

Description and Applications

The KMD-5575 Network Repeater-Isolator extends and reconditions EIA-485 network communications as well as enabling “T” or branch networks.

The KMD-5575 is designed to recondition a degraded EIA-485 (formerly RS-485) communication signal on a KMC KMDigital or BACnet subnetwork. Two primary factors that cause communication signal degradation within the digital subnetwork are long subnetwork wiring lengths and the number of digital controllers connected to the subnetwork.

A KMD-5575 is required after every 31 consecutive controllers on KMDigital or BACnet subnetworks (e.g., between controllers 31 and 32) or if the cumulative wiring distance exceeds 4,000 feet. (For smoke control applications, the maximum total length of the EIA-485 network cable, including all repeaters, is 4,000 feet.)

In addition, the KMD-5575 is required for “T” or branch network wiring configurations (see sample configuration on the next page).

Features

- ◆ Optical isolation between subnetwork segments helps prevent ground loops or current between segments as well as creating a 1,500 volt barrier to protect other connected segments from subnetwork overvoltage
- ◆ Double electrical isolation prevents overvoltage or mis-phasing of the power connection from affecting the subnetwork
- ◆ Surge protection protects the subnetwork from voltage spikes and accidental miswiring
- ◆ Crash avoidance helps prevent the token from crashing during network problems
- ◆ Removable terminal blocks simplify disconnecting network segments for troubleshooting
- ◆ Generally, up to four repeaters can be used on an EIA-485 network
- ◆ End-of-line jumpers, required on separate segments (as in the branch or “T” configuration below), are available on each subnetwork port



Specifications

Supply Voltage

24 volts AC (–15%, +20%),
60 Hz, 3 VA, Class 2 only

NOTE: All circuits, including supply voltage, are power limited. AC power is non-supervised in smoke control applications.

Baud Rate

9,600 to 38,400

Connections

Removable screw terminal blocks, wire size 14–22 AWG

Network Wiring

Belden 82760 or equivalent, shielded, twisted, 18 AWG, 5.5 ohms per 1,000 feet and ≤ 51 pF/foot (network connections are supervised in smoke control applications)

Material

Black ABS

Size

5.31 × 3.38 inches
(134.9 × 85.8 mm)

Weight

2.5 oz. (71 grams)

Regulatory

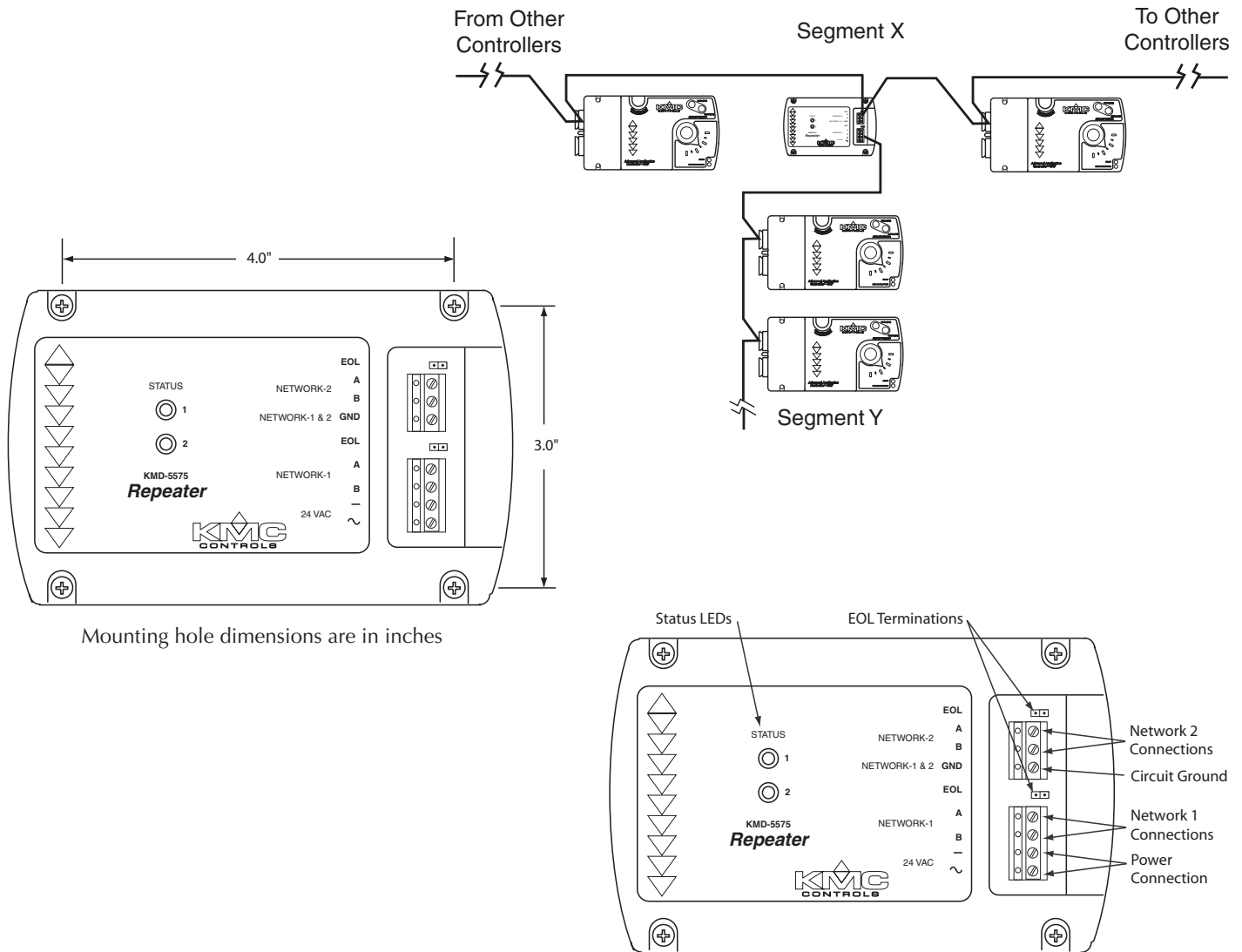
UL 916 Energy Management Equipment listed; UL 864 Smoke Control Equipment listed (UUKL)—see Smoke Control Manuals 000-035-08 (BACnet) and/or 000-035-09 (KMDigital) for smoke control application information

Ambient Limits

Operating
Shipping
Humidity

32 to 120° F (0 to 49° C)
–40 to 140° F (–40 to 60° C)
0 to 95% RH, non-condensing

Dimensions and Diagrams



Accessories

Connectors and Fuses

902-602-04	Replacement three-pin removable terminal block
031-602-02	Replacement four-pin removable terminal block
HPO-0063	Replacement two-pin jumper

Enclosures

HCO-1102	Steel control enclosure, 10.1 x 2.4 x 7.1 inches (257 x 62 x 181 mm)
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NOTE: For smoke control applications, this device must be mounted in a UL Listed FSCS enclosure or listed enclosure with minimum dimensions. See Smoke Control Manuals 000-035-08 (BACnet) and/or 000-035-09 (KMDigital) for smoke control application information.

Power Transformers

XEE-6111-40	Transformer, 120-to-24 VAC, 40 VA, single-hub
XEE-6112-40	Transformer, 120-to-24 VAC, 40 VA, dual-hub
XEE-6112-100	Transformer, 120-to-24 VAC, 96 VA, dual-hub (required in smoke control applications)

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