Bars 1, 2, 3, 4, 5, 6, and 7 are filled black, while bar 8 is empty.</p> | Western Australia: Perth | +8 | No | | |
|  <p>The diagram shows a vertical bar with 'On' at the top and numbers 1-8 below. Bars 1, 2, 3, 4, 5, 6, and 7 are filled black, while bar 8 is empty.</p> | Caracas | -4.5 | No | | |
|  <p>The diagram shows a vertical bar with 'On' at the top and numbers 1-8 below. Bars 1, 2, 3, 4, 5, 6, and 7 are filled black, while bar 8 is empty.</p> | Alger, Tunis | +1 | No | | |

Meaning of LED indicators on the RJ45 connector :

- ◆ The green LED is on when the interface is powered on.
- ◆ The yellow LED is blinking once per second when the interface is synchronised.
- ◆ The yellow LED is blinking fast for 5 s then switching off for 3 s when the interface is not synchronised or no more synchronised for 1 hour.

Technical features:

Power supply: PoE or external power supply SELV 12-35 V DC.

Consumption (no clock connected): 20 mA @ 48V, 50 mA @ 24V.

Synchronisation: SNTP protocol (RFC 1361), Multicast IP address.

Network connection: RJ45, Ethernet 10 Base-T.

Output signal: AFNOR NFS 87500A.

Electrical protection: resettable fuse.

Dimensions : 90 x 60 x 22 mm.

Electrical isolation: Class II

Operating temperature: -5 to +55°C

Humidity: 0 to 80% non-condensing.

Standards: EN 60950, EN 55022, EN 55024C

The NTP/AFNOR interface is a Class A products. It may also be utilized in residential/ domestic environments but may cause interference and require the user to take adequate corrective measures.

