



Ultrasonic Edge Sensor

UH01

In accordance with Nexen's established policy of constant product improvement, the specifications contained in this manual are subject to change without notice. Technical data listed in this manual are based on the latest information available at the time of printing and are also subject to change without notice.

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DANGER

Read this manual carefully before installation and operation.

Follow Nexen's instructions and integrate this unit into your system with care.

This unit should be installed, operated and maintained by qualified personnel ONLY.

Improper installation can damage your system or cause injury or death.

Comply with all applicable codes.

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TABLE OF CONTENTS

Introduction	4
Installation	4
Output Voltage Settings	4
Dimensions	5
Electrical Connections	6
Specifications	6
Warranty	7

INTRODUCTION

Nexen's UH01 is an Ultrasonic Web Edge Position Sensor, designed for use with Nexen Web Guide Amplifiers.

The UH01 senses the edge of transparent film, even if the film has coating or printing which on occasion reaches the edge of the film. Because the sensing medium is ultrasonic, the UH01 is ideally suited for use with any photo sensitive material.

INSTALLATION

The UH01 has two different output voltage ranges to meet the requirements of different controllers:
Hi: 0 - 5 VDC Lo: 0 - 300mVDC

NOTE: The UH01 selector switch comes factory set to Lo to operate properly with Nexen web guide controllers. To ensure proper operation with other controllers, set the UH01 sensor output selector switch to Hi or Lo according to the controller's requirements.

ADJUSTING THE OUTPUT VOLTAGE SETTING

1. Remove the selector switch cover to access the Hi/Lo switch. (See Figure 1)
2. Use a small, flat-blade screwdriver to adjust the Hi/Lo output switch (SW1) to the desired setting.

NOTES:

- Install UH01 in an area where the ambient temperature is between 32°F [0°C] and 120°F [50°C] and is free of rapid temperature changes.
- Install UH01 in an area that is free of drafts.
- Sending and Receiving elements of the Sensor must not be exposed to dirt or moisture.
- Never touch Sending or Receiving elements with metal objects.

MOUNTING BRACKET

1. Secure UH01 to threaded extension of Mounting Bracket Adjusting Screw (See Figure 2).

NOTE: Make sure lock nut on threaded extension is tight against UH01.

2. Secure Mounting Bracket to customer supplied sensor mounting bar (1 In. [25 mm] square) mounted across web (See Figure 3).

SENSING ANGLE

1. Adjust UH01 until angle Θ is 75° or less. This will reduce any sensing errors caused by web path fluctuations (See Figure 4).

NOTE: If it is impossible to maintain the angle described, provide a roll or guide bar which will ensure that the web path stays in the middle of the sensor gap (See Figure 5).

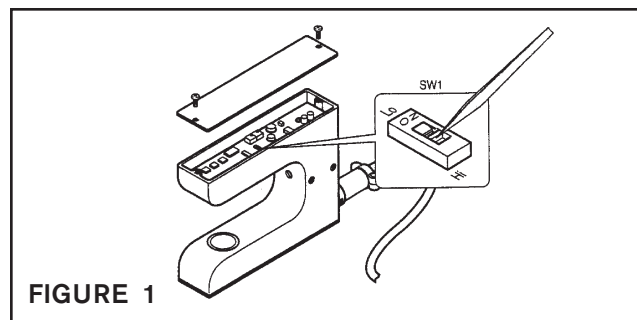


FIGURE 1

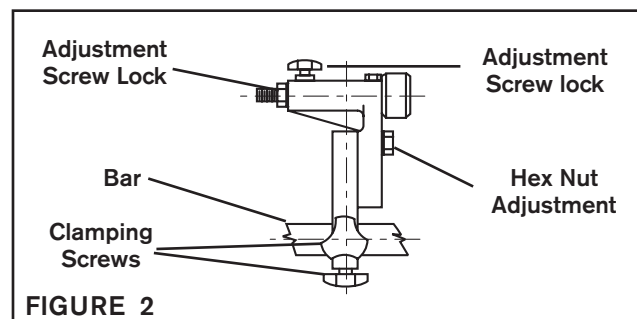


FIGURE 2

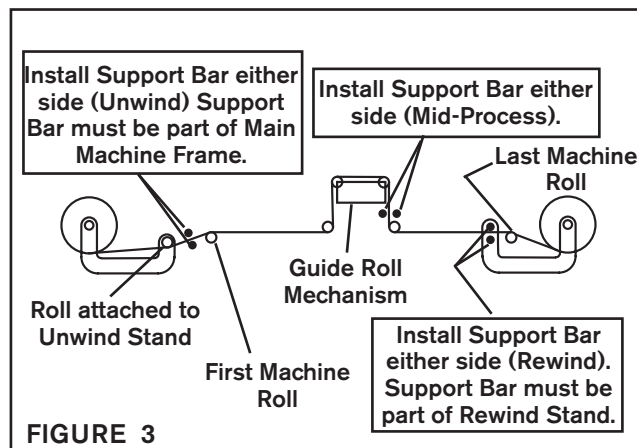


FIGURE 3

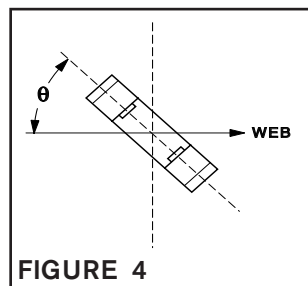


FIGURE 4

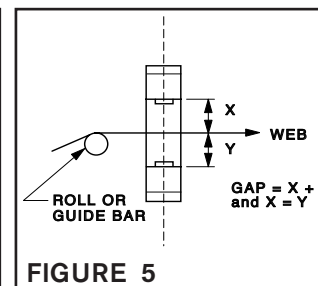


FIGURE 5

DIMENSIONS

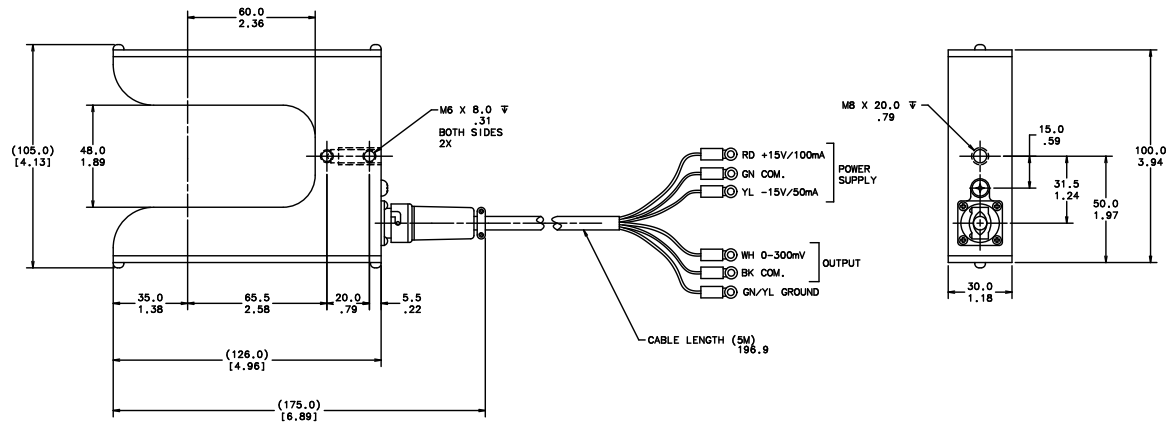


Figure 6 UH01 Dimensions

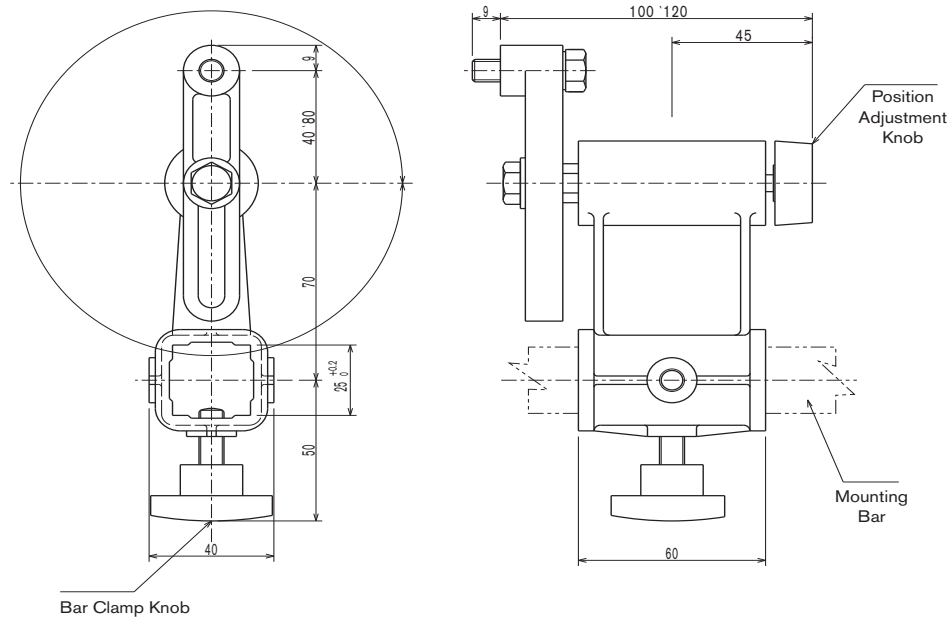
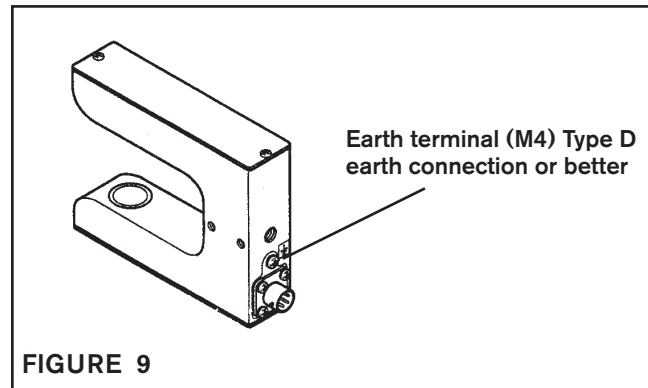
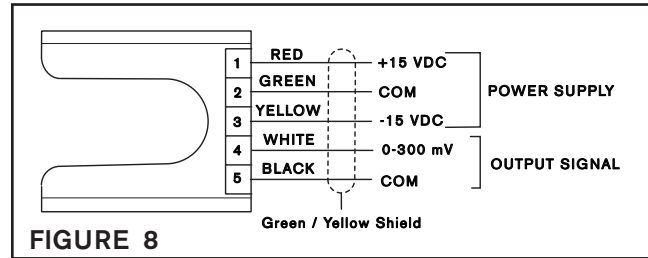


Figure 7 Screw Guider Dimensions

ELECTRICAL CONNECTIONS

Using 16 Ft. [5 m] cable provided, connect UH01 to the web guide controller according to the instructions provided with the controller (See Figure 8).

For greater static electricity resistance, connect the sensor housing's earth terminal (M4) to a machine frame ground near the sensor (See Figure 9)



SPECIFICATIONS

Frequency Response	200 Hz
Sensing Gap.....	1.89 In. [48 mm]
Measuring Width.....	0.31 In. [8 mm]
Sensitivity.....	0.004 In. [0.1 mm]
Power Supply.....	+15 VDC/100mA -15 VDC/50mA
Output	OPEN, 300 mVDC (Lo)
.....	OPEN, 5 VDC (Hi)
.....	BLOCKED, 0 mVDC (Lo & Hi)
Weight.....	1 Lb. [.45 Kg]
Ambient Temperature.....	32° - 120° F. [0° - 50° C]
Cable Length	16 Ft. [5 m]

WARRANTY

Warranties

Nexen warrants that the Products will be free from any defects in material or workmanship for a period of 12 months from the date of shipment. NEXEN MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, AND ALL IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. This warranty applies only if (a) the Product has been installed, used and maintained in accordance with any applicable Nexen installation or maintenance manual for the Product; (b) the alleged defect is not attributable to normal wear and tear; (c) the Product has not been altered, misused or used for purposes other than those for which it was intended; and (d) Buyer has given written notice of the alleged defect to Nexen, and delivered the allegedly defective Product to Nexen, within one year of the date of shipment.

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The exclusive remedy of the Buyer for any breach of the warranties set out above will be, at the sole discretion of Nexen, a repair or replacement with new, serviceably used or reconditioned Product, or issuance of credit in the amount of the purchase price paid to Nexen by the Buyer for the Products.

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In no event shall Nexen be liable for any consequential, indirect, incidental, or special damages of any nature whatsoever, including without limitation, lost profits arising from the sale or use of the Products.

Warranty Claim Procedures

To make a claim under this warranty, the claimant must give written notice of the alleged defect to whom the Product was purchased from and deliver the Product to same within one year of the date on which the alleged defect first became apparent.

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