SiNET™ MULTI-AXIS MOTION CONTROL
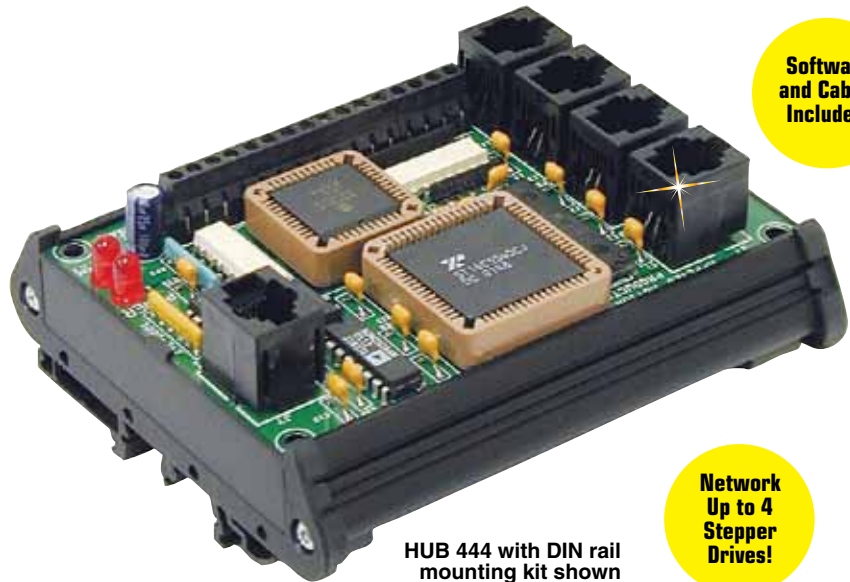## PROGRAMMABLE NETWORKING HUB WITH I/O, POINT-AND-CLICK SOFTWARE, STAND-ALONE CONTROL

NEW ®

HUB 444 DIN RAIL
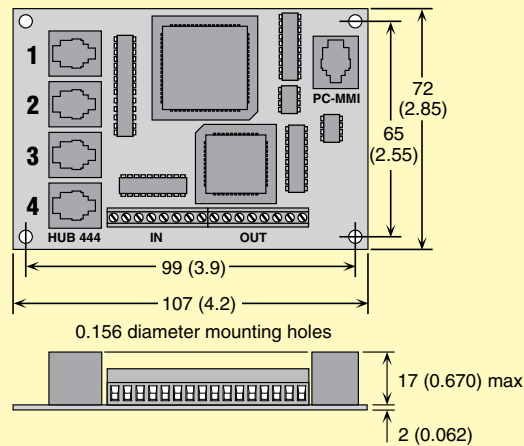
MADE IN USA

Software and Cables Included!

- Networks All Applied Motion Stepper or Servo Si™ Products for Multi-Axis Motion Applications
- For Real-Time Execution of Commands Downloaded from a Host PC or PLC Using the Si Command Language™ (SCL)
- Programmable for Stand-Alone Single or Multi-Axis Operations with Easy-to-Use SiNet Hub Programmer™ Windows Software (Software and Programming Cable Included)
- Can Also Act as a Router, Allowing a Host Computer or PLC to Control 1 to 4 Drives and the On-Board I/O Using Si Command Language™ (SCL)
- Communication via RS232
- 4 Optically Isolated Programmable Inputs, 5 to 24 Vdc
- 4 Optically Isolated Programmable Outputs, 24 Vdc, 100 mA
- Hub Programs and Host Computers Also Have Access to the I/O in Each Drive, Typically 8 Inputs and 3 Outputs per Drive
- Screw Terminal Connectors Make I/O Wiring Easy
- RJ11 "Telephone-Style" Connectors for Drives and PC for Easy, Reliable Connections
- Powered by Drive #1, No External Power Supply Required
- Can Control and Power Optional MMI (Operator Terminal)
- DIN Rail Mounting Kit Makes Installation Easy

The SiNet™ Hub 444 allows up to 4 Stepper or Servo Si™ drives to be controlled in host mode from a single PC or PLC's RS232 serial port or will run in stand-alone mode. Each indexer-drive acquires its unique address from the port to which it is
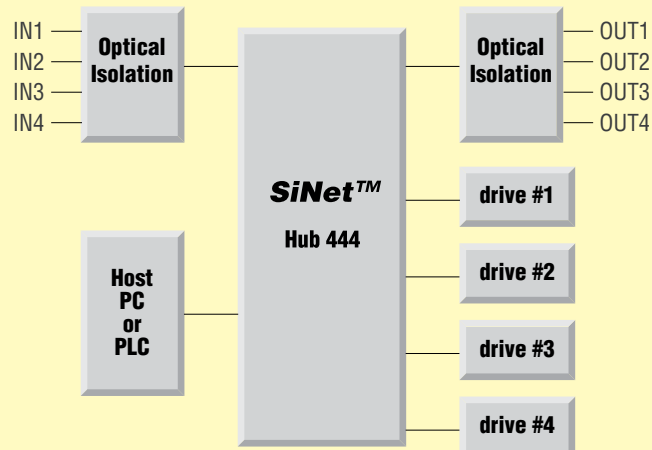
HUB 444 with DIN rail mounting kit shown smaller than actual size.

Network Up to 4 Stepper Drives!

Dimensions: mm (inch)

1
2
3
4
HUB 444   IN   OUT
PC-MMI

72 (2.85)
65 (2.55)

99 (3.9)
107 (4.2)

0.156 diameter mounting holes

17 (0.670) max
2 (0.062)

Block Diagram

IN1
IN2
IN3
IN4
Optical Isolation

OUT1
OUT2
OUT3
OUT4
Optical Isolation

SiNet™ Hub 444

Host PC or PLC

drive #1
drive #2
drive #3
drive #4

connected. This simple addressing scheme minimizes the cost of the drives, and more importantly, the cost of configuring and/or replacing drives in your system. Connections are made with low cost, reliable RJ11 cabling. Any of our popular, cost effective programmable Stepper or Servo Si™ drives or Si™ motor controls can be used with the SiNet™ Hub 444. By choosing the power level and features you need for each axis of your application, SiNet™ can provide a cost effective single or multi-axis motion solution. The SiNet™ Hub 444 is powered by the drive that's connected to port #1, saving you the cost and installation expense of using a separate power supply. Our Si Command Language™ (SCL) allows a host PC or PLC to execute relative, absolute and homing moves, make status inquiries, sample inputs, set outputs, and more. If your application requires a single axis to operate in "host mode", you can connect any of our programmable Si™ drives directly to your PC via the SiNet™ Hub 444 and invoke the Si Command Language™ (SCL). Our SiNet Programmer™ Windows software allows the user to create and store multi-axis motion control programs in the SiNet™ Hub 444 and run them without a PC, thus allowing the user to create a complex multi-axis motion system controlled from an operator interface or trigger.

SPECIFICATIONS

Power: Power is provided by Si™ indexer-drive on Port 1. Provides up to 50 mA for MMI via PC/MMI port.

Communication:
   Ports 1 to 4: RS232, 9600 bps, 8 data bits, one stop bit, no parity
   MMI: Same
   PC in Router Mode: Same
   PC When Running SiNet Programmer Software: 19200 bps
   Max Cable Length, Any Port: 15 m (50')

Physical: Constructed on 2 mm (0.062") fiberglass printed circuit board with 4 x 4 mm (0.156") mounting holes (nylon spacers included), 106.68 x 72.39 x 18.288 mm (4.2 x 2.85 x 0.72"), two red LEDs

   Operating Temperature Range: 0 to 70°C (32 to 158°F)
   DIN Rail Mounting Kit: Fits ENS0022 35 mm DIN rail

Program:
   Move Distances: ±16,000,000 steps
   Move Speeds: 0.025 to 50 rev/sec
   Accel/Decel Range: 1 to 3000 rev/sec/sec

Time Delays: 0.01 to 300 seconds
Loop Counts: 1 to 65,535
Number of Nested Loops: Unlimited
Number of Subroutines: Unlimited
Subroutine Stack Depth: 5 calls maximum
Number of Comments: Limited only by 200 line program length
MMI Variables for Storing Speeds, Distances and Loop Counts Entered by Operator: 50
Maximum Size of Messages Displayed by an MMI Prompt: 60 characters (80 for an MMI menu instruction)

Maximum Total Size of all MMI Prompt Messages: 1500 characters
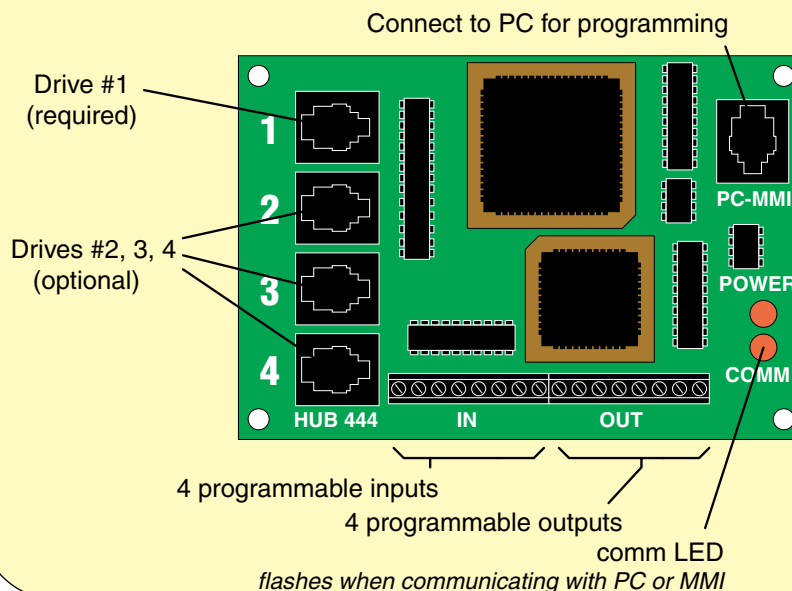   **Steps/Revolution:** 2000 to 50,800 (200 to 50,800 with Si-100 indexer)
Connectors: RJ11 for drives and PC/MMI, screw terminals for programmable inputs and outputs, accept 16 to 28 AWG wire
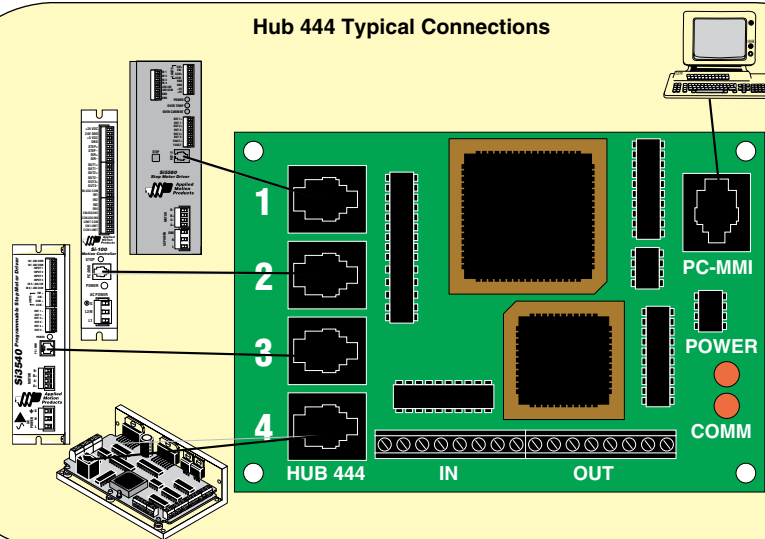**Programmable Inputs:** Optically isolated, 2200 Ω internal impedance, 5 to 24 Vdc
Programmable Outputs: Optically isolated (photo darlington), 28 Vdc maximum, 100 mA maximum

Hub 444 Features/Connections

Connect to PC for programming

Drive #1 (required)

Drives #2, 3, 4 (optional)

PC-MMI

POWER

COMM

1

2

3

4

HUB 444   IN   OUT

4 programmable inputs

4 programmable outputs

comm LED
flashes when communicating with PC or MMI

Hub 444 Typical Connections

1

2

3

4

HUB 444   IN   OUT

PC-MMI

POWER

COMM

To Order

MODEL NO.	DESCRIPTION
HUB 444 DIN RAIL	Multi-axis network hub with DIN rail mounting kit
MMI-01	Operator interface terminal
OM-CONV-USB	USB to RS232 Interface Converter; USB-A to DB9-male
OM-PL-USBS	USB to RS232 converter; works with Windows® Vista and 7

Comes complete with software and cables.

Ordering Example: HUB 444, *multi-axis network hub.*