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WEB GUIDING CONTROLS

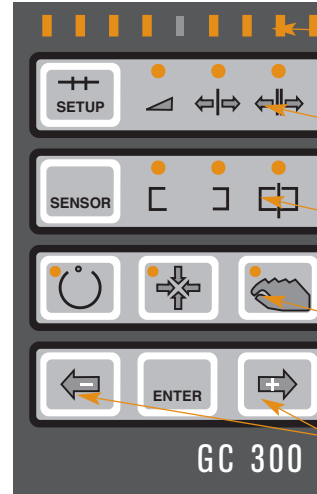
This Section Contains:Page

WEB GUIDING CONTROLS

GC 300 Web Guide Controllers	320-321
AE 120 Web Guide Controller	322-323
Web Guiding Sensors	324-326
Center Pivot Web Guides	327-330
Linear Actuators	331-332
TA100B/TA110B Transducer Amplifiers	333

GC 300 WEB GUIDE CONTROLLERS

The brains of the Nexen Web Guiding Systems



Position Display LED Bar
Indicates Faults and displays web position.

Calibration Controls
Set-up for Gain, Offset and Deadband.

Sensor Controls
Allows choice of Left, Right, or Center Position sensors.

Operation Mode
Allows choice of Automatic, Auto-center or Manual operation.

Manual Controls
Used to adjust web position in the manual mode.

GC 300 Web Guide Controllers

Model	Product Number	Description
110 VAC	912717	GC 300 – Single Sensor
110 VAC	912737	GC 300 with Second Sensor Board
110 VAC	912745	GC 300 with Remote Operator Board
110 VAC	912748	GC 300 with Second Sensor Board and Remote Operator Board
220 VAC	912719	GC 300 – Single Sensor
220 VAC	912727	GC 300 with Second Sensor Board
220 VAC	912747	GC 300 with Remote Operator Board
220 VAC	912749	GC 300 with Second Sensor Board and Remote Operator Board
	912696	Automatic Centering Proximity Sensor
	912736	Second Sensor Board

The GC 300 Web Guide Controller uses sophisticated electronics to correctly position moveable roll stands or guide roll assemblies used in printing and converting operations. The GC 300 provides accuracy to within ± 0.004 inches (0,01mm) of edge or centerline positions.

The GC 300 receives signals from web position sensors and translates them into control signals for web position drive motors. The system maintains constant position of paper, film, foil, textiles, non-woven materials, metal strip, rubber or any product processed in a continuous strip.

The GC 300 can take signals from either pulsed LED sensors

for opaque edge monitoring, or ultrasonic sensors for monitoring opaque and transparent materials. A special sensor is also available for following printed lines or pattern edges on previously printed webs. This is the Line Follower Sensor.

A single sensor can be used for Edge Position Control (EPC). With an optional daughter board and a second sensor, the GC 300 can provide Center Position Control (CPC). The sensor should be mounted with it's measuring center aligned with the desired position of the web edge.

CPC requires two sensors placed opposite one another on either side of the web. This configuration assures that the

center of material being processed stays aligned with the center of the machine.

Standard Features

- Smart Current Limiting protects motors.
- Automatic Calibration simplifies setup.
- Universal Symbology for international applications.
- Use either Proximity or Reed auto-center sensors for flexible installation and easy set-up.
- Internal thermal protection prevents overheating.

Three easy to use Operating Modes for flexibility.

Nexen's straight forward touch pad controls simplify adjustments and changes in operating mode.

Automatic

Actuator is constantly driven to reduce web position error to zero. Following setup and calibration this mode automatically keeps the web positioned correctly.

Manual

This mode allows you to steer the guide mechanism left or right during setup or when manual override is necessary.

Auto-centering

Using either reed switches or proximity sensors, this mode automatically centers the roll stand or guide roll assembly for machine setup, calibration or as a system "standby."

GC 300 WEB GUIDE CONTROLLERS

Easy Calibration, Set-up and Operation

Maximum Output:
24VDC at 6 amps max.

Smart over-current protection and indication. Protects motors while allowing full force operation when needed.

Thermal overload protection of driver stages. Motor miswiring warning.
Determines and displays motor wiring errors.

Right and left travel limit protection and indication. (Both visual and relay closure).

Sensor type selection.

Dip-switch selection of ultrasonic, LED, or Line Follower type sensor.

Automatic sensor calibration.

Sets optimal offset, gain and deadband.

Manual sensor calibration to override the automatic settings when needed.

Programmable sensor offset (with fault indication).

Remote sensor offset.

A remote pot. can be used to electronically offset the center of the guide sensor.

Instrumentation output available.

Center guiding available.

(Use daughter board accessory for second sensor). Automatically enabled when daughter board is present.

Auto-center function included standard.

Operates with either reed switch or proximity sensor input.

Front panel membrane switches.

Allows all calibration to be accomplished from the front panel.

Front panel LED bar graph for rapid interpretation of status.

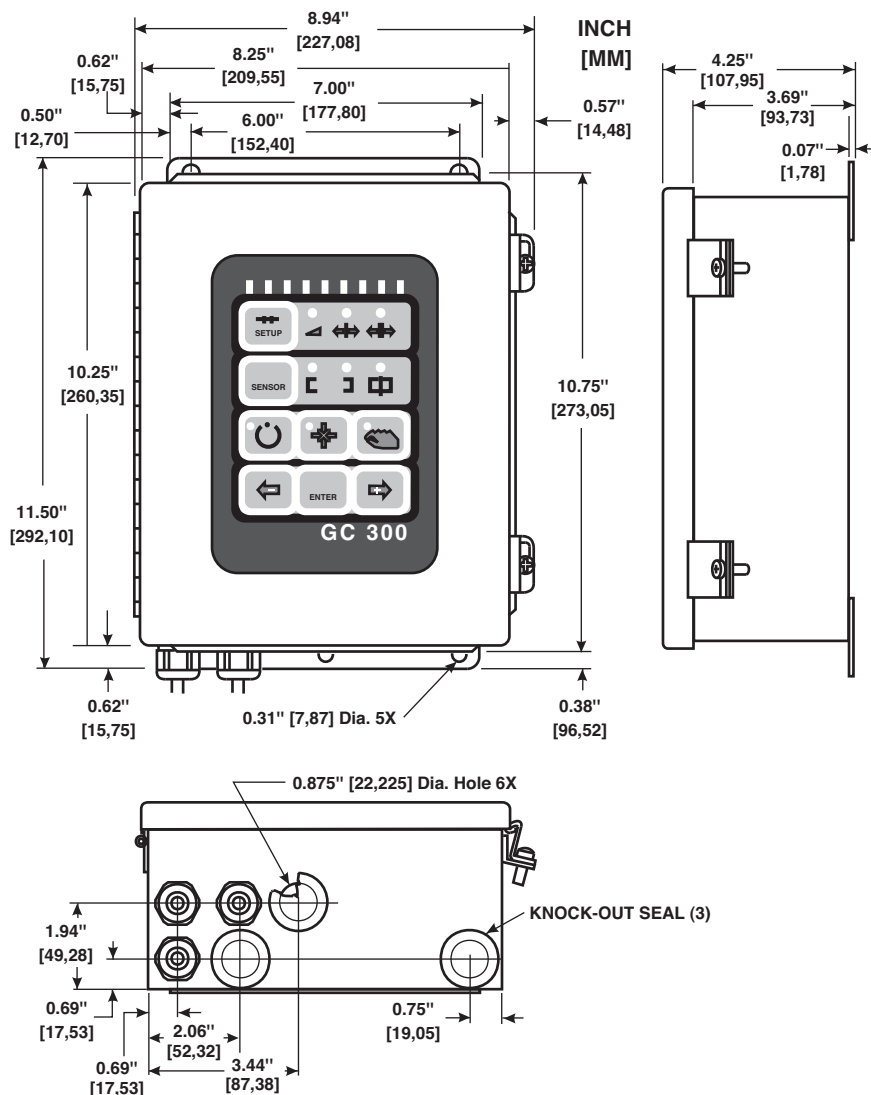
Used to display web position within the sensor window; and also display faults and parameters during calibration.

Factory settings stored in memory.

Return the unit to “factory parameter status” quickly and easily.

Sealed for use in dusty environments.

Dimensions



Specifications

Accuracy	± 0.004" [0,1mm] with Appropriate sensors
Power	110 VAC or 220 VAC, 160 VA at 50/60 Hz
Ambient Temp. Range	32° F. to 120° F. (0° C. to 50° C.)
Inputs	
Standard	Line Follower LH100 (Requires second sensor board)
Standard	One Ultrasonic UH21 or One Infrared LED PH16
Optional	Second UH21 or PH16 (requires daughter board)
Auto-center Switch	Either Limit Switch or Proximity Switch (Auto-Detect)
End-of-Travel	Limit Switches
Remote Offset Pot	2kΩ Pot. (customer supplied))
Outputs	
Motor	6 amp Max, 24 VDC, Over Current protected
End-of-Travel	SPDT Relays, Rated 0.3 amp max. @ 24 VDC
Web Position	Indication: 0-10 V

AE 120 WEB GUIDE CONTROLLER

The brains of the Nexen Web Guiding Systems

Amplifier for Automatic Web Positioning

Web position information from the sensor is fed to a web guide controller or amplifier.

The amplifier contains a SCR motor control which will drive an electrical linear actuator to correct the web position through the moveable roll stand or the guide roll mechanism.

The primary purpose of the amplifier is automatic positioning of the web in the sensor.

Amplifier Auxiliary Functions

Automatic Centering to move the roll stand or guide roll to its

midpoint or neutral position during rewinding.

Over Travel Alarm to indicate when the linear actuator has reached its maximum travel limit without being able to position the web.

Remote Position Readout to give a visual indication of web position at a remote location or as data input to a PC or PLC.

Amplifier Special Control Requirements

Special Auxiliary controls include:

A Remote Fine Tuning control to allow minute adjustment the of web position without having



to physically move the sensor.

Control to lock the linear actuator at any position in its travel.

A Remote Operators Station to allow remote switching of the automatic and manual functions of the amplifier during initial tuning and running.

A Remote Position Locking

AE 120 Web Guide Controller Product Number 912674

Precise edge or center positioning control for all opaque web guiding applications.

The AE 120 Web Guide Controller is an electronic controller that correctly positions moveable roll stands or guide roll assemblies used in web printing or web converting operations. It is the controller for Nexen's Self-Contained Web Guides and can also be used as a stand-alone controller in edge or center positioning control applications.

Compact and fully featured.

It's only 7.5 inches (191mm) wide by 2.25 inches (57mm) high, by 10 inches (254mm) deep, yet the AE 120 totally controls edge and center web positions within 0.004 inches (0,01mm).

You choose the operating mode and input signals that best suit your application.

It's part of the Self-Contained Web Guide package.

The AE 120 is the controller for Nexen's Self-Contained Web Guides. It uses a proximity sensor signal to automatically center your guide roll assembly or moveable roll stand.

It's also a stand-alone web guide controller.

The Controller also accepts several types of input signals and can send signals to various actuating devices. This makes it a compact and flexible addition to any edge or center positioning web guide system.

Controls edge positions within 0.004 inches (0,01mm).

Nexen's opaque or ultrasonic sensor provides the edge position signals to the AE 120.

Mount a single sensor on one side of the web with its measuring center aligned with the desired web edge position. This maintains the edge of the web at the measuring center of the sensor.

Controls centerline positions within 0.004 inches (0,01mm).

Mount two sensors equally spaced from the centerline of the machine. This maintains alignment of the web to the center of the machine.

Accepts input signals from 5 sources.

Nexen's AE 120 accepts signals from 5 external sources. This eliminates duplicating electronics if you need different input signals. One of the primary signal sources is required for operation. Auxiliary signal sources are optional.

Primary signal sources include:

- Opaque or ultrasonic sensor

Auxiliary signal sources include:

- Centering sensor (proximity sensor)
- Customer-supplied 10K ohm remote fine adjustment pot
- Customer-supplied lock-out switch to momentarily disable the auto correction mode
- Customer-supplied travel limit switches

Operates in three different modes for easy, flexible operation.

Simply flip a switch to choose one of these three operating modes:

Automatic — constantly drives an actuator to reduce error to zero. This keeps your web position left, right or centered, depending on configuration of edge guide sensors. Use this mode for normal running conditions following set-up and calibration.

Manual — allows you to manually steer the mechanism to the right or left. Disregards automatic settings. Use this mode for complete manual override.

Auto-Centering

— automatically centers the web using a proximity sensor. Locks down the equipment for safe control. Use this mode for machine set-up, calibration or as a system "stand-by."

AE 120 Web Guide Controller

- Operates as a stand alone unit, or included as an on-board controller for Nexen Self-Contained Web Guides
- Easy to install and calibrate
- Accepts opaque edge or ultrasonic sensor input
- Remote control option
- Lock-out switch provision
- Strain-relief clamps
-eliminates disconnects.

Sensor Select Switch
Edge position or center position control

Error Indicator

End of Travel Indicator
This lamp lights when guide roll or roll stand has moved to the end of its travel limit or when travel limit switches are actuated

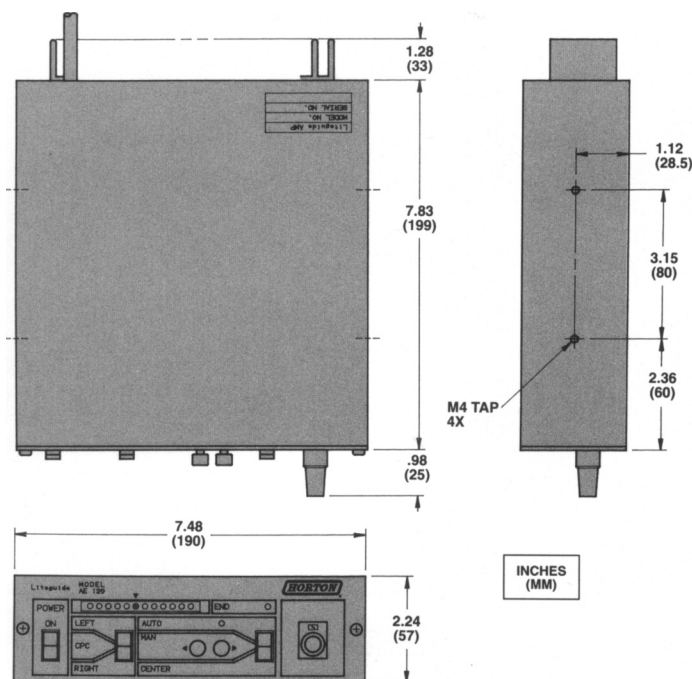
Mode Switch
Manual, automatic or auto-centering operation

Manual Operation Switches

Fine Adjustment

Model	AE 120 Web Guide Controller
Product Number	912674
Power Supply Voltage	100 to 240 VAC (continuous input), 50/60 Hz
Power Consumption	100 VA
External Input	Standard Line Follower LH100
	Standard One or Two Ultrasonic UH21 or Infrared LED PH16
	Position Sensor
	Centering Sensor: Proximity Sensor
	Fine Adjuster: Optional
	Lock-out Switch: N.O. 250mA, 15 DC, 1 mA (Customer supplied)
	Limit Switches: N.C. (Customer supplied)
Output	DC Motor: 24 V DC, 1.3 A
	Lamp Power Supply: 12 V DC, 1.8 W
	End of Travel: Dry Contact, Rated 0.1 A, 250 V AC, 0.1 A, 24 V DC
Ambient Temperature	32 to 122° F. (0 to 50° C)

Dimensions



WEB GUIDING SENSORS

Nexen Web Guiding Products: Precise Yet Rugged

Nexen Web Guiding systems give you both; extreme precision, and rugged dependability.

Precise enough for the laboratory, tough enough for the mill,

Nexen Web Guiding Systems are backed by a recognized leader in guiding equipment for over three decades.

You can be sure of quality, durability and performance... with Nexen

Three types of sensors

Several types of sensors are used to detect a web's position. The type required for any web guiding system is determined by the method required (EPC, CPC, or LFC) and type of material to be sensed.

Infrared Sensor

This type of sensor is the electrical equivalent of the pneumatic sensor. Light is transmitted by a lamp across the web edge. It is received by a light sensitive sensor. Web edge position is directly related to the amount of light sensed at the

receiving element. A variation of this method uses a pulsed LED in the infrared range as a light source. This type of sensor is not affected by ambient light, and is useful for processing photosensitive materials.

Line Following Sensor

LFC is achieved by bouncing light off a web as it passes around a transport roll in the machine. This type of sensor contains the lamp and sensor element in the same housing.

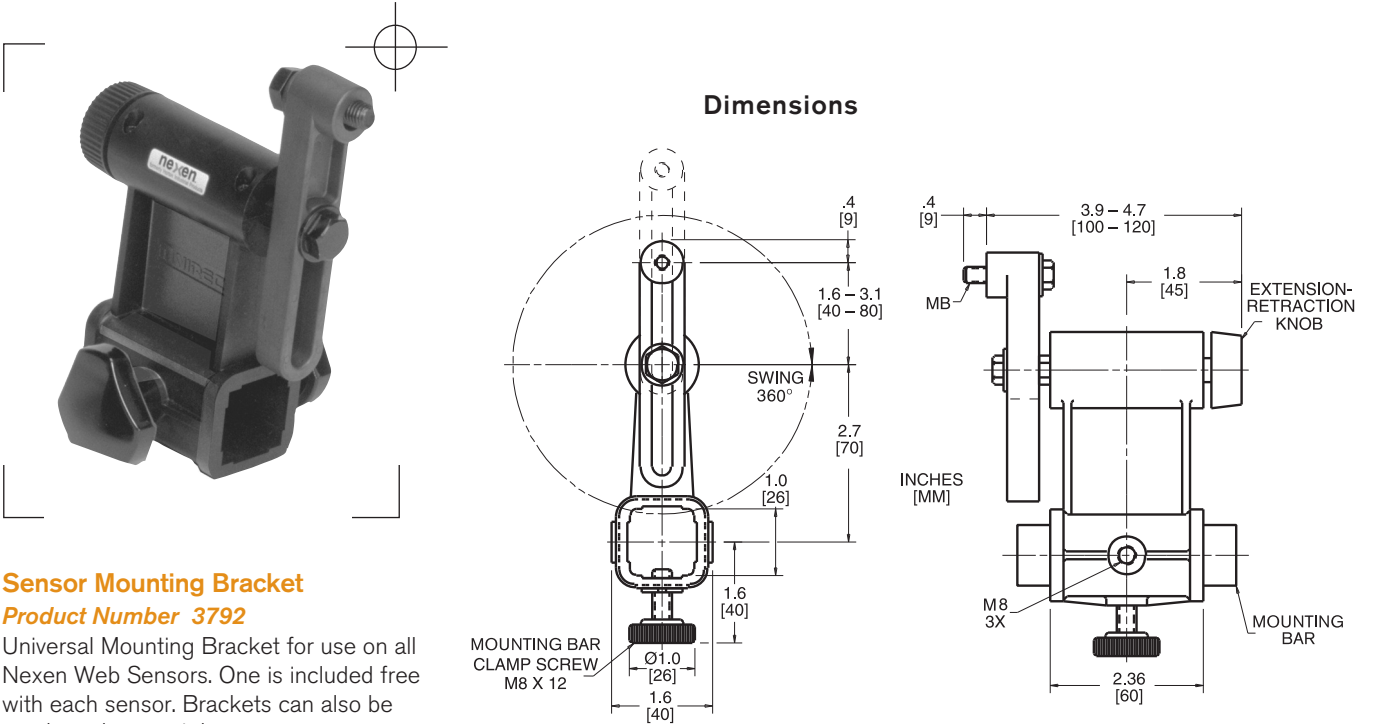
Ultra Sonic Sensors

Ultra Sonic Sensors can be used to sense photo sensitive products (photo film, print paper, etc.) or for transparent films with coating or printing near the edge.

Sensor Utilization Chart

MODEL	PRODUCT NUMBER	EPC	CPC	LFC	COMMENTS
PH 16	912085	X	X		Opaque edges only. Pulsed LED
PH 21	912626	X	X		Miniature version of PH 16, Opaque edges only. Pulsed LED
LH 100	912119	X		X	Line follower and web or pattern edges
UH 01 *	912153	X	X		Opaque or transparent edges, Ultra Sonic
AWL 280	912662	X	X		Use with AS 10 Preamplifier to sense various web widths without repositioning
AS 10	912721	X	X		Preamplifier used with AWL 280

* Cable Only, 16' #30710



Sensor Mounting Bracket

Product Number 3792

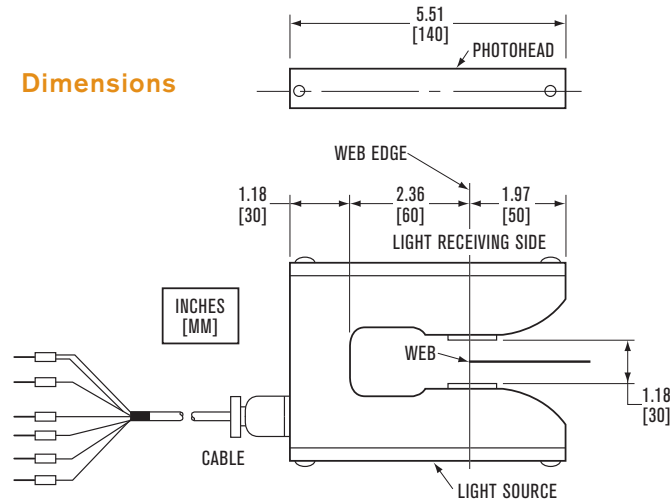
Universal Mounting Bracket for use on all Nexen Web Sensors. One is included free with each sensor. Brackets can also be purchased separately.

WEB GUIDING SENSORS

The Eyes of the Web Guiding System



Dimensions



PH 16 Opaque edge sensor

Product Number 912085

For sensing opaque web edges. It uses an infrared pulsed LED light source, to eliminate problems caused by ambient light. Because of its wave length (950nm) it is also usable with photo sensitive film or paper.

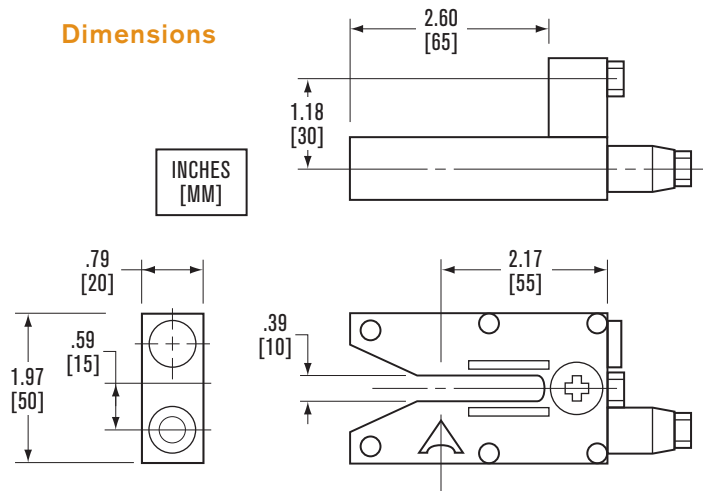
PH 16 is provided with a mounting bracket featuring a micro adjustment screw for fine adjustment.

Specifications

Space between emitter and receiver..... 1.18 in. (30 mm)
 Measuring width $\pm .20$ in. ($\pm 5,08$ mm)
 Cable length 16 ft. (5m)
 Light source..... Pulsed light emitting diode (LED)
 Light source wavelength..... 950 nm (Near infrared)
 Weight..... 2.5 lb. (1,1 kg)
 Body material Diecast aluminum alloy
 Excitation..... 12 VDC@ 40mA
 Output Voltage 0-350 mV
 Sensitivity 0.004 in. (0,1 mm)
 Temperature Range 32-122° F (0-50° C)



Dimensions



PH 21 Opaque edge sensor

Product Number 912626

The PH 21 is a photo electric edge sensor for webs. One PH 21 can be used for sensing either side of the web for Edge Position Control or EPC™. Two PH 21's one on each side of the web, can be used for Center Position Control or CPC™. The PH 21 senses edge position with a pulsed light emitting diode (LED), in the infrared range. This light source is not affected by ambient light.

The PH 21 is a miniaturized version of the PH 16. It is primarily used to position a sensor in a dimensionally restricted area.

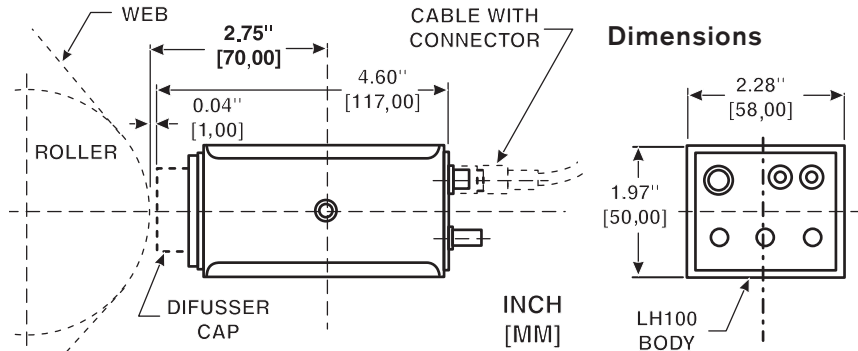
PH 21 is provided with a mounting bracket featuring a micro adjustment screw for fine adjustment.

Specifications

Measuring range..... $\pm .20$ in. ($\pm 5,08$ mm)
 Cable length..... 16 ft. (5m)
 Light source Pulsed light emitting diode (LED)
 Light source wavelength 950 nm (Near infrared)
 Weight..... 1.3 lb. (0,6 Kg)
 Body material..... Diecast aluminum alloy
 Excitation..... 12 VDC @ 40 mA
 Output Voltage 0-350 mV
 Sensitivity 0.004 in. (0,1 mm)
 Temperature Range 32-122° F (0-50° C)

WEB GUIDING SENSORS

The Eyes of the Web Guiding System



Specifications

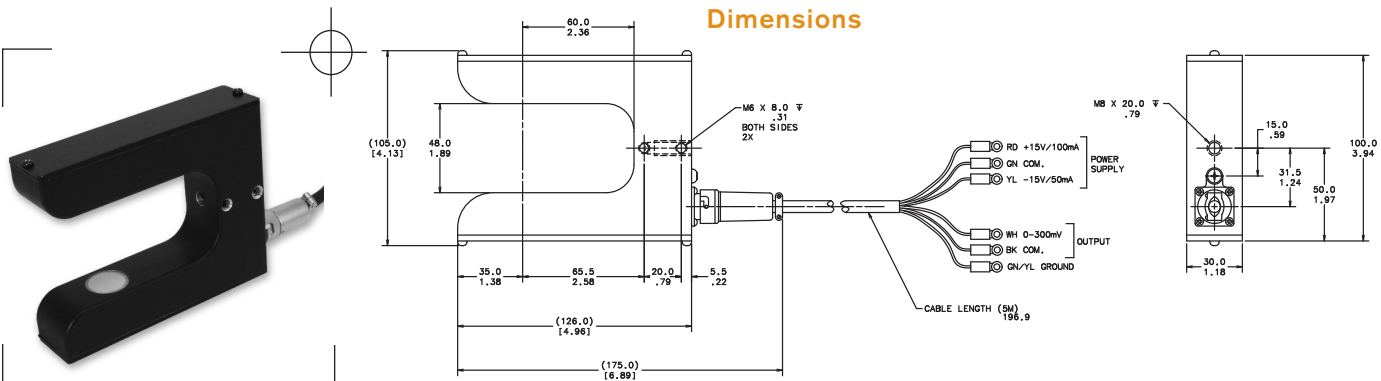
Detection line width	0.008" [0,2 mm] or greater (may differ depending on color or gradation of the line.)
Field of View	0.1"/0.2"/0.4" [2,5/5/10 mm] diameter (selectable)
Resolution	0.0005" [14µm]
Light receiving element	CCD linear image sensor.
Light source.	High luminance LED (2 colors; blue and red)
Power supply	+15V DC, 300 mA, -15V DC, 50 mA
Output	Position Signal
	Detection Field View 2.5 mm (0.2 mV to 0.4 mV low) (2.0V DC to 3.2V DC high).
	Detection Field View 5 mm (0.2 mV to 0.5 mV low) (1.4V DC to 3.8V DC high).
Actuator/Lock Signal	Detection Field View 10 mm (0.9 mV to 0.6 mV low) (0.1mV to 5.1V DC high).
	Open collector 30V, 0.1A or less ON when the target is lost from the field of view.
Mass	LH100: 1.3 Lb. [0.6 kg] (Including cable). Mounting Bracket: 1 Lb. [0.5kg]
Attached cable length.	16 Ft. [5m]
Ambient temperature	32° to 122°F [0° to 50° C]

LH 100 Line Follower Sensor

Product Number 912119

This sensor reflects light off a web and receives it back in the same sensor housing as the light emitter. The light source is an array of red and blue LED's. Superior optics allow following very low contrast guide lines as well as pattern edges. The LH 100 has a self focusing feature to simplify calibration. It can be used for sensing printed lines, pattern edges (either left or right) and for edge sensing either transparent or opaque webs.

LH 100 is provided with a mounting bracket featuring a micro adjustment screw for fine adjustment.



Dimensions

UH 01 Ultra Sonic Sensor

Product Number 912153

The UH 01 senses opaque or transparent edges, even if the transparent film has coating or printing which on occasion reaches the edge of the film. Because the sensing medium is ultra-sonic, the UH 01 is ideally suited for use with any photo sensitive material.

UH 01 is provided with a mounting bracket featuring a micro adjustment screw for fine adjustment.

Specifications

Center frequency	220 KHz
Sensor gap	1.89 in. (48 mm)
Measuring width	.031 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. (0,45 Kg)
Ambient temperature	32° F-120° F (0° C-50° C)
Cable length	16 ft. (5m)

CENTER PIVOT WEB GUIDES

Controlled alignment for reduced scrap, increased line speeds and improved roll quality.



Center Pivot Web Guides

Web guiding without side-to-side distortion or wrinkling.

Center Pivot Web Guides won't cause wrinkling because they don't create the side-to-side tension variations that end pivot guides do. Also, unlike end pivot guides, they can operate when mounted in any position.

Center pivot guiding is the kindest to your webs. Its configuration generally requires smaller lead-in and lead-out distances than end pivot guiding. Proper correction takes fewer degrees of roll movement. Less web movement means less stress on the web and a shorter lead-out distance is needed to stabilize tension. This makes the whole guiding system more compact and reduces "hunting" and over-correcting that requires slower web speeds and increases waste.

Applications

- **Mid-process**
- **Web converting**
- **Web printing**
- **Web slitting**
- **Web coating**

Choose from 3 styles

The Self-Contained Center Pivot Web Guide models have a Nexen linear actuator, automatic centering sensor, controller and web guide sensor built right into the guide roll mechanism. You simply mount it and provide 100-240 VAC power.

The Small Free Standing Web Guides have an actuator and automatic centering sensor built into the guide roll mechanism. These models come in standard roll lengths of 9" (229mm), 12" (305mm) and 15" (381mm), and require a 16 foot (5M) interface cable.

The Large Free Standing Web Guides also have a built-in actuator, an automatic centering

sensor and include a 16 foot (5M) interface cable. They come in standard roll lengths of 18" (457mm), 21" (533mm), 24" (610mm), 28" (711mm) and 32" (813mm). The Free Standing models let you choose from a wide range of sensors and controllers to best suit your application.

Features and Benefits

- Self-contained guides are a complete package and completely pre-wired. Simply mount and supply 100-240 VAC.
- Web correction without wrinkles. These guides make the proper corrections to keep your web at highest speeds with the least amount of stress.
- Optional roll finishes accommodate materials with differing coefficients of friction, such as polished films and rubber sheets.
- Completely U.S.A. made.
- Ideal for tight installations because they operate when mounted in any position.
- Complete technical support and field service available.
- A complete line of sensors, tension control systems and tension control clutches and brakes from Nexen let you match components and systems that best meet your needs.

How Nexen gives you worry-free, wrinkle-free web guiding.

Nexen Center Pivot Web Guides let you run your web with minimal waste and set-up because you make corrections on-the-fly at high speeds.

Corrections are made without side-to-side tension distortions that cause wrinkles. This also minimizes web stress that can cause web breaks.

Operation and installation are simple. The web guides can operate when mounted in any position (Figure 1). Entry guide rolls and exit guide rolls are part of the web guide mechanism.

Lead-in and lead-out rolls are customer supplied (Figure 2). Calculate lead-in and lead-out distances and mount the web guide. Lead-in and lead-out distances should be at least as long as the web width. Preferably, these distances are 1.25 times the web width.

On the Free Standing Web Guides, mount the sensor between the exit guide roll and the lead-out guide roll (Figure 2). The sensor is already properly mounted in the Self-Contained Web Guides.

The web always enters the unit on the pivot side and exits on the sensor side.

Large Free Standing Center Pivot Web Guide

Guide Roll

Turned and ground aluminum. Available in 5 roll lengths. Optional finishes available.

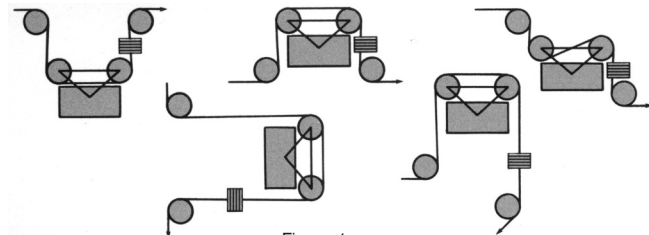
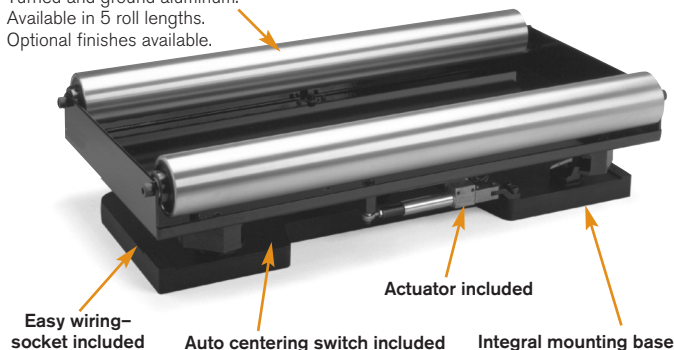


Figure 1

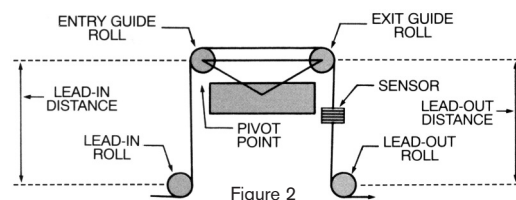


Figure 2

LARGE CENTER PIVOT WEB GUIDES

Controlled alignment for reduced scrap, increased line speeds and improved roll quality.

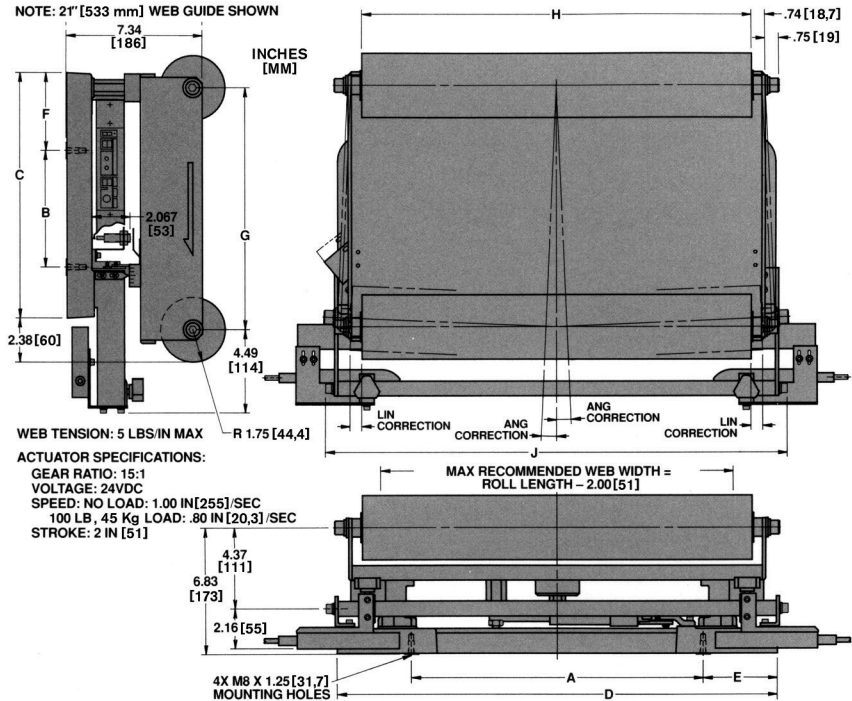
Large Center Pivot Web Guides Specification Chart

Available Roll Widths	18"(457mm), 21"(533mm), 24"(610mm), 28"(610mm), 32"(813mm)
Standard Roll Finish	Turned and ground Aluminum
Optional Roll Finishes	Coatings & Coverings: Hard-coated aluminum, mirror-finish hardcoat, electroless nickel plating, chrome plating, rubber covering, matte finish.
Motor Specifications	1 inch (25 mm)/second standard, 24 V DC
Sensor	PH 16 standard

If other options are desirable, please call factory for availability.

External Dimensions

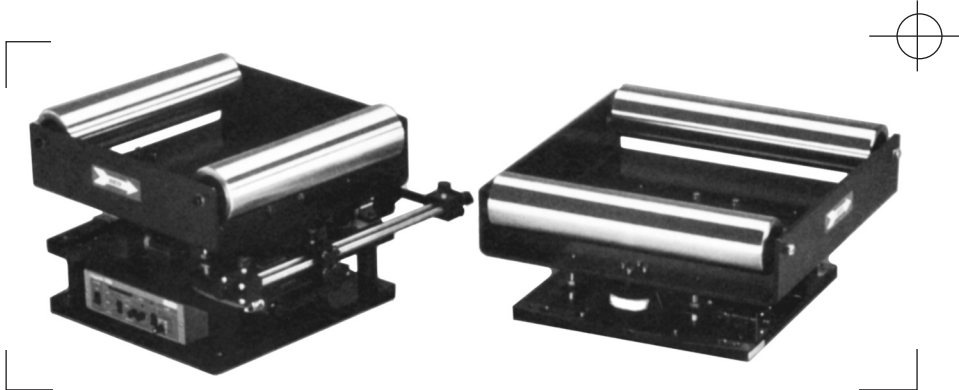
Self-Contained and Large Free Standing Center Pivot Web Guides



MODEL	PRODUCT NUMBER	CORRECTION*		A	B	C	D	E	F	G	H	J
		ANG	LIN									
18" [457 mm] WEB GUIDE	RT AE 120, LT SENSOR 964100											
	LT AE 120, RT SENSOR 964101	3.00°	0.78	17.00	7.50	13.24	20.77	1.89	4.20	13.05	18.00	21.92
	RT AE 120, 2 SENSORS 964102		[20]	[432]	[191]	[336]	[515]	[48]	[107]	[331]	[457]	[557]
	LT AE 120, 2 SENSORS 964103											
	FREE STANDING W/O AE 120 & SENSORS 964104	4.50°	1.16									N/A
21" [533 mm] WEB GUIDE	RT AE 120, LT SENSOR 964110											
	LT AE 120, RT SENSOR 964111	2.50°	0.68	15.75	6.30	13.24	23.77	4.01	4.20	13.05	21.00	24.92
	RT AE 120, 2 SENSORS 964112		[17]	[400]	[160]	[336]	[604]	[102]	[107]	[331]	[533]	[633]
	LT AE 120, 2 SENSORS 964113											
	FREE STANDING W/O AE 120 & SENSORS 964114	4.10°	1.06									N/A
24" [610 mm] WEB GUIDE	RT AE 120, LT SENSOR 964120											
	LT AE 120, RT SENSOR 964121	2.20°	0.57	15.75	6.30	13.24	23.77	4.01	4.20	13.05	24.00	27.26
	RT AE 120, 2 SENSORS 964122		[14]	[400]	[160]	[336]	[604]	[102]	[107]	[331]	[610]	[692]
	LT AE 120, 2 SENSORS 964123											
	FREE STANDING W/O AE 120 & SENSORS 964124	4.70°	1.22									N/A
28" [711 mm] WEB GUIDE	RT AE 120, LT SENSOR 964130											
	LT AE 120, RT SENSOR 964131	1.90°	0.55	27.00	9.50	15.24	31.77	2.39	4.45	15.05	28.00	32.92
	RT AE 120, 2 SENSORS 964132		[14]	[686]	[241]	[387]	[807]	[61]	[113]	[382]	[711]	[836]
	LT AE 120, 2 SENSORS 964133											
	FREE STANDING W/O AE 120 & SENSORS 964134	4.05°	1.19									N/A
32" [813 mm] WEB GUIDE	RT AE 120, LT SENSOR 964140											
	LT AE 120, RT SENSOR 964141	1.65°	0.48	27.00	9.50	15.24	31.77	2.39	4.45	15.05	32.00	35.26
	RT AE 120, 2 SENSORS 964142		[12]	[686]	[241]	[387]	[807]	[61]	[113]	[382]	[813]	[896]
	LT AE 120, 2 SENSORS 964143											
	FREE STANDING W/O AE 120 & SENSORS 964144	4.05°	1.19									N/A

SMALL CENTER PIVOT WEB GUIDES

Controlled alignment for reduced scrap, increased line speeds and improved roll quality.



9"(229mm) & 12"(305mm) Web Guides

Nexen Center Pivot Web Guides are engineered to provide excellent web positioning at mid-process locations, eliminate wrinkling, allow maximum flexibility in component location, and enhance ease-of-operation.

Selecting a Web Guide is Easy

- Determine the roller face length you require. Typically, this is 2" (100 mm) greater than the width of your web. These guides have roll faces from 9" to 12".(229 mm to 305 mm) Consult your Nexen representative for other sizes.
- Select a controller. Available options currently available are:
 - AE 120 Self-contained for compact mounting of the controller integral with the guide.
 - AE 120 Separate—The same controller, but mounted remotely. (Order controller separately.)
- Select Controller mounting (applicable to AE 120 self-contained only). Choices are:
 - GC 300—Full function controller to handle international power requirements and/or unusual sensor requirements. (Order GC 300 separately.)
 - Controller mounted on the left or right side, referenced to the direction of web travel.
 - Controller mounted normally, or inverted. In an inverted mounting position, the rollers are below the base. (See dimensional drawing).
- For free-standing applications (where the controller is ordered and mounted separately from the guide) select the necessary cable length. Available lengths are 16' (4,88M) and 35'(10,67M). No cable is required for self-contained units. They come totally pre-wired.
- Select a sensor:
 - None—If you want to mount the sensor remotely from the guide. (Order your sensors separately.)
 - PH 16—LED-based sensor for paper and similar opaque material.
 - UH 21— Ultrasonic sensor for transparent material and paper.
- For configurations that include sensor (i.e. either the PH 16 or the UH 21 in Step 5), select the sensor mounting.

Available choices are:

 - Left—to have the sensor mounted on the left side (looking in the direction of the web travel).
 - Right—to have the sensor mounted on the right side.
 - Both—to have two sensors mounted one each side for center guiding applications.

Product Selection Guide and Ordering Information

Determining the product number for your configuration

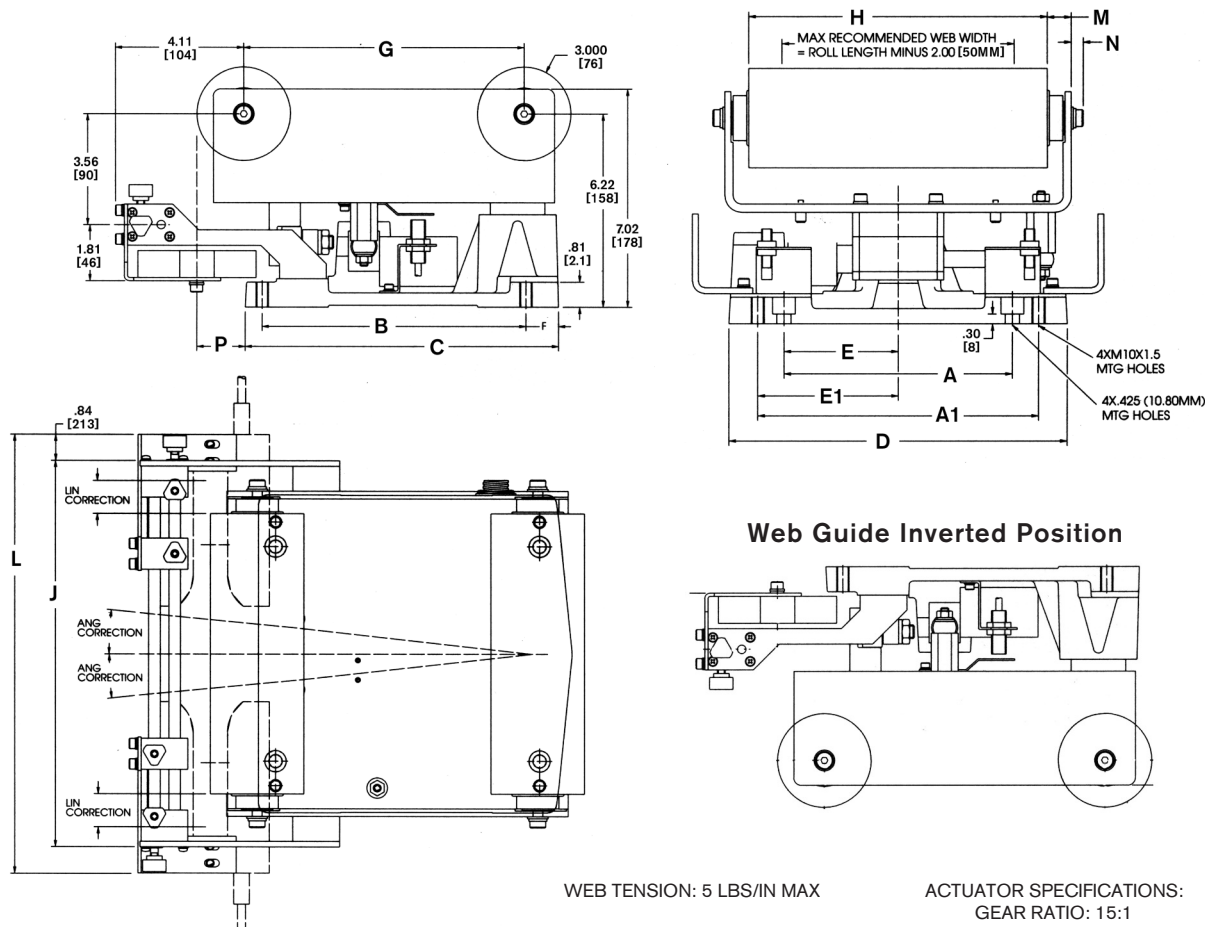
Example: WG-9-A-LN-NA-U-R

Roller Size	Controller	Control Mounting	Cable Length	Sensor	Sensor Mounting
9"	A = AE 120 Self-Contained	LN = Left Normal	NA = None	N = None	N = None
12"	E = AE 120 Separate	RN = Right Normal	16 = 16 feet long	P = PH 16 LED	L = Left
	F = GC 300 Mounted Separate	LI = Left Inverted	35 = 35 feet long	U = UH 31 Ultrasonic	R = Right
		RI = Right Inverted			B = Both
		NA = Not Applicable			

Please use the Web Guide Product List on the next page to specify any configuration not listed here.

SMALL CENTER PIVOT WEB GUIDES

Controlled alignment for reduced scrap, increased line speeds and improved roll quality.



9"(229mm) & 12"(305mm) Web Guide Dimensions

MODEL	CORRECTION*		A	A1	B	C	D	E	E1	F	G	H	J	L		M	N	P
	ANG	LIN												NOM**	MAX			
9" [229 mm] CENTER PIVOT	6.00°	1.06 [27]	6.890 [175]	8.465 [215]	8.465 [215]	10.05 [255]	10.20 [259]	3.44 [87,4]	4.23 [107,4]	1.04 [26]	9.000 [229]	9.000 [229]	12.40 [315]	14.08 [358]	16.68 [424]	0.72 [18]	0.36 [9]	1.54 [39]
12" [305 mm] CENTER PIVOT	6.00°	1.36 [35]	9.890 [251]	11.465 [291]	11.465 [291]	13.05 [331]	13.20 [335]	4.94 [87,4]	5.73 [107,4]	1.04 [26]	12.000 [305]	12.000 [305]	15.40 [391]	17.08 [434]	19.68 [500]	0.72 [18]	0.36 [9]	1.54 [39]

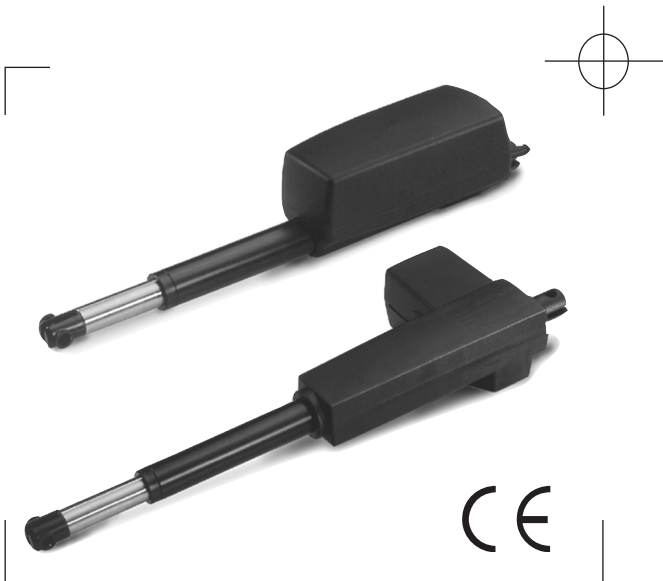
Small Center Pivot Web Guides Sample Product list

Product Number	Roll Width	Controller	Sensor	Configuration Number	Product Number	Roll Width	Controller	Sensor	Configuration Number
964220	9	AE 120, Left	PH 16	WG-9-A-LN-NA-P-L	887011	12	AE 120, Right	PH 16	WG-12-A-RN-NA-P-B
964221	9	AE 120, Right	PH 16	WG-9-A-RN-NA-P-R	887012	12	AE 120, Left	PH 16	WG-12-A-LN-NA-P-R
887003	9	GC 300, Not Included	PH 16	WG-9-F-NA-16-P-R	887017	12	AE 120, Left	UH 21	WG-12-A-RN-NA-U-R
887010	9	AE 120, Not Included	UH 21	WG-9-E-NA-16-U-L	887005	12	AE 120, Not Included	PH 16	WG-12-A-RN-NA-P-R
887000	12	AE 120, Right	PH 16	WG-12-A-RN-NA-P-R	887013	12	GC 300, Not Included	PH 16	WG-12-F-NA-16-P-L
887001	12	AE 120, Left	PH 16	WG-12-A-LN-NA-P-L	887014	12	AE 120, Not Included	UH 21	WG-12-E-NA-16-U-R
887002	12	AE 120, Left, Inverted	PH 16	WG-12-A-LI-NA-P-L	887111	12	AE 120, Not Included	PH 16	WG-12-E-NA-16-P-B
887009	12	AE 120, Right	PH 16	WG-12-A-RN-NA-P-L	887112	12	GC 300, Not Included	PH 16	WG-12-F-NA-16-P-R
Please use the Configuration Guide on previous page to specify any configuration not listed here.									

Please use the Configuration Guide on previous page to specify any configuration not listed here.

LINEAR ACTUATORS

Accurate, positioning of roll stands for web guiding applications



Linear Actuators Specifications

Product Number	Speed Per Sec. Inches [mm]	Thrust lbs. [newtons]	Stroke inches [mm]	Environ- Power volts amps	mental Protection Rating
912730	.35 [8,89]	600 [2669]	4 [100]	24 VDC 4.5 max	IP51*
912731	.35 [8,89]	600 [2669]	6 [150]	24 VDC 4.5 max	IP51*
912732	.35 [8,89]	600 [2669]	12 [300]	24 VDC 4.5 max	IP51*
912733	.39 9,91	900 4000	8 200	24 VDC 4.5 max	IP51*
912734	.39 9,91	900 4000	12 300	24 VDC 4.5 max	IP51*

* Protected against the ingress of dust and dripping water

Linear Actuators

Nexen's Linear Actuators provide the thrust that is required to move an unwind stand, a wind up roll stand or to convert an existing hydraulically actuated web guiding mechanism to electrical actuation.

Nexen's Linear Actuators are available in several models with different strokes.

To ensure optimum response and accuracy, roll stands should be mounted on linear ball bearings. Sliding ways and wheel track systems have higher coefficients of friction which requires greater break away thrust. Greater break away thrust prevents accurate, minute corrections.

CAUTION—Do NOT use the Linear Actuator for Radial (side) loads. The Linear Actuator is designed for axial (thrust) loads ONLY.

MAINTENANCE
Apply a few drops of light machine oil to the actuating rod. The frequency in which the Linear Actuator will require lubrication depends upon the working environment.

Features:

- 24 VDC permanent magnet motor
- Built-in, end limit switches
- Strong plastic housing protects motor and gear.
- Scratch-and wear-resistant powder painted outer tube
- Elegant and compact design with small overall dimensions
- 2000 mm (78.74") straight cable with DIN plug
- Protection class: IP51
- Ambient temperature: +41°F [5.0°C] to +104°F [40.0°C]
- Black in color
- Steel piston rod eye
- Zinc alloy back fixture
- CE marked

Limit Switch Adjustments

Linear Actuator Product Numbers 912730, 912731, 912732

These actuators have adjustable internal limit switches. If there is a physical obstruction or stop, then the Limit Switches can and must be adjusted to interrupt the Linear Actuator's movement before contact is made with the physical obstruction or stop.

If there is no physical obstruction to travel, then the Limit Switches may be left in their factory set default positions.

Linear Actuator Product Numbers 912733, 912734

These actuators have nonadjustable internal limit switches that are factory pre-set for the maximum stroke length. For applications that require less than the maximum stroke, an external limit switch connected to the web guide controller, must be installed.

If there is a physical obstruction or stop that prohibits the use of the maximum stroke length, then an external limit switch MUST be installed to interrupt the Linear Actuator's movement before contact is made with the physical obstruction or stop.

Failure to use an external limit switch will damage both the Linear Actuator and the web guiding mechanism.

If there is no physical obstruction to travel, then the nonadjustable, internal limit switches may be used in their default position for maximum stroke length.

Failure to use and adjust Internal or External Limit Switches properly, can damage both the Linear Actuator and the Web Guiding Mechanism.

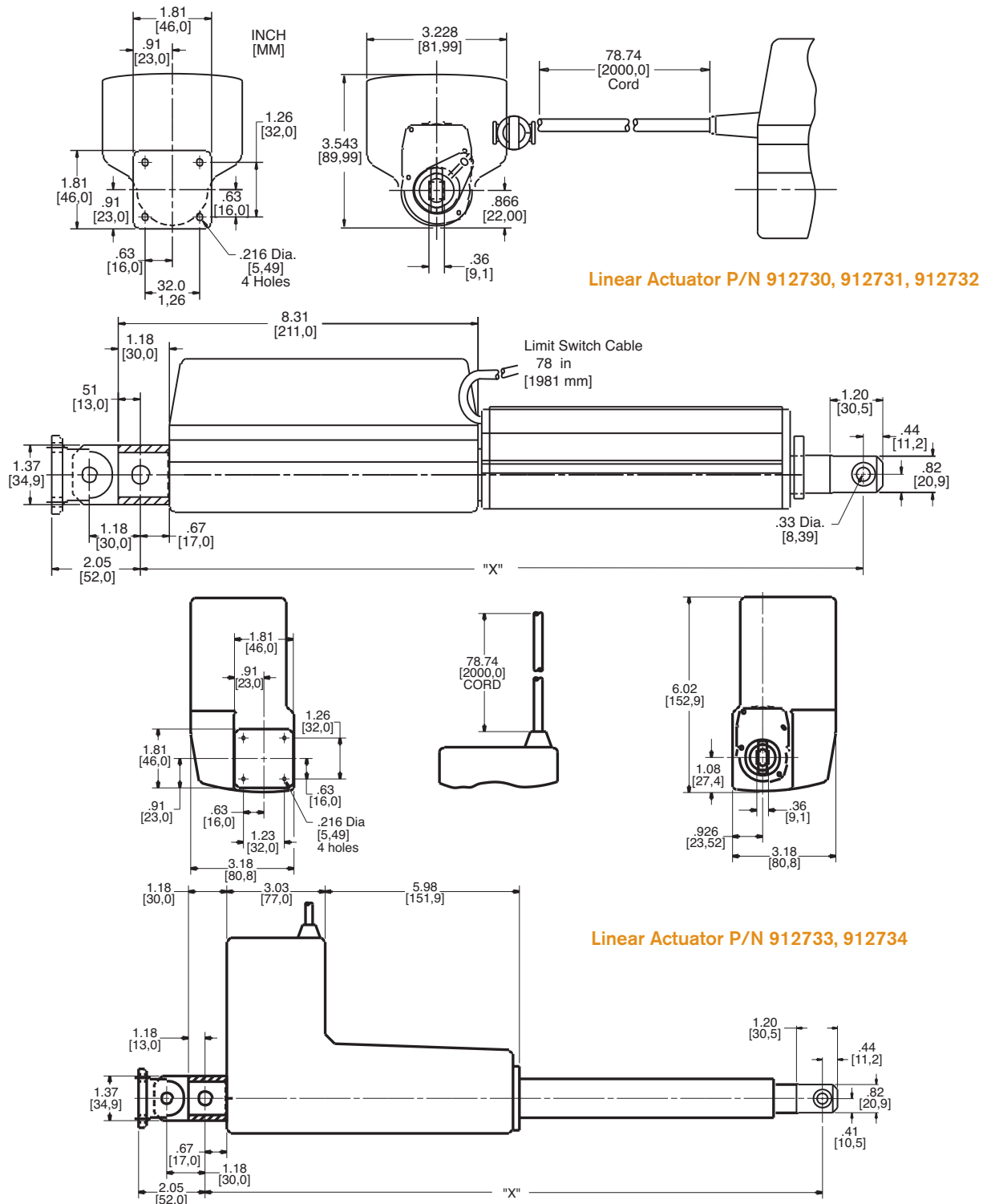
LINEAR ACTUATORS

Accurate, positioning of roll stands for web guiding applications

Linear Actuator Dimensions

Product Number	Description	Stroke	Dimension "X"
912730	Linear Actuator 600	4 [102]	14.68 [372,9]
912731	Linear Actuator 600	6 [152]	16.68 [423,7]
912732	Linear Actuator 600	12 [305]	22.68 [576,1]

Product Number	Description	Stroke	Dimension "X"
912733	Linear Actuator 900	8 [203]	15.18 [385,6]
912734	Linear Actuator 900	12 [305]	18.93 [480,9]



TA 100B/TA 110B TRANSDUCER AMPLIFIERS

Superior signal conditioning for web position sensors.



TA 100B and TA 110B Transducer Amplifiers

Designed to interface with one PH 16 or UH 21 Web Guide Sensor to provide a 0-10 VDC or 4-20mA indication of the position of the web edge.

Used where a position feedback signal is needed to close a control loop; or where position indication only is required, without control.

These amplifiers are ideal when you need low cost, accurate web position indication interfaced with machine controls. Applications include input for data loggers, process controllers. Host computers or other applications that require a precise tension interface.

Choose chassis-mount model for concealed OEM installations.

The chassis-mount style of the TA 110B makes it ideal for installations in cabinets or enclosures.

Choose fully enclosed model for easy retrofit.

The TA 100B comes complete with a NEMA-12 enclosure, making it a good choice when adding on to an existing tension control drive or other retrofit installation.

Specifications

Model	TA 100B - 110 VAC, Enclosed	Product Number	964414
Model	TA 110B - 110 VAC, Chassis	Product Number	964415
Input power	110 VAC, 50/60 Hz, 1 Phase; Prewired 8 ft. [2.4 m] power cord for TA 100B		
UL and ULC Listed	Enclosed model only		
Sensor compatibility	Any Nexen PH 16 or UH 21 Web Position Sensor		
Outputs	0-10 VDC, 4-20 mA		
Operating temperature	50°F to 120°F (10°C to 50°C)		
Operating humidity	10% to 90% relative non-condensing		
Storage temperature	-30°F to 150°F (-35°C to 65°C)		
Storage humidity	10% to 90% relative non-condensing		

