

tyco

*Fire &
Security*

Building Automation Product Catalogue - Issue 3



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Introduction

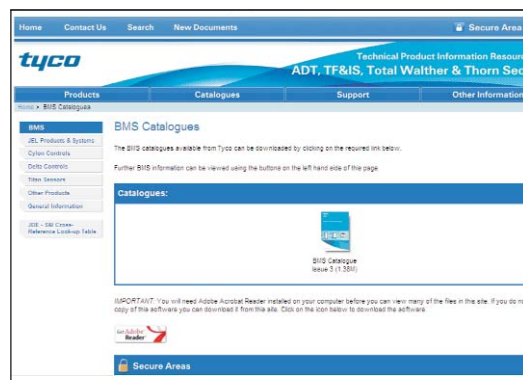
Welcome to Issue 3 of the Tyco Fire & Security's Building Automation and Integrated Systems Product Catalogue containing the wide range of products available from our distribution centre in Letchworth. We aim to make your product range as comprehensive as possible to ensure you never need go anywhere else. To meet this goal, our product specialists, with your help, have selected the most appropriate, cost effective product range available on the market.

In line with our ISO 9000 accreditation, only those products that meet the highest quality criteria have been included.



Our goal is to despatch product on the same day as we receive your order. Our warranty and service returns policy is second to none. We recognise that your business is highly dependent on excellence in customer service and to help achieve this we offer extended warranty from many of our suppliers. Full credit is also available on a "No Question – No Fuss" basis for any new in-warranty product returned to the distribution centre.

Our standard duration for warranty is a minimum of 12 months credit.



Our comprehensive website (www.tycosafetyproducts-europe.com) contains an endless supply of product related information available in multiple languages - English, French, German, Spanish, Italian, Dutch and Polish. It is regularly updated and features many aids to the selling process including presentation material, independent product test results and detailed technical information.

To enhance customer specifications and quotations we also provide a series of product datasheets which can give our clients an opportunity to read more about the product. We are positive that together we can help grow your business and we look forward to working with you in the future.

For further details on this catalogue, contact our customer telephone Help Line on **+01462 66 77 00 - Letchworth Customer Services**



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Unitron UC32 Controllers

The Unitron UC32 range uniquely presents UniPuts™, a revolutionary answer to flexible point configuration, offering maximised utilisation of controller capacity along with flexibility in strategy changes. Built on a modern, web-based architecture, the Unitron UC32 range has a wide application scope with the flexibility of being standalone or network enabled. Easily customisable, the Unitron UC32 range has optional internal or external keypads for a powerful yet user-friendly interface, matched by extensive monitoring and logging capabilities.



Features

- Programmable Controller
- 8 UniPuts™; 8 UniPuts™+Relays; 8 Universal Inputs
- Up to 16 controllers per fieldbus
- Flash upgradeable firmware
- Time-stamped datalogs
- 1024 strategy block, 64 datalogs
- Internal Display and Keyboard (UC32.24K only)

Unitron UC32.24 / UC32.24K Controllers

The UC32.24 is a programmable controller, with 8 Universal Inputs, 8 UniPut™ channels, 8 UniPut™ + Relay channels, and an optional built-in keypad interface.

Tyco's Unitron UC32.24 and UC32.24K are ideally suitable for main plant control, including AHUs, Boilers, Rooftop units, Lighting etc.

Technical Specification

Supply Requirements	24VAC +/-20% 50/60Hz
Power Rating	10 Watts Maximum
8 Universal Inputs	0-10V 10K3A1 Thermistor 0-20mA Digital Volt Free contact Pulse Counting up to 20Hz Potentiometer
8 UniPuts™	Digital Volt Free contact 0-10V Input 24VAC Detect 0-10V Output
8 UniPuts™ + Relays	0-10V Input Digital Volt Free contact 24VAC Detect 0-10V Output Class A Relay (24VAC@15A pk)
Communications	Service Port (RS232) Fieldbus Port (RS485) Keypad Port Modem (via Service Port)
Size	144 x 118 x 65 mm (excluding terminal plugs)

Product Codes

UC32.24	Programmable Controller 8UP, 8UP+R, 8UI
UC32.24K	Programmable Controller KPD, 8UP, 8UP+R, 8UI



Features

- Programmable Controller
- 8 UniPuts™+Relays; 8 Universal Inputs
- Up to 16 controllers per fieldbus
- Flash upgradeable firmware
- Time-stamped datalogs
- 1024 strategy block, 64 datalogs

Unitron UC32.16 Controller

The UC32.16 is a programmable controller, with 8 Universal Input channels and 8 UniPut™ + Relay channels. Tyco's Unitron UC32.16 is ideally suitable for main plant control, including AHUs, Boilers, Rooftop units, Lighting, etc.

Technical Specification

Supply Requirements	24VAC +/-20% 50/60Hz
Power Rating	10 Watts Maximum
8 Universal Inputs	0-10V 10K3A1 Thermistor 0-20mA Digital Volt Free contact Potentiometer Pulse Counting up to 20Hz
8 UniPuts™ + Relays	0-10V Input Digital Volt Free contact 24VAC Detect 0-10V Output Class A Relay (24VAC@15A pk)
Communications	Service Port (RS232) Fieldbus Port (RS485) Keypad Port Modem (via Service Port)
Size	144 x 118 x 65 mm (excluding terminal plugs)

Product Code

UC32.16 Programmable Controller 8UP+R, 8UI



Features

- Programmable Controller
- 4 UniPuts™+Relays; 8 Universal Inputs
- Up to 16 controllers per fieldbus
- Flash upgradeable firmware
- Time-stamped datalogs
- 1024 strategy block, 64 datalogs

Unitron UC32.12 Controller

The UC32.12 is a programmable controller, with 8 Universal Input channels and 4 UniPut™ + Relay channels. Tyco's Unitron UC32.12 is ideally suitable for main plant control, including AHUs, Boilers, Rooftop units, Lighting, etc.

Technical Specification

Supply Requirements	24VAC +/-20% 50/60Hz
Power Rating	10 Watts Maximum
8 Universal Inputs	0-10V 10K3A1 Thermistor 0-20mA Digital Volt Free contact Pulse Counting up to 20Hz Potentiometer
4 UniPuts™ + Relays	0-10V Input Digital Volt Free contact 24VAC Detect 0-10V Output Class A Relay (24VAC@15A pk)
Communications	Service Port (RS232) Fieldbus Port (RS485) Keypad Port Modem (via Service Port)
Size	144 x 118 x 65 mm (excluding terminal plugs)

Product Code

UC32.12 Programmable Controller 4UP+R, 8UI



Features

- Programmable Controller
- 4 UniPutsTM+Relays; 4 Universal Inputs
- Up to 16 controllers per fieldbus
- Flash upgradeable firmware
- Time-stamped datalogs
- 1024 strategy block, 64 datalogs

Unitron UC32.8 Controller

The UC32.8 is a programmable controller, with 4 Universal Input channels and 4 UniPutTM + Relay channels. Tyco's Unitron UC32.8 is ideally suitable for main plant control, including AHUs, Boilers, Rooftop units, Lighting, etc.

Technical Specification

Supply Requirements	24VAC +/-20% 50/60Hz
Power Rating	10 Watts Maximum
4 Universal Input	0-10V 10K3A1 Thermistor 0-20mA Digital Volt Free contact Pulse Counting up to 20Hz Potentiometer
4 UniPutsTM + Relays	0-10V Input Digital Volt Free contact 24VAC Detect 0-10V Output Class A Relay (24VAC@15A pk)
Communications	Service Port (RS232) Fieldbus Port (RS485) Keypad Port Modem (via Service Port)
Size	144 x 118 x 65 mm (excluding terminal plugs)

Product Code

UC32.8 Programmable Controller 4UP+R, 4UI

Features

- 16 Volt-free Digital Inputs
- Isolated RS485 field bus with up to 1.2Km length

Unitron UC32.16DI

The UC32.16DI is a digital input multiplexor for use with Unitron UC32 Field Controllers. It has 16 Volt-free digital inputs and no outputs. The input values are sent to the strategies of UC32 controllers using Global messages.

Technical Specification

Supply Requirements	24VAC +/-20% 50/60Hz
Power Rating	10 Watts Maximum
	16 Digital Inputs
Size	118 x 130 x 45 mm

Product Code

UC32.16DI Digital Input (16) Module



Features

- 3 Universal Inputs; 2 Universal Outputs
- 2 Triac Outputs
- 3 Relay Outputs
- Up to 63 controllers per fieldbus
- Time-stamped datalogs
- 190 strategy block, 4 datalogs

Unitron UCU10FC Unitary Controller

The UCU10FC is a programmable controller, with 3 Universal Input channels. 2 Universal Outputs, 2 Triac Outputs and 3 Relay Outputs. Tyco's Unitron UCU10FC is ideally suited to Fan Coil applications.

Technical Specification

Supply Requirements	24VAC +/-20% 50/60Hz
Power Rating	55 Watts Maximum
3 Universal Inputs	0-10V 10K3A1 Thermistor 0-20mA Digital Volt Free contact
2 Universal Outputs	0-10V Outputs 24VAC Triac @ 400mA
2 Digital Outputs	24VAC Triac @500mA
3 Digital Outputs	230VAC @ 2A
Communications	Fieldbus Port RS485 Service Port
Size	118 x 130 x 45 mm

Product Code

UCU10FC	Programmable Unitary Controller, 3UI, 2UO, 5DO
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Features

- 3 Universal Inputs; 2 Universal Outputs
- 2 Triac Outputs
- 1 Relay Outputs
- Up to 63 controllers per fieldbus
- Time-stamped datalogs
- 190 strategy block, 4 datalogs

Unitron UCU8FC Unitary Controller

The UCU8FC is a programmable controller, with 3 Universal Input channels. 2 Universal Outputs, 2 Triac Outputs and 1 Relay Output. Tyco's Unitron UCU8FC is ideally suited to Fan Coil applications.

Technical Specification

Supply Requirements	24VAC +/-20% 50/60Hz
Power Rating	55 Watts Maximum
3 Universal Inputs	0-10V 10K3A1 Thermistor 0-20mA Digital Volt Free contact
2 Universal Outputs	0-10V Output 24VAC Triac @ 400mA
2 Digital Outputs	24VAC Triac @500mA
1 Digital Output	230VAC @ 2A
Communications	Fieldbus Port (RS485) Service Port
Size	118 x 130 x 45 mm

Product Code

UCU8FC	Programmable Unitary Controller, 3UI, 2UO, 3DO
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Features

- 3 Universal Inputs
- 5 Triac Outputs
- Up to 63 controllers per fieldbus
- Time-stamped datalogs
- 190 strategy block, 4 datalogs

Unitron UC8 Unitary Controller

The UC8 is a programmable controller, with 3 Universal Input channels and 5 Triac Outputs Tyco's Unitron UC8 is ideally suited to controlling single items of equipment.

Technical Specification

Supply Requirements	24VAC +/-20% 50/60Hz
Power Rating	55 Watts Maximum
3 Universal Inputs	0-10V 10K3A1 Thermistor 0-20mA Digital Volt Free contact
5 Digital Output	VAC Triac @500mA
Communications	Fieldbus Port (RS485) Service Port
Size	118 x 130 x 45 mm

Product Codes

UCU8	Programmable Unitary Controller, 3UI, 5DO
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Features

- Integrated Airflow Sensor
- 3 Universal Inputs; 2 Universal Outputs
- 4 Triac Outputs
- Up to 63 controllers per fieldbus
- Time-stamped datalogs
- 255 strategy block, 4 datalogs

Unitron UCU10VAV Unitary Controller

The UCU10VAV is a programmable controller, with an integrated airflow sensor, 3 Universal Input channels. 2 Universal Outputs and 4 Triac Outputs. Tyco's Unitron UCU10VAV is ideally suited to single Variable Air Volume applications.

Technical Specification

Supply Requirements	24VAC +/-20% 50/60Hz
Power Rating	55 Watts Maximum
3 Universal Inputs	0-10V 10K3A1 Thermistor 0-20mA Digital Volt Free contact
2 Universal Outputs	0-10V Output 24VAC Triac @ 200mA & 500mA
1 Airflow Sensor	0-650 sccm airflow
4 Digital Output	24VAC Triac @500mA
Communications	Fieldbus Port (RS485) Service Port
Size	118 x 130 x 45 mm (excluding air flow sensor)

Product Code

UCU10VAV	ProgrammableUnitaryController,3UI, 2UO,4DO
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Features

- Peer-to-peer networking
- 100Mbps Fast Ethernet using TCP/IP
- RS485/RS232/USB Ports
- Optional MODBus support
- Fieldbus - up to 63 devices (4 with /LC option)
- Embedded Web Server

Unitron UC32.netK Communications Controller

The UC32.netK is an Ethernet-based peer-to-peer communications controller, used to network Unitron UC32 I/O Controllers together. The UC32.netK co-ordinates communication between I/O controllers on its fieldbus, with other UC32.netKs and with PCs using Ethernet, and other peripherals using RS232/RS485 serial protocols.

It can also add additional communications protocols such as MODBus and BACnet/IP to the Unitron UC32.netK system.

Technical Specification

Supply Requirements	24VAC +/-20% 50/60Hz
Power Rating	5 Watts Maximum
Keypads	Internal - 4X20 LCD, 6 buttons External - UCKRA420 via RJ12 port (Maximum cable length 50m)
Embedded Web Server	Fieldbus setup and map Globals Alarm, Printer and Modem strings Port config and system status
Communications	Fieldbus Port (RS485) External Keypad Port (RS232) Service / Printer Port (RS232) Service Port (USB) Modem / Service / Printer Port (RS232) MODBus Port (RS232/RS485) Ethernet Port (10BaseT/100BaseT) Size 144 x 118 x 65 mm (excluding terminal plugs)

Product Codes

UC32.netK	Comms Controller, KPD
UC32.netK/LC	Comms Controller, KPD (4 Controllers)
UC32.netK/MOD	Comms Controller, KPD, MODBus
UC32.netK/WEB	Comms Controller, KPD, Web Server
UC32.netK/LC/WEB	Comms Controller, KPD, Web Server (4 Controllers)
UC32.netK/IP	Comms Controller, KPD, BACnet/IP
UC32.netK/WEB/MOB	Comms Controller, KPD, Web Server, MODBus

UCKRA420

A range of Tyco accessories specifically designed to complement the Unitron controllers.



Features

- 80 alphanumeric characters (4X20)
- Access all points on UC32 site
- Supertwist LCD with backlight
- Contrast adjustment

Unitron UCKRA420 Keypad/Display

The UCKRA420 is a keypad / display interface for the Unitron system, which allows conditions on a Unitron site to be viewed and changed. It can also be used to configure UC32 controllers.

Technical Specification

Supply Requirements	From associated controller
Cable length	Max 50m
Communications	RS232 @ 9600 baud
Size	154 x 144 x 35 mm

Product Code

UCKRA420	Unitron Keypad / Display
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Chapter 2 - Unitron Accessories

Rugged Palm



Product Code

RUG/PALM

RUG/PALM including Unitron Palmlink Software

Relay Packs



Product Codes

UC32RP8

External relay pack with 8 relays, screw terminals

UC32RP4

External relay pack with 4 relays, screw terminals

UC32R.L4

External relay pack with 4 raise/lower relays, screw terminals

Cables

Product Codes

UCUCAB

UCU Service port to Palm cable

UC32PCCONN

UC32 to PC Connection cable

UC32PCCAB

UC32 to PC Commissioning cable

UC32MDMCAB

UC32 to Modem cable

Unitron Palmlink Software

Unitron Palmlink Software (end user)

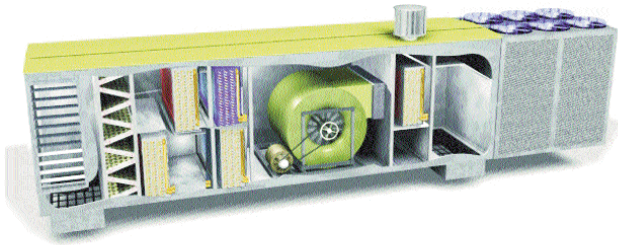
Product Code

P/LINKSW-EU

Unitron Palmlink software (end user)

Unitron Software

The Unitron Workstation Supervisory Software provides a graphical user interface (GUI) for end users. Unitron Engineering Centre provides the commissioning resource for engineering of Unitron systems.



Features

- Operator Workstation Software
- Microsoft Windows compliant
- Site License available

Unitron Command Centre

Supervisory software for Unitron systems, recommended for MS Windows 2000/XP.

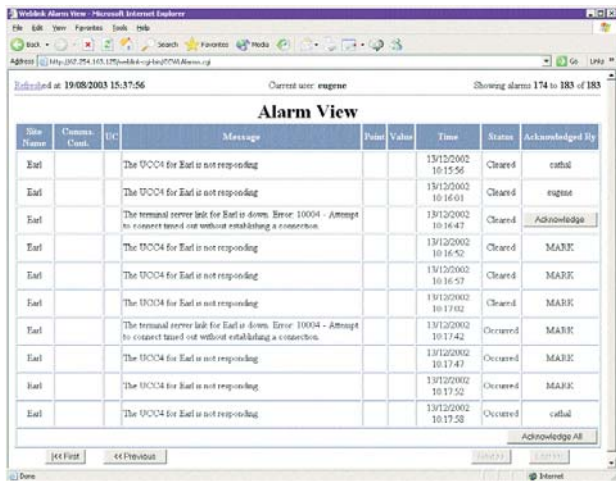
Technical Specification

Operating Systems	MS Windows 2000 MS Windows XP
PC Specification	Pentium III 850MHz 256MB RAM (2000) 512MB RAM (XP) 60GB Hard Disk SVGA Video Card 65536 Colours 800 X 600 Resolution

Product Codes

UCC/L	Command Centre Site License
UCC/D	Command Centre Dongle
UCC/SU	Command Centre Single User License
WEBLINK/1	Weblink Single Client License
WEBLINK/2	Weblink 2 Client License
WEBLINK/3	Weblink 3 Client License
WEBLINK/L	Weblink Site License
UCC/OPC	UnitronUC32 OPC Server
UCC/EM/16	Unitron Energy Manager 16 Point
UCC/EM/32	Unitron Energy Manager 32 Point
UCC/EM/64	Unitron Energy Manager 64 Point
UCC/EM/128	Unitron Energy Manager 128 Point
UCC/EM/256	Unitron Energy Manager 256 Point

Chapter 3 - Unitron Software



Features

- Programming Software for Unitron Systems
- Microsoft Windows compliant
- Integrated Graphic Editor

Unitron Engineering Centre

Programming software License for Unitron system.

Technical Specification

Operating Systems MS Windows 2000
MS Windows XP
PC Specification Pentium III 850MHz
256MB RAM (N2000)
512MB RAM (XP)
60GB Hard Disk
SVGA Video Card
65536 Colours
800 X 600 Resolution

Product Codes

UEC/L Unitron Engineering Centre
UEC/D Unitron Engineering Centre Dongle

BACnet™ Controllers

The Tyco range of BACnet™ controllers are native BACnet™. This means that the database objects in the controller can be seen by other BACnet™ systems, and data can be exchanged between other BACnet™ devices without the need for a Gateway or interface. Tyco BACnet™ controllers are fully compatible with the BACnet™ PTP, BACnet™ MS/TP and BACnet™ IP standards.



Features

- BACnet™ MS/TP and BACnet™ PTP communications
- Attractive wall-mount housing
- Completely programmable in GCL+
- Flash upgradeable firmware
- Internal thermistor
- Available in 8 keypad layout options

DSM-T0B BACnet™ System Manager

The DSM-T0B is a native BACnet™ Controller that communicates on an RS485 LAN using the BACnet™ MS/TP protocol. The controller is housed within a stylish wall mounted housing and includes a programmable LCD and keypad that can be used as a stand-alone interface for a building network to set equipment schedules, etc. and has a built in Thermistor.

The device is available in a variety of keypad configurations selected by order code suffix. See ordering info below for details. Control strategies are contained in the device, which includes 2XRS 485 ports, Modem port and a service port.

Technical Specification

Supply Requirements	24VAC
Power Rating	10VA Maximum
Universal Inputs	10K3A1 Thermistor (Internal)
Other Features	Internal Audio Beeper Battery Back Memory and RTC
Communications	BACnet™ MS/TP Main LAN Port (RS 485) BACnet™ MS/TP Subnet / Linknet Port (RS 485) BACnet™ PTP Port (RS 232) Service Port
Keypad Options	G1A - General - 4 buttons, Temp & Occupancy keys G1B - General - 16 buttons, Temp, Occupancy and Numeric keys G2B - General - 16 buttons, Temp, Occupancy, Fan and Numeric keys G3A - General - 8 buttons, Temp, Occupancy and Time Clock keys K1A - Numeric keypad - 16 buttons VM1 - 16 buttons, Temp, occupancy, Time Clock and Numeric keys Size 147 x 109 x 38mm with housing 240g with housing

Product Codes

DSM-T0B-G1A	System Manager G1A keypad, backlit
DSM-T0B-G1B	System Manager G1B keypad, backlit
DSM-T0B-G2B	System Manager G2B keypad, backlit
DSM-T0B-G3A	System Manager G3A keypad, backlit
DSM-T0B-K1A	System Manager K1A keypad, backlit
DSM-T0B-VM1	System Manager VM1 keypad, backlit



Features

- BACnet™ / IP, MS/TP and PTP communications
- Fully Programmable in GCL+
- Flash upgradeable firmware

DSM-RTR BACnet™/IP Router

The DSM-RTR is a native BACnet™ controller that routes network traffic between the BACnet™ / IP Wide Area Network, BACnet™ MS/TP and BACnet™ PTP Local Area Networks using the BACnet™ protocols.

The DSM-RTR comes with on board 10BaseT ethernet port 2 X RS 485 MS/TP ports, RS232 PTP port and a Service port.

Technical Specification

Supply Requirements	24VAC
Power Rating	10VA Maximum
Other Features	Battery Back Memory and RTC
Communications	BACnet™ / IP Ethernet Port (10BaseT) BACnet™ MS/TP Main LAN Port (RS 485) BACnet™ MS/TP SubLAN Port (RS485) BACnet™ PTP Port (RS 232) Service Port
Optional MODbus	RTU Port (RS 485)
Size	146 x 210 x 56mm with housing 342g with housing

Product Codes

DSM-RTR	BACnet™ Router
DSM-RTR-MOD30	BACnet™ Router for up to 30 MODbus devices



Features

- BACnet™ MS/TP and PTP communications
- Flash upgradeable firmware

DSM-TOB-MOD BACnet™ to MODBus Gateway

DSM-TOB-MOD has the capability of communicating to a MODbus slave device. The DSM-TOB-MOD acts as the MODbus Master device and communicates using the RS-485 MODbus RTU protocol.

This gateway translates information from the MODbus slave device into BACnet™ objects within the DSM-TOB-MOD.

Technical Specification

Supply Requirements	24VAC
Power Rating	10VA Maximum
Other Features	Battery Back Memory and RTC
Communications	BACnet™ MS/TP Main LAN Port (RS 485) MODbus RTU Port (RS 485) BACnet™ PTP Port (RS 232) Service Port
Keypad Options	G1B - General - 16 buttons, Temp, Occupancy & Number keys
Size	147 x 109 x 38mm with housing 240g with housing

Product Codes

DSM-T0B-MOD5	BACnet™ Gateway for up to 5 MODbus devices
DSM-T0B-MOD15	BACnet™ Gateway for up to 15 MODbus devices
DSM-T0B-MOD30	BACnet™ Gateway for up to 30 MODbus devices
DSM-PWR	BACnet™ Gateway for MODbus Power Meter



Features

- BACnet™ / IP, MS/TP and PTP communications
- Integrated housing
- 12 UIs and 8UOs, with optional HOA switches
- Completely programmable in GCL+

DSC-1280 System Controller

The DSC-1280 is a native BACnet™ Controller that communicates on an RS485 LAN using the BACnet™ MS/TP protocol or optionally over Twisted-Pair Ethernet (10BaseT). It also supports an MS/TP SubLAN for application specific controllers. Alternatively, the SubLAN may be configured to support up to 12 BACstats and other LINKnet I/O devices (with a maximum of 2 DFM devices).

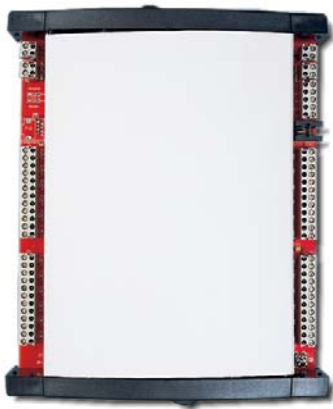
The controller is designed for a wide range of applications with mid-sized I/O requirements, and strategies are written in the powerful GCL+ programming language.

Technical Specification

Supply Requirements	24VAC
Power Rating	40VA Maximum
12 Universal	Inputs 0-5V 0-10V 10K Thermistor 4-20mA Volt free
8 Analogue Outputs	Analogue 0-10V Binary 0 or 10V
Other Features	Battery Back Memory and RTC Optional HOA Switches Visual LED Status of each I/O
Communications	BACnet™ / IP Ethernet Port (10BaseT) (Optional) BACnet™ MS/TP Main LAN Port (RS 485) BACnet™ MS/TP SubLAN / LINKnet Port (RS 485) BACnet™ PTP Port (RS 232) Service Port
Size	270 x 205 x 64mm with housing 900g with housing

Product Code

DSC-1280E	BACnet™ System Controller with HOA and Ethernet
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Features

- BACnet™ / IP, MS/TP and PTP communications
- Integrated housing
- 12 UIs and 12UOs, with optional HOA switches
- Completely programmable in GCL+

DSC-1212 System Controller

The DSC-1212 is a native BACnet™ Controller that communicates on an RS485 LAN using the BACnet™ MS/TP protocol or optionally over Twisted-Pair Ethernet (10BaseT). It also supports an MS/TP SubLAN for application specific controllers.

Alternatively, the SubLAN may be configured to support up to 12 BACstats and other LINKnet I/O device (with a maximum of 2 DFM devices). The controller is designed for a wide range of applications with mid-sized I/O requirements, and strategies are written in the powerful GCL+ programming language.

Technical Specification

Supply Requirements	24VAC
Power Rating	40VA Maximum
12 Universal Inputs	0-5V 0-10V 10K Thermistor 4-20mA Volt free
12 Universal Outputs	Analogue 0-10V Binary 0 or 10V
Other Features	Battery Back Memory and RTC Optional HOA Switches Visual LED Status of each I/O
Communications	BACnet™ / IP Ethernet Port (10BaseT) (Optional) BACnet™ MS/TP Main LAN Port (RS 485) BACnet™ MS/TP SubLAN / LINKnet Port (RS 485) BACnet™ PTP Port (RS 232) Service Port

Product Codes

DSC-1212	BACnet™ System Controller
DSC-1212E	BACnet™ System Controller with HOA and Ethernet



Features

- BACnet™ / IP, MS/TP and PTP communications
- Integrated housing
- 16 UIs and 16UOs, with optional HOA switches
- Completely programmable in GCL+

DSC-1616 System Controller

The DSC-1616 is a native BACnet™ Controller that communicates on an RS485 LAN using the BACnet™ MS/TP protocol or optionally over Twisted-Pair Ethernet (10BaseT). It also supports an MS/TP SubLAN for application specific controllers.

Alternatively, the SubLAN may be configured to support up to 12 BACstats and other LINKnet I/O devices (with a maximum of 2 DFM devices). The controller is designed for a wide range of applications with mid-sized I/O requirements, and strategies are written in the powerful GCL+ programming language.

Technical Specification

Supply Requirements	24VAC
Power Rating	40VA Maximum
16 Universal Inputs	0-5V 0-10V 10K Thermistor 4-20mA Volt free
16 Universal Outputs	Analogue 0-10V Binary 0 or 10V
Other Features	Battery Back Memory and RTC Optional HOA Switches Visual LED Status of each I/O
Communications	BACnet™ / IP Ethernet Port (10BaseT) (Optional) BACnet™ MS/TP Main LAN Port (RS 485) BACnet™ MS/TP SubLAN / LINKnet Port (RS 485) BACnet™ PTP Port (RS 232) Service Port
Size	306 x 205 x 64mm with housing 1000g with housing

Product Code

DSC-1616E	BACnet™ System Controller with HOA and Ethernet
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Features

- BACnet™ MS/TP and BACnet™ PTP communications
- Attractive wall-mount housing
- 3UIs and 5BOs
- Completely programmable in GCL+
- Flash upgradeable firmware
- Internal Thermistor
- Available in 8 keypad layout options

DSC-T305B BACnet™ System Controller

The DSC-T305B is a native BACnet™ Controller that communicates on an RS485 LAN using the BACnet™ MS/TP protocol. The controller is housed within a stylish wall mounted housing and includes a programmable LCD and keypad that can be used as a stand-alone interface for a building network to set equipment schedules, etc. and has a built in Thermistor, 3UIs and 5BOs.

The device is available in a variety of keypad configurations selected by order code suffix. See ordering info below for details. Control strategies are contained in the device, which includes 2XRS 485 ports, Modem port and a service port.

Technical Specification

Supply Requirements	24VAC
Power Rating	10VA Maximum
Universal Inputs	10K3A1 Thermistor (Internal) 0-5V 0-10V 10K Thermistor 4-20mA Volt free
Universal Outputs	Analogue 0-10V Binary 0 or 10V
Other Features	Internal Audio Beeper Battery Back Memory and RTC
Communications	BACnet™ MS/TP Main LAN Port (RS 485) BACnet™ MS/TP Subnet / Linknet Port (RS 485) BACnet™ PTP Port (RS 232) Service Port
Keypad Options	G1A - General - 4 buttons, Temp & Occupancy keys G1B - General - 16 buttons, Temp, Occupancy and Numeric keys G2A - General - 8 buttons, Temp, Occupancy and Fan speed keys G2B - General - 16 buttons, Temp, Occupancy, Fan and Numeric keys G3A - General - 8 buttons, Temp, Occupancy and Time Clock keys H2A - Hotel Application - 8 buttons K1A - Numeric keypad - 16 buttons VM1 - 16 buttons, Temp, Occupancy, Time Clock and Numeric keys
Size	147 x 109 x 38mm with housing 240g with housing

Product Code

DSC-T305B-VM1 System Controller VM1 keypad, backlit



Features

- BACnet™ MS/TP communications
- Attractive wall-mount housing
- 3UIs and 5BOs
- Completely programmable in GCL+
- Flash upgradeable firmware
- Internal Thermistor
- Available in 8 keypad layout options

DAC-T305 BACnet™ Application Controller

The DAC-T305 is a native BACnet™ Application Controller that communicates on an RS485 LAN using the BACnet™ MS/TP protocol. The controller is housed within a stylish wall mounted housing and includes a programmable LCD and keypad that can be used as a stand-alone interface for a building network to set equipment schedules, etc. and has abuilt in Thermistor, 3UIs and 5BOs.

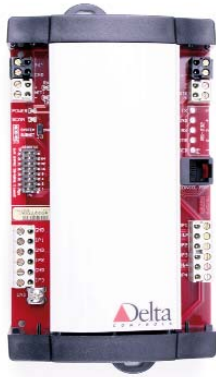
The device is available in a variety of keypad configurations selected by order code suffix. See ordering info below for details. Control strategies are contained in the device, which includes 2XRS 485 ports, Modem port and a service port.

Technical Specification

Supply Requirements	24VAC
Power Rating	10VA Maximum
Universal Inputs	10K3A1 Thermistor (Internal) 0-5V 0-10V 10K Thermistor 4-20mA Volt free
Universal Outputs	Analogue 0-10V Binary 0 or 10V
Other Features	Internal Audio Beeper Backlight Option
Communications	BACnet™ MS/TP Main LAN Port (RS485) BACnet™ MS/TP Subnet / Linknet Port (RS 485)
Keypad Options	G1A - General - 4 buttons, Temp & Occupancy keys G1B - General - 16 buttons, Temp, Occupancy and Numeric keys G2A - General - 8 buttons, Temp, Occupancy and Fan speed keys G2B - General - 16 buttons, Temp, Occupancy, Fan and Numeric keys G3A - General - 8 buttons, Temp, Occupancy and Time Clock keys H2A - Hotel Application - 8 buttons K1A - Numeric keypad - 16 buttons VM1 - 16 buttons, Temp, Occupancy, Time Clock and Numeric keys
Size	147 x 109 x 38mm with housing 240g with housing

Product Codes

DAC-T305-G1A	Application Controller G1A keypad
DAC-T305-G1B	Application Controller G1B keypad
DAC-T305-G2A	Application Controller G2A keypad
DAC-T305-G2B	Application Controller G2B keypad
DAC-T305-G3A	Application Controller G3A keypad
DAC-T305-H2A	Application Controller H2A keypad
DAC-T305-K1A	Application Controller K1A keypad
DAC-T305-VM1	Application Controller VM1 keypad
DAC-T305B-VM1	Application Controller VM1 keypad, backlit



Features

- BACnet™ MS/TP communications
- Integrated housing
- 3 UIs and 4 Outputs (4BOs / 2AOs & 2BOs)
- Completely programmable in GCL+

DAC-304/DAC322 Application Controllers

The DAC-304/DAC-322 is a native BACnet™ Application Controller that communicates on an RS485 LAN using the BACnet™ MS/TP protocol. Alternatively, the SubLAN may be configured to support up to 4 BACstats and other LINKnet I/O devices (with a maximum of 2 DFM devices).

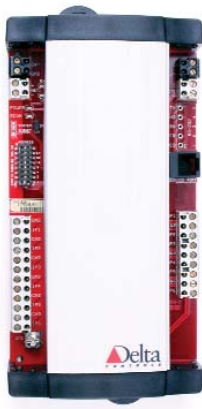
The controller is designed for a wide range of applications with small-sized I/O requirements, and strategies are written in the powerful GCL+ programming language.

Technical Specification

Supply Requirements	24VAC
Power Rating	40VA Maximum
3 Universal Inputs	0-5V 0-10V 10K Thermistor 4-20mA Volt free
Analogue Outputs	Analogue 0-10V
Digital Outputs	24VAC 0.5A Triac
Other Features	Visual LED Status of each I/O
Communications	BACnet™ MS/TP Main LAN Port (RS 485) BACnet™ MS/TP SubLAN / LINKnet Port (RS 485) Service Port
Size	192 x 102 x 48mm with housing 250g with housing

Product Codes

DAC-304R3	BACnet™ Application Controller, 3UI, 4BO
DAC-322R3	BACnet™ Application Controller, 3UI, 2AO, 2BO



Features

- BACnet™ MS/TP communications
- Integrated housing
- 6 UIs and 6 Outputs (6BOs/3AOs & 3BOs)
- Completely programmable in GCL+

DAC-606/DAC-633 Application Controllers

The DAC-606/DAC-633 is a native BACnet™ Application Controller that communicates on an RS485 LAN using the BACnet™ MS/TP protocol. Alternatively, the SubLAN may be configured to support up to 6 BACstats and other LINKnet I/O devices (with a maximum of 2 DFM devices).

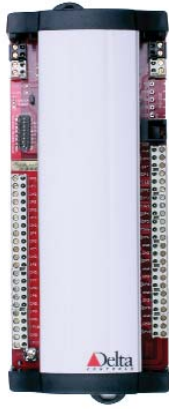
The controller is designed for a wide range of applications with small-sized I/O requirements, and strategies are written in the powerful GCL+ programming language.

Technical Specification

Supply Requirements	24VAC
Power Rating	40VA Maximum
6 Universal Inputs	0-5V 0-10V 10K Thermistor 4-20mA Volt free
Analogue Outputs	Analogue 0-10V
Digital Outputs	24VAC 0.5A Triac
Other Features	Visual LED Status of each I/O
Communications	BACnet™ MS/TP Main LAN Port (RS 485) BACnet™ MS/TP SubLAN / LINKnet Port (RS 485) Service Port
Size	219 x 102 x 48mm with housing 360g with housing

Product Codes

DAC-606R3	BACnet™ Application Controller, 6UI, 6BO
DAC-633R3	BACnet™ Application Controller, 6UI, 3AO,3BO



Features

- BACnet™ MS/TP communications
- Integrated housing
- 11 UIs, 4AOs and 6BOs
- Completely programmable in GCL+

DAC-1146 Application Controller

The DAC-1146 is a native BACnet™ Application Controller that communicates on an RS485 LAN using the BACnet™ MS/TP protocol. It also supports an MS/TP SubLAN for application specific controllers. Alternatively, the SubLAN may be configured to support up to 10 BACstats and other LINKnet I/O devices (with a maximum of 2 DFM devices).

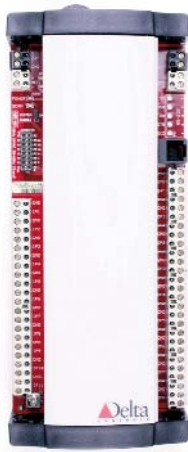
The controller is designed for a wide range of applications with mid-sized I/O requirements, and strategies are written in the powerful GCL+ programming language.

Technical Specification

Supply Requirements	24VAC
Power Rating	40VA Maximum
11 Universal Inputs	0-5V 0-10V 10K Thermistor 4-20mA Volt free
4 Analogue Outputs	Analogue 0-10V
6 Binary Outputs	24VAC 0.5A Triac
Other Features	Visual LED Status of each I/O
Communications	BACnet™ MS/TP Main LAN Port (RS 485) BACnet™ MS/TP SubLAN / LINKnet Port (RS 485) Service Port
Size	264 x 102 x 48mm with housing 482g with housing

Product Code

DAC-1146 BACnet™ Application Controller



Features

- BACnet™ / IP, MS/TP and PTP communications
- Integrated housing
- 11 UIs and 8BOs
- Completely programmable in GCL+

DAC-1180 Application Controller

The DAC-1180 is a native BACnet™ Application Controller that communicates on an RS485 LAN using the BACnet™ MS/TP protocol. It also supports an MS/TP SubLAN for application specific controllers. Alternatively, the SubLAN may be configured support up to 8 BACstats and other LINKnet I/O devices (with a maximum of 2 DFM devices).

The controller is designed for a wide range of applications with mid-sized I/O requirements, and strategies are written in the powerful GCL+ programming language.

Technical Specification

Supply Requirements	24VAC
Power Rating	40VA Maximum
11 Universal Inputs	0-5V 0-10V 10K Thermistor 4-20mA Volt free
8 Analogue	Outputs 0-10V, 20mA
Other Features	Visual LED Status of each I/O
Communications	BACnet™ MS/TP Main LAN Port (RS 485) BACnet™ MS/TP SubLAN / LINKnet Port (RS 485) Service Port
Size	264 x 102 x 48mm with housing 482g with housing

Product Code

DAC-1180 BACnet™ Application Controller



Features

- BACnet™ MS/TP communications
- Integrated housing
- 16 UIs
- Completely programmable in GCL+

DAC-1600 Application Controller

The DAC-1600 is a native BACnet™ Application Controller that communicates on an RS485 LAN using the BACnet™ MS/TP protocol. It also supports an MS/TP SubLAN for application specific controllers.

The controller is designed for a wide range of applications with mid-sized I/O requirements, and strategies are written in the powerful GCL+ programming language.

Technical Specification

Supply Requirements	24VAC
Power Rating	40VA Maximum
16 Universal Inputs	0-5V 0-10V 10K Thermistor 4-20mA Volt free
Other Features	Visual LED Status of each I/O
Communications	BACnet™ MS/TP Main LAN Port (RS 485) BACnet™ MS/TP SubLAN / LINKnet Port (RS 485) Service Port
Size	180 x 147 x 46mm with housing 324g with housing

Product Code

DAC-1600 BACnet™ Application Controller



Features

- BACnet™ MS/TP and PTP communications
- Integrated housing
- 3 UIs, 7 BOs (4 Triacs and 3 Relays)
- Completely programmable in GCL+

DFC-304-R3-240 Application Controllers

The DFC-304-R3-240 is a native BACnet™ Application Controller that communicates on an RS485 LAN using the BACnet™ MS/TP protocol. Alternatively, the SubLAN may be configured to support up to 4 BACstats and other LINKnet I/O devices (with a maximum of 2 DFM devices).

The controller is designed for a wide range of applications with small-sized I/O requirements, and strategies are written in the powerful GCL+ programming language.

Technical Specification

Supply Requirements	230VAC
Power Rating	18VA Maximum
3 Universal Inputs	0-5V 0-10V 10K Thermistor 4-20mA Volt free
Digital Outputs	4 X 24VAC 0.5A Triac 3 X 230VAC 8A Triac
Other Features	Visual LED Status of each I/O
Communications	BACnet™ MS/TP Main LAN Port (RS 485) BACnet™ MS/TP SubLAN / LINKnet Port (RS 485) Service Port
Size	255 x 102 x 48mm with housing 732g with housing

Product Code

DFC-304-R3-240 BACnet™ Application Controller, 3UI, 7BO



Features

- BACnet™ MS/TP and PTP communications
- Integrated housing
- 3 UIs, 2 AOs & 5 BOs (2 Triacs and 3 Relays)
- Completely programmable in GCL+

DFC-322-R3-240 Application Controllers

The DFC-322-R3-240 is a native BACnet™ Application Controller that communicates on an RS485 LAN using the BACnet™ MS/TP protocol. Alternatively, the SubLAN may be configured to support up to 4 BACstats and other LINKnet I/O devices (with a maximum of 2 DFM devices).

The controller is designed for a wide range of applications with small-sized I/O requirements, and strategies are written in the powerful GCL+ programming language.

Technical Specification

Supply Requirements	230VAC
Power Rating	18VA Maximum
3 Universal Inputs	0-5V 0-10V 10K Thermistor 4-20mA Volt free
Binary Outputs	2 X 24VAC 0.5A Triac 3 X 230VAC 8A Triac
Analogue Outputs	2 X 0-10V, 20mA
Other Features	Visual LED Status of each I/O
Communications	BACnet™ MS/TP Main LAN Port (RS 485) BACnet™ MS/TP SubLAN / LINKnet Port (RS 485) Service Port
Size	255 x 102 x 48mm with housing 732g with housing

Product Code

DFC-322-R3-240 BACnet™ Application Controller, 3UI, 2AO, 5BO



Features

- BACnet™ MS/TP and PTP communications
- Integrated housing
- Integrated air flow sensor (internal AI)
- Optional Actuator (2 internal BOs)
- Optional Actuator Position feedback (1 internal AI)
- 3 external UIs, 4 external BOs
- Completely programmable in GCL+

DVC-304/A/AF Application Controllers

The DVC-304 is a native BACnet™ Application Controller that communicates on an RS485 LAN using the BACnet™ MS/TP protocol. Alternatively, the SubLAN may be configured to support up to 4 BACstats and other LINKnet I/O devices (with a maximum of 2 DFM devices).

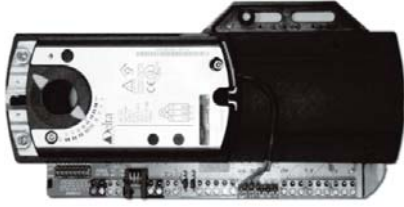
The controller is designed for VAV applications and is available with an optional integrated actuator, strategies are written in the powerful GCL+ programming language.

Technical Specification

Supply Requirements	24VAC
Power Rating	15VA Maximum
Universal Inputs	0-5V 0-10V 10K Thermistor 4-20mA Volt free
Binary Outputs	24VAC, 0.5A Triacx
Communications	BACnet™ MS/TP Main LAN Port (RS 485) BACnet™ MS/TP SubLAN / LINKnet Port (RS 485) Service Port
Size	239 x 120 x 80mm with housing 840g with housing and actuator

Product Codes

DVC-304	BACnet™ VAV Controller, AF Sensor
DVC-304/A	BACnet™ VAV Controller, AF Sensor, Actuator
DVC-304/AF	BACnet™ VAV Controller, AF Sensor, Actuator c/w Feedback



Features

- BACnet™ MS/TP and PTP communications
- Integrated housing
- Integrated air flow sensor (internal AI)
- Optional Actuator (2 internal BOs)
- Optional Actuator Position feedback (1 internal AI)
- 3 external UIs, 2 external AOs, 2 external BOs
- Completely programmable in GCL+

DVC-322/A/AF Application Controllers

The DVC-322 is a native BACnet™ Application Controller that communicates on an RS485 LAN using the BACnet™ MS/TP protocol. Alternatively, the SubLAN may be configured to support up to 4 BACstats and other LINKnet I/O devices (with a maximum of 2 DFM devices).

The controller is designed for VAV applications and is available with an optional integrated actuator, strategies are written in the powerful GCL+ programming language.

Technical Specification

Supply Requirements	24VAC
Power Rating	15VA Maximum
Universal Inputs	0-5V 0-10V 10K Thermistor 4-20mA Volt free
Binary Outputs	24VAC, 0.5A Triac
Analogue Outputs	0-10V, 20mA
Communications	BACnet™ MS/TP Main LAN Port (RS 485) BACnet™ MS/TP SubLAN / LINKnet Port (RS 485) Service Port
Size	239 x 120 x 80mm with housing 840g with housing and actuator

Product Codes

DVC-322	BACnet™ VAV Controller, AF Sensor
DVC-322/A	BACnet™ VAV Controller, AF Sensor, Actuator
DVC-322/AF	BACnet™ VAV Controller, AF Sensor, Actuator c/w feedback



DZNT-V104D Application Controllers

The DZNT package consists of a native BACnet™ intelligent LCD thermostat (DZNT-T0) and a remote termination board (DZTM) for mounting on the VAV/VVT unit.

Features

- BACnet™ MS/TP and PTP communications
- Integrated housing
- Integrated air flow sensor (internal AI)
- Optional Actuator (2 internal BOs)
- Optional Actuator Position feedback (1 internal AI)
- Loadable Application database
- Uses CAT5 cable with RJ45 termination

The thermostat has an LCD display, four pushbuttons for setpoint and occupancy override, and contains a variety of configurable VAV/VVT algorithms suitable for controlling all three remote termination board types.

Technical Specification

Supply Requirements	24VAC
Power Rating	15VA
Analogue Inputs (3)	Temperature Sensor Airflow Sensor Actuator feedback option
Universal Input	10K Thermistor / Volt free
Binary Outputs	24VAC, 0.5A Triac 2 for Damper Actuator 1 for Fan 3 for powered reheat
Communications	BACnet™ MS/TP (NET1) LINKnet Port (NET2) Service Port
Size	Thermostat 114 x 70 x 25mm with housing 50g with housing Termination Board 127 x 83 x 25mm with housing 250g with housing

Product Codes

DZNT-V104D-A	3-stage reheat
DZNT-V104D-AF	3-stage reheat, feedback



DZNT-V104T Application Controllers

The DZNT package consists of a native BACnet™ intelligent LCD thermostat (DZNT-T0) and a remote termination board (DZTM) for mounting on the VAV/VVT unit.

Features

- BACnet™ MS/TP and PTP communications
- Integrated housing
- Integrated air flow sensor (internal AI)
- Optional Actuator (2 internal BOs)
- Optional Actuator Position feedback (1 internal AI)
- Loadable Application database
- Uses CAT5 cable with RJ45 termination

The thermostat has an LCD display, four pushbuttons for setpoint and occupancy override, and contains a variety of configurable VAV/VVT algorithms suitable for controlling all three remote termination board types.

Technical Specification

Supply Requirements	24VAC
Power Rating	15VA
Analogue Inputs (3)	Temperature Sensor Airflow Sensor Actuator feedback option
Universal Input	10K Thermistor / Volt free
Binary Outputs	24VAC, 0.5A Triac 2 for Damper Actuator 1 for Fan 2 for Tri-state reheat 1 for reheat
Communications	BACnet™ MS/TP (NET1) LINKnet Port (NET2) Service Port
Size	Thermostat 114 x 70 x 25mm with housing 50g with housing Termination Board 127 x 83 x 25mm with housing 250g with housing

Product Codes

DZNT-V104T-A	Tri-stage reheat
DZNT-V104T-AF	Tri-stage reheat, feedback



Features

- BACnet™ MS/TP and PTP communications
- Integrated housing
- Integrated air flow sensor (internal AI)
- Optional Actuator (2 internal BOs)
- Optional Actuator Position feedback (1 internal)
- Loadable Application database
- Uses CAT5 cable with RJ45 termination

DZNT-V112A Application Controllers

The DZNT package consists of a native BACnet™ intelligent LCD thermostat (DZNT-T0) and a remote termination board (DZTM) for mounting on the VAV/VVT unit.

The thermostat has an LCD display, four pushbuttons for setpoint and occupancy override, and contains a variety of configurable VAV/VVT algorithms suitable for controlling all three remote termination board types.

Technical Specification

Supply Requirements	24VAC
Power Rating	15VA
Analogue Inputs (3)	Temperature Sensor Airflow Sensor Actuator feedback option
Universal Input	10K Thermistor/Volt free
Binary Outputs	24VAC, 0.5A Triac 2 for Damper Actuator 1 for Fan 2 for reheat
Analogue Output	0-10V, 20mA Analogue Reheat
Communications	BACnet™ MS/TP (NET1) LINKnet Port (NET2) Service Port Size Thermostat
Size	114 x 70 x 25mm with housing 50g with housing Thermostat 114 x 70 x 25mm with housing 50g with housing Termination Board 127 x 83 x 25mm with housing 250g with housing

Product Codes

DZNT-V112-A	Analogue reheat
DZNT-V112-AF	Analogue reheat, feedback



Features

- BACnet™ MS/TP communications (DFM-200 only)
- Integral Housing
- 2UIs/2UIs & 2BOs/2UIs and 2AOs

DFM-200/202/220 Field Module

The DFM-200/202/220 field modules are expansion I/O boards that provide remotely expandable I/O to BACnet™ Controllers. The Field Modules provide two universal inputs in three different output configurations, and are capable of communicating on the proprietary LINKnet network or directly on a BACnet™ MS/TP network (DFM-200 only).

When connected to a LINKnet network they provide programmable, remote I/O to the controller. When connected to the BACnet™ MS/TP network they function as independent BACnet™ device inputs that can be accessed over the BACnet™ MS/TP network.

Technical Specification

Supply Requirements	24VAC
Power Rating	6VA Maximum
Universal Inputs	0-5V 0-10V 10K Thermistor 4-20mA Volt free
Analogue Outputs	Analogue 0-10V
Binary Outputs	24VAC 0.5A Triac
Communications	BACnet™ MS/TP Main LAN Port (RS 485) BACnet™ MS/TP Subnet / Linknet Port (RS 485)
Size	108 x 102 x 48mm with housing 133g with housing

Product Codes

DFM-200	Field Module, 2UI
DFM-202	Field Module, 2UI, 2BO
DFM-220	Field Module, 2UI, 2AO



Features

- BACnet™ MS/TP communications (DFM-400 only)
- Integral Housing
- 4UIs/4UIs & 4BOs/4UIs & 4AOs/4 Pulse Inputs

DFM-400/404/440/400P Field Module

The DFM-400/404/440/400P field modules are expansion I/O boards that provide remotely expandable I/O to BACnet™ Controllers. The Field Modules provide four universal inputs in three different output configurations, and are capable of communicating on the proprietary LINKnet network or directly on a BACnet™ MS/TP network (DFM-400 only).

The DFM-400P is a BACnet™ MS/TP only device. When connected to a LINKnet network they provide programmable, remote I/O to the controller. When connected to the BACnet™ MS/TP network they function as independent BACnet™ device inputs that can be accessed over the BACnet™ MS/TP network.

Technical Specification

Supply Requirements	24VAC
Power Rating	8VA Maximum
Universal Inputs	0-5V 0-10V 10K Thermistor 20mA Volt free
Analogue Outputs	Analogue 0-10V
Binary Outputs	24VAC 0.5A Triac Pulse Inputs 20Hz Max, Volt free
Communications	BACnet™ MS/TP Main LAN Port (RS 485) BACnet™ MS/TP Subnet / Linknet Port (RS 485)
Size	168 x 100 x 48mm with housing 184g with housing

Product Codes

DFM-400	Field Module, 4UI
DFM-404	Field Module, 4UI, 4BO
DFM-440	Field Module, 4UI, 4AO
DFM-400P	Field Module, 4 Pulse Inputs



Features

- LINKnet communications
- Integral Housing
- 16UIs

DFM-1600 Field Module

The DFM-1600 field module is an expansion I/O board that provides remotely expandable inputs to BACnet™ System Controllers (DSC xxxx). The Field Module provides 16 universal inputs and is capable of communicating on the proprietary LINKnet network.

When connected to a LINKnet network it provides programmable, remote inputs to the controller.

Technical Specification

Supply Requirements	24VAC
Power Rating	8VA Maximum
Universal Inputs	0-5V 0-10V 10K Thermistor 4-20mA Volt free
Communications	LINKnet™ Port (RS 485)
Size	180 x 147 x 46mm with housing 324g with housing

Product Code

DFM-1600 Field Module, 16UI



Features

- LINKnet communications
- Integral Housing
- 16UIs and 16UOs

DFM1616

The DFM-1616 field module is an expansion I/O board that provides remotely expandable I/O to DSC-1616E BACnet™ Controllers. The Field Module provides 16 universal inputs and 16 universal outputs, and is capable of communicating on the proprietary LINKnet network.

When connected to a LINKnet network it provides programmable, remote I/O to the DSC-1616E controller.

Technical Specification

Supply Requirements	24VAC
Power Rating	30VA Maximum
Universal Inputs	0-5V 0-10V 10K Thermistor 4-20mA Volt free
Universal Outputs	Analogue 0-10V Binary 0 or 10V
Communications	LINKnet™ Port (RS 485)
Size	306 x 205 x 64mm with housing 1000g with housing

Product Code

DFM-1616 Field Module, 16UI, 16UO



Features

- LINKnet Communications
- Integrated housing
- Built in Thermistor
- Completely programmable in GCL+

DNS-24 Network Sensor

The DNS-24 is an intelligent room sensor with a custom 3 value , 96 segment LCD. It is capable of communicating on LINKnet or directly on a BACnet™ MS/TP network. When connected to an Application Controller on a LINKnet network, it provides programmable remote sensor capabilities to the controller.

When connected on the BACnet™ MS/TP network, it functions as an independent BACnet™ sensor.

Technical Specification

Supply Requirements	24VAC
Power Rating	2VA Maximum Built in Thermistor 3 value, 96 segment LCD 4 Push Buttons Built-in Humidity Sensor (DNS-24H)
Communications	BACnet™ MS/TP Main LAN Port (RS485) BACnet™ MS/TP Subnet/Linknet Port (RS 485)
Size	127 x 83 x 25mm with housing 120g with housing

Product Codes

DNS-24B	BACnet™ Network sensor
DNS-24L	LINKnet only Network sensor
DNS-24H	BACnet Network Humidity Sensor



Features

- LINKnet Communications
- Integrated housing
- Built in Thermistor, 1UI, 3BOs
- Completely programmable in GCL+

DNT-T103 Network Sensor

The DNT-103 is an intelligent room sensor with a custom 3 value, 96 segment LCD. It is capable of communicating on LINKnet a or directly on a BACnet™ MS/TP network. When connected to an Application Controller on a LINKnet network it provides programmable remote sensor capabilities to the controller.

When connected on the BACnet™ MS/TP network, it functions as an independent BACnet™ sensor. In addition to the built in thermistor the DNT-103 also provides an additional Universal Input and 3 Binary outputs.

Technical Specification

Supply Requirements	24VAC
Power Rating	2VA Maximum
Universal Input	10K3A1 Thermistor (Internal) 4-20mA Humidity Sensor (Internal - DNT-H103) 0-5V 0-10V 10K Thermistor 4-20mA Volt free
3 Binary Outputs	24VAC 0.5A Triac
3-digit LCD	(7 segment)
4 Push Buttons	
Communications	BACnet™ MS/TP Main LAN Port (RS 485) BACnet™ MS/TP Subnet / Linknet
Port (RS 485)Size	127 x 83 x 25mm with housing 120g with housing

Product Codes

DNT-103B	BACnet™ Network sensor backlit
DNT-H103	BACnet Network Humidity Sensor



Features

- LINKnet Communications
- Integrated housing
- Built in Thermistor, 2UI, 2AOs, 1BOs
- Completely programmable in GCL+

DNT-T221 Network Sensor

The DNT-221 is an intelligent room sensor with a custom 3 value, 96 segment LCD. It is capable of communicating on LINKnet a or directly on a BACnet™ MS/TP network. When connected to an Application Controller on a LINKnet network it provides programmable remote sensor capabilities to the controller.

When connected on the BACnet™ MS/TP network, it functions as an independent BACnet™ sensor. In addition to the built in thermistor the DNT-221 also provides an additional 2 UIs, 2AOs and a Binary output.

Technical Specification

Supply Requirements	24VAC
Power Rating	2VA Maximum
Universal Input 1	0K3A1 Thermistor (Internal) 4-20mA Humidity Sensor (Internal - DNT-H121) 0-5V 0-10V 10K Thermistor 4-20mA Volt free
2 Analogue Outputs	0-10V
Binary Output	24VAC 0.5A Triac
3-digit LCD	(7 segment)
4 Push Buttons	
Communications	BACnet™ MS/TP Main LAN Port (RS 485) BACnet™ MS/TP Subnet / Linknet Port (RS 485)
Size	127 x 83 x 25mm with housing 130g with housing

Product Codes

DNT-221B	BACnet™ Network sensor, backlit
DNT-H121	BACnet Network Humidity Sensor



Features

- BACnet™ MS/TP communications
- Attractive wall-mount housing
- 3UIs and 5BOs
- Programmable in GCL+
- Flash upgradeable firmware
- Internal Thermistor
- Available with 4, 8 or 16 button keypad options

DNT-T305 BACnet™ Application Controller

The DNT-T305 is a native BACnet™ Controller that communicates on an RS485 LAN using the BACnet™ MS/TP protocol. The controller is housed within a stylish wall mounted housing and includes a programmable LCD and keypad that can be used as a stand-alone interface for a building network to set equipment schedules, etc. and has a built in Thermistor, 3UIs and 5BOs.

The device is available in a variety of keypad configurations selected by order code suffix. See ordering info below for details.

Technical Specification

Supply Requirements	24VAC
Power Rating	10VA Maximum
Universal Inputs	10K3A1 Thermistor (Internal) 0-5V 0-10V 10K Thermistor 4-20mA Volt free
Universal Outputs	Analogue 0-10V Binary 0 or 10V
Other Features	Internal Audio Beeper
Communications	BACnet™ MS/TP Main LAN Port (RS 485)
Keypad Options	G1A - General - 4 buttons, Temp & Occupancy keys G1B - General - 16 buttons, Temp, Occupancy and Numeric keys G2A - General - 8 buttons, Temp, Occupancy and Fan speed keys G2B - General - 16 buttons, Temp, Occupancy, Fan and Numeric keys G3A - General - 8 buttons, Temp, Occupancy and Time Clock keys H2A - Hotel Application - 8 buttons K1A - Numeric keypad - 16 buttons VM1 - 16 buttons, Temp, Occupancy, Time Clock and Numeric key
Size	147 x 109 x 38mm with housing 240g with housing

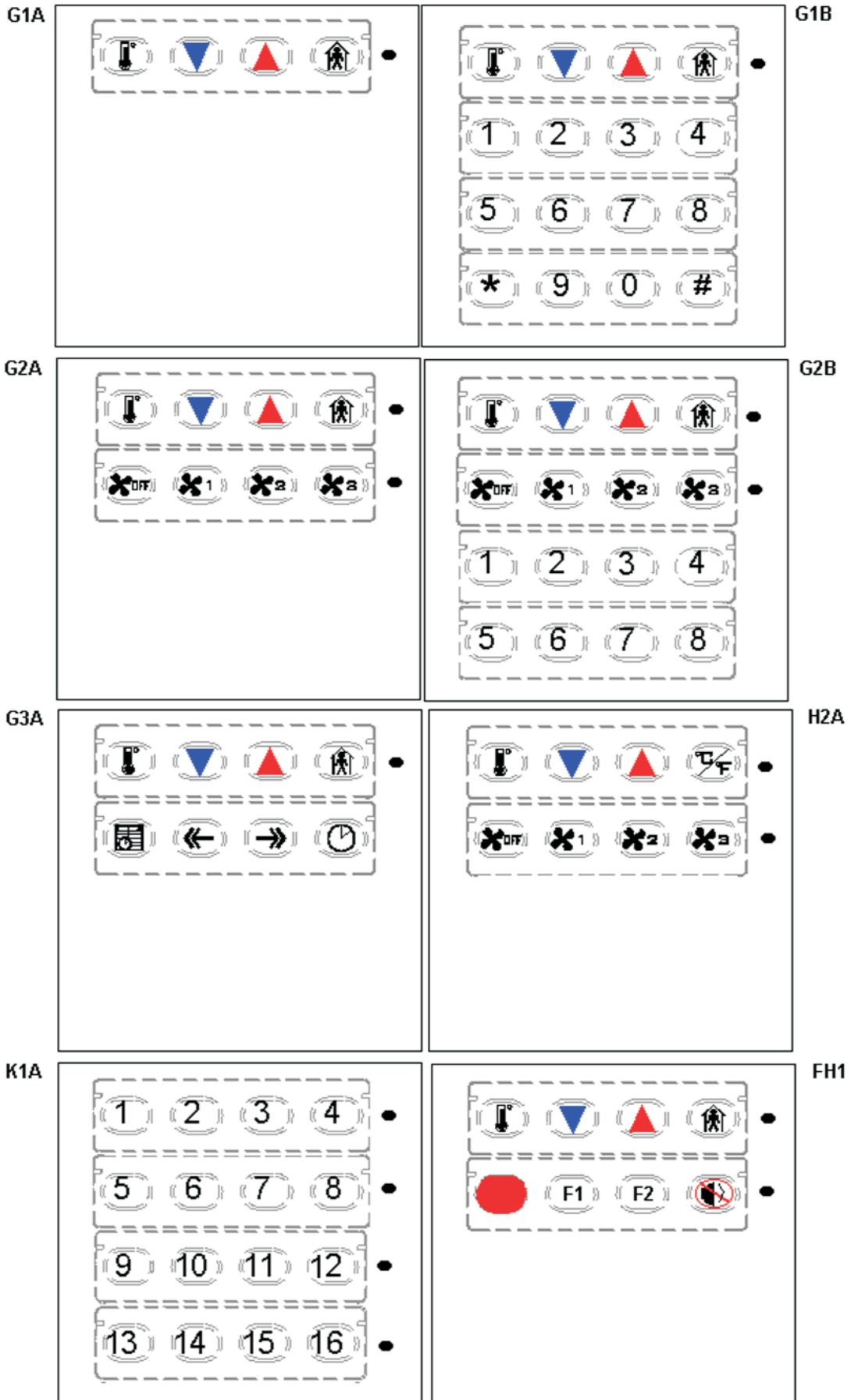
Product Codes

DNT-T305-G1B	BACstat II G1B keypad
DNT-T305-G2B	BACstat II G2B keypad
DNT-T305-G3A	BACstat II G3A keypad
DNT-T305-K1A	BACstat II K1A keypad

Chapter 4 -BACnet™ Controllers

Keypad Options

● Indicates row of buttons is exposed through door.



Chapter 5 - BACnet™ Accessories

A range of Tyco accessories specifically designed to complement the BACnet™ controllers.



Features

- Provides 500V of isolation
- Service port
- BACnet™ MS/TP compliant
- Baud rate auto-sensing

RPT-768 BACnet™ MS/TP Repeater

The RPT-768 is an intelligent BACnet™ MS/TP Network repeater. It has easily identifiable NET IN and NET OUT RS 485 connections. If required the device can be powered by two independent power sources to achieve maximum isolation, and includes its own microprocessor to optimise the network signal and to provide auto-baud capabilities.

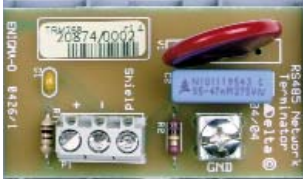
Technical Specification

Supply Requirements	24VAC
Power Rating	4VA Maximum
Communications	BACnet™ MS/TP NET IN Port (RS 485) BACnet™ MS/TP NET OUT Port (RS 485) Service Port
Size	161 x 100 x 48mm with housing 190g with housing

Product Code

RPT768 BACnet™ MS/TP Repeater

TRM-768



Product Codes

TRM-768
TRM-768 BACnet™ MS/TP
Network terminator

DFF099-KEY

Hardware key containing 50 credits
for enabling MODbus on
DSM/DSC/DAC controllers

Product Codes

DFF099-KEY

CON-768



CON768 RS-232 to RS-485
converters

Product Codes

CON-768

Cables

Product Codes

CBL-930-3	DRC25x tp PC - Amp to DB25F
CBL-930-1	C to Intelli-Con/DCU Cabling DB25 3 pin
CBL-931-1	Modem Cable, 5 pin to DB25 (male)
CBL-930-2	C Cable, 3 pin to DB9 (female)
CBL-931-2	Modem to DCU cabling, DB25 (male) to 7 pin
CBL-930-4	DRC25x to PC Cable, 5 pin to DB9
CBL-931-3	DRC to Modem Cable, AMP to DB25 (male)

Chapter 5 - BACnet™ Accessories

The tyco range of native BACnet™ Operator Workstation Software incorporate various BACnet™ objects, properties and services to provide a high degree of inter-operability with various third party BACnet™ system devices. The tyco B-OWS provides a powerful Windows 98/ME/NT/2000/XP based graphical user interface (GUI) for operating BACnet™ based integrated facility management systems..



Features

- BACnet™ Operator Workstation Software (B-OWS)
- Microsoft Windows compliant
- Integrated GCL+ editor
- Illustrator graphics editor option
- Historian Archiving Tool option

ORCAview B-OWS

ORCAview is an industry leading package that combines an intuitive GUI with powerful facility management capabilities. The workstation operates within Microsoft Windows 98/ME/NT/2000/XP, providing the operator with powerful control functions, great flexibility and ease of use. The device is available in a variety of keypad configurations selected by order code suffix.

See ordering info below for details. Control strategies are contained in the device, which includes 2XRS 485 ports, Modem port and a service port.

Technical Specification

Operating	MS Windows 98 MS Windows ME MS Windows NT 4.0 (SP 6) MS Windows 2000 MS Windows XP MX Windows 2003 Server
PC Specification	Pentium III 850MHz 128MB RAM (98/ME) 256MB RAM (NT/2000) 512MB RAM (XP/2003) 60GB Hard Disk SVGA Video Crd 800 x 600 x 65536 Colours

Product Codes

Historian	ORCAview Only	With Illustrator	With ODBC	Both
None	DOW	DOW-I	DOW-O	DOW-I-O
Small	DOW-HS	DOW-HS-I	DOW-HS-O	DOW-HS-I-O
Medium	DOW-HM	DOW-HM-I	DOW-HM-O	DOW-HM-I-O
Large	DOW-HL	DOW-HL-I	DOW-HL-O	DOW-HL-I-O
Unlimited	DHS	Not Applicable	DHS-O	Not Applicable



Features

- BACnet™ Operator Workstation Software (B-OWS)
- Microsoft Windows compliant
- Integrated GCL + editor
- Illustrator Graphics editor option

ORCAweb B-OWS

ORCAweb is a web-based front-end for both facility management and tenants, it is a PC based Server that connects to both the building automation network and the facility LAN. ORCAweb is based on a client-server architecture and the software has no limits on the number of simultaneous users.

Controlled by user access level, the operator may view graphics, deviced architecture, object properties or tenant portal pages.

Technical Specification

Operating Systems MS Windows 98
 MS Windows ME
 MS Windows NT 4.0 (SP6)
 MS Windows 2000
 MS Windows XP
 MS Windows 2003 Server

Product Codes

Package	Small (250 I/O points)	Medium (500 I/O points)	Large (Unlimited I/O points)
ORCA Web only	DWS-S	DWS-M	DWS-L
ORCAweb + ODBC	DWS-S-O	DWS-M-O	DWS-L-O
ORCAweb + Small Historian	DWS-S-HS	DWS-M-HS	DWS-L-HS
ORCAweb + Small Historian +ODBC	DWS-S-HS-O	DWS-M-HS-O	DWS-L-HS-O
ORCAweb + Medium Historian	DWS-S-HM	DWS-M-HM	DWS-L-HM
ORCAweb + Medium Historian + ODBC	DWS-S-HM-O	DWS-M-HM	DWS-L-HM-O
ORCAweb + Large Historian	DWS-S-HL	DWS-M-HL	DWS-L-HL
ORCAweb + Large Historian + ODBC	DWS-S-HL-O	DWS-M-HL-O	DWS-L-HL-O

Chapter 6 - BACnet™ Software

The tyco range of Integration products include specialist software designed specifically for all aspects of Alarm Management and Visualisation requirements. The software is easy to configure and operate Utilising touch screen technology running on Windows 2000/XP and offering a sophisticated, designed for touch, graphical user interface (GUI) for integrating disparate building systems onto a common head-end.



Features

- Multi-Redundant Server Technology
- High Resolution Graphics
- Extensive Driver list
- Powerful Alarm Handling
- Alarm/Action Scenarios
- Live and Recorded CCTV Images
- Graphic Filters for ease of use
- Animated, Customisable Icons
- Unlimited Graphic Plans
- Fully Configurable System
- IP Ready for Video/Voice over IP, etc.
- Full Event Log for Audit Trail
- Matrix Mapping for CCTV/DVR/NVR
- Alarm Escalation
- Designed for Touch

Genesys™

The Genesys™ application offers the latest in Control Room Management Systems (CRMS) enabling multi-discipline integration providing an intelligent graphical and text alarm handling system which includes display of alarms in priority order within a hierarchy.

Utilising scenarios and actions, which releases the operator from making decisions, leaving them free to deal with the actual incident.

The Genesys™ Security Management System is a scalable solution that provides for an organisation's security requirements that can be expanded to suit the customer's requirements today as well as the future due to changing circumstances.

The Genesys™ application is designed for use on touchscreens and is therefore extremely easy to use and its intuitive look and feel make it the leading Control Room Integration Product.

Product Codes

2000-TYCO-INTI	GENESYS (TYCO VERSION) + INTELLEX MODULE
2000-TYCO-INTC	GENESYS (TYCO VERSION) + CCTV MATRIX MODULE
2000-TYCO-INTA	GENESYS (TYCO VERSION) ADDITIONAL USER
2000/SG1	GENESYS SOFTWARE - SINGLE USER
2000/SG2	GENESYS SOFTWARE - TWO USERS
2000/SG3	GENESYS SOFTWARE - 1 TO 5 USERS
2000/SGA	GENESYS SOFTWARE - ADDITIONAL USERS (6 TO 16)
2000/AS1	GENESYS MIGRATING SERVER SOFTWARE - 1 TO 2 USERS
2000/AS2	GENESYS MIGRATING SERVER SOFTWARE - 1 TO 3 USERS
2000/AS3	GENESYS MIGRATING SERVER SOFTWARE - 1 TO 5 USERS
2000/AAL	GENESYS SOFTWARE - ADDITIONAL USERS (6 TO 16)
2000/AA1L	ADDITIONAL License FOR AS1 AND AS2
2000-GSM1-IN-I	GENESYS (TYCO VERSION) BUNDLED INDUSTRIAL PC (Intellex)
2000-GSM1-IN-C	GENESYS (TYCO VERSION) BUNDLED INDUSTRIAL PC (AD Matrix)
2000-GSM7-INT-I	GENESYS (TYCO VERSION) BUNDLED PC (Intellex)
2000-GSM7-INT-C	GENESYS (TYCO VERSION) BUNDLED PC (AD Matrix)
2000/GSM1	INDUSTRIAL PC WITH TFT TOUCHSCREEN
2000/GSM2	INDUSTRIAL PC WITH TFT TOUCHSCREEN & 8-PORT SERIAL CARD
2000/GSM3	INDUSTRIAL PC WITH SVGA MONITOR
2000/GSM4	As 2000/GSM1 - TOWER DESKTOP VERSION
2000/GSM5	As 2000/GSM2 - TOWER DESKTOP NO FLOPPY, SINGLE FAN
2000/GSM6	As 2000/GSM2 - TOWER DESKTOP VERSION
2000/GSM7	As 2000/GSM1 - RACK MOUNTED, NO FLOPPY, SINGLE FAN
2000-TYCO-GC	GENESYS GRAPHICS CARD

Genesys™ tyco Drivers

Product Codes

2000-TYCO-CM	Genesys CCTV System Driver
2000-TYCO-FM	Genesys Fire System Driver
2000-TYCO-IM	Genesys Intruder System Driver
2000-TYCO-AM	Genesys Access Control Driver

Genesys™ Other Drivers

Product Codes

2000/CC	Cell Call Driver	2000/CG	C2000 Concierge Single User Driver
2000/MACCTV	Matrix Driver	2000/CG2	C2000 Concierge Two User Driver
2000/MUX	Multiplexer Driver	2000/CG4	C2000 Concierge Four User Driver
2000/FA	Mimic Fire Alarm Driver	2000/ADR	Adpro Fast Scan Driver
2000/IA	Mimic Intruder Alarm Driver	2000/TFL	TFL CCTV Driver (TVNP-CP Protocol)
2000/IAC	Mimic & Control Intruder Alarm Driver	2000/ST1	ISM Seltech Cell CallDriver - Single User
2000/PG	Pager Driver	2000/ST2	ISM SELTECH CELL CALL Driver - Additional User
2000/IOD	ISM MIO Network Driver	2000/UL	Ultimate 3000 Intercom Driver
2000/SA	Blick Pager Driver	2000/CD	IP Camera Video CODEC Driver
2000/T	Telemetry Driver	2000/IC	I.COMPLY Incident Report Driver
2000/AM	Audio Matrix Driver	2000/DVR/G	Geutebruck DVR Driver
2000/AM/IO	Audio Matrix WITH IO CONTROL Driver	2000/G/B	Bosch General Alarm Driver
2000/PG/SA	Pager with Staff Attack (ASCOM) Driver	2000/G/L	Lintott General Alarm Driver
2000/CA	Chubb Atlas Driver		
2000/ACA	Access Control (ASCII TEXT) Driver		
2000/AC	Access Control Driver		
2000/FG	Geoquip/SW Microwave Driver		
2000/ZR	Zander Screen Driver		
2000/DVR/F	NVR Driver		
2000/DVR/E	Ernitech DVR Driver		
2000/RD	Infrared Remote Control Driver		
2000/RCD	Rugby Clock Driver		

Genesys™ Ancillaries

Product Codes

2000/8/SC	8 Port Serial Expansion Card
2000/HUB4	4 Way Ethernet Hub
2000/HUB8	8 Way Ethernet Hub
2000/HUB16	16 Way Ethernet Hub
2000/4500T	24 Managed Ethernet Switch
2000/4226T	4 Managed Ethernet Switch
2000/NC	Ethernet Card
2000/GTS	18" Microtouch TFT Touchscreen
2000/98753/6	4 Port Serial Rocket Hub Single
2000/RTS1	Port Serial to Ethernet Switch
2000/ARC	4-Way Relay Card
2000/VCH	High Resolution Video Card
2000/RC	Rugby Clock
2000/J1	USB Joystick for CCTV Telemetry
CM/MIO2	8 Alarm Input Card with 4 Unregulated Relay Outputs
CM/NET	MIO RS232-485 Network Controller for upto 32 Cards
2000/BSU5/CB6	5V 18A DC Regulated PSU

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