

### MICRONET MANAGER INTERFACE/ARCNET® ROUTER

#### Order Type:

MN50-MI-ARC - MicroNet ARCNET Interface

MN50-MI-NCP MicroNet NCP Interface

MN50-MI-RTR ARCNET Router

The MicroNet Manager Interface (also referred to generally as the MN MI) provides the network-level management functions for a network of MicroNet controllers and displays. An RS 232 port on the MN MI provides either a single connection to a PC running the VisiSat Configuration Tool or MicroNet View software or a Wide Area Network (WAN) for remote access. A second RS 232 port can be used for an additional connection to the VisiSat Configuration Tool or MicroNet View on the remote site when the primary port is occupied by the modem. The MN MI features password protection to stop unauthorised computers from interrogating remote sites. An MN MI features a built-in Real Time Clock that can be used for network synchronization.

The ARCNET Router (MN50-MI-RTR) provides the means to extend an ARCNET network of MicroNet controllers and displays. Up to 31 ARCNET Routers can each provide an extra sub-LAN, each of which can contain up to 95 devices (including the ARCNET Router). In this way the length of the network and the total number of devices can be increased.

### FEATURES

#### MN50-MI-ARC & MN50-MI-NCP:

- Autoanswer operation on modem sites
- Two types of alarms: Service alarms are retrieved by MicroNet View software the next time it makes contact with the MN MI, while priority alarms are autodialed immediately
- Password protection
- Stores up to four phone numbers
- Retains telephone numbers and passwords in flash memory during a power failure
- Autodials in the event of a controller going off line
- Industry standard connector used for modem connection
- Real Time Clock
- Supports ARCNET and NCP networks
- Collects data logs on remote sites



#### MN50-MI-RTR:

- Expands number of network devices
- Extends network length
- Parameter transfer between sub-LANs
- Provides opto-isolation between networks



#### Data Sheets

DS 10.217A - Wiring and Commissioning Information  
DS 10.202 - VisiSat Configuration Tool

#### Multi-Lingual Instructions

MLI 10.217 - Installation Instructions



## SPECIFICATION

Order Type	Description	Communications Protocol	On-board Real Time Clock
MN50-MI-ARC	MicroNet ARCNET Interface	ARCNET	Yes
MN50-MI-NCP	MicroNet NCP Interface	NCP	Yes
MN50-MI-RTR	ARCNET Router	ARCNET	Yes

## HARDWARE SPECIFICATIONS

<b>Dimensions:</b>	244mm Height x 165mm Width x 55mm Depth
<b>Enclosure:</b>	Moulded polycarbonate plastic case. Fire resistant to UL94. IP 40.
<b>Power Supply Input:</b>	24Vac, 50/60Hz supplied from a transformer conforming to EN 61558.
<b>Maximum Power Consumption:</b>	MN50-MI-NCP: 4.4VA MN50-MI-ARC: 4.7VA MN50-MI-RTR: 5.0VA
<b>Number and Type of PC Communication Ports:</b>	2 Off RS 232
<b>Maximum RS 232 Cable Length:</b>	15m
<b>Available Flash Memory:</b>	256Kb
<b>Power Failure Reserve:</b>	Non-rechargeable Lithium battery continues to run the clock and supports the unit's RAM. For the MN50-MI-ARC and MN50-MI-NCP, current logs and alarms in the Network Interface are preserved for up to 350 days.
<b>EMC Compliance:</b>	EN50081-1 (Emissions) EN50082-1 (Immunity)
<b>Agency Listing:</b>	UL Listed: UL916 UL Listed to Canadian Safety Standards
<b>Compliance:</b>	FCC Class A and CE Compliant
<b>Mounting:</b>	Wall or 35mm DIN rail.
<b>Ambient Limits:</b>	<b>Operating Temperature:</b> 0 to 50°C <b>Shipping and Storage Temperature:</b> -10 to 70°C <b>Humidity:</b> 5 to 95%rh, non-condensing.
<b>Wiring Terminals:</b>	1.5mm <sup>2</sup> (AWG No. 16 to 24) wire.

## SOFTWARE SPECIFICATIONS (MN50-MI-ARC, MN50-MI-NCP ONLY)

The MicroNet Network Interface performs a broad range of network level functions. The types of network functionality and details are shown in the following table:

Functionality	Detail
Real Time Clock	Can be designated as master for synchronization.
Alarm handling	Process and store any object alarm generated on the network. Optional storage of up to 2500* alarms in non-volatile memory. Service alarms. Priority alarms.
Logging	2500 samples maximum capacity. Data collection backed up in non-volatile memory (when battery is fitted).

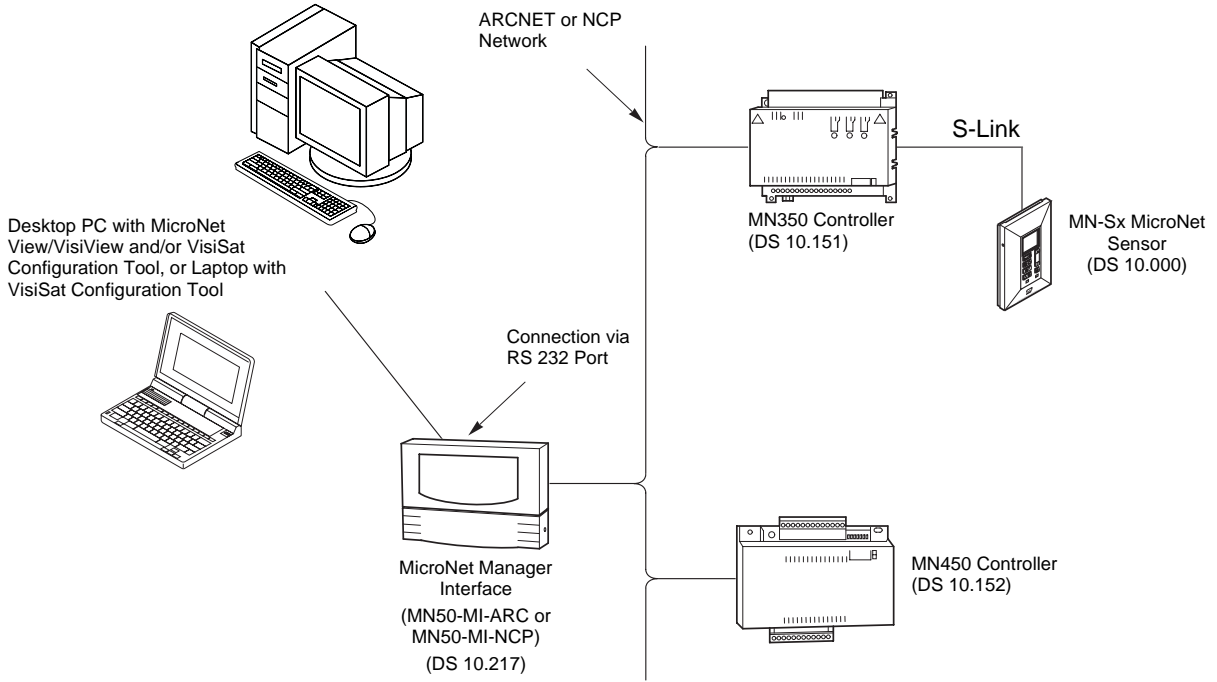
\* The MN50-MI-NCP/ARC has 2500 locations for storing logs and alarms, therefore the more logs it stores, the less space is left available for alarms.

## ACCESSORIES

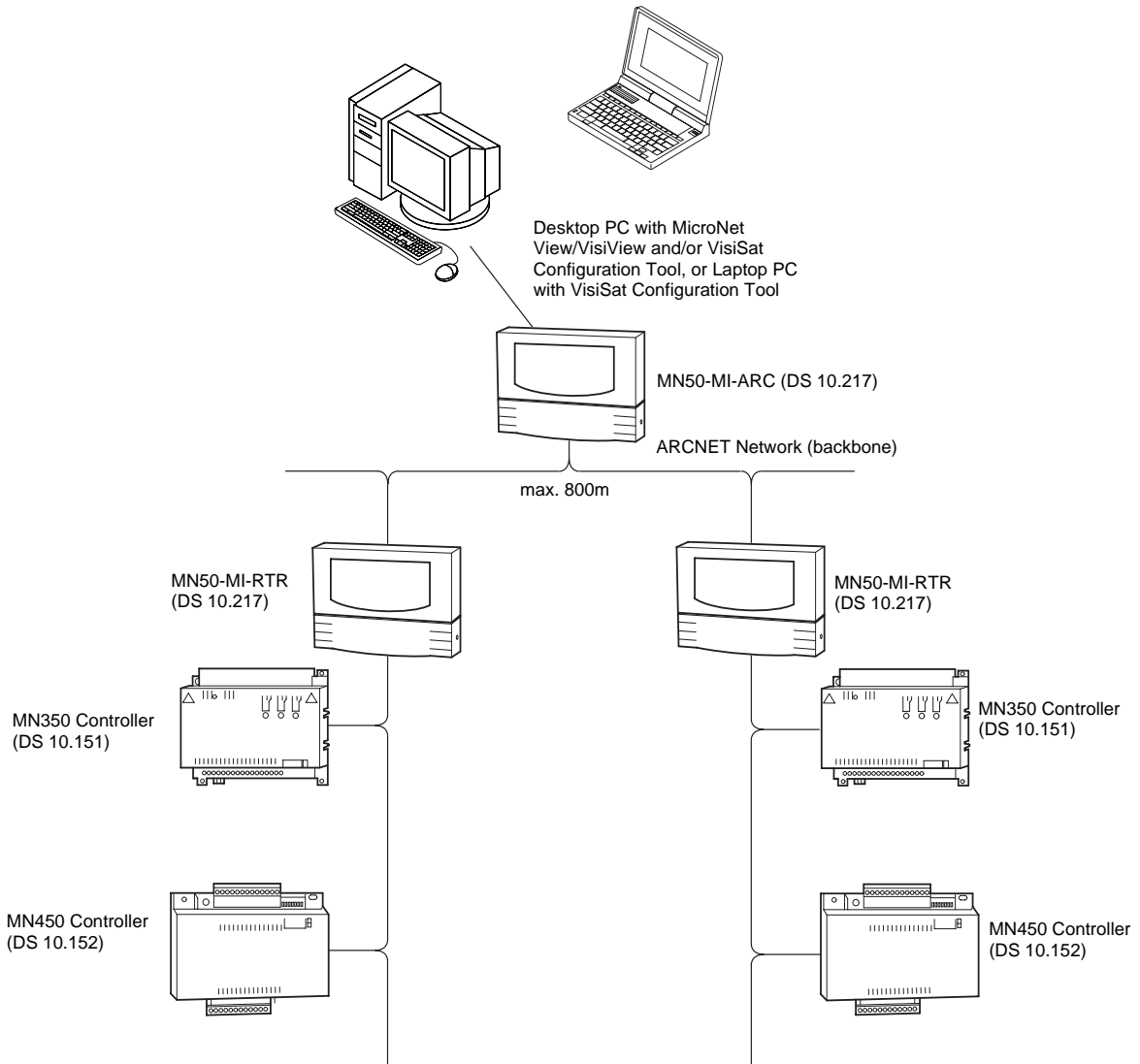
CBL-002	RS 232 D8/D9 cable from PC to MN50-MI-NCP/ARC
MNA-C	ARCNET Communications card
MNR-C	ARCNET Router Communications card

**TYPICAL SYSTEM DIAGRAMS**

**MICRONET MANAGER INTERFACE (MN50-MI-ARC OR MN50-MI-NCP)**



**ARCNET ROUTER**



## COMMUNICATIONS

MicroNet View can host multiple networks, providing no practical limit on the system size on NCP and ARCNET networks.

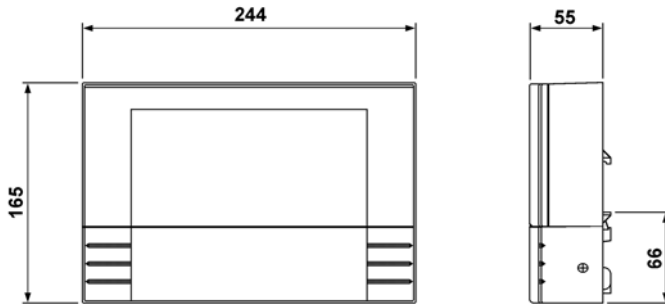
**NCP (Native Communications Protocol)** Controllers on an NCP network connect to MicroNet View/VisiView and the VisiSat Configuration Tool via the MN50-MI-NCP. An NCP network can host up to 20 sub-networks with 63 devices, each communicating in a polled-response fashion. An NCP network has a communications speed of 9.6k baud.

**ARCNET** Controllers on an ARCNET network connect to the MicroNet View software via an MN50-MI-ARC only and to the VisiSat Configuration Tool/VisiView software via an MN50-MI-ARC or an ARCNET PC card. An ARCNET network provides high-performance peer-to-peer communications and can host up to 95 devices (plus the MN50-MI-ARC). An ARCNET network has a communications speed of 156k baud.

Additionally, up to 31 sub-LANs can be created, each using an ARCNET Router (MN50-MI-RTR) hosting up to 95 devices (plus the ARCNET Router).

**Opto-isolation and Network Length** - The maximum cable length of each ARCNET sub-LAN is 800m. By adding a single ARCNET Router, the network length can be extended by 800m. Multiple ARCNET Routers can be added to extend the network further. The ARCNET Router also provides opto-isolation between networks; this characteristic being useful/essential when for example, different buildings have different electrical potentials.

## DIMENSION DRAWING



Dimensions in mm

Weights:

MN MI approx. 890g

Router approx. 890g

MNA-C Card 18.3g

## APPLICATIONS

### MN50-MI-ARC & MN50-MI-NCP:

The MicroNet Manager Interface provides the following functionality to a MicroNet Network:

- Data Log (trend) Collection
- Alarm Management for MN350, MN450, MN550 and MN650 Controllers.

### MN50-MI-RTR:

The ARCNET Router can provide expansion and opto-isolation to an ARCNET network.

## CONNECTIVITY

### MN50-MI-ARC & MN50-MI-NCP:

The MicroNet MN MI connects a PC running MicroNet View/VisiView or the VisiSat Configuration Tool software to either an NCP or ARCNET communications network. When connected to a modem, the MN MI can allow modem access from MicroNet View/VisiView or VisiSat Configuration Tool.

VisiSat can also be connected to an NCP network via an RS 232/RS 485 converter and to an ARCNET network via an ARCNET PC card.

### MN50-MI-RTR:

The MN50-MI-RTR typically sits on the backbone of an ARCNET communications network and enables the connection of a further 95 devices to its sub-LAN. The network address is set up using the bit switches.

### WARNING -

THE RTC BOARD CONTAINS A LITHIUM CHLORIDE BATTERY WHICH IS COMPLETELY SAFE WHILST IN NORMAL USE. THE BATTERY MUST BE DISPOSED OF IN ACCORDANCE WITH LOCAL WASTE REGULATIONS.

### Cautions

- Do not apply any voltages until a qualified technician has checked the system and the commissioning procedures have been completed.
- If any equipment covers have to be removed during the installation of this equipment, ensure that they are refitted after installation to comply with UL and CE safety requirements.
- This is a 24Vac device. Do not exceed rated voltage. Local wiring regulations and usual safety precautions apply.
- 24Vac must be supplied by a transformer conforming to EN 61558.
- Do not exceed the maximum ambient temperature.
- Interference with parts under sealed covers invalidates guarantee.
- The design and performance of TAC Satchwell equipment is subject to improvement and therefore liable to alteration without notice.
- Information is given for guidance only and TAC Satchwell does not accept responsibility for the selection or installation of its products unless information is given by the company in writing relating to a specific application.
- A periodic check of the Building Management System is recommended. Please contact your local sales office for details.

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