

# Honeywell

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## Honeywell Sensing and Control

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Representative photograph,  
actual product appearance  
may vary.

- ▣ Installation  
Instructions -  
Multiple Languages
- ▣ Accessory: Power  
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## 942-MOA-2D-1G1-220S

Series 942 Separate control box, 1,500 mm [59.0 in] scan dist  
two analog outputs (0 Vdc to 10 Vdc and 4 mA to 20 mA) , two  
switching outputs PNP and digital link, to use with 942 or 947  
head

### Features

Four models with scan ranges from 0.9 m to 3,0 m  
[2.95 ft to 9.84 ft]  
Stainless steel M30 heads, IP65  
Plastic control box with screw terminals, IP 40  
Synchronising/hold input: To avoid mutual interference from several sensors, they are very sim  
synchronised by connecting their synchronising/hold input (pin 4) together. If the measure need  
stopped, connect the synchronising/hold input to the ground; the output stays stable.  
Ultrasonic beam power (sensitivity) adjustable by switch  
Four switching outputs, Open collector PNP: set points 1 and 2, adjustable by coded wheels ; L  
(target close), Overrange (target far or absent).  
NO/NC adjustable by switch  
Two Analog outputs (4 mA to 20 mA and 0 Vdc to 10 Vdc)  
Temperature compensation

### Typical Applications

Loop control  
Tank level measurement (liquids, crops, etc.)  
Reel diameter measurement  
Tire manufacturing

### Description

The 942 separate series are industrial controls performing distance  
measurement by using an ultrasonic beam. They are the most versat  
sensors of all the product range; they feature two analog outputs (4  
20 mA and 0 V to 10 V), Four switching outputs, parallel data output:  
serial link RS-232. The sensor head has no adjustment and may be n  
in the most remote or difficult places (top of tanks, inside of machine  
places.) The control box is mountable on DIN rail; it houses all the  
adjustments. Adjustment can be performed in a matter of seconds vi  
coding wheels and switches on the front panel of the control box. Adv  
programming is done on a PC, connected with the RS-232 link. The s  
(under Microsoft Windows) provides a very easy man-machine interf  
extended possibilities: Digital Signal Processing parameters, cycle tin  
slope, etc.

942-M3A kits includes control box, cable, connector and head; a programming kit including soft  
RS-232 cable may be purchased separately.

Product Specifications	
Sensing Range	150 mm to 1,500 mm [6.0 in to 59.0 in]

<b>Range Type</b>	Middle range 1,0 m to 2,0 m [39.0 in to 79.0 in]
<b>Supply Voltage</b>	19 Vdc to 30 Vdc
<b>Oscillating Frequency</b>	220 KHz
<b>Integrated Temperature Compensation</b>	Yes
<b>Repeatability</b>	± 0.2 % ± 1,0 mm [0.039 in]
<b>Output Type</b>	Analog 4 mA to 20 mA, RS-232 Interface, Switching 2 x F Analog 0 Vdc to 10 Vdc
<b>Switching Output Type</b>	1 Normally Open/1 Normally Closed
<b>Response Time</b>	60 ms (target moving < 1 m/s)
<b>Response Time (Target Present/Absent)</b>	300 ms
<b>Max. Switching Frequency</b>	8 Hz
<b>Adjustment Method</b>	Thumb Wheels or PC software
<b>Analog Output Slope Selection</b>	Thumb Wheels or PC software
<b>Operating Temperature Range</b>	0 °C to 50 °C [32 °F to 122 °F]
<b>Storage Temperature</b>	-25 °C to 85 °C [-13 °F to 185 °F]
<b>Linearity</b>	0.3 % ± 2,0 mm [0.079 in]
<b>Load Resistance</b>	> 1.45 Kohm (Voltage), < 250 Ohm (Current)
<b>Maximum Output Current</b>	100 mA
<b>Hysteresis</b>	Programmable by software (default 1 %)
<b>Adjustable Sensitivity</b>	Switch (33 % or 100 %)
<b>Indicators</b>	5 LED
<b>Additional Inputs/Outputs</b>	Overrange, underrange, parallell outputs, Hold/Synchroni
<b>Computer interface</b>	RS-232, 3 wire
<b>Memory</b>	EEPROM (non-volatile)
<b>Current Consumption</b>	50 mA maximum
<b>Circuit Protection</b>	Reverse Polarity, voltage spikes on supply and output line short circuit on switching output
<b>Housing Style</b>	Separate head and control box
<b>Housing Material</b>	Polyethylenterephtalat
<b>Sealing</b>	IP 40
<b>Mounting</b>	Din rail or 2 holes dia. 4 mm
<b>Termination Type</b>	Screw terminals
<b>Availability</b>	Global
<b>Normally Open/Normally Closed selection</b>	Switch or software
<b>UNSPSC Code</b>	41111926

<b>UNSPSC Commodity</b>	41111926 Proximity sensors
<b>Series</b>	942 Series

*Due to regional agency approval requirements, some products may not be available in your area.  
Please contact your regional Honeywell office regarding your product of choice.*