The DEETER Group®

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Wireless Sensor System

Base Station

The Base Station is at the heart of the Deeter Wireless Sensor System, designed to communicate with a Deeter Sender or LVCS-RF and convert remote sensor input signals into useful outputs.

The Base Station acts as the coordinator for a wireless network. It operates on one of 16 radio frequency channels available in the 2.4GHz ISM band. Range can be more than 1km, subject to environmental factors, and greater distances can be attained with the use of a Deeter Wireless Router.

The internationally recognised IEEE 802.15.4 protocol allows several networks to share the same space without interfering with each other.

The Base Station provides the following process outputs:

- Four Open-collector transistor outputs. These may be used to drive external relays (for example a Deeter Dual Level Controller) for pumps and alarms. The outputs will sink up to 50mA at 40V and are short-circuit protected.
- A 4-to-20mA current-loop driver. This allows interfacing with industrial process controllers or the range of Deeter Current Loop Indicators.
- A serial communications channel provides full-duplex RS232 and half-duplex RS485 transceivers. This allows software to be developed for linking to PCs, data-loggers, PLCs and so forth (Future feature). A USB connection is also available.

Deeter House
Valley Road
Hughenden Valley
Bucks HP14 4LW

Tel: +44 (0)1494 566 046
Fax: +44 (0)1494 563 961
Email: sales@deeter.co.uk

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The Base Station has three internal push-button switches and a 2-line by 16-character LCD. The buttons are accessible with the lid removed and are used in conjunction with the display to select installation options during initial setup.
Once the system has been installed it will continue to operate without any need for user intervention.
The Base Station is housed in a rugged ABS enclosure with an external antenna. It has cable glands for power input and signal outputs.

Specifications (BE01)

Antenna (External)	Fully weather-proof	**Frequency Channels**	16
Antenna Gain	2.2dBi	**Operating Temperature**	-20°C to + 70°C
Antenna Extension Cable (Note 1)	3m length	**Process Outputs**	Four open collector transistor outputs, 50mA 40V DC(max). One 4-20mA current loop driver
Antenna type	Half Wave dipole	**Radio Frequency**	2.4 GHz ISM band
CE mark	Yes	**Receiver Sensitivity**	-96dBm
Communications protocol	IEEE 802.15.4	**Serial Communications port**	One UART RS232C, RS485 115200 baud 8-bit, no parity, 1-stop bit, USB
Dimensions (mm)	Height = 179 (237 inc. antenna) Depth = 51 (118 inc. antenna) Width = 138 Antenna Height = 96	**Supply Voltage (Note 2)**	10-26V DC
Enclosure	IP64	**Transmit power (Note 3)**	6dBm
FCC Part 15 compliant	Yes		

Notes

1) Optional feature.
2) The Base Station is supplied with a 12V DC external wall-mounted mains adapter power supply. This can operate on 100-240V AC 50-60Hz mains. It can supply 0.5A.
3) Conform to European ETSU Limits.

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Ordering Information

Description	Ordering Code
Wireless Base Station BE02	DE012-0192
Antenna Extension Cable and mounting kit	DE012-0123

All electrical equipment should be installed by a qualified/certified electrician.
The Deeter Group follows a policy of continual development of its products and reserves the right to change specifications and/or features without notice.

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