

Group	Slides	Date	unknown
Series	URS33, URS46, and URS55	Revised	1/8/2008
Element Group	Wiring	Revision	2
Element	Photoelectric position sensors	Author	J. Coleman, E. Blanchard
		# Of Pages	4

URS33, 46 and 55 Limit Switch Wiring

Languages	Target Group	Status	Usage	International Restrictions
<input checked="" type="checkbox"/> English	<input type="checkbox"/> Basic	<input type="checkbox"/> In Process	<input type="checkbox"/> Internal	<input checked="" type="checkbox"/> Citizens/Nationals of U.S.A.
<input type="checkbox"/> German	<input checked="" type="checkbox"/> Normal	<input checked="" type="checkbox"/> Completed	<input checked="" type="checkbox"/> Public	Non-Restricted Countries, End
<input type="checkbox"/>	<input type="checkbox"/> Specialist			<input checked="" type="checkbox"/> Uses, and End Users (www.bis.doc.gov)

checked = allowed to view

About the Content:

This document contains a wiring diagram, timing chart and instructions to wire a URS33, URS46, or URS55 photoelectric position sensor.

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Introduction

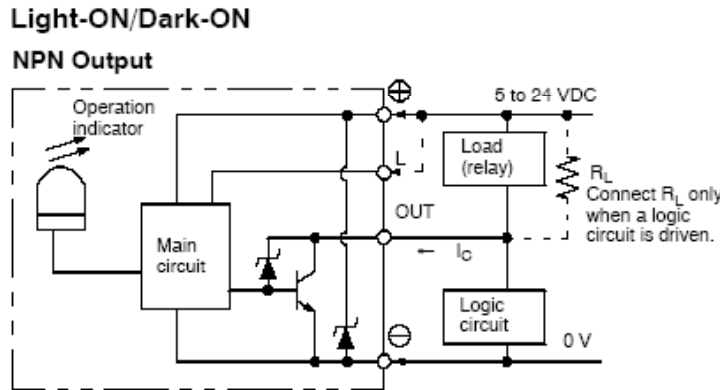
First decide if you need/want a Normally Closed, Active Low signal or Normally Open, Active High signal. The diagram and timing chart below refer to Light-ON and Dark-ON.

Dark-ON = Normally Open, Active Low
 Light-ON = Normally Closed, Active High

The wire leads coming from the NPN photoelectric position sensors are Brown, Black, Blue, and Pink.

- Blue ground line (-)
- Brown positive (+) line
- Black output line
- Pink L line.

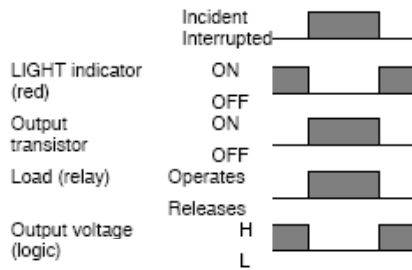
Internal/External Circuit Diagram



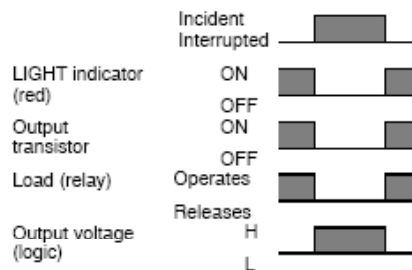
*Diagrams and chart below from OMRON EE-SX670/671/672/673/674/A/R manual

Timing Chart

Light-ON



Dark-ON



Instructions

To wire the sensor to be **Normally Open/Active Low**, you will need to only attach the blue, black, and brown wires (pink should be left “hanging” or cut). To wire the sensor to be **Normally Closed/Active High** connect the pink wire to the brown wire.

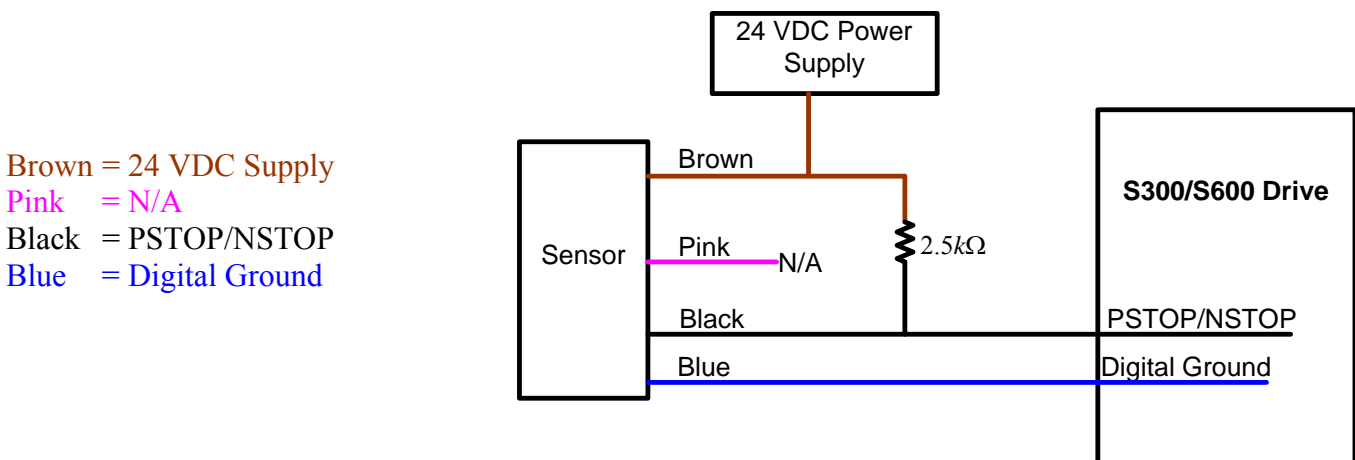
Resistors

The diagram above shows the potential need for a resistor between the brown and the black wires. For 5V use a 500 Ω resistor and for a 24V supply, use a 2.5kΩ resistor.

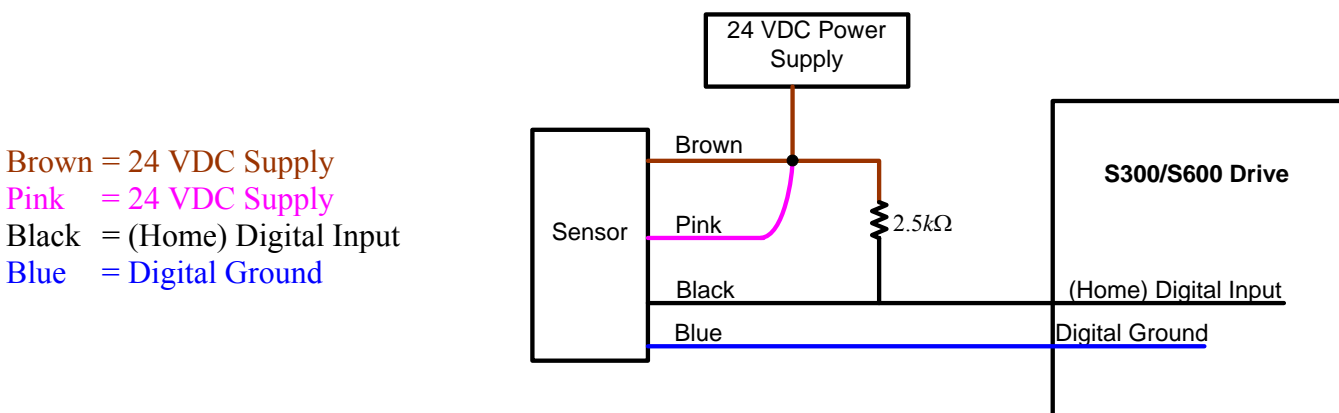
S300/S600 Wiring Diagram

The photoelectric position sensors for the URS 33, 46 and 55 are NPN sensors. The manual for the S300/S600 indicates that PNP limit switches should be used. The photoelectric sensors for the URS will work if the following instructions and diagrams are followed correctly. The following diagrams show the wiring for the photoelectric position sensors to the S300 and S600 drives.

PSTOP/NSTOP Limit Switch



Home (Machine Home Reference) Switch / Digital Input



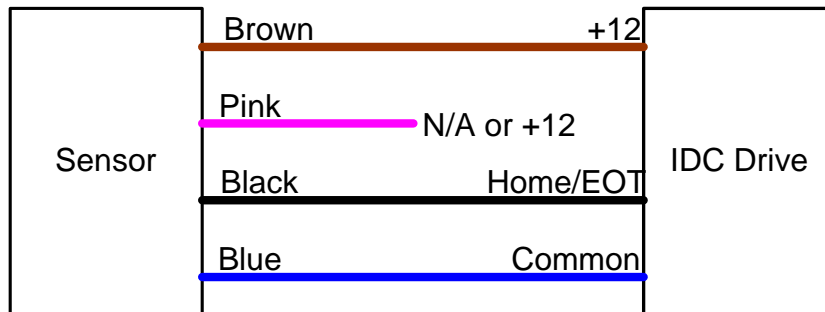
IDC Drives

The following diagrams show the wiring for the photoelectric position sensors to the IDC branded drives.

EOT/Home

EOT = End Of Travel

EOT or Home set to Normally Open: Pink wire not connected
 EOT or Home set to Normally Closed: Pink wire connected to 12V



For Discrete Inputs

