

# *EAGLE*<sup>™</sup> PT-PS Series

## Pan Tilt Head—Power Supplies

### Installation and Operations Manual

#### **PRECAUTIONARY STATEMENT**

**1.1 Improper settings and connections may cause damage to the PT-100 pan tilt, the camera, and the lens being used. Please read all of the following documentation before attempting the installation and configuration of these systems. If any of the instructions are unclear to you, call your servicing dealer or Hitachi before proceeding for clarification. Failure to correctly configure and install these systems may cause damage to the equipment, and will void the warranties. Please make sure before connecting or disconnecting any cables that the power supplies are turned OFF.**

#### **2. WARRANTY**

2.1 Hitachi Denshi America warrants to the original customer that each unit shall be free from malfunction due to defective workmanship or component failure for a period of ONE YEAR from the original date of delivery to the customer. For service under the warranty period, the unit must be returned to Hitachi Denshi America Ltd., 150 Crossways Park Drive, Woodbury, NY 11797. This warranty does not apply to finish or appearance items, to malfunction due to abuse or operation in violation of published operating specifications or to failures caused by improper connections, modifications, alterations, or other unauthorized repairs.

#### **3. HARDWARE INSTALLATION**

3.1 Before starting installation, make certain that all power supplies to equipment are turned OFF.

#### **4. POWER REQUIREMENTS AND PIN CONFIGURATIONS**

4.1 The PT-PS power supplies are designed to provide reliable power to the PT-100 and 200 series of pan tilt heads. The PT-PS-1 will provide power for one PT-100 head and camera assembly; the PT-PS-2 will provide enough power for up to four PT-100 head and camera combinations and the PT-PS-3 provides 6.5 amps, for use with PT-200 heads and larger cameras. The PT-100 / 200 series of pan tilt heads require 24 volts DC power. Maximum draw is approximately 2.5 amps; average current draw in operation is 1.5 amps. The camera power supply built into every PT head will provide power for camera / lens combinations drawing up to 5 amps at 12 VDC; if the camera / lens draws more than this, a separate external camera power supply is required. To help reduce power drop, it is com-

mon practice to run 4 conductors for power and tie two conductors together at the end entering the pantilt head, thus doubling the effective current carrying capability. Here is a chart with recommended AWG for different distances ( at 77°F )

| Distance in feet | AWG |
|------------------|-----|
| 20               | 28  |
| 50               | 26  |
| 100              | 22  |
| 200              | 18  |
| 500              | 16  |
| 1000             | 12  |

4.2 Here is the listing of pin configurations for the connector on the power supply output:

|                         |                                     |
|-------------------------|-------------------------------------|
| AMP 4 pin CPC connector | MAIN POWER OUTPUT                   |
| PIN 1                   | +24 VDC CAMERA POWER SUPPLY TO HEAD |
| PIN 2                   | +24 VDC CAMERA POWER SUPPLY TO HEAD |
| PIN 3                   | CAMERA POWER SUPPLY GROUND TO HEAD  |
| PIN 4                   | CAMERA POWER SUPPLY GROUND TO HEAD  |

4.3 Here are listing of pin configurations for the connector on the pan tilt head BASE:

| 5 pin connector on base of PT head | MAIN PAN TILT CONTROL INTERFACE              |
|------------------------------------|--|
| PIN 1                              | RS-485 GROUND                                |
| PIN 2                              | RS-485 LINE 1                                |
| PIN 3                              | RS-485 LINE 2                                |
| PIN 4                              | +24VDC FROM MAIN POWER SUPPLY PIN 1 OR 2     |
| PIN 5                              | GROUND TO 24VDC MAIN POWER SUPPLY PIN 3 OR 4 |

Power supply requirements for the system connections must be fully accounted for before the system is operated. One PT-PS-1 power supply, with its' output of 2.5A, will not be enough to power multiple heads simultaneously, but could power a system of three heads if only one head is operated at one time. Ordinarily for a multiple head system the PT-PS-2 supply (four separate 3 amp outputs) or the PT-PS-3 (6.5A output ) should be used for multi head systems to allow for multiple head operation at the same time and for line loss. If using the PT-PS-2, it is easier to change the fuse of one of the outputs to a 10A fuse (included) from the standard 3A fuse; in this way a single output connector can provide 10A of power to the PT-T2 via a single line instead of wiring all four outputs.