Excel 100C
CONTROLLER

EXCEL *5000* **OPEN** ™
S Y S T E M

FEATURES

- **Stand-alone or integrated networked operation via C-Bus**
- **Integrated communication interfaces:**
  Remote via Modem / ISDN / GSM
- **Freely programmable applications**
- **36 inputs / outputs:**
  12 universal inputs
  12 universal outputs
  12 digital inputs
- **Multiple operator interface options**
- **Program for wiring test included**
- **LED indicators**
- **RAM back-up via gold capacitor (no battery needed)**
- **Flash EPROM for application and firmware download**

GENERAL

The Excel 100C Controller is a direct-digital control, microprocessor-based, programmable controller for managing building functions.

The Excel 100C monitors and commands HVAC equipment controls for buildings (industrial, retail, hotel, school, health care buildings, etc.). It can operate as a stand-alone unit or as an integral part of a higher-order system.

The Excel 100C easily accommodates expansion via a sophisticated peer-to-peer Communication Bus (C-Bus). Up to 30 devices - such as Excel Building Supervisors (XBS), other controllers, interfaces to 3rd part systems etc. - can be connected to the C-Bus. Long-distance communication to a remote XBS is supported via modem, ISDN, or GSM.

The Excel 100C is easily handled using the XI582AH Operator Terminal (supports bus-wide access) or the PC-based XI584 tool for easy start-up of the controller (e.g. downloading applications, implementing on-site adjustments, etc.). A PC-based Excel Building Supervisor workstation provides a graphic operator interface for managing a network of controllers.

Control applications are generated using CARE, a PC-based graphic tool which simplifies the engineering process. Once the control applications have been engineered, they can be simulated and adjusted in CARE, which also assists in the startup and troubleshooting of the application programs.

DESCRIPTION

Excel 100C supports twelve universal inputs, twelve universal outputs, and twelve digital inputs. This enables the Excel 100C to handle a wide variety of small to medium-sized applications.
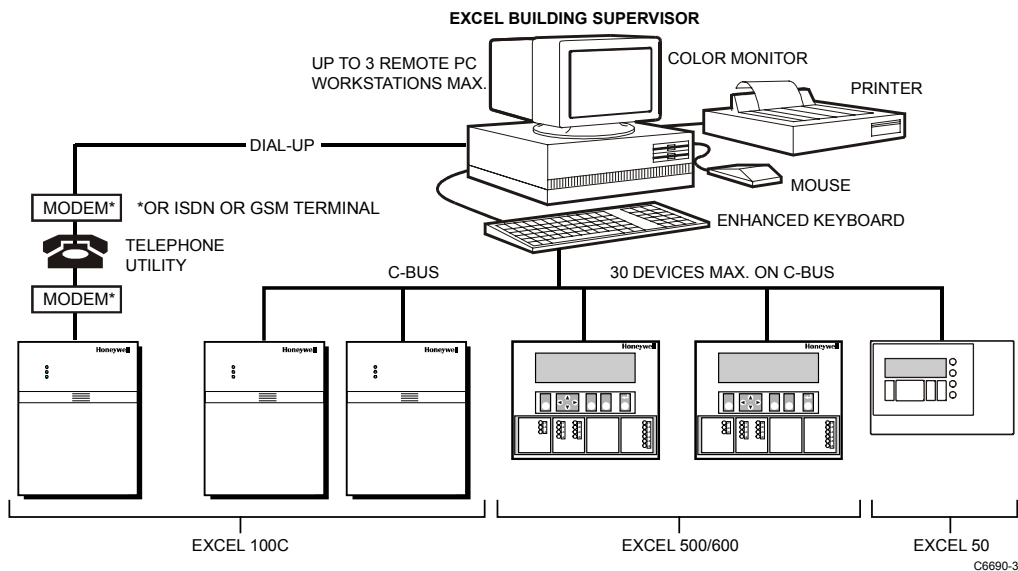
The capabilities of the Excel 100C can be enhanced with additional controllers connected to the same C-Bus.

The controllers on the C-Bus are able to exchange and share data.

Remote service and maintenance is supported via an integrated interface for modem, ISDN, and GSM communication.

Download of firmware and applications into the flash memory of the Excel 100C is possible from the XI584 engineering tool as well as from the building manager XBS. This functionality is used to upgrade the firmware or the applications.

The memory and the real-time clock are backed up by a gold capacitor. This prevents problems related to the disposal of dead batteries, environmental problems, etc.

C E

EXCEL BUILDING SUPERVISOR

UP TO 3 REMOTE PC WORKSTATIONS MAX.

COLOR MONITOR

PRINTER

DIAL-UP

MOUSE

MODEM*   *OR ISDN OR GSM TERMINAL

ENHANCED KEYBOARD

TELEPHONE UTILITY

C-BUS   30 DEVICES MAX. ON C-BUS

MODEM*

EXCEL 100C

EXCEL 500/600

EXCEL 50

C6690-3

SPECIFICATIONS

Housing Material:
Plastic

Dimensions: (H x W x D)
9-1/4 x 7-1/2 x 2-7/8 in.
(235 x 192 x 72 mm)

Weight:
2.6 lbs, 1.2 kg per controller.

Mounting Options:
Cabinet mounted on DIN-rail, or wall.

I/O Terminal Options:
Wiring sub-base with screw terminals.

Protection Class:
IP30 (with cover mounted).

Environmental Limits:
Temperature:
  Operating: 0 $^\circ$C to 50 $^\circ$C (vertically mounted)
  Storage: -20 $^\circ$C to 60 $^\circ$C
Humidity (operating or storage):
        5 to 90% rh non-condensing

Supply voltage:
24 Vac $\pm$ 20%, 50 to 60 Hz
24 Vdc +20%, -10%
Wiring sub-base with screw terminals.

Power Consumption:
Max. 25 VA

Memory / real time clock back up:
72 hours via gold capacitor.

Approvals:
  UL864 (XL100CUUKL)
  UL916 (XL100CU)

I/O Point Characteristics:

Type	Characteristics	
12 universal inputs	Sensor:	NTC 20 kΩ at 25 °C PT1000 Ω at 0 °C –58...302 °F (-50...+150 °C)
	Voltage:	0 to 10 V (software controlled switches for low / high impedance)
	Current:	0 (4) to 20 mA (by using external 500 Ω resistor)
	Resolution: 12 Bit	
12 digital inputs	For dry contacts or input signals up to 24 Vac / Vdc. By using as totalizer or counter inputs digital inputs 1 and 2 (pin 13, 14) max. frequency: 15 Hz min. pulse duration: 20 ms min. pulse break: 33 ms max. chatter time: 5 ms digital inputs 3 to 12 (pin 15-18; 49-54) max. frequency: 0.4 Hz min. pulse duration: 1.25 s min. pulse break: 1.25 s max. chatter time: 50 ms	
12 universal outputs	universal outputs (Analog or Digital): 0...10 Vdc, 20 mA max. (max. load 500 Ω)	

All inputs and outputs protected against over-voltage up to 24 Vac.

Digital Output (Relays):

MCE 3: Two spdt (changeover contact) relays (K1, K2), one spst (n.o. contact) relay (K3). K1, K2, and K3 rated max. 240 V, 2 A.

MCD 3: Two (n.o. contact) relays (K1, K2) for floating control and one spdt (changeover contact) relay (K3). K1 and K2 rated 240 V, 0.2 A and K3 rated max. 240 V, 2 A.

Optional Alarm Relay: Audible signal transmitter for controllers watchdog timer. Optional silence switch with controller return-to-normal audible alarm available.

Logic Levels:
Logic 1 from 5 V or higher with a hysteresis of 2.5 V, digital signal must fall below 2.5 V for Logic 0.

Man-Machine-Interface XI582AH (Optional)
Buswide MMI functionality.

Keypad:
8 function keys.

Display:
Backlit LCD, 6 lines, 34 characters per line, adjustable contrast.
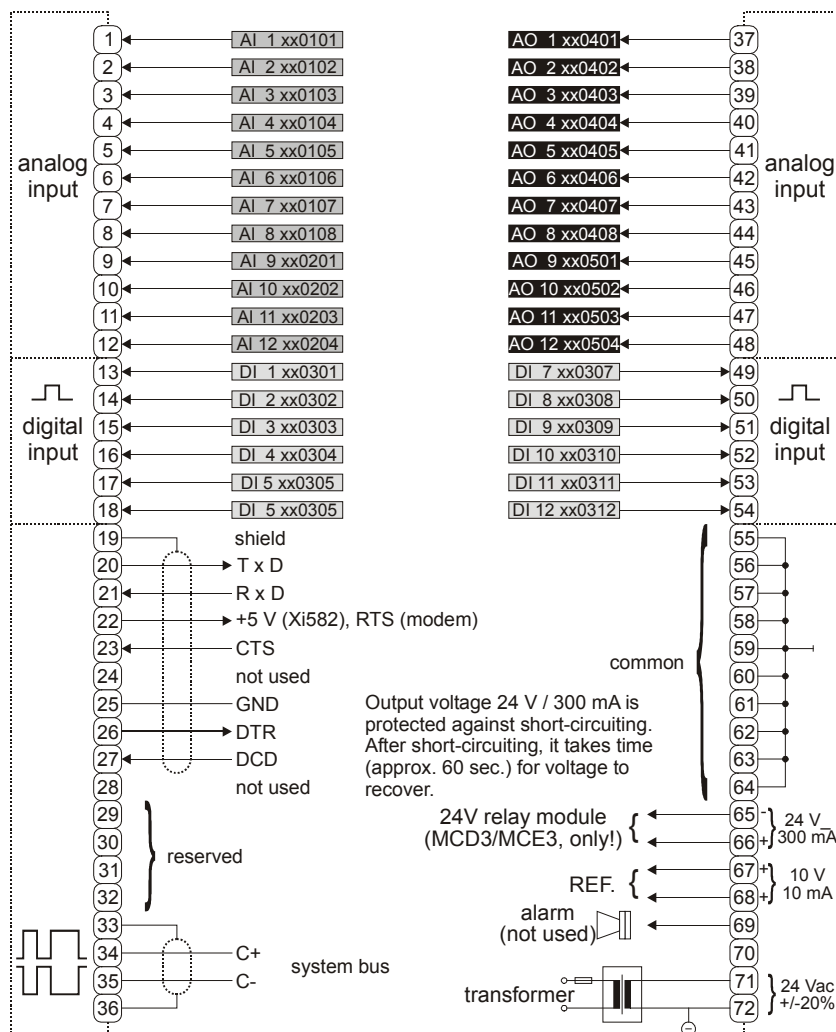
Bus and Port Connections
C-Bus:
Up to 76.8 Kbps, switch provided for selectable termination.
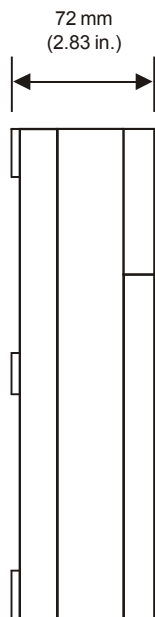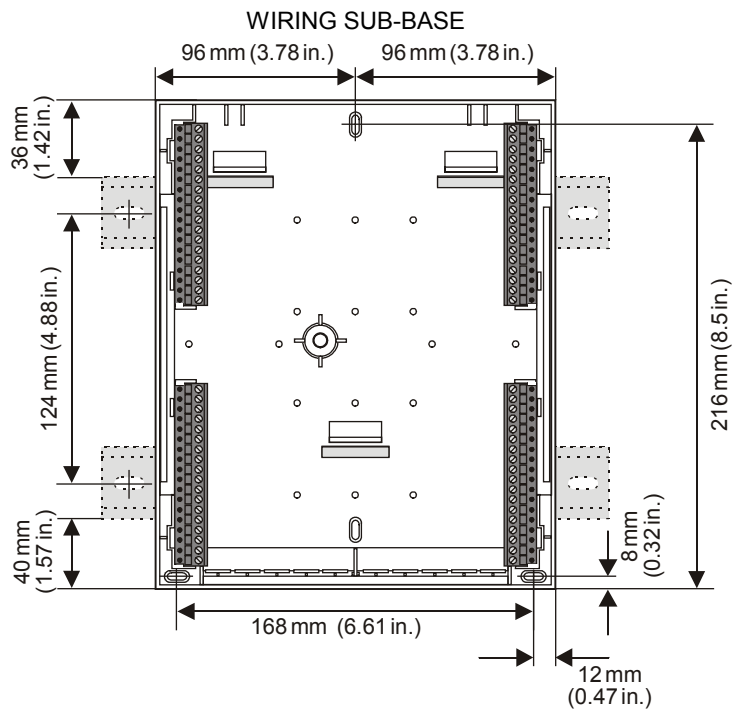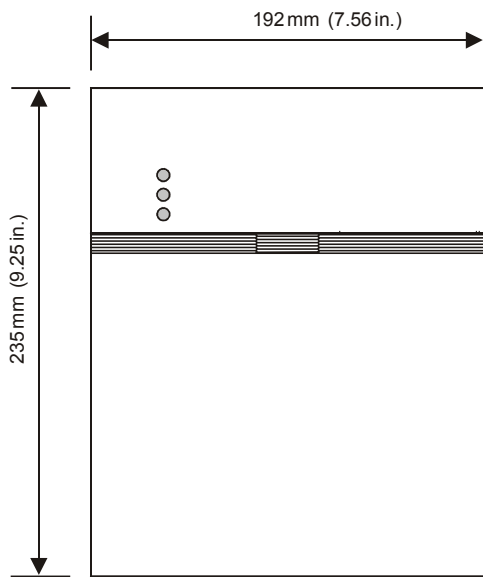
Controller Serial Port:
9-pin Sub-D connector, RS 232 for external MMI XI582 and XI584 PC MMI, or modem/ISDN terminal adapter/GSM connection.
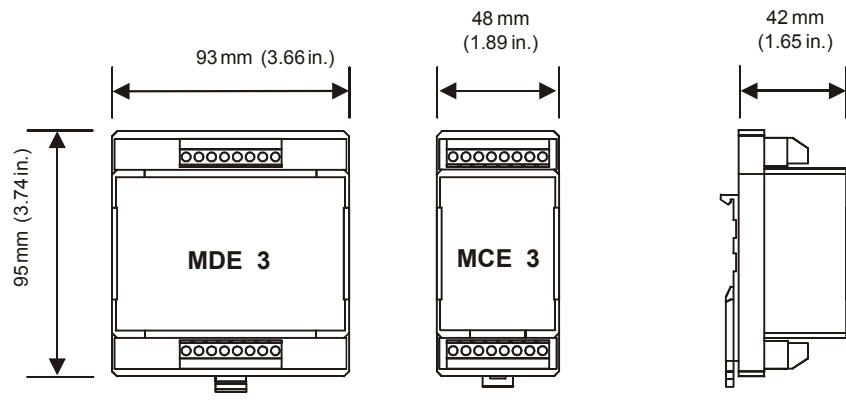
Assignment Overview for Excel 100C

NOTE: Terminals 65 and 66 provide a pulsed 24 Vdc output, and can only be used to connect relay modules MCD3/MCE3. Do not connect relays to these terminals!

DIMENSIONS

192 mm (7.56 in.)

235 mm (9.25 in.)

72 mm (2.83 in.)

WIRING SUB-BASE

96 mm (3.78 in.)   96 mm (3.78 in.)

36 mm (1.42 in.)

124 mm (4.88 in.)

40 mm (1.57 in.)

216 mm (8.5 in.)

8 mm (0.32 in.)

168 mm (6.61 in.)

12 mm (0.47 in.)

MCD 3 - MCE 3

93 mm (3.66 in.)

48 mm (1.89 in.)

42 mm (1.65 in.)

95 mm (3.74 in.)

MDE 3

MCE 3

Dimens_1

Honeywell

printed in Germany   Subject to change without notice