Engineering Data

ED 15049-4

Group: **Controls**

Date: **January 2005**

Supersedes: **Nov. 1999**

# MicroTech®
# BACdrop™ Gateway

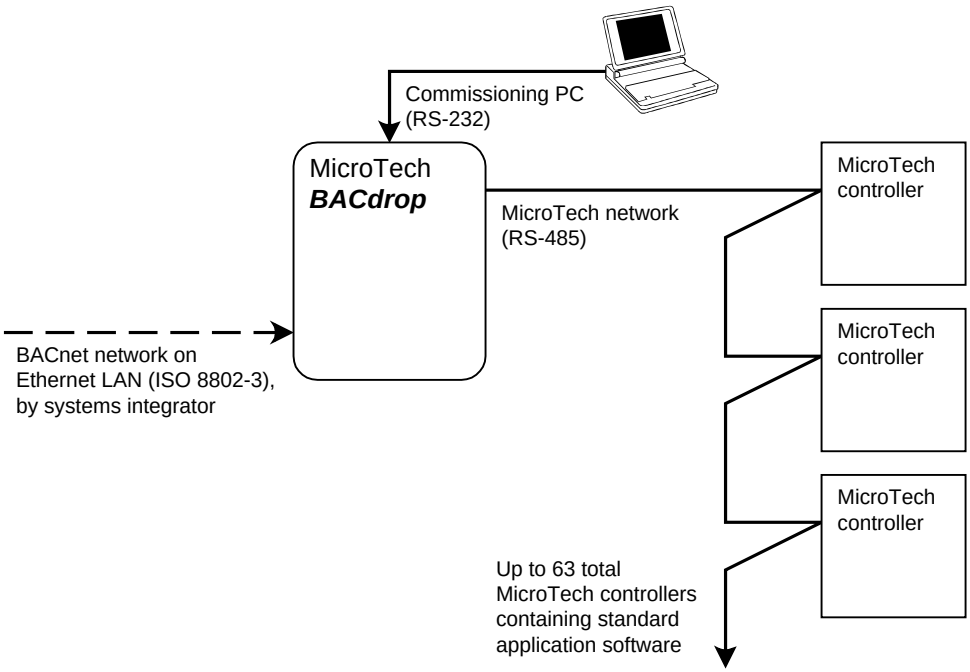
**Submittal Sheet**

## Application

The BACdrop gateway translates MicroTech protocol into BACnet protocol and functions similar to a router in that the BACdrop panel passes messages upon request at the same speed as the MicroTech unit controller, 9600 bps. The BACdrop panel does not buffer (store) this data. Since the data is not being stored, the BACdrop panel may only pass data as quickly as it is receiving data. Though the BACdrop panel may be passing the MicroTech data to a high-speed Ethernet LAN (10 Mbps), the data coming into and out of the BACdrop panel is at 9600 bps. If the building automation system, (BAS), is not buffering data and instead is pulling data real-time, it may take several seconds or even minutes to provide data coming from the MicroTech controller(s) through the BACdrop gateway to a graphic, trend log or other BAS application. If a buffering function is required, the systems integrator must provide it. See ED 15052 for additional information regarding turnaround time for MicroTech data through a BACdrop gateway.

### MicroTech BACdrop Commissioning Software

The BACdrop commissioning software allows a technician to commission or troubleshoot the MicroTech network and verify the BACnet interface. Windows® 95/98 is required.


Commissioning PC
(RS-232)
MicroTech
BACdrop
MicroTech network
(RS-485)
MicroTech
controller
MicroTech
controller
MicroTech
controller
BACnet network on
Ethernet LAN (ISO 8802-3),
by systems integrator
Up to 63 total
MicroTech controllers
containing standard
application software

### Supported MicroTech Standard Control Applications

- Unit ventilator
- Applied rooftop systems
- Self-contained air conditioning systems
- Series-100 centrifugal chiller (old-style MicroTech controls)
- Series-200 centrifugal chiller
- Reciprocating chiller (only U.S. manufactured at present)
- Air-cooled screw chiller (types ALS)
- Water cooled screw chiller (types WHS, PFS-B, PFS-C)
- Large-tonnage water cooled screw chiller with J&E Hall compressor (type PES)
- Air cooled scroll chiller (type AGZ)
- MicroTech Chiller System Controller (CSC)
- MicroTech Remote Monitoring and Control Panel (RMC)
- MicroTech Remote Monitoring and Sequencing Panel (RMS)

# Features of BACdrop

## Microprocessor

The BACdrop gateway contains a 386SX/33 MHz microprocessor. BACdrop holds and executes a program, which is loaded into its memory at the factory. The program retrieves MicroTech network data packets from the MicroTech controllers and translates the data to BACnet network data packets. A BACnet building automation system can access and use this data. Also, the BACdrop program accepts BACnet network data packets, translates the data to MicroTech network data packets, and sends them to the appropriate MicroTech controllers.

## Three Communications Ports

| Communications Port | Use |
|---|---|
| ISO 8802-3 (Ethernet) | BACnet network interface (commissioning PC with Ethernet card can also be connected) |
| RS-232 | PC interface for BACdrop commissioning software |
| RS-485 | MicroTech network interface |

## Specifications

| Parameter | Value |
|---|---|
| Enclosure Dimensions: | 9.5” wide x 11.5” high x 4.25” deep (241 mm x 292 mm x 108 mm) |
| Net Weight: | 10 lb. (4.5 kg) |
| Electrical Requirements: | 100 to 240 Vac at 50–60 Hz |
| Environmental | |
| Temperature: | |
| Operating | 32°F – 140°F (0°C – 60°C) |
| Non-operating | 0°F – 158°F (–18°C – 70°C) |
| Humidity: | 20% – 90% noncondensing |
| Communication Cable | |
| MicroTech: | Shielded, twisted pair cable, 300V, 60°C, 20 AWG stranded, polyethylene insulated, with PVC outer jacket and drain wire (Belden 8762 or equivalent) |
| BACnet: | As specified by ISO 8802-3: typically 24 AWG UTP (unshielded twisted pair), 4 twisted pair, Category 5 PVC or plenum jacket—as used in 10Base-T star topology Ethernet networks |