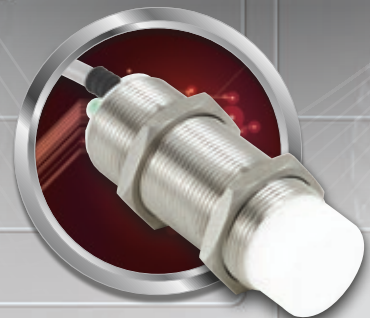




Food & Beverage

HTMTM
SENSORS

WORLD CLASS SENSORS AND
DOWNTIME REDUCTION SERVICES
TO APPLY THEM



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Total Cost Savings with Consignment Service

HTM™ Sensors is committed to the aggressive elimination of downtime. PROXWorx™ vending machines provide the best possible service, inventory control, and data for continuous improvement.



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COST REDUCTION VENDING

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H30 PHOTOELECTRIC SENSORS
WITH I/O LINK

HTMTM
SENSORS



 **IO-Link**



- MINIATURE HOUSING
- SENSITIVITY ADJUSTMENT VIA POTENTIOMETER
- IO-LINK FOR PROCESS OPTIMIZATION
- EXCELLENT BLACK/WHITE BEHAVIOR
- IMMUNITY TO MUTUAL INTERFERENCES

H30 PHOTOELECTRIC SENSORS WITH I/O LINK SPECIFICATIONS

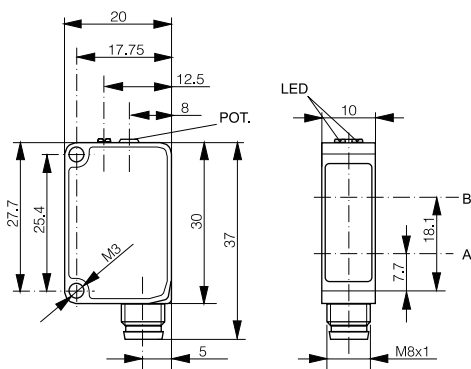
	THRU-BEAM	DIFFUSE	RETROREFLECTIVE	BACKGROUND SUPPRESSION	CLEAR OBJECT DETECTION
					
SENSING RANGE TYP. MAX.	30 m	1.5 m	8 m	300 mm	5 m
LIGHT SOURCE	N/A	Red LED 630 nm	Red LED 630 nm	PinPoint Red LED 640 nm	Red LED 630 nm
LIGHT SPOT SIZE (DISTANCE)	N/A	ø 15 mm @ 500 m / ø 26 mm @ 1 m	ø 30 mm @ 1 m / ø 140 mm @ 6 m	ø 6 mm @ 100 m / ø 10 mm @ 300 m	ø 40 mm @ 1 m
INDICATOR LED	Output: Yellow Excess Gain: Green	Output: Yellow Excess Gain: Green	Output: Yellow Excess Gain: Green	Output: Yellow Excess Gain: Green	Output: Yellow Excess Gain: Green
SUPPLY VOLTAGE RANGE (UB)	10-30 V DC				
IO-LINK	✓	✓	✓	✓	✓
SHORT CIRCUIT PROTECTION	✓	✓	✓	✓	✓
REVERSE POLARITY PROTECTION	✓	✓	✓	✓	✓
RESPONSE TIME ¹	<= 500 µs (normal) / <=1 ms / <= 250 µs	<= 340 µs (normal) / <=1 ms / <= 100 µs	<= 340 µs (normal) / <=1 ms / <= 100 µs	<= 500 µs (normal) / <=1 ms / <= 250 µs	<= 340 µs (normal) / <=1 ms / <= 100 µs
OUTPUT TYPE	PNP Complementary				
OPERATION MODE	Light On or Dark on Selectable wiring				
HOUSING MATERIAL	ABS				
LENS MATERIAL	PMMA				
IP RATING	IP67				
CABLE OR CONNECTOR	4-Pin M8 Male QD				
PART NUMBERS					
DC Emitter QD	H30-TTX-30000D-M8-3QD				
PNP	H30-TRX-30000P-M8-4QD	H30-DIF-1500P-M8-4QD	H30-RET-8000P-M8-4QD	H30-BGS-0300P-M8-4QD	H30-COD-5000P-M8-4QD
NPN	H30-TRX-30000N-M8-4QD	H30-DIF-1500N-M8-4QD	H30-RET-8000N-M8-4QD	H30-BGS-0300N-M8-4QD	H30-COD-5000N-M8-4QD
DC Emitter Pre-wired	H30-TTX-30000D-2M				
PNP Pre-wired	H30-TRX-30000P-2M	H30-DIF-1500P-2M	H30-RET-8000P-2M	H30-BGS-0300P-2M	H30-COD-5000P-2M
NPN Pre-wired	H30-TRX-30000N-2M	H30-DIF-1500N-2M	H30-RET-8000N-2M	H30-BGS-0300N-2M	H30-COD-5000N-2M

NOTE: Specifications subject to change without notification. ¹By default, "Normal" mode. "Fine" and "Fast" modes selectable via IO-Link.



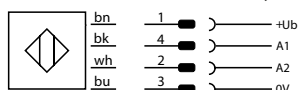
IO-LINK FUNCTIONALITIES

IO-Link version: 1.0	SIO mode: Supported	Process data: Detection state & stability alarm	Baudrate: COM2 (38.4 kBaud)
Special functions: Output configuration, output timing, sensor mode, detection counter, event flags, maximum and actual sensor temperature			

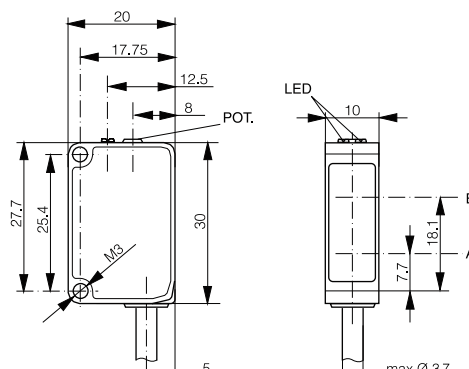


A: emitter axis B: receiver axis

WIRING DIAGRAM - 4-PIN QD

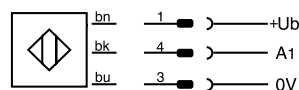


PINS



A: emitter axis B: receiver axis

WIRING DIAGRAM - PRE-WIRED



PHOTOELECTRIC SENSORS WITH VISIBLE LED ENSURE RELIABLE AND EXTENDED SENSING RANGES FOR LIMITED SPACES, WITH IP67 ENCLOSURE RATING AND ARE ECOLAB-APPROVED FOR USE IN HYGIENIC AREAS. IO-LINK COMMUNICATION FOR PROCESS OPTIMIZATION.

IP69K FOOD GRADE PROXIMITY SENSORS
AND WASHDOWN CABLES

HTMTM
SENSORS



- IP69K RATED SENSORS FOR FOOD, BEVERAGE, PHARMACEUTICAL AND OTHER WASHDOWN APPLICATIONS
- SUS 316 FOOD GRADE STAINLESS STEEL HOUSING
- EXTENDED RANGE IN SHIELDED OR UNSHIELDED MODELS
- AVAILABLE WITH MATCHING IP69K M12 CONNECTOR CABLES
- IDEAL FOR APPLICATIONS WITH HIGH PRESSURE AND CHEMICAL WASHDOWN



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IP69K FOOD GRADE PROXIMITY SENSORS AND WASHDOWN CABLES SPECIFICATIONS

M12 SHIELDED



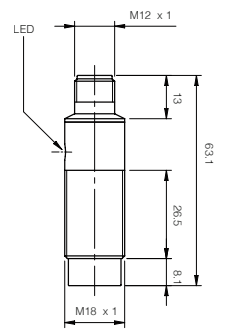
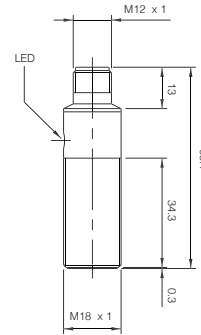
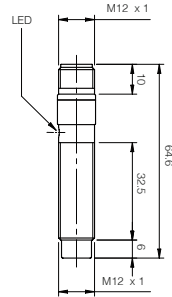
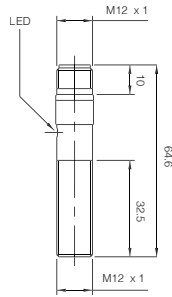
M12 UNSHIELDED



M18 SHIELDED



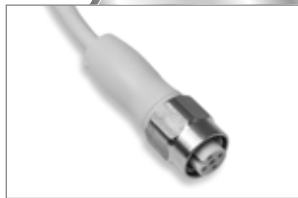
M18 UNSHIELDED



SENSING DISTANCE	4 mm	8 mm	8 mm	12 mm
OPERATING VOLTAGE	10-30 V DC			
OPERATING TEMPERATURE	-40 °C - +80 °C			
HOUSING MATERIAL	SUS 316 Stainless Steel with PPS thermoplastic Sensing Face			
IP RATING	IP69K			
SHIELDED PNP - NO/NC	ECU1-1204P-SRU4-316-IP69K		ECU1-1808P-SRU4-316-IP69K	
UNSHIELDED PNP - NO/NC		ECU2-1208P-SRU4-316-IP69K		ECU2-1812P-SRU4-316-IP69K
SHIELDED NPN - NO/NC	ECU1-1204N-SRU4-316-IP69K		ECU1-1808N-SRU4-316-IP69K	
UNSHIELDED NPN - NO/NC		ECU2-1208N-SRU4-316-IP69K		ECU2-1812N-SRU4-316-IP69K

NOTE: Specifications subject to change without notification.

FEMALE STRAIGHT

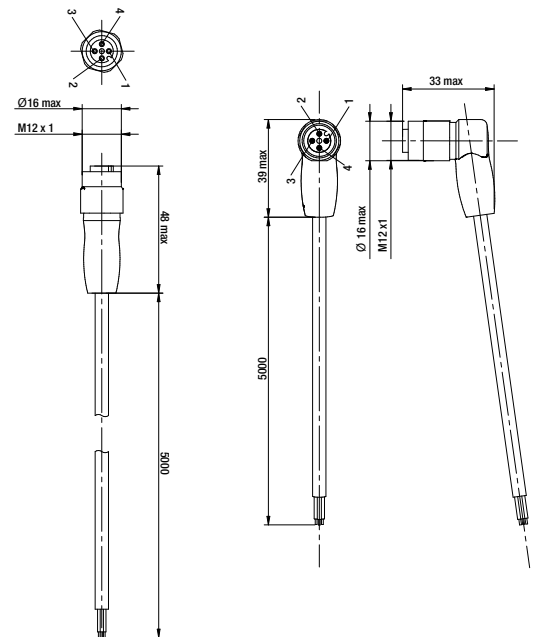


FEMALE ANGLED



PART NUMBER	R-FS4TZ-V075-SS-IP69K	R-FA4TZ-V075-SS-IP69K
RATED CURRENT	4 A	
OPERATING TEMPERATURE	-40 °C - +105 °C	
LOCKING NUT / JACKET MATERIAL	Stainless Steel AISI316L / PP-EPDM	
IP RATING	IP69K	
NOMINAL TENSION	MAX. 250 V AC/DC	
NUMBER OF BENDING CYCLES	4,000,000	

NOTE: Specifications subject to change without notification.



IP69K RATED FOOD GRADE PROXIMITY SENSORS AND CABLES ARE THE BEST CHOICE FOR FOOD AND PACKAGING MACHINERY WHERE A RELIABLE AND COMPLETELY SEALED SENSOR AND CABLE IS REQUIRED FOR LONG-LASTING OPERATION IN A TOUGH ENVIRONMENT.

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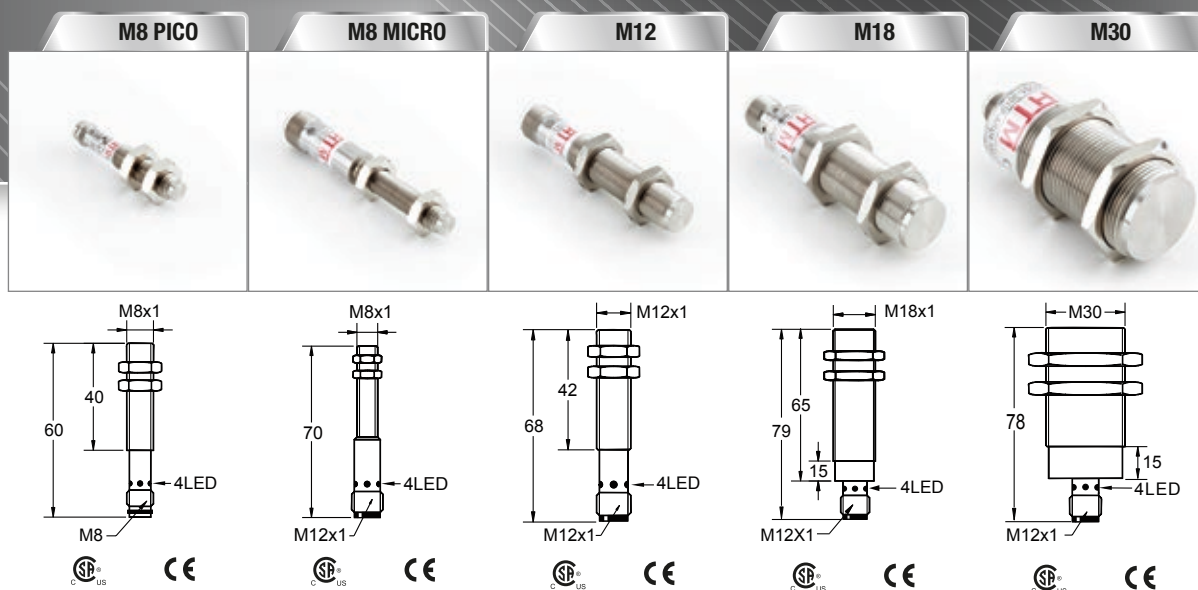
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SENSORS



- 1-PIECE STAINLESS STEEL SENSORS FOR FOOD AND PACKAGING APPLICATIONS
- MADE OF 1-PIECE OF SUS 316 FOOD GRADE STAINLESS STEEL BAR
- DOUBLE THE RANGE FROM STANDARD, THE M12 HAS A 4 mm RANGE
- 100 °C RATING FOR HOT FOOD PRODUCTION OR CLEANING
- AVAILABLE IN PNP, NPN, DC 2-WIRE AND AC OUTPUT FUNCTIONS
- IDEAL FOR USE WHERE PRESSURE WASHDOWN AND DETERGENTS ARE USED



METALHEAD™ FOOD GRADE SENSORS SPECIFICATIONS



SENSING DISTANCE	2 mm	2 mm	4 mm	8 mm	15 mm
OPERATING VOLTAGE	10-30 VDC				
OPERATING TEMPERATURE	-25 °C - +100 °C				
MOUNTING STYLE	Shielded				
HOUSING MATERIAL	1-piece Stainless Steel Face and Body - Food Grade SUS 316				
PART NUMBERS					
DC 3-wire 10-30 V PNP - Open	ECS1-0802P-ACS3-100C-316	ECS1-0802P-ARU4-100C-316	ECS1-1204P-ARU4-100C-316	ECS1-1808P-ARU4-100C-316	ECS1-3015P-ARU4-100C-316
DC 3-wire 10-30 V PNP - Closed	ECS1-0802P-BCS3-100C-316	ECS1-0802P-BRU4-100C-316	ECS1-1204P-BRU4-100C-316	ECS1-1808P-BRU4-100C-316	ECS1-3015P-BRU4-100C-316
DC 3-wire 10-30 V NPN - Open	ECS1-0802N-ACS3-100C-316	ECS1-0802N-ARU4-100C-316	ECS1-1204N-ARU4-100C-316	ECS1-1808N-ARU4-100C-316	ECS1-3015N-ARU4-100C-316
DC 3-wire 10-30 V NPN - Closed	ECS1-0802N-BCS3-100C-316	ECS1-0802N-BRU4-100C-316	ECS1-1204N-BRU4-100C-316	ECS1-1808N-BRU4-100C-316	ECS1-3015N-BRU4-100C-316
DC 2-wire 10-60 V - Open	ECS1-0802C-ACS3-100C-316	ECS1-0802C-ARU4-100C-316	ECS1-1204C-ARU4-100C-316	ECS1-1808C-ARU4-100C-316	ECS1-3015C-ARU4-100C-316
AC 20-240 V - Open	N/A	N/A	ECS1-1204A-AUL3-100C-316 *	ECS1-1808A-AUL3-100C-316 *	ECS1-3015A-AUL3-100C-316 *

* Connector thread for these AC part numbers is 1/2-20 UNF and not M12.

Short body versions available upon request.

NOTE: Specifications subject to change without notification.

FOOD GRADE METALHEAD™ SENSORS ARE THE BEST CHOICE FOR FOOD AND PACKAGING MACHINERY WHERE A RELIABLE AND COMPLETELY SEALED SENSOR IS REQUIRED FOR LONG-LASTING OPERATION IN A TOUGH ENVIRONMENT.

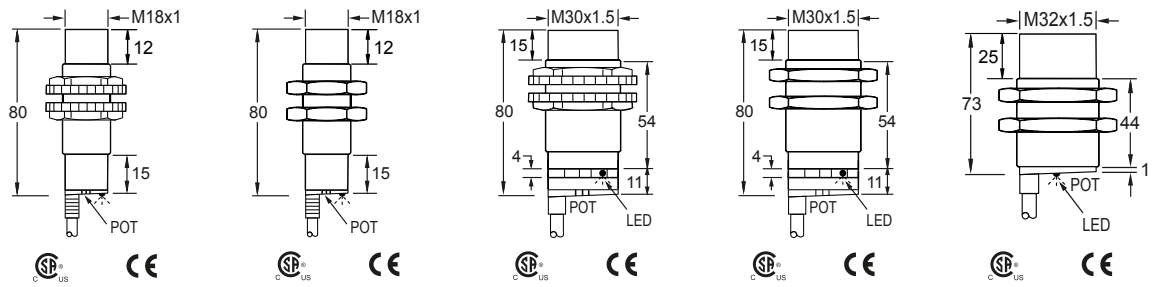


HTMTM
SENSORS



- CAPACITIVE SENSORS FOR LEVEL CONTROL AND NON-METALLIC PRESENCE DETECTION
- AVAILABLE IN PLASTIC OR STAINLESS STEEL HOUSINGS
- AVAILABLE WITH A PRE-WIRED CABLE OF ANY LENGTH, OR WITH A QUICK-CONNECT
- AVAILABLE WITH PNP, NPN, AC AND AC/DC OUTPUT FUNCTIONS
- AVAILABLE IN SHIELDED OR UNSHIELDED CONSTRUCTION FOR ANY APPLICATION
- IDEAL FOR USE IN MACHINES THAT REQUIRE NON-METALLIC, NON-CONTACT SENSING

CAPACITIVE PROXIMITY SENSORS SPECIFICATIONS



SENSING DISTANCE	1-15 mm adjustable	1-15 mm adjustable	1-30 mm adjustable	1-30 mm adjustable	1-40 mm adjustable
OPERATING TEMPERATURE	-25 °C - +70 °C				
SENSING FACE MATERIAL	PBT Plastic	PTFE	PBT Plastic	PTFE	PTFE
HOUSING MATERIAL	PBT Plastic	Stainless Steel	PBT Plastic	Stainless Steel	Stainless Steel
PART NUMBERS					
DC 3-wire 10-30 V PNP - Open	CCP2-1815P-A3U2	CCU2-1815P-A3U2	CCP2-3030P-A3U2	CCU2-3030P-A3U2	CCU2-3240P-A3U2
DC 3-wire 10-30 V PNP - Closed	CCP2-1815P-B3U2	CCU2-1815P-B3U2	CCP2-3030P-B3U2	CCU2-3030P-B3U2	CCU2-3240P-B3U2
DC 3-wire 10-30 V NPN - Open	CCP2-1815N-A3U2	CCU2-1815N-A3U2	CCP2-3030N-A3U2	CCU2-3030N-A3U2	CCU2-3240N-A3U2
DC 3-wire 10-30 V NPN - Closed	CCP2-1815N-B3U2	CCU2-1815N-B3U2	CCP2-3030N-B3U2	CCU2-3030N-B3U2	CCU2-3240N-B3U2
AC 20-240 V AC - Open	CCP2-1815A-A3U2	CCU2-1815A-A3U2	CCP2-3030A-A3U2	CCU2-3030A-A3U2	CCU2-3240A-A3U2
AC 20-240 V AC - Closed	CCP2-1815A-B3U2	CCU2-1815A-B3U2	CCP2-3030A-B3U2	CCU2-3030A-B3U2	CCU2-3240A-B3U2

NOTE: Specifications subject to change without notification.

*Flatpack, M8 and M12 sizes available.

CAPACITIVE SENSORS ARE THE BEST CHOICE FOR THE RELIABLE DETECTION OF LIQUIDS, BULK SOLIDS, PLASTICS, POWDERS, PELLETS AND PASTES WHERE A NON-CONTACT SOLUTION IS REQUIRED.



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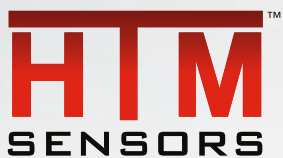
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