

IDNet® Addressable Modules

IDNet communication is provided by the Simplex 4100U Control and Indicating Equipment (c.i.e.) and is the next generation of the addressable device communications, improving upon the original MAPNET II communications protocol. The IDNet protocol and hardware enhancements support up to 250 addressable devices on a single cable pair and can support additional device types and different operations.

Features

- Supported by Simplex 4100U Series c.i.e.
- c.i.e. displays device location and status
- Individually addressable communications over a single cable pair
- Zone Adaptor Modules provide addressable interface to collective circuits
- IDNet digital protocol communications
- Convenient DIP switch address selection
- Supports up to 250 addressable devices per loop

General

IDNet communicating devices individually annunciate identity and accurate status to the 4100U c.i.e.

Applications include monitoring of sprinkler pressure switches, flow switches and valve monitor devices, interfacing of collective detectors and addressable monitoring and control (voltage free) for AS 1668 applications.

The majority of IDNet devices are loop powered requiring a single cable pair for operation by the c.i.e.

4090-9001 Supervised IAM (Individual Addressable Module)



The 4090-9001 IAM has both power and communications supplied by a two-wire IDNet circuit. It provides addressable monitoring of devices such as:

- ◊ Flow switches
- ◊ Valve monitor devices
- ◊ AS 1668 Airflow status,

by monitoring normally open dry contacts and the wiring to an end-of-line resistor.

Using IDNet communications, the 4090-9001 can sense normal, open circuit, short circuit, and current limited conditions. With the proper end-of-line and current limiting resistors, dual functions such as tamper switch and waterflow switch monitoring can be determined and communicated by a single addressable point.

Technical Specification

Comms Power ¹	24 to 40Vdc w/data
Supervision Resistor	6k8 Ohm 0.5W
Current Limited Operation ²	1k8/4k7 0.5W
Dimensions (HWD)	44x40x32mm
Ambient Temperature	0 to +49°C
Relative Humidity	10% to 93% (n/c)
Part Number	4090-9001

1. IDNet communications w/data

2. Available only with IDNet

Note: Loop powered 2 wire device

4090-9002 Relay IAM (Individual Addressable Module)



The 4090-9002 Relay IAM allows the c.i.e. to control a remotely located Form "C" Relay contact using IDNet addressable communications for both data and module power. Typical applications are for switching local power for control functions such as magnetic door holders, or control of HVAC components, pressurisation fans, dampers, etc. Relay contact status is also communicated to the c.i.e. The address is set by DIP switch under the resealable label.

Technical Specification

Comms Power ¹	24 to 40Vdc w/data
Relay Contact Ratings SPDT	0.5A @120VAC ² 2A@24Vdc ³ 1A@24Vdc ⁴
Current Limited Operation	1k8/4k7 0.5W
Dimensions (HWD)	105x105x35mm
Ambient Temperature	0 to +49°C
Relative Humidity	10% to 93% (n/c)
Part Number	4090-9002

1. IDNet communications with data

2. Transient suppressed load

3. Inductive load

Note: Loop powered 2 wire device

4090-9101 Zone Adaptor Module (ZAM)



The 4090-9101 Monitor ZAM allows a 2-wire circuit of collective smoke or heat detectors to be interfaced on to the IDNet loop.

Up to 20 collective heat and smoke detectors can be monitored by a 4090-9101 Monitor ZAM. The address is set by DIP switch under the resealable label.

Note the 4090-9101 requires a separate 24Vdc power supply to power the collective circuit.

Technical Specification

Comms Power ¹	24 to 40Vdc w/data
Operating Voltage	18.9 to 32Vdc
ZAM Current @ 24VDC ²	Quiescent 16mA max. Alarm 72mA max.
Supervision Resistor	3k3 Ohm 1W
Dimensions (HWD)	105x105x35mm
Ambient Temperature	0 to +49°C
Relative Humidity	10% to 93% (n/c)
Part Number	4090-9101

1. IDNet Communications with data

2. Actual current value is determined by total device requirements

4090-9116 Addressable Line Isolator



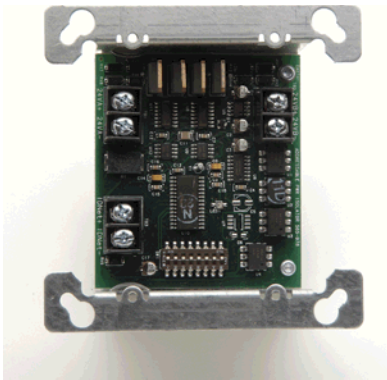
The 4090-9116 Isolator provides IDNet communications isolation, improving installation convenience and system integrity. Isolation is automatically activated when an output short circuit is detected and the condition is reported to the c.i.e. Circuit isolation can also be selected manually from the 4100U c.i.e. to enable partial loop testing. If the output wiring is acceptable, the isolator will connect the rest of the circuit. If the output wiring is shorted, the isolator remains isolated. The address is set by DIP switch under the resealable label.

Technical Specification

Comms Power ¹	24 to 40Vdc w/data
Dimensions (HWD)	105x105x35mm
Ambient Temperature	0 to +49°C
Relative Humidity	10% to 90% (n/c)
Part Number	4090-9116

1. IDNet communications with data

4090-9117AU Addressable Power Isolator



The 4090-9117AU Power Isolator provides monitoring and short circuit protection for 24Vdc power wiring to IDNet addressable devices. In the event of a short circuit, it opens a two-pole electronic switch, isolating both power circuit conductors. This function can also be selected from the c.i.e. The isolator reports to the c.i.e. when it is in isolation mode. It also reports the extent of shorted wiring by identifying the addresses of non-communicating devices

Technical Specification

Comms Power ¹	24 to 40Vdc w/data
Current Rating	2A@32Vdc max.
Input Current	10mA@24Vdc
Dimensions (HWD)	105x105x35mm
Ambient Temperature	0 to +49°C
Relative Humidity	10% to 90% (n/c)
Part Number	4090-9117AU

1. IDNet communications with data

4090-9118 Relay IAM (Individual Addressable Module) with T-Sense Input



The 4090-9118 Relay IAM with T-Sense allows a 4100U IDNet communication channel to monitor two input contact closures with one point and control an output relay with the other point, yet occupy a single loop address. Power is supplied from the IDNet communications channel, eliminating the need for separate power wiring. The input circuit and relay operation are controlled independently and may be disabled separately. Applications include water flow and tamper switch monitoring and control and damper position monitoring and control

Technical Specification

Comms Power ¹	24 to 40Vdc w/data
Relay Contact Ratings SPDT	
	0.5A @120VAC ²
	0.25A@120VAC ³
	2A@30Vdc ²
	1A@30Vdc ³
Input	N/O, dry contacts
Current Limited Operation	1k8/4k7 0.5W
Dimensions (HWD)	105x105x35mm
Ambient Temperature	0 to +49°C
Relative Humidity	10% to 90% (n/c)
Part Number	4090-9118

1. IDNet communications with data

2. Resistive Load

3. Inductive Load

Note: Loop powered 2 wire device

4090-9119 Relay IAM (Individual Addressable Module) with Unsupervised Input



The 4090-9119 allows a 4100U IDNet communication channel to monitor an unsupervised input contact with one point and control an output relay with the other point, yet occupy a single address. The input circuit and relay operation are controlled independently and may be disabled separately. Module power is supplied from the IDNet communications channel eliminating the need for separate power wiring. The address is set by DIP switch under the resealable label.

Technical Specification

Comms Power ¹	24 to 40Vdc w/data
Relay Contact Ratings SPDT	
non power limited	0.5A @120VAC ²
	0.25A@120VAC ³
power limited	2A@30Vdc ²
	1A@30Vdc ³
Input	N/O, dry contacts
Dimensions (HWD)	105x105x35mm
Ambient Temperature	0 to +49°C
Relative Humidity	10% to 95% (n/c)
Part Number	4090-9119

1. IDNet communications with data

2. Resistive Load

3. Inductive Load

Note: Loop powered 2 wire device

4090-9120AU Six Point I/O Module with T-Sense Inputs and Relay Outputs Module



The 4090-9120AU allows 4 100U IDNet communication channel to monitor four T-sense input circuits and control two output relays from a single module requiring a single address. Power is supplied by a separate 24Vdc connection to a listed fire alarm power supply. The input circuits and output relay operation are controlled independently and may be disabled separately. Point association is determined at the 4 100U host panel. At the 4 100U, the device address is designated as a single hardware location. Each of the four input circuits monitors for continuity to an end-of-line resistor and can differentiate between a short circuit contact closure and a current limited contact closure. Two input supervision resistors are required per T-sense input.

Technical Specification

Comms Power ¹	24 to 40Vdc w/data
Operating Voltage	18 to 32Vdc
Operating Current	30mA@24Vdc
Relay Contact Ratings SPDT	
non power limited	0.5A @120VAC ² 0.25A@120VAC ³
power limited	2A@30Vdc ² 1A@30Vdc ³
Supervision Resistor	6k8 Ohm 0.5W
Current Limited Operation	1k8/4k7 0.5W
Input	N/O, dry contacts
Dimensions (HWD)	105x105x35mm
Ambient Temperature	0 to +49°C
Relative Humidity	10% to 90% (n/c)
Part Number	4090-9120AU

1. IDNet communications with data
2. Resistive Load 3. Inductive Load

Note: 4 wire device; requires separate 24VDC and IDNet communication loop

4190-9050 4-20mA Analogue Monitor Zone Adaptor Module (AMZ)



Analogue Monitor ZAMs provide a multi-featured interface for connecting analogue sensors on a 4-20mA loop to a Simplex addressable c.i.e. Each AMZ can have up to 3 separate threshold levels, each with a custom action message. The AMZ monitors the 4-20 mA loop connection and digitally communicates the sensor measurement to the c.i.e. which can then determine whether a status annunciation is required and can display the sensor analogue level directly in the appropriate units of measurement. Typical applications include air quality for demand control ventilation, air and liquid temperature, humidity, air velocity and

toxic gas monitoring. Up to 100 AMZs can be used per c.i.e. with one address per AMZ.

Technical Specification

Comms Power ¹	24 to 40Vdc w/data
Operating Voltage	18 to 32Vdc
Basic AMZ Current	30mA
Sensor Output	Switched Input Voltage
Sensor Loop Current	4mA to 20mA
Fault Output Current	5mA
LED Annunciator Current	3mA (2098-9808)
Dimensions (HWD)	105x105x35mm
Ambient Temperature	0 to +49°C
Relative Humidity	10% to 90% (n/c)
Part Number	4190-9050

1. IDNet communications with data

4099-9032 Manual Call Point



The 4099-9032 addressable Manual Call Point (MCP) provides a means to manually initiate a fire alarm condition to the 4 100U c.i.e. via the IDNet channel. The IDNet channel provides the communication link and power between the call point and 4 100U. Activation of the MCP requires the frangible element to be broken, which causes contacts on a microswitch to close, initiating an alarm condition. Call Point reset requires the fitting of a replacement frangible element. The MCP features an integral red LED status indicator.

Technical Specification

Comms Power ¹	24 to 40Vdc w/data
Dimensions (HWD)	86x87x35mm
Ambient Temperature	-9°C to +70°C
Relative Humidity	10% to 95% (n/c)
CSIRO ActivFire listed	afp-1691
Part Number	4099-9032

1. IDNet communications with data



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