JOHNSON CONTROLS

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Code No. LIT-1900072

DX-9200

LONWORKS® Compatible Digital Controller

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Description

The LONWORKS® Compatible DX-9200 Digital Controller is the ideal digital control solution for Air Handling Unit (AHU) applications or distributed lighting and related general purpose electrical equipment control applications. Several models are available, each supporting either room control or discharge air applications. As a standalone unit, or when integrated into a LONWORKS network, the controller has both the hardware and software flexibility to adapt to a variety of control requirements. The controller can extend its input and output point capability by communicating with Input/Output (I/O) modules on an extension bus, and provides monitoring and control of all connected points at its built-in Light-Emitting Diode (LED) display.

XT/XTM Extension Modules and XPx Expansion Modules

The DX-9200 controller supports a line of extension and expansion modules for a wider and more flexible range of I/O options, as well as a manual override option on outputs. An extension module (XT-9100 or XTM-905) used with expansion modules (XP/XPx) provides various combinations of analog and digital (binary) I/O points. A system can have up to eight extension modules connected to the controller via the XT (RS485) extension bus.

The extension and expansion modules may be mounted next to the controller on the same DIN rail, or remotely at a distance of up to 1200 meters (3900 feet) from the controller.

See the XTM-105/XTM-905/XPx Extension and Expansion Modules catalog page for more information.

Features

- LONWORKS compatible network variable interface using FTT10 transceiver
- integration into Metasys® Network via network control module (NCM350)
- GX-9100 Software Configuration Tool
- realtime clock and time programs
- extension bus for additional I/O points
- built-in local LED display and control panel
- optional manual override switches
- optional text and graphic display unit (DT-9100)

To Order

Specify the code number from the following selection chart.

XT Bus Configuration

XT/XTM Modules	Quantity
Maximum Number of XT/XTMs per DX	8
Maximum Number of I/Os for each XT/XTM	8 analog + 8 digital (binary), or 16 digital (binary)
Maximum Number of I/Os from XT/XTMs per DX	64

Options

Application Modules	Configuration Options
Analog Inputs	Sensor/Transmitter ranging High/Low limits Filter constants Square root
Control Blocks	PID Loops Remote reset logic Operation modes Control limits and alarms Sequencer and step control logic
Digital Inputs	Source points for logic functions Pulse counters
Calculation Blocks	Averaging Minimum or maximum select Enthalpy, wet bulb, and dew point Input selector Arithmetic calculator Compare logic Line segment function Timer functions Runtime counter Totalizer and integrator
Logic Blocks	AND, OR, NOT State change detect Set and reset of parameters
Analog Outputs	High/Low ranging
Digital Outputs (DX Controller)	Incremental with or without feedback Duration adjust type On/Off logic, including pulse and start/stop
Digital Outputs (XT/XTM Modules)	On/Off logic, including pulse and start/stop
Time Schedule Blocks	Yearly holiday calendar Start/stop times for days of week and holidays Optimal start/stop modules (2 modules available)

Point Configuration

Point Type	Quantity			Characteristics
	DX-9200	XT-9100 w/XPx	XTM-905 w/XPx (a)	
Analog Inputs	8	6	6	0-10 VDC (impedance 300K ohm) 0/4-20 mA DC (impedance 100 ohm) RTD Ni1000 (JCI), A99 (JCI), and Pt1000 (DIN)
Digital (Binary) Inputs	8	4/8/16	4/8/16	Dry Contacts (potential free)
Digital (Binary) Outputs	6	4/8/16	3 to 4/8/16	24 VAC Triacs (minimum 0.05 amperes [A], maximum 0.5A) XT/XTM only: Relay Contact (maximum 250 VAC 3A) XTM only: relays with magnetically latched or electrically held operation
Analog Outputs	4	2	2	0-10 VDC (10 mA maximum) or 0/4-20 mA DC
	4	0	0	0-10 VDC (10 mA maximum) only

(a) The specifications of this table only pertain to modules available in North America.

DX-9200 LonWorks® Compatible Digital Controller (Continued)

Selection Chart

Code Number	Description
DX-9200-8454-xx	LONWORKS Compatible Digital Controller DX-9200 (FTT10) xx = model Code A = General Purpose Room Control Applications – SI (metric) units AA = General Purpose Room Control Applications – IP (North American) units D = AHU or Discharge Air Control Applications – SI (metric) units DA = AHU or Discharge Air Control Applications – IP (North American) units
DX-9200-7454-xx	LONWORKS Compatible Digital Controller DX-9200 (FTT10) Repair Module
DX-9200-8997	Panel Mounting Base for DX-9200 Controller
DX-9200-8996	Cabinet Door Mounting Frame for DX-9200 Controller
DT-9100-8104	Display Unit with Panel Mounting Kit
DT-9100-8902	Optional Wall Mounting Kit for DT-9100 Display Unit
NU-NET203-0	LONWORKS Network Card for NCM350/NCM361
NU-EOL202-0	End-of-Line Termination Module – FTT10 Network (bus topology) – two required
NU-EOL203-0	Termination Module – FTT10 Network (free topology) – one required
DC-9100-6800	Replacement Lithium Battery
MW-MTOOL-0	Includes GX-9100 Graphic Software Configuration Tool, English Language

Accessories

Code Number	Description
XT/XP Extension/Expansion Modules	
XT-9100-8304	Extension Module
XP-9102-8304	Expansion Module: 6 Analog Inputs, 2 Analog Outputs
XP-9103-8304	Expansion Module: 8 Digital Outputs – Triacs
XP-9104-8304	Expansion Module: 4 Digital Inputs, 4 Digital Outputs – Triacs
XP-9105-8304	Expansion Module: 8 Digital Inputs
XP-9107-8304	Expansion Module: 4 Digital Outputs – relay
XTM/XPx Extension/Expansion Modules	
XTM-905-5	Extension Module Communications interface and 24 VAC supply
XPA-821-5	Expansion Module – Analog; 6 analog inputs, 2 analog outputs without manual override
XPB-821-5	Expansion Module: 8 binary inputs
XPL-401-5	Expansion Module: 4 binary inputs, 3 binary outputs (latching relays with manual override)
XPE-401-5	Expansion Module: 4 binary inputs, 3 binary outputs (electrically maintained relays with manual override)
XPE-404-5	Expansion Module: 4 binary inputs, 4 binary outputs (electrically maintained relays with manual override; On/Off or Pulse type)
XPT-401-5	Expansion Module: 4 binary inputs, 4 binary outputs (24 VAC triacs with manual override)
XPT-861-5	Expansion Module: 8 binary outputs (24 VAC triacs without manual override)
XST-101-0	Blank Stickers for Module Front Panels: Pack of 50 sheets, DIN A4, 12 stickers per sheet, laser printable

Specifications

DX-9200 LonWorks® Compatible Digital Controller		
LONWORKS Communication		FTT10 transceiver
Power Requirements		24 VAC ± 15 %, 10 VA (@ 24 VAC), 50-60 Hz
Ambient Operating Conditions		0 to 40°C (32 to 100°F) 10 to 90% RH non-condensing
Ambient Storage Conditions		-20 to 70°C (0 to 160°F) 5 to 95% RH non-condensing
Dimensions (H x W x D)	**Controller with Cabinet Door Mounting Frame**	164 x 200 x 114 mm (6.5 x 7.9 x 4.5 in.)
	Controller with Panel Mounting Base	200 x 184 x 100 mm (7.9 x 7.3 x 3.9 in.) Allow minimum of 160 mm (6.3 in.) depth for hinged door clearance.
Shipping Weight		Controller: 1.8 kg (4 lb 0 oz) Panel Mounting Base: 0.8 kg (1 lb 12 oz) Cabinet Door Mounting Frame: 0.8 kg (1 lb 12 oz)
Agency Listings		CE Directive 89/336/EEC EN50081-1, EN50082-1 FCC Compliant (UL and CSA Listings Pending)