SensorNet/Manchester Distribution Panel

Features That Make a Difference:

- Amplifies SensorNet or Manchester protocol signals for multi-point dome control
- Switch easily between SensorNet or Manchester protocols
- Accommodates home run dome wiring via 16 output ports
- Supports home run, daisy chain, and junction box (J-Box) wiring topologies to accommodate any size system
- Install at head end or remote locations
- Rack (2U) mountable
- Thin, single PCB design allows the panel to be mounted either at the front or rear of an electronics rack, facing in or out
- Surge suppression available on all data and power connections
- ADACSNETDP model includes power supply that can power up to three panels (US) or five panels (International)
- Compatible with American Dynamics™ MegaPower matrix switcher/controller systems and Intellex® Digital Video Management Systems

The SensorNet/Manchester distribution panel amplifies either a SensorNet or Manchester protocol signal for multi-point dome control which provides the flexibility to operate efficiently in either protocol setting. With 16 output driver links (two connectors per link), the panel can accommodate home run dome wiring, multiple daisy-chained links to domes, or J-Boxes.

The panel also includes inputs for two hosts allowing you to maintain a connection between both the primary and backup CPUs and the devices connected to the panel, thereby providing a redundant solution.[1] For the ultimate control, you can monitor signal activities on each channel.

Installing the panel is easy, either at the head end or at remote locations and it can be used in place of a SensorNet J-Box when power is available for domes locally. The sleek, 2U design can easily be mounted at the front or rear of an electronics rack, facing in or out.

The panel is compatible with all versions of American Dynamics SpeedDome programmable dome cameras, Manchester receiver drivers, J-Boxes, and control systems that use SensorNet or Manchester protocols.

(1) The host input ports will be used in sequence whenever the previous input port is not receiving data.

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Model Numbers

ADACSNETD . . . . No external power module
ADACSNETDP . . . . Includes external power module

Physical

Dimensions (L x W x D). . . . . . 481 x 87 x 34 mm (18.9 x 3.4 x 1.3 in)
Weight . . . . 0.75 kg (1.66 lbs)
Mounting . . . . 19-inch EIA / IEC rack mount (2U)

Electrical

Power Source. . . . . External power module: 27 VA North American
(able to power three units)
International 45 VA (able to power five units)
Input. . . . . 12 to 30 V, DC or AC, isolation not required
Certified limited power source
NEC Class 2
Power Consumption. . . . . 8 VA
Indicators: Power On . . . . Green LED
Noise Detect. . . . . Red LED
Host A and B Receive Data . . Yellow LED
Channels 1-16 Receive Data . Yellow LED
Protection. . . . . Internal primary current fuse
Inrush limiting
DC isolation

Surge Protection. . . . . Transguard rated at 60 V, 250 A, 1.5 J
Gas discharge tube, impulse rated at 10 kA
Design Tolerance . . . . Input voltage minimum of 11 VDC or AC without
dropout[2]
Input frequency 47 to 63 Hz
Cable to Transformer . . . . 5 m (16.5 ft) 18 AWG, 3 conductor
Input Connector . . . . Euro-style 3-pin removable plug;
5.06 mm terminal block
Allowable Dropout . . . . 150 ms

Environmental

Operating Temperature. . . . . . -10° to 50°C (14° to 122°F)
Storage Temperature . . . . -40° to 70°C (-40° to 158°F)
Relative Humidity . . . . 0 to 95% non-condensing

Regulatory

EMC. 47 CFR, Part 15; ICES-003; EN55022,
Class B; EN61000-3-2; EN61000-3-3;
AS/NZS 3548, Class A; CISPR 22
Immunity EN50130-4
Safety. . . . . UL 60950-1; CSA C22.2.60950-1;
EN 60950-1; IEC 60950-1

DATA COMMUNICATION		
	SensorNet	**Manchester**
Address Range	1 to 254	1 to 64
Bit Rate	230.4 kbps	31 kbps
Network Distance[3]	1 km (3,300 ft) per cable segment if repeaters are used 1.5 km (5,000 ft) per cable segment if repeaters are not used	1.5 km (5,000 ft)
Maximum Loads	32 devices per cable segment	3 per run
Cable Segment Repeaters	SensorNet J-Boxes, distribution panels	Distribution panels
Topologies	Daisy chain, backbone, or star	Daisy chain
Transmission Medium	Single non-polarized unshielded twisted pair UTP 22 AWG (0.326 mm^2)	Single twisted pair 18 AWG (0.823 mm^2) (Belden 8760), polarized, Shielded
Connector	Euro-style 3-pin removable plug 3.5 mm (0.14 in) terminal block, Shield not used	Euro-style 3-pin removable plug 3.5 mm terminal block
Connector PIN Assignments	PIN 1 - S+ (orange wire) PIN 2 - S - (yellow wire) PIN 3 - Ground (Shield not used)	PIN 1 - S+ (black wire) PIN 2 - S- (white wire) PIN 3 - Ground (Shield used)
Terminating Resistor	120 Ω, switch selectable	120 Ω, switch selectable
Physical Layer	RS-485, transformer-isolated, 2-wire	RS-485, transformer-isolated, 2-wire
Data Encoding	FM-0	Manchester
Link Layer Framing	SDLC/HDLC	Proprietary
Link Layer Channel	Bi-directional, half duplex	Simplex
Collision Avoidance	Polling by primary host controller device	N/A
Application Protocol	Proprietary	Proprietary
Host Controller Devices	ADMPCPU, ADTT16E Primary Touch Tracker, MegaPower 48 Plus, MegaPower LT, ADACSNET SensorNet USB Module, and previous American Dynamics SensorNet host/controller products	ADMPCPU, AD2091, MegaPower 48 Plus, and previous American Dynamics SensorNet host controller products
Secondary Devices	Domes, distribution panels, J-Boxes, secondary Touch Tracker, and SensorNet I/O unit	Domes

(2) Input voltage greater than 36 VDC or AC may damage equipment
(3) The network distance shown is the total distance per ADACSNETD driver. The panel contains 16 drivers labeled 1 through 16 and each driver has two physical connectors on the front panel. If only one of the two connectors is used, the full distance can be applied to that connector. If both of the connectors are being used, the combined distance should not exceed the amount shown.

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