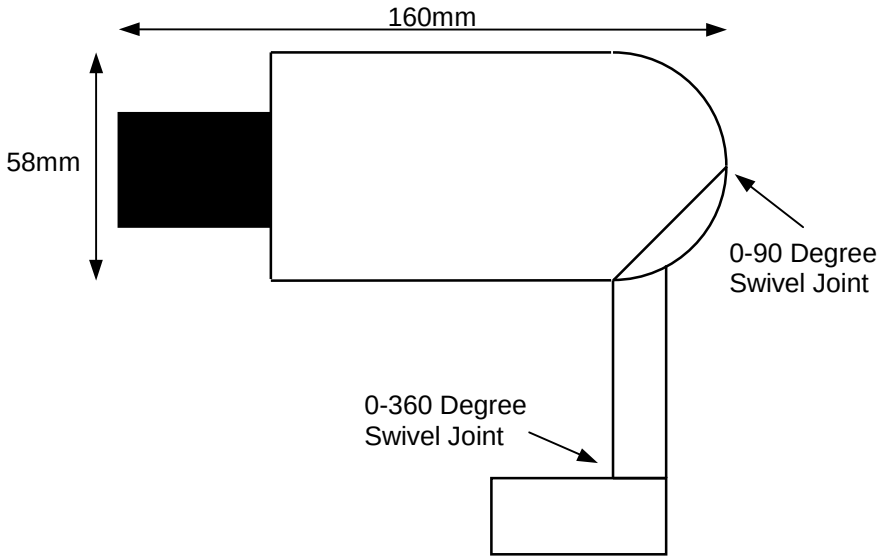
Dr Nigel Brooks

47 Turner Road
COLCHESTER
CO4 5JY
ENGLAND

Control Systems and Software Consultant

Tel: +44 (0)1206 851402
Nigel@NigelBrooks.Com

The Intelligent Light Sensor – NILS-5



- Designed as a wall-watching device, the sensor can be discretely mounted, usually on the same track as the light fittings. It features an advanced microprocessor-based design with remote calibration.
- Combined with the HUB-5 (LDPSU5) it provides a MODBUS interface for connection to the Building Management System (BMS) or other lighting control system to adjust the artificial light levels and control electro-mechanical blinds to modulate the natural lighting.
- The standard NILS-5 sensor, has an optical filter response closely matched to the human eye, and giving a 99% rejection of any IR component (CIE response).
- A 4 wire power/data cable feeds continuous digital readings from the sensor back to the controlling HUB-5. This incorporates a MODBUS interface for the BMS, normally set to provide a reading range of 0-600 Lux, with linearity better than 1%. A typical value being 200 Lux for a gallery environment (other ranges can be specified).
- The standard lens fitted to the sensor gives an angular spread of approximately 2 degrees, giving a 20cm square monitoring area at 5m from the sensor, a 40cm area at 10m from the sensor, etc.
- The sensor includes a Target/ID Assist, which can illuminate 2 LEDs placed either side of the sensing device. These are focused through the lens and projected on the wall, either side of the monitoring area, allowing for simple and precise aiming of the sensor.
- A proprietary RS-485 line protocol is used for communication between the sensor and the HUB, allowing up to 32 sensors to be connected in either Star, Daisy Chain, or Combo topologies giving flexibility and cable cost savings.
- The HUB-5 provides a central point for connections to the sensors, power supply, BMS connection, and calibration connection.
- The sensor can supplied mounted in an ERCO Domotec 77201/71041 light fitting as shown above, or can be fitted into significantly smaller enclosures, as specified by the clients.
- Once fixed in position, the sensor has complete hemispherical movement for precise targeting of the monitoring area.

Electrical Specification

- Power supply: 50mA @ 12v
- Wiring specification: **Brooks Light Sensors - HUB 5 System Wiring Details Rev 1.1.pdf** or later
- Cable requirement: Belden 8723, CAT5 or 4 core Phone Cable, depending on application and distance
- Connection: Sensor Tail with XLR-4 or 4P4C, or Body mounted 4P4C Socket