

Ultrasonic Sensors With Analog Output

Technical Data Sheet

P-1256-WE
819-0455

Model: UT30UP-DCA4-1016-CSI
Part Number: 7600-448-001

Model: UT30UP-DCA4-2032-CSI
Part Number: 7600-448-002



 **Warner**[®]
Electric

An **Altra Industrial Motion** Company

Ultrasonic Sensors

with Analog Output

4-20mA and 0-10V

Wire selectable inverted or non-inverted outputs



Threaded plastic barrel
M 30 x 1.5



Threaded plastic barrel
M 30 x 1.5

Sensing range		101..1016 mm (4-40")	203..2032 mm (8-80")
Switching functions/output		Analog 4-20mA and 0-10V	Analog 4-20mA and 0-10V
Ordering Information	Model description Part number	UT30UP-DCA4-1016-CSI 7600-448-001	UT30UP-DCA4-2032-CSI 7600-448-002

Electrical data

Voltage range	min./max.	20-30V DC reverse polarity protected	20-30V DC reverse polarity protected
Input current		50mA	50mA
Transducer frequency		212 KHz	150 KHz
Short circuit protected		Yes	Yes
LED - (strength indicator)		Yes - green to red; see (Note D)	Yes - green to red; see (Note D)
Response time		30 mSec	50 mSec
Range control		Zero and span (2 potentiometers)	Zero and span (2 potentiometers)

Mechanical Data

Temperature range	min./max	0°C/+60°C / 32°F/140°F	0°C/+60°C / 32°F/140°F
Degree of protection		IP 65/NEMA 12	IP 65/NEMA 12
Body material		Valox plastic	Valox plastic
Termination	cable 2 m/6 ft. Plug/socket	PVC 4 x 22 gauge Versions available to order	PVC 4 x 22 gauge Versions available to order
Accessories		1) Brackets	1) Brackets
Humidity		0-95% non-condensing	0-95% non-condensing

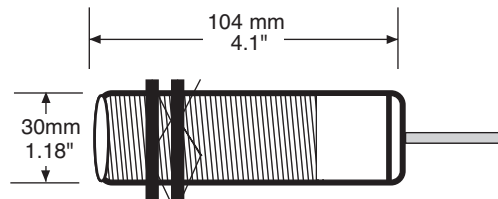
1) Brackets for M 30 x 1.5

Ordering Information

Plastic - BK5-D34PA
Part number 596-0223-041

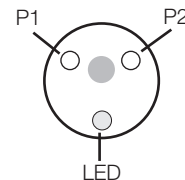
Metal - M 30 ST
Part number 7430-448-003

Dimensions

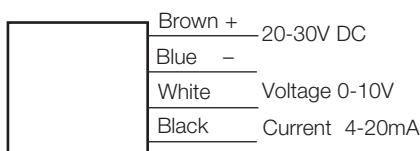


Adjustment Pots

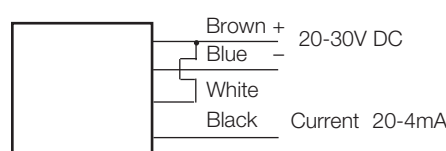
Zero and Span Control



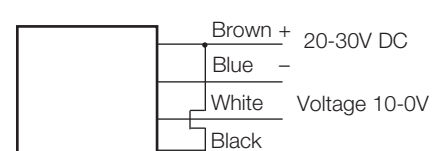
Wiring Data



Non Inverted Output



Current Output Inverted



Voltage Output Inverted

Operation and Set-Up

Minimum Analog Ranging

Minimum analog ranging is when you desire to have the full 4-20mA or 0-10V output over the minimum 5 inch sensing span. 5 inches of minimum sensing span can be adjusted anywhere in the sensing range. For example 10"-15" or 25"-30". To make this adjustment, you place your target at the minimum sensing range and adjust P1 to 4mA. Then move your target to the maximum sensing range and adjust P2 to 20mA. Re-check the readings and make appropriate adjustments, if necessary. See diagram (A).

Maximum Analog Ranging

Analog sensing in the maximum range means utilizing the entire 36" span (4"-40") and 72" span (8"-80"). To adjust, set your target at the minimum range, either 4" or 8" and adjust P1 to 4mA. Move the target to the maximum range and adjust P2 to 20mA. Re-check readings and make appropriate adjustments, if necessary. See diagram (B).

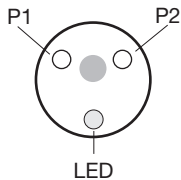
Inverted Analog Outputs

Inverted outputs means that the 4-20mA or 0-10V output signal will decrease proportionally with distance. To adjust, place your target at the minimum sensing distance and adjust P1 to 20mA. Place your target at the maximum sensing distance and adjust P2 to 4mA. Re-check readings and make appropriate adjustments, if necessary. See diagram (C).

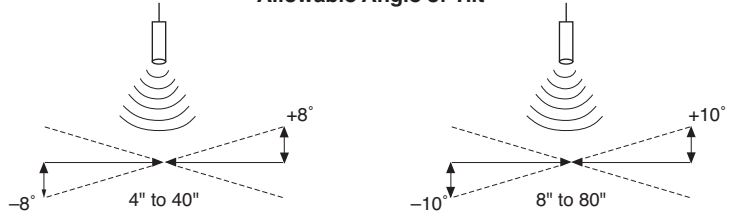
LED Operation (Note D)

The LED is green when the unit is powered up. It will fade to red as a target is detected with increased intensity as more signal is being reflected from the target. Note: Any color other than green equals a workable signal level.

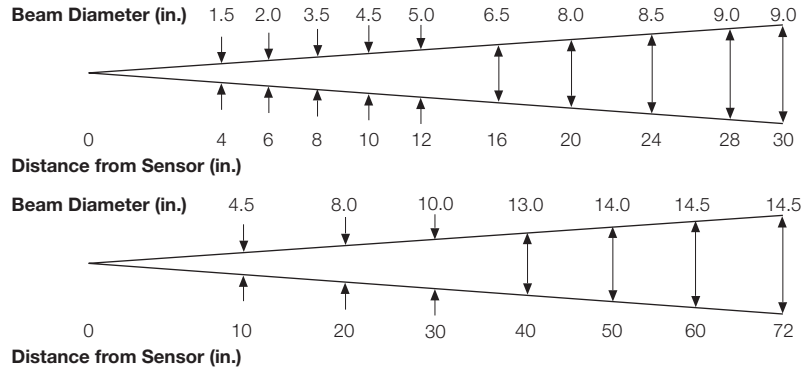
Adjustment Pots Zero and Span Control



Allowable Angle of Tilt



Beam Spread vs. Target Distance



Minimum Analog Ranging

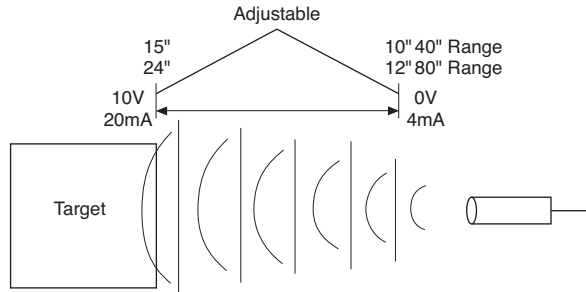


Diagram A

Maximum Analog Ranging

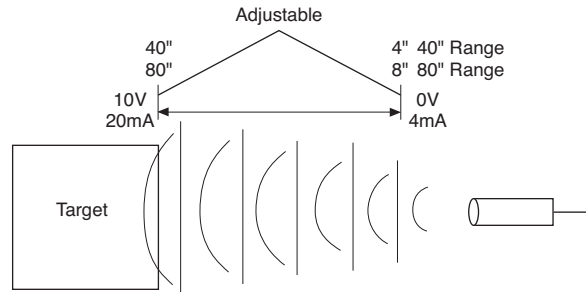


Diagram B

Inverted Analog Ranging

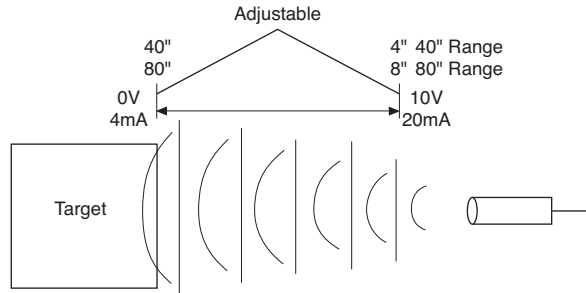


Diagram C

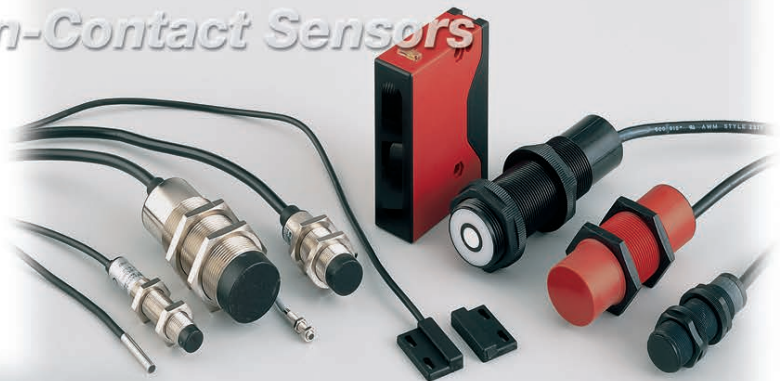
Sensors, Industrial Switches and Safety Technology Products

Warner Electric has many years of experience in applying sensors in motion control applications. Warner Electric's broad range of innovative and technologically advanced product range offers our customers the exact solution to satisfy their sensing applications.

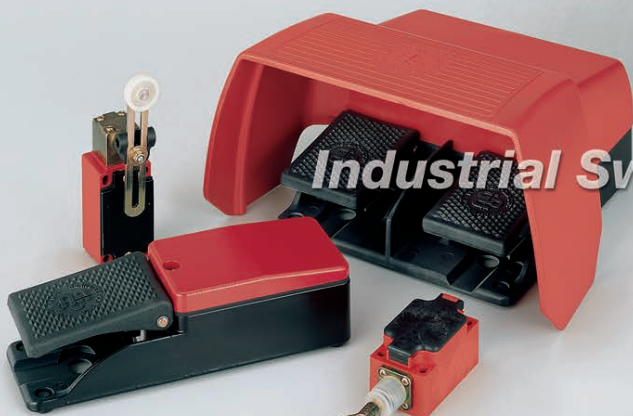
Our full product range is available through more than 800 distributor locations, throughout the United States, Canada and Mexico.

Local Sales Support is provided by a well trained sales force that is backed up by Application Engineering providing immediate technical support.

Non-Contact Sensors



Industrial Switches



Non-Contact Sensors

- Photoelectric Sensors
- Ultrasonic Sensors
- Inductive Proximity Sensors
- Capacitive Sensors
- Magnetic Sensors

Industrial Switches

- Limit Switches
- Foot Switches
- Cable Pull Switches

Safety Technology Products

- Safety Interlocks
- Cable Pull Switches
- Coded Magnetic Monitoring Systems

Safety Technology Products



Approvals and Certification

Each model is individually identified with its own certification. Documentation is available upon request.



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