

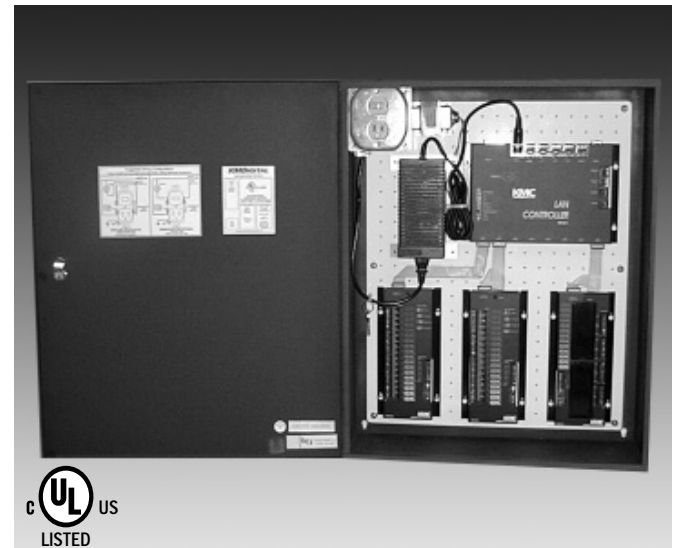
Description

The KMD-5230/5240 Series LAN Controller Panel consists of a KMD-5210 LAN Controller and up to four KMD-5220 Input and/or KMD-5221 enclosed in a UL and CUL Listed Enclosed Energy Management Equipment Panel. Each panel provides a power disconnect switch, receptacle, and a KMD-5210 with power supply. Panels with KMD-5221 Output Modules will also include a required power transformer.

The KMD-5210 LAN Controller is an intelligent, modular, programmable direct digital controller and a high level LAN communications manager for Facilities Management Systems in any size building or distributed facility. The operating software utilizes a high level, nonproprietary programming language that ensures reliability, operator independence, and compatibility with future system enhancements and reduced maintenance costs. The KMD-5210 LAN Controller will operate stand alone, or in a fully networked KMC Digital System to precisely monitor and control peripheral equipment in the HVAC or related industry.

The LAN Controller provides three dedicated RS-485 terminal ports. One port (MAIN) is provided for connection to the main KMC Digital Network that supports up to 31 KMD-5200 additional series LAN Controllers in a full peer-to-peer network. Two ports (LAN A and LAN B) provide full peer-to-peer communications on two subnetwork with up to 124 KMD-5800 and KMD-7000 series Programmable Loop Controllers each. An Ethernet port is provided for commercial WAN/LAN communications in lieu of the EIA-485 Network. LED's are provided to indicate communications' and operating status. Additional dedicated ports are provided for up to two operator computer interfaces along with an RS-232 modem port. Up to 64 input/outputs may be controlled directly with the KMD-5210 LAN Controller using a mix of up to four KMD-5220 input or KMD-5221 output modules.

The KMD-5220 is a general-purpose 16-channel input module that can accept digital, analog or pulse signals. Each input uses 16-bit analog to digital conversions.



The KMD-5221 is a 16-channel output module and each can control either digital or analog outputs. The KMD-5221 will accept optional output boards for Hand-Off-Auto operation of relay, triac or analog outputs. Each output uses 12-bit digital to analog conversion.

Features

The KMD-5230/5240 Series LAN Controller Panels (depending on configuration) feature:

- ◆ Stand-alone or networked peer-to-peer capability,
- ◆ 2-Way modem communications, dial-in, N Page or T Page capability,
- ◆ Up to 64 Universal Inputs - software selectable as analog or digital with standard and custom ranges,
- ◆ Up to 64 Universal Outputs - software selectable as analog or digital with standard and custom ranges. Optional output cards for "Hand-Off-Auto" w/feedback for triac, relay or analog output with override,
- ◆ 256 Variable points - software selectable as analog or digital with standard and custom ranges; may have manually set or programmed driven values,
- ◆ 512 Networked points in / 64 networked points out,

- ◆ Alarm buffering up to 256 alarms, 50 alarm for distribution,
- ◆ 128 Standard P, PI, or PID Control Loops,
- ◆ 128 User Definable Control Basic Programs,
- ◆ 96 Trend Logs for Data Logging, Each capable of 6 analog, digital or virtual elements or points. WinControl can graphically display logs,
- ◆ 128 Runtime Logs with time/date stamp and cumulative runtime,
- ◆ 64 Control System Groups for organizing controller selected points or elements into a real-time display or color graphic,
- ◆ 64 Weekly Time Schedules with Overrides,
- ◆ 16 Annual Routines for Holiday Schedules,
- ◆ 5 Sensor Conversion Tables for creating linear curves,
- ◆ 6 Access Levels with 256 individual user passwords,
- ◆ On-board 68 character full English alarm messages,
- ◆ On-board 68 character full English maintenance Messages,
- ◆ Power-fail with auto-restart capabilities,
- ◆ Program and program parameters are stored in nonvolatile flash memory.

Accessories

HCO-1035	20" x 24" x 6" Enclosure
HCO-1036	24" x 36" x 6" Enclosure
KMD-5563	Power Supply
KMD-5210	LAN Controller
KMD-5220	Input Module
KMD-5221	Output Module
KMD-5660	6" Ribbon Cable
KMD-5661	13" Ribbon Cable
KMD-5663	24" Ribbon Cable
XEE-6112-100	100 VA transformer

Options

HPO-6701	Hand-Off-Auto with triac output, feedback, & LED indication
HPO-6702/04	Hand-Off-Auto w/ analog output & override, feedback, & LED indication
HPO-6703-05	Hand-Off-Auto with Form A contact output, feedback & LED indication
HPO-6802	Relay card cover - required with any of the above relays

Models

Currently available models include:

Model	In	Out	Amp	Size
KMD-5230	-	-	1.5A	20" x 24" x 6"
KMD-5231	16	-	1.5A	20" x 24" x 6"
KMD-5232	32	-	1.5A	20" x 24" x 6"
KMD-5233	48	-	1.5A	20" x 24" x 6"
KMD-5234	64	-	1.5A	24" x 36" x 6"
KMD-5235	16	32	5.7A	20" x 24" x 6"
KMD-5236	32	16	5.7A	20" x 24" x 6"
KMD-5237	48	16	5.7A	24" x 36" x 6"
KMD-5238	16	48	5.7A	24" x 36" x 6"
KMD-5239	32	32	5.7A	24" x 36" x 6"
KMD-5240	16	16	5.7A	20" x 24" x 6"

Specifications

OVERALL SPECIFICATIONS

Supply Voltage	120 VAC, 50/60 Hz (w/ KMD-5563)
Supply Current	See MODELS
Ambient Limits	
Operating	0°–120°F (–18°–49°)
Shipping	–40°–140°F (–40°–60°C)
Humidity	0–95%, R.H., non-condensing
Panel Size	See MODELS
Panel Material	16-gauge steel, NEMA 1
Panel Color	Gloss dark blue
Approvals	UL & CUL 916 Enclosed Energy Management Equip- ment. UL & CUL 2017 Signal System Equipment.

OUTPUT MODULE SPECIFICATIONS

Outputs	Software selectable; analog or digital
Analog	0–10 VDC
Digital	0/12 VDC on-off
Protection	24 VAC Overvoltage & shorts
Status LED	Flashes when module is ac- cessed
Connectors	(4) 8-pole removable terminal strips for outputs (1) 6-pole removable terminal strip for 24 VAC power
Wire Size	12–22 AWG

LAN CONTROLLER SPECIFICATIONS

Communications	
Proprietary WAN	RS-485 @ 115,000 baud (Main- network) maximum with Belden 82760, or equivalent.
Subnetwork (x2)	RS-485 @ 38,400 baud (LAN A & LAN B) maximum with Belden 82760, or equivalent.

Modem	RS-232
Computer	
A	RS-232
B	RS-232
Ethernet	10 base T
Diagnostic LED's	Main Network LAN A LAN B Ethernet Tx Ethernet Rx Ethernet Collision Power

Conversion

	A/D operating @ 16 bit analog-digital
	D/A operating @ 12 bit digital-analog
Processor	32-bit
Memory Backup	Flashed every 6 hours to maintain historical integrity
Real Time Clock	Backup 96 hours no- maintenance capacitor

INPUT MODULE SPECIFICATIONS

Inputs	Software selectable; analog or digital
Analog	0–5 VDC & 4–20 mA
Digital	12 VDC on-off & pulse signals
Input Impedance	1K or 10K Ω with jumper 100K Ω without jumper 250 Ω ohm for 4-20 mA
Protection	24 VAC, continuous
Status LED	Flashes when module ac- cessed
Connectors	(4) 8-pole removable ter- minal strip for inputs (1) 8-pole removable ter- minal strip for 4-20 mA use
Wire Size	12-22 AWG

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