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nanodac™

Recorder/Controller

imagine making the
impossible possible

imagine bigger better smaller, we did. We combined our extensive expertise in absolute data security and world class control to bring you the best in recording and control in a space-saving, small box with a superb full colour display and it is called the nanodac™ recorder/controller. Add to this, a strong sales team comprised entirely of degree qualified engineers who understand your process, an absolute commitment to innovation, and 5% of our total sales continuously re-invested in research and development; we can and do imagine making the impossible possible for our customers.

nanodac Recorder/Controller

The nanodac recorder/controller offers the ultimate in graphical recording combined with PID control for a box of its size. The compact ¼ DIN panel mount unit offers four high accuracy universal inputs for data recording and PID control. This secure data recording device with accurate control is enhanced by a full colour, ¼ VGA, 320 x 240 pixel display to bring a crystal clear operator interface to even the smallest of machines.

Bigger

- Bigger on the inside
- 50MB flash memory
- More functionality in one box

Better

- Eurotherm PID algorithm
- Recording methodology
- Cyrstal clear display
- Graphics
- User interface

Smaller

- Recording and control in ¼ DIN box
- Engineering with better tools and combined fuctionality

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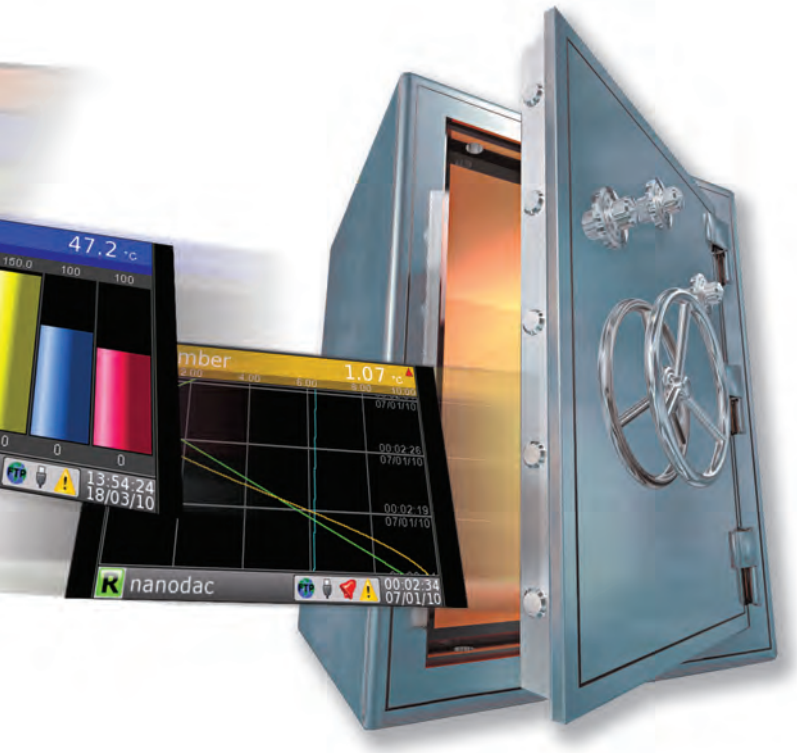
Better Recording Strategy

The recording functionality within the nanodac instrument contains decades of knowledge and understanding of the requirements of capturing and storing electronic data. We understand that different applications have different needs and the nanodac recorder can store your information in either open CSV format or in a secure, check summed format to protect data integrity. Whichever format you choose for your process we have the tools to help you keep this data safe; get it to the place you need, and in the format you require.



- 50MB Flash memory for data storage
- 8Hz sample and recording rate
- Secure, binary data (UHH) or open (CSV) data files
- 4 universal input channels
- 14 additional channels for use as mathematical functions, Modbus inputs, totalisers or counters.

The nanodac recorder has a variety of ways in which you can view your data: bar graph, trend, numeric values. The clear, full colour display with your data in the format you need makes it easy for operators to see what is happening in a particular process. The push buttons below the display also enable simple scrolling between configured views.

Each nanodac instrument contains an impressive 50MB of non-volatile Flash memory for data storage. All process data is continually logged to this memory and the recorder offers multiple archive strategies to ensure that your data is never lost.

Control that's small and powerful

Better Control Algorithm

The nanodac recorder/controller can also provide two independent control loops. This control functionality utilises the advanced Eurotherm PID algorithm providing high performance and reliability to your process. Functionality includes one of the best autotune facilities available along with overshoot inhibition (cutbacks); compensation for power fluctuations using power feedforward; linear, fan, oil and water cooling.

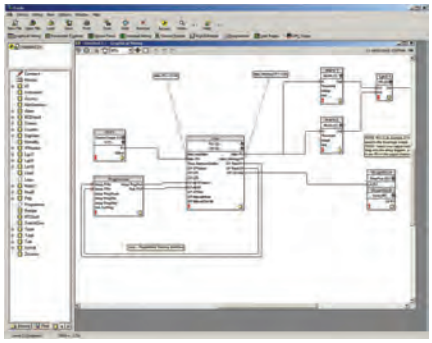
Better performance, smaller box

The nanodac input circuitry provides high accuracy with high noise rejection. We believe that if you cannot measure accurately, you cannot control accurately. If you cannot measure without noise you cannot measure accurately. This instrument meets the exacting standards (including Nadcap) required for good control and recording.

Designed for ease of use

As well as precision PID control from the world's leading supplier and secure data recording, the nanodac instrument can be configured using iTools software. This software is used across the Eurotherm controller ranges and is proven to reduce engineering and save cost through its powerful cloning facility. Any configuration created for a nanodac recorder/controller can be stored, modified offline and/or cloned for use in other instruments. This makes the spares holding simple and flexible and vastly reduces engineering and any down time that may occur. iTools also provides a Graphical Wiring Editor reducing the engineering time for even the most sophisticated configurations.

- Clone and download complete configurations to an instrument quickly and easily
- Reduce engineering and downtime
- Reduce spares holding requirements



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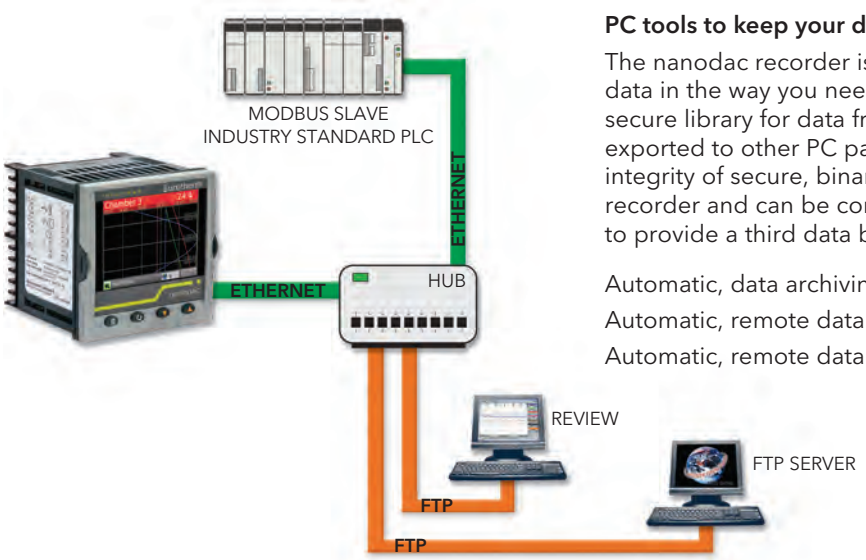
Get your data in the way you need it



PC tools to keep your data secure yet provide the flexibility you need

The nanodac recorder is supported by PC based tools to get your data in the way you need it. Review software acts as an efficient and secure library for data from which charts can be reviewed, printed and exported to other PC packages as required. Review maintains the integrity of secure, binary files (UHH format) created by the nanodac recorder and can be configured to pull data directly over the network to provide a third data back up route.

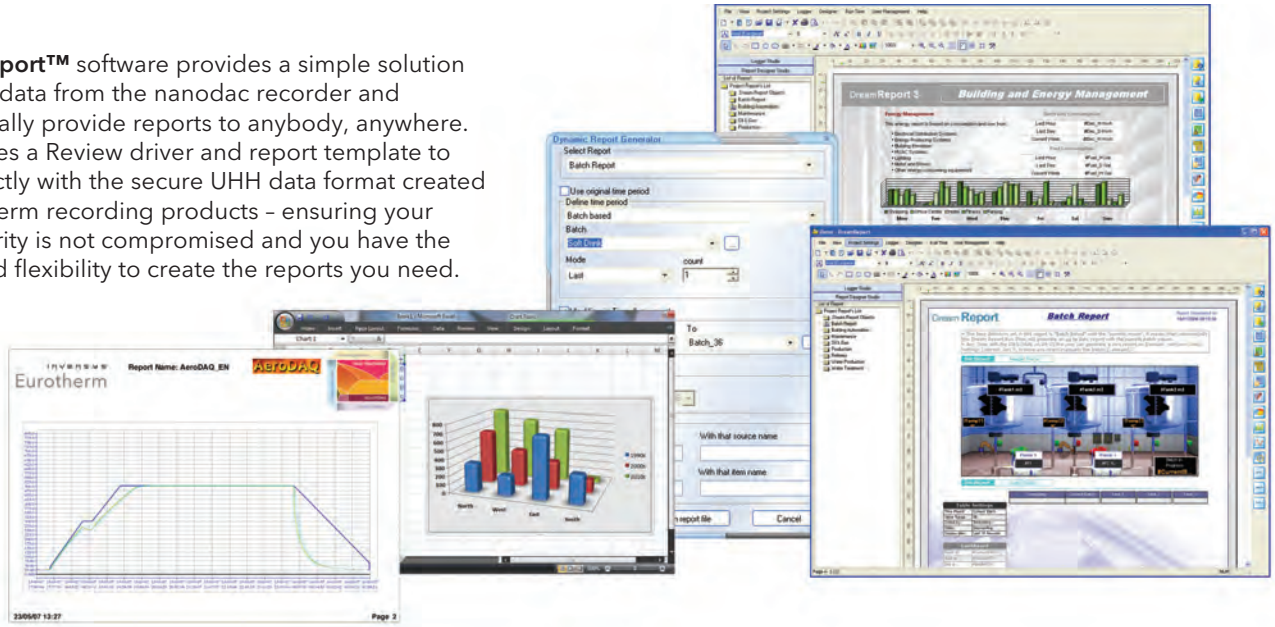
Automatic, data archiving to removable USB memory stick (up to 8GB)

Automatic, remote data archiving over Ethernet network using FTP

Automatic, remote data archiving directly into Review database

Create the reports you need

Dream Report™ software provides a simple solution to extract data from the nanodac recorder and automatically provide reports to anybody, anywhere. It integrates a Review driver and report template to work directly with the secure UHH data format created by Eurotherm recording products – ensuring your data security is not compromised and you have the power and flexibility to create the reports you need.



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Small and crystal clear

The nanodac unit is exceptionally compact and has a high I/O density to support its four channels of data acquisition/recording and two independent control loops. Its ¼ VGA , 320 x 240 pixel display provides crystal clear views onto your process from the widest of angles.

The instrument can be configured directly using the four push buttons in a similar way to the 3000 Series controllers. To assist with programming the unit in this way, user wiring is provided via the front display.

Specification

General	
Display	3.5" TFT colour (320 pixels wide x 240 pixels high)
Controls	Four navigation buttons (page, scroll, lower, raise)
Panel size	¼ DIN (96mm x 96mm)
IP rating	IP65
Inputs	4 universal (TC, RTD, mA, mV, V)
PV accuracy	Better than 0.1% of reading
Alarms	2 per channel
Alarm types	Absolute high, Absolute low, Deviation high, Deviation low, Deviation band, Rate of change
USB	1 port at rear, USB2.0
Recording	
Memory for data storage	50MB
Recording formats	UHH (Eurotherm proprietary secure, check summed file system) or CSV
Recording destinations	Internal Flash, USB memory stick (up to 8GB), FTP over Ethernet
Recording speed	Up to 8Hz, all channels
Trend update	1Hz
Removable media	USB memory stick (up to 8GB)
Virtual channels	14 (Maths/Totalisers/Counters/Modbus input)
Maths types	Modbus input, Add, Subtract, Multiply, Divide, Group min, Group max, Channel min, Channel average, Configuration revision
Recording groups	1
Control	
Control loops	2
Control types	On/Off, PID, VP
Power feedforward	Yes
Communications	
Ethernet	10/100baseT
Protocols	Modbus TCP, FTP
Network addressing	DHCP or Fixed IP

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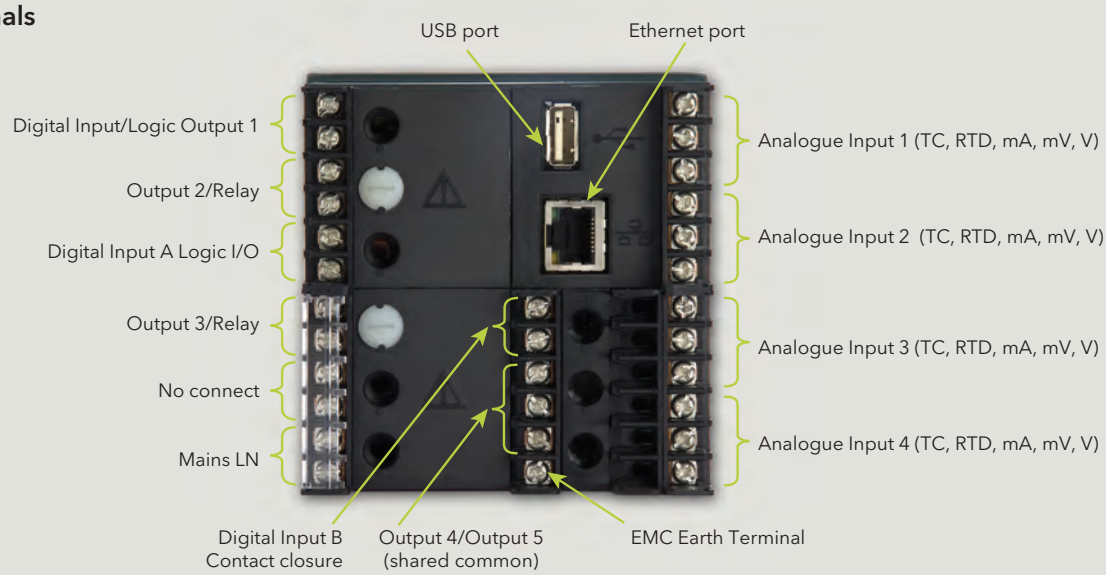
Smaller.

Rear Terminals



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Eurotherm:
International sales and service

AUSTRALIA *Sydney*
Eurotherm Pty. Ltd.
T (+61 2) 9838 0099
F (+61 2) 9838 9288
E *info.eurotherm.au@invensys.com*

AUSTRIA *Vienna*
Eurotherm GmbH
T (+43 1) 7987601
F (+43 1) 7987605
E *info.eurotherm.at@invensys.com*

BELGIUM & LUXEMBOURG
Moha
Eurotherm S.A/N.V.
T (+32) 85 274080
F (+32) 85 274081
E *info.eurotherm.be@invensys.com*

BRAZIL *Campinas-SP*
Eurotherm Ltda.
T (+5519) 3707 5333
F (+5519) 3707 5345
E *info.eurotherm.br@invensys.com*

CHINA
Eurotherm China
T (+86 21) 61451188
F (+86 21) 61452602
E *info.eurotherm.cn@invensys.com*

Beijing Office
T (+86 10) 5909 5700
F (+86 10) 5909 5709/5909 5710
E *info.eurotherm.cn@invensys.com*

DENMARK *Copenhagen*
Eurotherm Danmark AS
T (+45 70) 234670
F (+45 70) 234660
E *info.eurotherm.dk@invensys.com*

FINLAND *Abo*
Eurotherm Finland
T (+358) 22506030
F (+358) 22503201
E *info.eurotherm.fi@invensys.com*

FRANCE *Lyon*
Eurotherm Automation SA
T (+33 478) 664500
F (+33 478) 352490
E *info.eurotherm.fr@invensys.com*

GERMANY *Limburg*
Eurotherm Deutschland GmbH
T (+49 6431) 2980
F (+49 6431) 298119
E *info.eurotherm.de@invensys.com*

INDIA *Chennai*
Eurotherm India Limited
T (+91 44) 24961129
F (+91 44) 24961831
E *info.eurotherm.in@invensys.com*

IRELAND *Dublin*
Eurotherm Ireland Limited
T (+353 1) 4691800
F (+353 1) 4691300
E *info.eurotherm.ie@invensys.com*

ITALY *Como*
Eurotherm S.r.l
T (+39 031) 975111
F (+39 031) 977512
E *info.eurotherm.it@invensys.com*

KOREA *Seoul*
Eurotherm Korea Limited
T (+82 31) 2738507
F (+82 31) 2738508
E *info.eurotherm.kr@invensys.com*

NETHERLANDS *Alphen a/d Rijn*
Eurotherm B.V.
T (+31 172) 411752
F (+31 172) 417260
E *info.eurotherm.nl@invensys.com*

NORWAY *Oslo*
Eurotherm A/S
T (+47 67) 592170
F (+47 67) 118301
E *info.eurotherm.no@invensys.com*

POLAND *Katowice*
Invensys Eurotherm Sp z o.o.
T (+48 32) 2185100
F (+48 32) 2185108
E *info.eurotherm.pl@invensys.com*

SPAIN *Madrid*
Eurotherm España SA
T (+34 91) 6616001
F (+34 91) 6619093
E *info.eurotherm.es@invensys.com*

SWEDEN *Malmo*
Eurotherm AB
T (+46 40) 384500
F (+46 40) 384545
E *info.eurotherm.se@invensys.com*

SWITZERLAND *Wollerau*
Eurotherm Produkte (Schweiz) AG
T (+41 44) 7871040
F (+41 44) 7871044
E *info.eurotherm.ch@invensys.com*

UNITED KINGDOM *Worthing*
Eurotherm Limited
T (+44 1903) 268500
F (+44 1903) 265982
E *info.eurotherm.uk@invensys.com*

U.S.A. *Ashburn VA*
Eurotherm Inc.
T (+1 703) 724 7300
F (+1 703) 724 7301
E *info.eurotherm.us@invensys.com*

ED60

Eurotherm is also represented in the following countries:

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