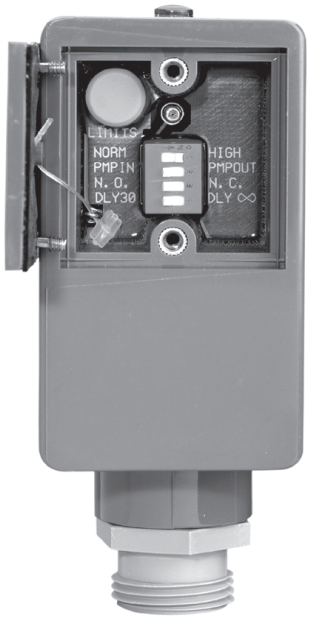
SUPERPROX® Ultrasonic Dual-Level Sensors

- *Easy push-button setup for the specific application*
- *Dual-level on/off latch or dual-level on/off latch with high and low alarm*
- *Non contact sensing range up to 2 m (79")*
- *Epoxy sealed in tough ULTEM® housing*
- *Virtually impervious to the harshest environments*
- *CE certified*
- *AC-powered models ETL listed*



The SUPERPROX® ultrasonic sensors with on/off latch-control output are now available for a wide variety of dual-level control applications. All AC-powered models operate over a 100 to 240 voltage range and there are DC-powered models available with high and low alarm outputs for critical control requirements. The DC models are also available with a sensing range of 2 m (79").

Capable of reliable monitoring and controlling most liquid and granular materials within the level sensing range, these self-contained sensors are typically used in such applications as opening and closing a valve or starting and stopping a pump.

This ultrasonic sensor series (Model SM502 through Model SM572) offers easy setup, dependable operation, and compatible integration with most programmable logic controllers. Each sensor is epoxy sealed to withstand harsh, wet, messy, dusty, and dirty environments typically associated with level-control applications. The SUPERPROX® housings meet NEMA 4X (indoor use only) and IP67 industry standards. A Dairy 3A approved housing is available as an option.

Introduction

Hyde Park's self-contained, SUPERPROX®, dual-level sensors are capable of monitoring and controlling most nonhazardous liquid or dry material levels within a sensing range of either 51mm to 1 m (2 to 39") or 120 mm to 2 m (4.7 to 79"). An ON/OFF latched output is provided by the sensor relative to two level limit set points. The output is used for controlling material levels in tanks, hoppers, reservoirs, etc. as well as loop levels or tension on web processing lines.

These dual-level sensor models are available in three basic operating functions, each of which offers one or more options. The Model Reference Guide on the next page lists and identifies the three functions and options under "Functionality".

The specific description of each function can be found under these suffixes on the following pages.

Control Compartment

A unique feature available to the user of these sensors is the facility to quickly set them up for a specific application. These sensors are configured through two to four slide switches and one to two push-buttons located inside the watertight control compartment on the sensor. The control compartment for each of the three operating functions is illustrated on the following pages.

To access the control compartment, remove the small square cover on the back of the sensor. Simply loosen the two flat-head cover screws and insert a small blade screwdriver in either the top or bottom slot to remove the cover. A short plastic tether prevents separation of the cover from the sensor.

Sensor Limits Setup Push-button

First, during installation, make sure the sensor face is as parallel as possible to the surface of the material being detected.

To set the level limits, simply place an object at the desired distance from the sensor for one limit and press the LIMITS push-button once. This sets the first limit. While the LIMITS push-button is depressed, the multicolored LED, located on top of the sensor, is amber. Upon release of the push-button, the LED flashes amber indicating that the second limit needs to be set. Place an object at the desired position for the second limit and press the LIMITS push-button once. Again, while the push-button is depressed, the LED is amber. Upon release of the push-button, the LED flashes amber momentarily and then turns green to indicate acceptance of both limits. At the same time, the sensor output switches from an inactive to active state, placing the sensor in the operational mode, ready to use. When power is off or interrupted, the limits are retained in a nonvolatile memory.

If in setting either level limit the echo from the object is too weak or distorted, the LED flashes red for 10 seconds (or until the button is pressed again) indicating the limit setting was not accepted by the sensor. Attempt to set both limits again, being careful to keep the object surface parallel to the face of the sensor.

Minimum allowed distance between limits is 13 mm (1/2"). The multicolored LED flashes red after the press and release of the LIMITS push-button for the second limit setting if the distance between the limit settings is less than 13 mm. The multicolored LED continues flashing red either until the LIMITS push-button is pressed and released once for the first limit setting or until 10 seconds have elapsed. Pressing and releasing the LIMITS push-button once reinitiates the limit setup sequence. If 10 seconds elapse before the LIMITS push-button is pressed and released for the second limit setup, the limits revert back to the previous settings.

Model Reference Guide - SM502 Series

Use the guide below to ensure the correct model number is specified for the application. Please note that not all sensor model combinations are available.

EXAMPLE MODEL: **SM5 0 2 A - 1 73 - LE N R 4**

SUPERPROX® Product Series

Power/Connection Type
0...12 to 24 VDC / cable style
2...100 to 240 VAC / cable style (no alarm)
5...12 to 24 VDC / connector style
7...100 to 240 VAC / connector style (no alarm)

Sensing Function
2...Proximity - dual level

Design Level
A...Applies to all DC-powered models
B...Applies to all AC-powered models

Sensing Range
1...51 to 1 m (2 to 39")
4...120 mm to 2 m (4.7 to 79")

Functionality
00...ON/OFF Latch control
14...ON/OFF Delay latch control
19...ON/OFF Delay latch control / default window: +0/-.25"
20...ON/OFF Latch control / Fast response: 20 ms ON/OFF response
44...ON/OFF Latch control / default window: ±0.100"
72...ON/OFF Latch control with dual alarms** / default window: ±0.25", delay 30 sec or × with switch selectable setup
73...ON/OFF Latch control with dual alarms**
74...ON/OFF Latch control with dual alarms** / default window: ±0.125"
76...ON/OFF Latch control with dual alarms** / inverted NPN output

Special Features
... No letter indicates standard sensor with no special features
LE... No change in output on loss of echo
FS... Fluorosilicone transducer face
AA... Remote limit setup (Available on cable models only.)
AB... RS232, 4-digit/2-decimal place output (Available on cable models only.)
AD... Limits push-button disabled
AE... RS232, 5-digit/3-decimal place output (Available on cable models only.)
AF... No LEDs

Housing Types
...No letter indicates standard ULTEM®* plastic housing
N...NORYL®* Dairy 3A gray plastic housing

Remote Type
...No letter indicates standard coupler
R...Right-angle sensing head with armor cable
S...Straight sensing head with armor cable

Remote Cable Length
...No number indicates standard coupler
1 ...254 mm (10")
2 ...508 mm (20")
3 ...762 mm (30")
4 ...1016 mm (40")
Armored (standard) or PVC cable (specify P after number)
5P...1270 mm (50")
6P...1524 mm (60")
Available in PVC cable only

* ULTEM® and NORYL® are registered trademarks of The General Electric Company.

** Alarms available on DC-powered models only.

NOTE: SM522 and SM572 AC models carry the ETL safety label

Loss of Echo

Loss of echo occurs when the sensor does not receive echoes from an object within its sensing range for more than one second. When this occurs, the sensor's output automatically switches OFF. When the sensor again receives echoes from a level, the output will either switch or remain in the same state depending on where the echoes are received relative to the level control limits.

"LE" Option

The LE suffix in the Model Reference Guide indicates an available option for users who do not prefer the standard response to loss of echo. With the LE option, when loss of echo occurs for more than one second, there is no change in the output state of the sensor. When the sensor again receives echoes, the output assumes the state relative to the control limit set points.

Function "00", "20", "44" ON/OFF Latch Control

This dual-level sensor function allows two level limits, high and low, within which the level of product is to be controlled. As the product level moves above the high limit or below the low limit, the sensor output switches state and latches either ON or OFF to, for example, close or open a valve and stop or run a pump. The output remains latched in the ON or OFF state until the product level moves back beyond the other limit, at which time the output switches state.

Function "00", "20", "44" Sensor Configuration Switches

Switch 1 configures the sensor to operate in either a normal or high sensitivity mode. Place this switch in the NORM position for sensing smooth liquid or solid material levels. Place the switch in the HIGH position for sensing turbulent liquid levels and soft or porous material that will deflect or absorb some of the ultrasonic energy.

Switch 2 configures the sensor output to perform either a pump in or pump out control function. Place this switch in the PMPIN position to control the filling process and prevent an overflow of a vessel. Place the switch in the PMPOUT position to control an emptying process and prevent the complete drawdown of a vessel.

Pump-In Mode When the level moves below the low limit, the sensor output switches state and latches, starting a pumping process. The sensor output does not change state until the level moves back above the high limit to stop the pumping process.

Pump-Out Mode When the level moves below the low limit, the sensor output switches state and latches, stopping a pumping process. The sen sor output does not change state until the level moves back above the high limit to restart the pumping pro cess.

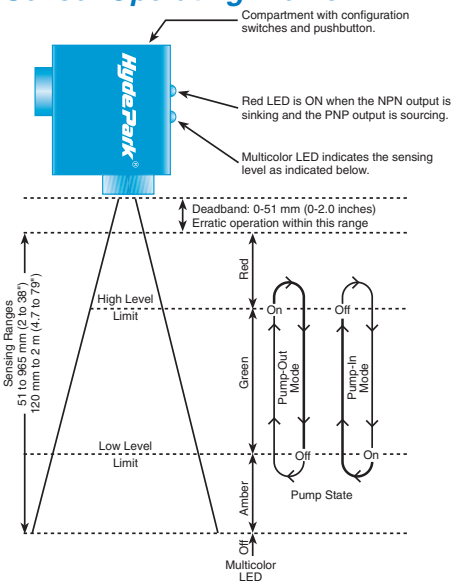
Switch 3 selects the operating mode for the sensor output to be either normally open (N.O.) or normally closed (N.C.).

Switch 4 selects the allowable time for setting the high and low limits. If the switch is in the DLY 30 position, the allowed setup time is 30 seconds. If the switch is in the DLY position, the setup time is infinite.

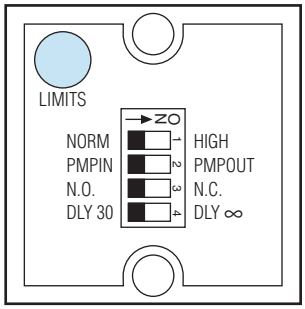
Function "14", "19", On/Off Delay Latch Control

This function operates the same as described for the Function "00", "20", and "44" models, with one exception. The Function "14" and "19" models allow programmable on/off delay time adjustments of the sensor output. As the level moves above the high limit or below the low limit, the sensor output switches and latches either on or off, following the programmed delay time, in performing the required control function. As the level moves back beyond the limit, the output switches and latches back to its other state following, again, the programmed delay time in performing the required control function.

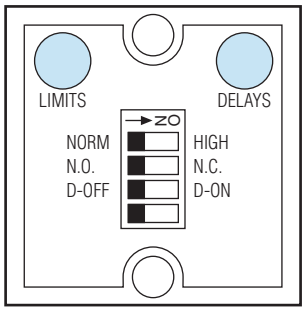
Sensor Operating Profile



Function "00", "20", "44" Control Compartment



Function "14", "19" Control Compartment



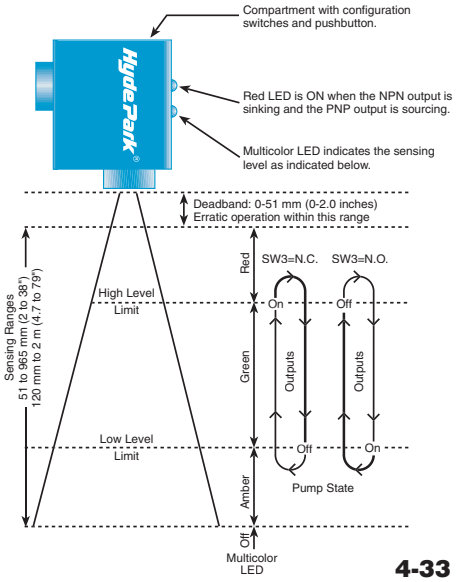
Function "14", "19" Sensor Configuration Switches

Switch 1 configures the sensor to operate in either a normal or high sensitivity mode. Place this switch in the NORM position for sensing smooth liquid or solid material levels. Place the switch in the HIGH position for sensing turbulent liquid levels and soft or porous material that will deflect or absorb some of the ultrasonic energy.

Switch 2 selects the operating mode for the sensor output to be either normally open (N.C. is pump out) or normally closed (N.O. is pump in).

Switch 3 selects the delay time program mode for setting the desired ON and OFF delay times through the DELAYS push-button. See Delay Time Setup for switch operation.

Switch 4 is not used.



Delay Time Functions

The ON delay time prevents the sensor output state from immediately switching active when the sensor starts sensing the level outside that respective level limit set point. The output switches active only after the sensor has continued sensing the level outside that respective level limit set point for the entire ON delay time period.

The OFF delay time prevents the sensor output state from immediately switching inactive when the sensor starts sensing the level outside that respective level limit set point. The output switches inactive only after the sensor has discontinued sensing the level outside that respective level limit set point for the entire OFF delay time period.

Delay Time Setup

Place Switch 3 in the D-OFF position for setting the desired OFF delay time. Press the DELAYS push-button for the length of the desired delay time. The multicolored LED indicator on the sensor momentarily flashes green after release of the DELAYS push-button to acknowledge the delay time has been set into the nonvolatile memory of the sensor.

Place Switch 3 in the D-ON position for setting the desired ON delay time. Press the DELAYS push-button for the length of the desired delay time. The multicolored LED indicator on the sensor momentarily flashes green after release of the DELAYS push-button to acknowledge the delay time has been set into the nonvolatile memory of the sensor.

Resetting Delay Times

Place Switch 3 in the D-OFF position and press the DELAYS push-button two successive times for resetting the OFF delay time to the minimum response time. Perform the same process with Switch 3 in the D-ON position for resetting the ON delay time to the minimum response time. The multicolored LED indicator on the sensor momentarily flashes green after the second release of the DELAYS push-button to acknowledge the delay time has been reset to the minimum response time.

Function "72", "73", "74", "76" On/Off Latch Control with Dual Alarms

This dual-level, on/off latch-control sensor function is, again, similar in operation to the Function "00", "20", and "44" sensors in that it also allows two level limits, a high and low, within which the level of product is to be controlled. An added feature enables the user to set two discrete alarm set points anywhere within the sensing range where alarm outputs are required to protect the equipment from potential damage.

This function is only available in DC-powered models having current sinking, NPN outputs. Current sourcing, PNP outputs are not available.

Function "72", "73", "74", "76" Sensor Configuration Switches

Switch 1 configures the sensor output to perform either a pump in or pump out control function. Place the switch in the PMPIN position to control the filling process and prevent an overflow of a vessel. Place the switch in the PMPOUT position to control an emptying process and prevent the complete drawdown of a vessel.

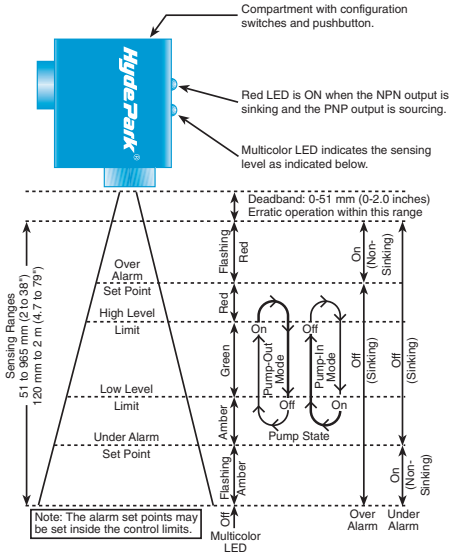
Pump-In Mode When the level moves below the low limit, the sensor output switches state and latches, starting a pumping process. The sensor output does not change state until the level moves back above the high limit to stop the pumping process.

Pump-Out Mode When the level moves below the low limit, the sensor output switches state and latches, stopping a pumping process. The sensor output does not change state until the level moves back above the high limit to restart the pumping process.

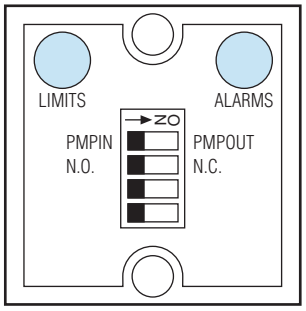
Switch 2 selects the operating mode for the sensor output to be either normally open (N.O.) or normally closed (N.C.).

Switch 3 and **Switch 4** are not used.

Sensor Operating Profile



Sensor Operating Profile Function "72", "73", "74", "76" Control Compartment



Dual-Alarm Outputs

The dual-alarm outputs in the Function "72", "73", "74", and "76" sensors operate in a fail-safe manner. The alarms are normally ON, conducting or sinking, with the level inside both alarm limits. For example, the high alarm output switches OFF when the level rises above the high alarm limit. Conversely, the low alarm switches OFF when the level drops below the low alarm limit.

Loss of Echo and the "LE" Option

Like the outputs of the other dual-level sensors, the dual-alarm outputs in the Function "72", "73", "74", and "76" sensors also switch OFF with a loss of echo condition. Upon echo restoration, both alarm outputs switch ON when the level is inside both alarm limits. Should the level be outside one of the alarm limits, that alarm output will remain OFF.

With the "LE" option, when loss of echo occurs for more than one second, there is no change in either the control level or alarm level output states of the sensor. When the sensor again receives echoes from within its sensing range, those outputs assume the state relative to the control and alarm limit set points.

Multicolored LED Indicator During Alarm Setup Mode for Function "72", "73", "74", and "76" Sensors

Press and release the ALARMS push-button with the level at the desired low alarm limit.

- Flashing Amber - Low alarm limit is set.

Press and release the ALARMS push-button with the level at the desired high alarm limit.

- Flashing Red - High alarm limit is set.

IMPORTANT: When either one of the alarm limits is reset for a different level, the other alarm limit must also be reset.

Multicolored LED Indicator in Operational Mode for Function "72", "73", "74", and "76" Sensors

There are four possible setup mode combinations for setting where the alarm level outputs are inactive with respect to the control level output. The table below illustrates the LED status colors for all four alarm limit setup combinations.

Setup Combination 1:

High Alarm Level	Flashing Red
High Control Level	Red
Low Control Level	Green
Low Alarm Level	Amber
	Flashing Amber

Setup Combination 2:

High Control Level	Flashing Red
High Alarm Level	Flashing Red
Low Alarm Level	Green
Low Control Level	Flashing Amber
	Flashing Amber

Setup Combination 3:

High Control Level	Flashing Red
Low Control Level	Flashing Red
High Alarm Level	Flashing Red
Low Alarm Level	Amber
	Flashing Amber

Setup Combination 4:

High Control Level	Flashing Red
High Alarm Level	Flashing Red
Low Control Level	Green
Low Alarm Level	Amber
	Flashing Amber

Electrical Wiring

Sensor wires must be run in conduit free of any AC power or control wires.

Sensor Wire Colors

DC Models, 4-Conductor

	Cable Style	Connector Style
(+) 12 to 24 VDC	RED	BROWN
NPN/Sinking Output	WHITE	BLACK
PNP/Sourcing Output	GREEN	WHITE
Common	BLACK	BLUE

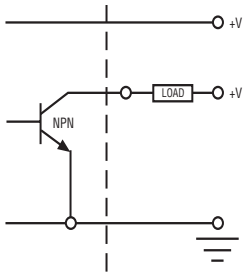
DC Models, 5-Conductor

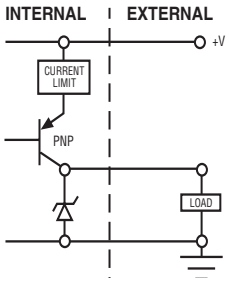
(+) 12 to 24 VDC	RED	BROWN
Control Level, NPN/Sinking Output	WHITE	BLACK
Low Alarm Level NPN/Sinking Output	BROWN	ORANGE
High Alarm Level NPN/Sinking Output	GREEN	WHITE
Common	BLACK	BLUE

AC Models, 4-Conductor

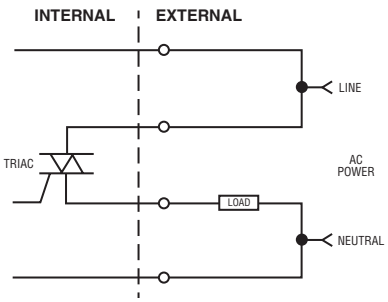
100 to 240 VAC	BROWN	BROWN
Switch Line Side	BLACK	BLACK
Switch Load Side	WHITE	WHITE
Neutral	RED	BLUE

DC Outputs





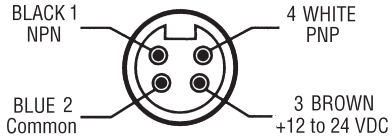
AC Outputs



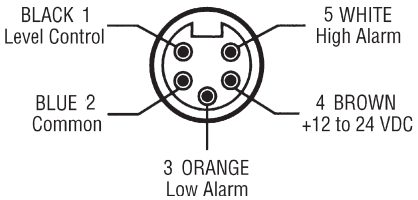
View of Plug on Connector Style Sensors

DC Power Models

(4-Pin, Functions "00", "14", "19", "20", and "44")

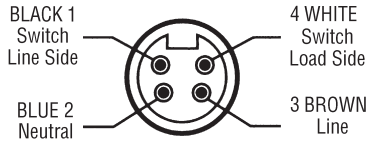


(5-pin, Functions "72", "73", "74", and "76")



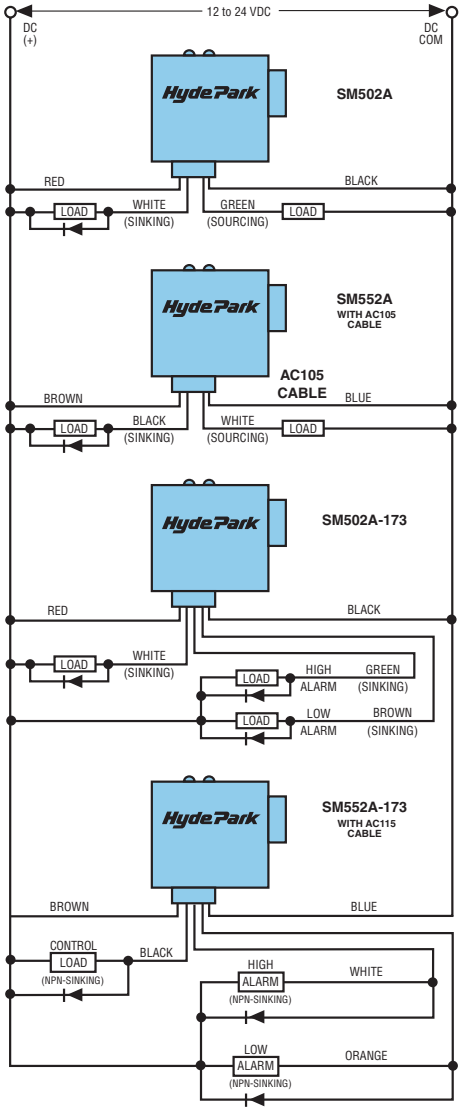
AC Power Models

(4-Pin, Functions "00", "14", "19", "20", and "44")

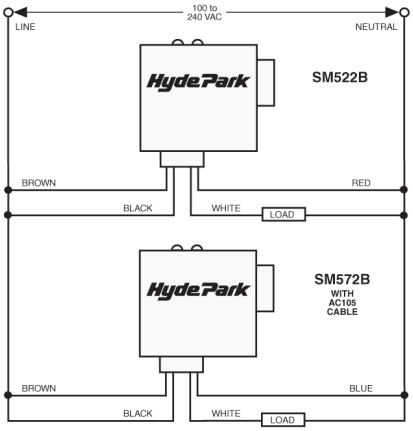


Sensor Wire Connectors

DC Models

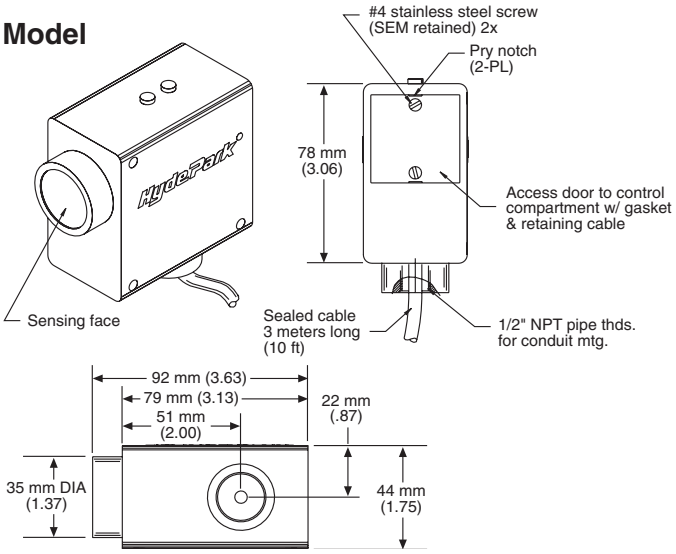


AC Models

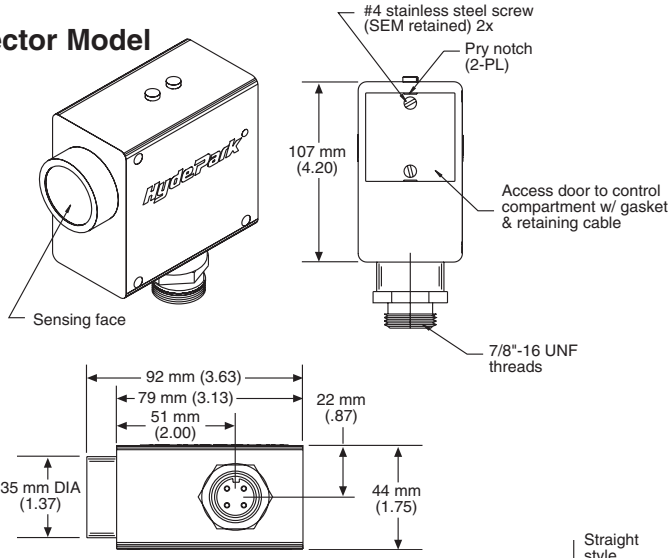


Dimensions

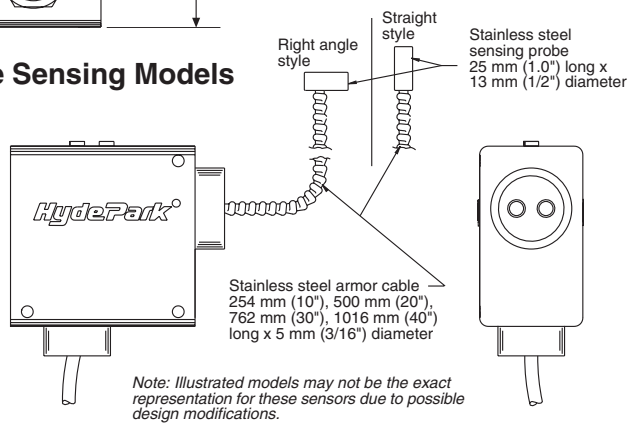
Cable Model



Connector Model



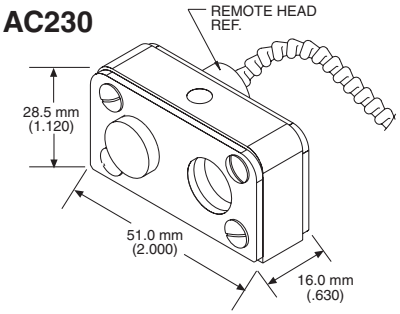
Remote Sensing Models



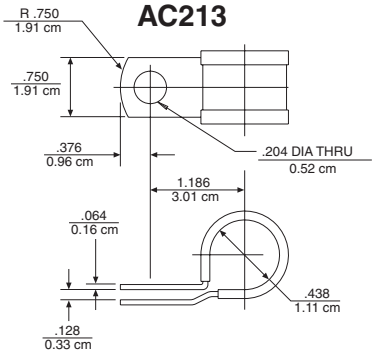
Note: Illustrated models may not be the exact representation for these sensors due to possible design modifications.

Mounting Accessories

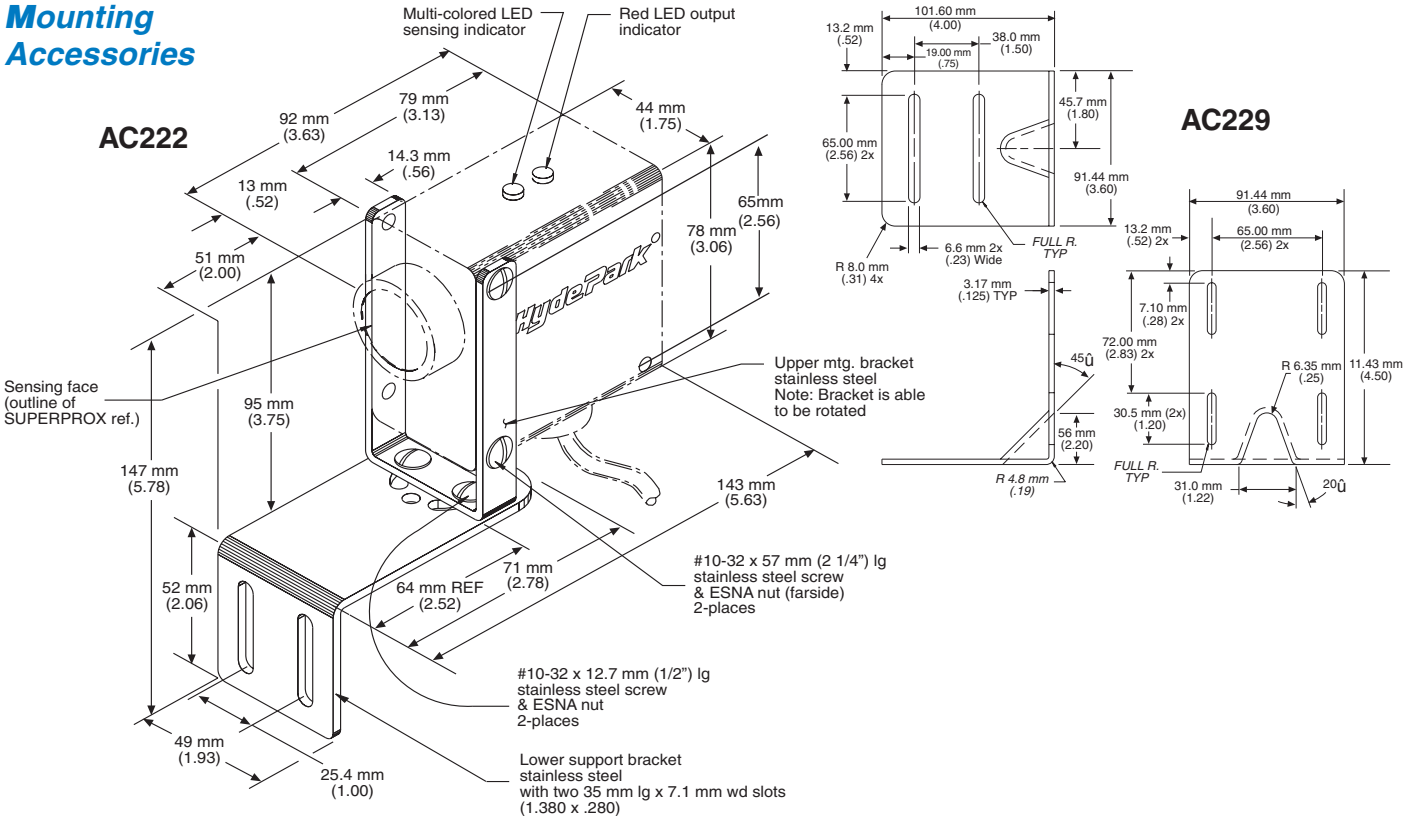
AC230



AC213



Mounting Accessories



General Specifications

Sensing

Ranges:
51 to 1 m (2 to 39")
120 mm to 2 m (4.7 to 79" - DC Model only)
Sonic Frequency: 200 kHz

Power Requirements

DC Models:
12 to 24 VDC ± 10% @ 80 mA, 2 W max., excluding output load (regulated supply)
AC Models:
100 to 240 VAC, 50/60 Hz, @ 30 mA, 7.5 VA max., excluding load

Outputs

DC Models:
NPN Sinking: Switch selectable N.O./N.C.
Sinking on-state voltage drop:
Maximum 0.25 volts @ 60 mA
Sinking load current:
Maximum 100 mA
Sinking output voltage:
Maximum applied 30 VDC
PNP Sourcing: Switch selectable N.O./N.C.
Sourcing output current: Maximum 100 mA
Current limit protected to less than 160 mA
AC Models: Triac, switch selectable N.O./N.C.
Maximum continuous load current: 1 Amp
Maximum applied output voltage: 260 VAC
Maximum off-state leakage current: less than 50 µA (100% PLC/AC input interface compatibility)

Response Time

"On" 200 ms, "Off" 200 ms to
"On" 400 ms, "Off" 400 ms, depending upon model

Indicators

Multicolored (Amber, Red, Green) LED:
Indicates limits setup and operational modes
Red LED: Visual indicator for sensor output;
illuminated when output is in an active (on) state

Connections

Cable Style Models:
DC: 24 AWG, PVC jacket,
4- or 5-conductor, 3 meters (10') long, standard
AC: 20 AWG, PVC jacket,
4-conductor, 3 meters (10') long, standard
Connector Style Models:
DC: 4- or 5-pin "mini" style
AC: 4-pin "mini" style

Protection

Power Supply: current-limited over-voltage, ESD, reverse polarity, fuse on AC Model
Outputs: current-limited over voltage, ESD, over-current, fused TRIAC on AC Model

Environmental

Operating Temperature Range:
0° to 50°C (32° to 122°F)
Storage Temperature Range: -40° to 100° C (-40° to 212°F)
Operating Humidity: 100%
Protection Ratings: NEMA 4X (indoor use only), IP67
Chemical Resistance: Resists most acids and bases, including most food products. Fluorosilicone transducer face is available to provide resistance to aromatic and petroleum-based hydrocarbons.

Agency Approvals

CE Mark: CE conformity is declared to:
EN61010-1: 1990 including amend. No.1:1992
EN55011 Group 1 Class A, EN50082-1.
Declaration of conformity available upon request
AC Models SM522/572 carry the ETL safety label.

Construction

Dimensions (overall)
92 mm (3.625") L x 44 mm (1.75") W x 91 mm (3.58") H
Housing:
Case: ULTEM®* (FDA approved)
Optional: NORYL®* (USDA-Dairy 3A Sanitary Standards compliant)
Transducer Face: Silicone rubber (FDA approved)
Optional: Fluorosilicone rubber
Sensor Cable: PVC jacket
LED: Polycarbonate

* ULTEM® and NORYL® are registered trademarks of The General Electric Co.

Accessories

Model AC105, Straight, 7/8-16 mini, 4-conductor, mating connector cable, 4 m (12'), for connector style sensors
Model AC105-50, Straight, 7/8-16 mini, 4-conductor, mating connector cable, 15 m (50'), for connector style sensors
Model AC115, Straight, 7/8-16 mini, 5-conductor, mating connector cable, 4 m (12'), for Model SM552A-X7X series dual-level sensors
Model AC115-50, Straight, 7/8-16 mini, 5-conductor, mating connector cable, 15 m (50'), for Model SM552A-X7X series dual-level, connector-style sensors
Model AC213, Stainless and Teflon, remote sensing probe mounting bracket
Model AC222, Standard, stainless mounting bracket assembly, slotted for vertical adjustment
Model AC229, Stainless, plate-style, right-angle, mounting bracket, with base slotted for forward reverse adjustment and side slotted for sensor adjustment
Model AC230, Three-piece, stainless, mounting bracket assembly with O-ring mount for sensor models with remote heads.

See page 7-1 for accessory photos.

Selection Chart

SM502 Series
Dual-Level

Model No.	Power Version: 100-240 VAC	Power Version: 12-24 VDC	Connection Style: Cable	Connection Style: Connector	Sensing Range: 2m (79")	Sensing Range: 1 m (39")	Transducer Style: Standard	Transducer Style: Remote Rt. Angle	Transducer Style: Remote Straight	On/Off Output Options: Latch Control	On/Off Output Options: Delay Latch Control	On/Off Output Options: Latch Control w/ Dual Alarms	Materials: Transducer: Silicone*	Materials: Transducer: Fluorosilicone*	Materials: Housing: ULTEM®*	Materials: Housing: NORYL®*	Loss of Echo	Default Window	Special Features: Notes
SM502A-100•		■	■			■	■			■			■		■				
SM502A-100 FS		■	■			■	■			■				■	■				
SM502A-100 LE•		■	■			■	■			■			■		■		■		
SM502A-100 S2		■	■			■			■(20")	■			■		■				
SM502A-114		■	■			■	■				■		■		■				
SM502A-114 LE		■	■			■	■				■		■		■		■		
SM502A-119		■	■			■	■				■		■		■				
SM502A-119 LE		■	■			■	■				■		■		■		■		
SM502A-173•		■	■			■	■					■	■		■				
SM502A-173 FS		■	■			■	■					■		■	■				
SM502A-173 LE		■	■			■	■					■	■		■		■		
SM502A-173 LES4		■	■			■			■(40")			■	■		■		■		
SM502A-173 N		■	■			■	■					■	■			■			
SM502A-173 R2		■	■			■		■(20")				■	■		■				
SM502A-173 R4		■	■			■		■40")				■	■		■				
SM502A-173 S4		■	■			■			■(40")			■	■		■				
SM502A-174		■	■			■	■					■	■		■			±0.125"	
SM502A-176		■	■			■	■					■	■		■				Inverted NPN Alarm Outputs
SM502A-400•		■	■		■		■			■			■		■				
SM502A-400 LE		■	■		■		■			■			■		■		■		
SM502A-473		■	■		■		■					■	■		■				
SM502A-473 LE		■	■		■		■					■	■		■		■		
SM522B-100•	■		■			■	■			■			■		■				
SM522B-100 FS	■		■			■	■			■				■	■				
SM522B-100 LE	■		■			■	■			■			■		■		■		
SM522B-100 R3	■		■			■		■(30")		■			■		■				
SM522B-100 R4	■		■			■		■(40")		■			■		■				
SM522B-114	■		■			■	■				■		■		■				
SM522B-114 LE	■		■			■	■				■		■		■		■		
SM522B-144	■		■			■	■			■			■		■			±0.100"	
SM552A-100•		■		■		■	■			■			■		■				
SM552A-100 LE		■		■		■	■			■			■		■		■		
SM552A-100 R4		■		■		■		■(40")		■			■		■				
SM552A-114		■		■		■	■				■		■		■				
SM552A-114 LE		■		■		■	■				■		■		■		■		
SM552A-119 LE		■		■		■	■				■		■		■		■	+0/-0.25"	
SM552A-120		■		■		■	■			■			■		■				20 ms ON/OFF Response
SM552A-172		■		■		■	■					■	■		■			±0.25"	Delay 30 sec. or × switch slectable
SM552A-173		■		■		■	■					■	■		■				
SM552A-173 LE•		■		■		■	■					■	■		■		■		
SM552A-173 LES3		■		■		■			■(30")			■	■		■		■		
SM552A-173 R1		■		■		■		■(10")				■	■		■				
SM552A-173 R2		■		■		■		■(20")				■	■		■				
SM552A-173 R4		■		■		■		■(40")				■	■		■				
SM552A-174		■		■		■	■					■	■		■				
SM552A-176		■		■		■	■					■	■		■				Inverted NPN Alarm Outputs
SM552A-400•		■		■	■		■			■			■		■				
SM552A-400 LEFS		■		■	■		■			■				■	■		■		
SM552A-400 LE		■		■	■		■			■			■		■		■		
SM552A-414 LE		■		■	■		■				■		■		■		■		
SM552A-472		■		■	■		■					■	■		■			±0.25"	Delay 30 sec. or × switch selectable
SM552A-473		■		■	■		■					■	■		■				
SM552A-473 LE		■		■	■		■					■	■		■		■		
SM552A-473 R2		■		■	■			■(20")				■	■		■				
SM572B-100	■			■		■	■			■			■		■				
SM572B-100 FS	■			■		■	■			■				■	■				
SM572B-100 LE	■			■		■	■			■			■		■		■		
SM572B-100 LES2	■			■		■			■(20")	■			■		■		■		
SM572B-100 R4	■			■		■		■(40")		■			■		■				
SM572B-100 S1	■			■		■			■(10")	■			■		■				

SM502 Series (cont.)
Dual-Level

Model No.	Power Version: 100-240 VAC	Power Version: 12-24 VDC	Connection Style: Cable	Connection Style: Connector	Sensing Range: 2m (79")	Sensing Range: 1 m (39")	Transducer Style: Standard	Transducer Style: Remote: Rt. Angle	Transducer Style: Remote: Straight	On/Off Output Options: Latch Control	On/Off Output Options: Delay Latch Control	On/Off Output Options: Latch Control w/ DualAlarms	Materials: Transducer: Silicone*	Materials: Transducer: Fluorosilicone*	Materials: Housing: ULTEM®*	Materials: Housing: NORYL®*	Loss of Echo	Default Window	Special Features: Notes
SM572B-114	■			■		■	■				■		■		■				
SM572B-114 LE	■			■		■	■				■		■		■		■		
SM572B-144	■			■		■	■			■			■		■			±0.100"	

❒ No change in output on loss of echo

• = Most commonly stocked sensors
* = See definition in *Sensing Terms*.
All possible sensor configurations are not listed here.