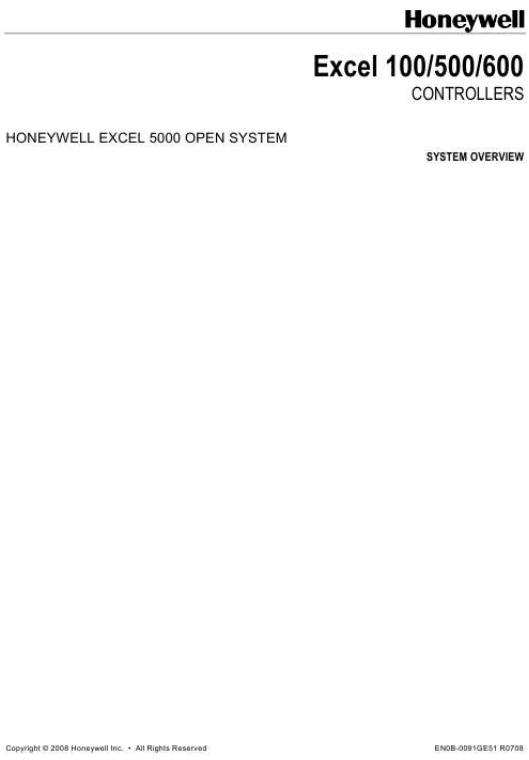

Honeywell

Excel 100/500/600
CONTROLLERS

HONEYWELL EXCEL 5000 OPEN SYSTEM

SYSTEM OVERVIEW

EN0B-0091GE51 R0708

Manual abstract:

Freely programmable LONMARK controller (Excel 500, only) The Excel 500 controller complies with the LONMARK ® Interoperability Guidelines. It supports up to 512 NVs which can be mapped to data points. It can function on a LONWORKS® network with Excel 10 and Excel 50 controllers, other Excel 500 controllers and their Distributed I/O modules, and third-party LONWORKS devices and centrals. The Excel 500 provides the following unique benefits: Automatic binding of Excel 500 controllers and Honeywell I/O modules. This saves engineering time and cost over usual network variable (NV) binding. In addition, this saves on Echelon® node royalty fees. 512 NVs supported for integration and interoperation with other devices on the LONWORKS network. NV-Booster® functionality avoids multiple NVs with many-to-one bindings and thus reduces the number of Excel 500 controllers needed. All binding information from and to the Excel 500 controller can be saved in Flash memory or uploaded together with the application and restored after power failure. This also allows exchange of controller hardware without redoing the complete binding.

The Excel 500 controller allows conversion of NV types which increases flexibility and interoperability on a LONWORKS network. With firmware 2.06.00 and higher, Excel 500 controllers support full Building Management Functionality (BMF) over LONWORKS (alarming, scheduling, trending). Connection to building supervisors Up to eight building supervisors can be connected via the Honeywell system bus (CBus).

Excel 100/500/600 allows communication with an EBI/SymmetrE building supervisor via modem or ISDN terminal adapter. Communication via analog/ISDN modem Excel 500 (with firmware version 2.01.00 and higher) and Excel 100C allow direct connection of an analog modem or ISDN terminal adapter, with data transmission rates of up to 38.4 Kbaud.

Modular design and easy operation The modular design enables the system to be expanded to meet the growing needs of the building. The user addresses and the full English-language descriptors are stored in the controller and are, therefore, available to be viewed locally, at the operator unit, without the need for a central PC. NOTE: The Excel 500-XCL5010 and the Excel 100C have no internal display; thus, an XI582 or an XL-Online is needed. Distributed I/O modules and Excel Smart I/O modules connected via LONWORKS® bus The modules consist of an electronic module and a terminal module. The terminal module provides terminals for all field signals. Internal wiring between the Excel 500 controller and the field terminals is not required (except for the 2-wire LONWORKS bus connection). Optional manual override modules and manual disconnect modules are available. Excel Smart I/O modules are LONMARK association-compliant devices, and are thus suitable for all LONWORKS environments. They feature a variety of softwareconfigurable digital and analog inputs and outputs and can be installed at strategic locations throughout buildings. NOTE: The Excel 500-XCL5010 can be connected only to external I/O modules.

The connection of internal plug-in modules is not possible. Large remote trend buffer The XC5210C Excel 500 CPU module provides an enlarged remote trend buffer which allows more than 10,000 historical values to be stored and transmitted to a building supervisor. 1 EN0B-0091GE51 R0708 EXCEL 100 SYSTEM EXCEL 100/500/600 SYSTEM OVERVIEW The User Programs Free selection of applications Permanent applications from EPROM The Excel 100/500/600 receives its user programs in three different ways: With the selection of the applications for the EPROM, the user program is assembled from permanently programmed functions when starting the system for the first time no further programming tools are necessary. With Flash-EPROM, applications can be stored restored via the operator interface. With the CARE engineering system, standard applications for heating, ventilation and air conditioning technology can be assembled and extended as desired. With free program preparation using CARE, the user program is generated automatically after graphical preparation of the system schematic diagram, the instrumentation and control strategies. Configurable applications No programming experience needed EN0B-0091GE51 R0708 2 EXCEL 100/500/600 SYSTEM OVERVIEW EXCEL 100/500/600 SYSTEM Excel 100 Modules MCE 3 and MCE 1 The MCE 3 and MCE 1 are analog/digital converters that convert analog outputs of the Excel 100 into digital outputs. The MCE 1 converts one analog output into one voltage-free changeover contact. The MCE 3 converts three analog inputs into two voltage-free outputs and one N.O.

contact. The MCD 3 is an analog/digital converter that converts 1 analog output into one voltage-free changeover contact and one analog output into a three-point output. The MCM 1 is a 4-channel separation module that provides active switching voltages to the digital inputs of the Excel 100 from up to four voltage-free contacts. MCD 3 MCM 1 Excel 100 Technical Data Voltage: 24 Vac, ± 20%, 50 to 60 Hz 24 Vdc, + 20%, 10% IMPORTANT If the Excel 100C is supported with, e.g.

a battery or accumulator, it has to be assured that no "pumping" of the power supply occurs. Maximum number of devices per System Bus: 30 Power consumption: max. 40 VA (max. 30 W) Ambient temperature: During operation: 0 to 50°C (0 to 45°C when mounted horizontally) During storage: -20 to 60°C Ambient humidity: During operation and storage 5 to 90% r.h.

Dimensions of housing: 235 x 192 x 72 mm (H x W x D) Mounting: Wall or DIN rail mounting Program back-up during power failure: 72 hours via gold capacitor Protection class: IP 30 (with cover mounted) Operator units: Operator unit XI582 desktop or wall mounting XL-Online module Analog/digital converter Analog/digital converter Analog/digE51 R0708 4 EXCEL 100/500/600 SYSTEM OVERVIEW EXCEL 100/500/600 SYSTEM XC5010C Computer Module The XC5010C computer module is the brain of Excel 500 and features internal modules. Control and monitoring functions are performed by means of programmable, 16-bit microprocessor controlled, digital technology. The program is held in RAM, but it can also be saved onto a Flash-EPROM. RAM is buffered by a gold capacitor and is supported for approx. 72 hours in case of a power failure. The XC5010C adds support for a LONWORKS network connection to Distributed I/O modules and to other controllers and LONMARK devices. Serial interface communication support for MMI is possible via two interfaces, Sub-D (front) and 18-pin male (back), which can be selected using a switch on the front panel. The interface enables the system to be expanded to up to 30 devices including a building supervisor. Communication is performed via the system bus using a token-passing multi-master structure. LEDs indicate the operational status as well as the transmit / receive status of the interfaces.

XC5210C Computer Module The XC5210C computer module has all the same functions and capabilities as the XC5010C described above with one exception. Increased memory allows for a greatly increased remote trend buffer capacity up to 10,000 values can be stored. XC6010 Computer Module The XC6010 computer module is the 32-bit, high performance version of the XC5010C computer module. It features more memory and faster DCC cycle-times as well as faster scanning times in combination with some of the input / output modules. The XC6010 computer module has only a single serial interface connection and does not support LONWORKS bus connections; therefore, Distributed I/O modules cannot be used with the XC6010C. XD505A / 508 Communication Submodules The submodules XD505A and XD508 are used for C-bus communication with older Excel 100/500 and Excel 600 controllers. The submodules are plugged onto the Excel 100B or XC5010B/XC6010 computer modules. 5 EN0B-0091GE51 R0708 EXCEL 100/500/600 SYSTEM EXCEL 100/500/600 SYSTEM OVERVIEW XP502 Power Supply Module The XP502 power supply module supplies the low voltage power to the internal modules via the internal bus. · The on/off switch for the power supply is situated on the front panel of the XP502 power supply module. · The module can be connected with an external uninterrupted power supply (UPS), XAPU 24-2F.

· LEDs indicate the operating status, status of the watchdog relay and operation by battery. XF521A Analog Input Module The XF521A analog input module has eight inputs. It converts data from analog sensors PT 1000, NTC 20K, 0 to 10V and (0...

20 mA, 4...20 mA). The resolution is 12 bit.

The characteristic curves for the different sensor types are entered in the data point description. XF526 Analog Input Module The XF526 analog input module has eight inputs. It converts data from additional analog sensors: PT 100, PT 1000, PT 3000, BALCO 500, NTC 20K, 0 to 10V and (0...20 mA, 4...20 mA). The characteristic curves for the different sensor types are entered in the data point description.

The single LED indicates that the internal processor is working. EN0B-0091GE51 R0708 6 EXCEL 100/500/600 SYSTEM OVERVIEW EXCEL 100/500/600 SYSTEM XF522A Analog Output Module The XF522A analog output module has eight outputs that supply a 0...10V signal. The resolution is 8 bit. Five of the outputs are equipped with a manual override switch that can be used to select 0V, 10V or automatic operation. The module can be adapted to suit a variety of actuators by entering the characteristic curves in the data point description. The intensity of the LEDs is proportional to the output voltage. XF527 Analog Output Module This module has the same functionality as XF522A, but without manual override switches.

The analog outputs are controlled by software, only. XF523A Digital Input Module The XF523A digital input module has twelve inputs. It processes floating signals as well as non-floating signals up to 24 V AC/DC. The inputs can also be used as totalizer inputs. The following specifications apply to totalizer inputs: · Inputs 1 and 2: Maximum frequency Minimum pulse duration Minimum pulse interval · Inputs 3 to 12: Maximum frequency Minimum pulse duration Minimum pulse interval 15 Hz 20 msec 33 msec 0.

4 Hz 1.25 sec 1.25 sec · LEDs indicate the respective status of the inputs. The LEDs are invertible (NO/NC). XF524A Digital Output Module The XF524A output module has six relay outputs, including five with changeover contacts and one with a normally open contact.

The five changeover contacts can be activated and deactivated independent of the user program by a manual switch. This is particularly useful for commissioning and servicing. The relays are integrated in the XF524A module and eliminate the need for externally mounted interlocking relays and their associated additional wiring. LEDs indicate the status of all six outputs. XF529 Digital Output Module This module has the same functionality as XF524A, but without manual override switches. The digital outputs are controlled by software, only. 7 EN0B-0091GE51 R0708 EXCEL 100/500/600 SYSTEM EXCEL 100/500/600 SYSTEM OVERVIEW XF525A Three-Position Output Module The XF525A three-position output module was specifically developed for controlling reversible actuators. A total of three actuators can be connected directly to the XF525A three-position output module. Both 24 Vac and 240 Vac actuators can be operated. The module features radio interference suppression for actuators with a current draw of up to 0.

2 A (240 Vac) or 1.2 A (24 Vac). The control relays are already incorporated in the three-position output module and eliminate the need for externally mounted interlocking relays and their associated additional wiring. Actuators with different running times can be connected directly to this output module. @@@@@@@@contact 5 changeover 1 N.O. @@@@Use the cables only as described. @@@@@@@@@@@@@@The XCL5010 supports only Distributed I/O modules. @@@@@@@@@@@@@@A power LED (L1) and a service LED (L2) are located on each module. L2 indicates the current state of the bus node.

@@PT 1000, NTC 20K, 0...10 Vdc, 0..

.20 mA, 4...20 mA).

@@The resolution is 12 bit. 11 EN0B-0091GE51 R0708 EXCEL 100/500/600 SYSTEM EXCEL 100/500/600 SYSTEM OVERVIEW Analog Output Module XFL522B The XFL522B analog output module has eight output channels that supply a 0...10 V signal. The resolution is 8 bit. The outputs can be used to control actuators or other suitable analog devices. Digital Input Module XFL523B The XFL523B digital input module has twelve input channels that can be used for connecting sensors or any device that provides a digital input. @@LEDs indicate the respective status of the inputs. Two different LED color sets for indicating the on/off states can be selected via a DIP switch (sw1: LEDs DI1 to D6; sw2: LEDs DI 7 to DI 12).

The possible on/off colors are: yellow/none or red/green. Digital Output Module XFL524B The XFL524B digital output module has six isolated changeover contacts that can be connected to actuators or other switchable devices. LEDs indicate the status of all six outputs. Manual Override Unit XFR522A for XFL522A The XFR522A manual override module mounts directly on top of the XFL522A. Eight potentiometers on top of the module can be used to independently vary the output of each channel from 0% to 100%. Each potentiometer also has an automatic setting that causes the channel to operate normally. The LEDs of the XFL522A are also visible. The manual override unit works independently from the CPU. A feedback signal that includes the user address, the operating mode (manual/auto), and its value is sent to the CPU if any changes are made using the manual override unit. EN0B-0091GE51 R0708 12 EXCEL 100/500/600 SYSTEM OVERVIEW EXCEL 100/500/600 SYSTEM Manual Override Unit XFR524A for XFL524A The XFR524A manual override module mounts directly on top of the XFL524A.

Six switches on top of the module can be used to independently switch each of the digital outputs OFF (0) or ON (1). Each switch also has an automatic setting that causes the channel to operate normally. The LEDs of the XFL524A are also visible. The manual override unit works independently from the CPU. A feedback signal that includes the user address, the operating mode (manual/auto), and its value is sent to the CPU if any changes are made using the manual override unit.

Summary of Distributed I/O Modules module Analog input module Analog output module Digital input module Table 3. Excel 500 Distributed I/O modules manual override name inputs outputs with feedback XFL521B XFL522B with XFR522A XFL523B XFL524B Digital output module with XFR524A 12 6 changeover 6 changeover (6 x) 1 0 Auto 8 8 8 8 x output intensity (8 x) potentiometers 8 x output intensity 12 x status LEDs (selectable colors) 6 x status LEDs 6 x status LEDs LED display 13 EN0B-0091GE51 R0708 EXCEL 100/500/600 SYSTEM EXCEL 100/500/600 SYSTEM OVERVIEW Additional Parts Socket / Housing: Terminal block for XFL521/522A/523....

..... XSL513 Terminal block for XFL524A.

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..... XSL514 Additional modules: LONWORKS connector module ....

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XSL511 Manual disconnect module .....

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... XSL512 Accessories: Cover release tool..

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XAL2 Swivel label .....

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..XAL1 Termination module .....

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. 209541B Mounting clamps (for XSL512514) Excel Smart I/O Modules Excel Smart I/O modules are LONMARK association-compliant devices, and can thus be used in all open LONWORKS environments. They feature a variety of softwareconfigurable digital and analog inputs and outputs and are suitable for installation at strategic locations throughout your buildings. The modules convert physical input signals from sensors into network variables and the network variables into physical output signals for operating actuators. The diverse mix of inputs and outputs (flexibly configurable using Honeywell's LonMaker for WindowsTM plug-in) makes the Excel Smart I/O ideally suited for a wide range of intelligent, distributed applications. EN0B-0091GE51 R0708 14 EXCEL 100/500/600 SYSTEM OVERVIEW EXCEL 100/500/600 SYSTEM Time Programs Simple and flexible time programs The daily programs must first be defined before a time program can be created. A daily program is assigned to each weekday in the weekly program. This weekly program is automatically copied for every week in the annual program. Exceptions can be defined for any number of days by replacing the daily program directly in the annual program. The beginning and end of daylight savings time can be stored to automate the changeover from daylight savings time to standard time.

The changeover is then performed automatically on the appropriate days. Automatic summer/winter changeover System Texts Flexible text files The text files are stored in the controller. Installation and Commissioning Freely programmable application programs Protection against program loss User friendly service level When the application program for a freely programmable application is generated during CARE engineering, the complete documentation for the system and the wiring diagram are generated automatically. The application program can be either loaded into the RAM of the computer module from disk or stored in the computer module's Flash-EPROM. The various operating levels can be accessed by means of passwords.

In operator level 3, "read and make changes", all inputs and outputs can be queried, set, or simulated. The current status of each input and output can be queried. All relay outputs can be activated or deactivated. Analog outputs can be set to a value between 0 and 100%. In order to simulate operating conditions, each digital input can be commanded ON or OFF and each analog input can be assigned a value between 0 and 100%.

This service level is useful for both commissioning and servicing. Menu driven programming level Operator level 4 of the XL-Online is primarily used to set the system parameters. Additionally, the system text and the time program can also be edited. Excel 500/600 with internal modules (XC5010C/XC6010) 15 Excel 500XCL5010 with Communication Module EN0B-0091GE51 R0708 EXCEL 100/500/600 SYSTEM EXCEL 100/500/600 SYSTEM OVERVIEW Excel 500/600 Technical Data Voltage: XC5010C/ XC6010: 24 Vac/dc, ± 20% XCL5010: 24 Vac, ± 20% Maximum number of modules per Excel 500/600: 16 I/O

modules (internal + Distributed; XCL5010 Distributed, only) with up to 128 inputs and outputs. Up to ten per module type. Up to ten XF524A digital output modules and XF525A three-position output modules combined (not XCL5010). Maximum number of devices per System Bus: 30 Power consumption: XC5010C/XC5210C/ XC6010: max. 40 VA (max. 30W) XCL5010: max. 5 VA (max.

4W) Ambient temperature: During operation: 0 to 45 °C During storage: -20 to 70 °C Ambient humidity: During operation and storage 5 to 90% r.h. (non-condensing) Dimensions of housing: XC5010C/XC6010: 144 x 192 x 188 mm (H x W x D) XCL5010: 150 x 198 x 97 mm (H x W x D) Mounting: Front door (not XCL5010) or panel mounting on DIN-rail Program back-up during power failure: 72 hours for RAM (XC5010C/XCL5010) 1 month for RAM (XC6010) Protection class: IP 30 Operator units: Operator unit XI581 on unit housing (not XCL5010) Operator unit XI582 desktop or wall mounting XL-Online EN0B-0091GE51 R0708 16 EXCEL 100/500/600 SYSTEM OVERVIEW EXCEL 100/500/600 SYSTEM module Computer module Power supply module Analog input module Analog output module Digital input module Digital output module Three pos. output. module Table 4. Excel 500/600 controllers and internal modules type hardware software XC5010C/XC52010C, 16 bit (internal + distributed) Freely programmable XCL5010 16 bit (distributed, only) LONWORKS network interface Freely programmable XC6010 32 bit No LONWORKS network interface XP502 polling every sec. XF521A / XF526 8 analog inputs (240 ms with XC6010 fast mode) XF522A / XF527 8 analog 0...10 V outputs polling every 2 sec.
polling every sec. XF523A 12 digital inputs (125 ms with XC6010) 5 changeover contacts XF524A / XF529 polling every 2 sec. 1 normally open contact XF525A 3 three-position outputs polling every 0.5 sec. module Analog input module Analog output module Digital input module Digital output module Table 5.
Excel 500 Distributed I/O modules type hardware XFL521B 8 analog inputs XFL522B 8 analog outputs XFL523B 12 digital inputs XFL524B 6 changeover contacts software polling every sec. updating every sec. polling every sec. updating every sec. type XFC2A05001 XFC2A06001 XFC3A04001 XFC3A05001 XFC3A06001 XFC2D05001 XFC2D06001 XFC3D04001 XFC3D05001 XFC3D06001 power 230 Vac 230 Vac 24 Vac 24 Vac 24 Vac 230 Vac 230 Vac 24 Vac 24 Vac 24 Vac Table 6.
Excel Smart I/O modules overrides universal inputs digital inputs no 2 4 no 4 4 no 4 4 no 2 4 no 4 4 yes 2 4 yes 4 4 yes 4 4 yes 2 4 yes 4 4 analog inputs 2 2 2 2 2 2 2 2 2 2 relays 4 4 4 4 4 4 4 4 4 4 4 17 EN0B-0091GE51 R0708 EXCEL 100/500/600 SYSTEM OVERVIEW REMOTE COMMUNICATION There are several possibilities for communication of alarms, trending information, and system data points to a remote building supervisor via modem.

Excel 100C / Excel 500 Excel 500 controllers with firmware version 2.1.x and higher and Excel 100C controllers can have a modem or ISDN terminal adapter connected directly to their serial port. This allows communication with an EBI/SymmetrE building supervisor at data transmission rates of up to 38.4 Kbaud. The Excel 100C or Excel 500 controller connected to the modem/ISDN terminal adapter may function as a normal building controller, but it has a buffer that can store up to 100 trend samples. EBI / SymmetrE modem / ISND adapter modem / ISND adapter Excel 500 C-BUS Excel 500 XCL5010 Excel 500 XC5010C Excel 100 Excel 600 Distributed I/O (mandatory) Distributed I/O (optional) 18 EN0B-0091GE51 R0708 EXCEL 100/500/600 SYSTEM OVERVIEW XI581 / XI582 OPERATOR UNIT Easy handling on site The XI581 (XC5010C/XC6010, only) or XI582 is the command and information center of the Excel 100/500/600. Data, such as setpoint values and time switching programs, can be entered via the operator unit. @@can also be displayed.

@@@@@@The entire operation uses plain language text stored in the controller, which can be freely accessed by the user. In addition, the display features a backlight. The device can be operated at three levels, thereby protecting the data from unauthorized access. Level 1: Read only without password Level 2: Read plus limited changes with a password Level 3: Read and make changes with a password Operator units can be positioned anywhere XI581 is mounted directly on the unit housing (XC5010C/XC6010, only). XI582 is the desktop model and is also suitable for wall mounting. Both devices are connected to the operating interface on the computer module. The wall and desktop units can be positioned up to 15 meters from the computer module. Buswide access Clear display Security due to password controlled operating levels XI581 Controller-mounted operator terminal XI582 Desktop operator terminal 19 EN0B-0091GE51 R0708 XI581 / XI582 OPERATOR UNIT EXCEL 100/500/600 EN0B-0091GE51 R0708 20 EXCEL 100/500/600 XL-ONLINE User friendly operation The XL-Online is the local intelligent operating and service device. It performs all the operating functions of the XI581/XI582 as well as having all the advantages of a PC. In addition to being able to make major modifications, such as changing setpoint values and time program switching points, the XL-Online also offers all the service and commissioning functions.

The Excel Online can be operated at five levels, 3 of which are protected against unauthorized access Level 1: Read only Level 2: Change data (e.g. time program) Level 3: Change data (e.g. data point description) Level 4: Change parameters Level 5: Definition of new operators A printer can be connected to the XL-Online's parallel interface to log alarms and messages.

Like the XI582, the XL-Online can also be placed up to 15 meters from the computer module. Password protected operating levels for: - User functions - Service functions - Programming functions Excel 500/600 with XL-Online operator and service computer and printer Excel 500XCL5010 with XL-Online operator and service computer and printer XI584con 21 EN0B-0091GE51 R0708 XL-ONLINE OPERATOR AND SERVICE COMPUTER EXCEL 100/500/600 EN0B-0091GE51 R0708 22 EXCEL 100/500/600 CARE ENGINEERING SYSTEM Hardware requirements The CARE engineering system is a software package that can be installed on a personal computer. The PC must satisfy the following requirements: - Pentium 90 MHz CPU (166 MHz recommended) - 1 free serial interface - VGA graphics card (800 x 600 points) - Color monitor - 32 MB RAM (64 MB recommended) - 1 floppy disk drive - 50 MB of available hard disk space (100 MB recommended) - Printer supported by MS WinWord® (HP LaserJet® recommended) - Microsoft® or compatible mouse Software requirements - Microsoft® WindowsTM 95/98, -NT 4.0 SR1 - For enhanced printing: MS WinWord® V7.0 or higher Personal computer with CARE system disk Program generation without programming knowledge The CARE engineering system is a software package that enables an application program to be generated, which may be loaded and executed without any prior programming knowledge.

Heating, ventilating and air conditioning systems are designed from pre-prepared individual diagrams using a menu driven system. The system is designed on the screen, and the control strategies and switching tables can be defined using graphical symbols. In addition to the CARE engineering system's main function of designing the system diagram with the appropriate control strategies and automatic generation of the application program, it can also generate time programs and system texts. Control strategy using CARE 23 EN0B-0091GE51 R0708 CARE ENGINEERING SYSTEM Automatic documentation EXCEL 100/500/600 The user is then presented the final result by the CARE system. These results may be printed to a Winword document - List of required CPU hardware - Wiring diagram - Data point description - Text lists - Parameter list for each control circuit - System diagrams - Control strategies - Switching tables - Time programs System design using CARE Modular application library In addition to generating fully customized control strategies, the user may select predefined control solutions from a large set of applications. These intelligent Excel function modules (XFMs) provide configurable, easy-to-use control solutions for all kinds of HVAC applications. EN0B-0091GE51 R0708 24 LIVE CARE MONITORING AND SIMULATION TOOL EXCEL 100/500/600 LIVE CARE MONITORING AND SIMULATION TOOL Watch applications at work Live CARE is an integral part of the CARE engineering system that allows online access to controllers. When working with Live CARE, the application is presented to the user in the same way as in the CARE engineering tool. This provides a convenient way to access and modify control parameters and data point values, thus allowing easy plant start-up and fine-tuning. In addition to online access to controllers, the Live CARE simulator allows you to check and tune controller applications by simulating the behavior of the controller.

This includes real-time, single-step or accelerated real-time simulation of: · · · · Time programs Control strategies Switching tables Data points Static simulator 25 EN0B-0091GE51 R0708 EXCEL 100/500/600 Manufactured for and on behalf of the Environmental and Combustion Controls Division of Honeywell Technologies Sàrl, Ecublens, Route du Bois 37, Switzerland by its Authorized Representative: Automation and Control Solutions Honeywell GmbH Böblinger Strasse 17 71101 Schönaich / Germany Phone: (49) 7031 63701 Fax: (49) 7031 637493 http://ecc.emea.honeywell.com Subject to change without notice. Printed in Germany EN0B-0091GE51 R0708 .