

## Raytek Programmable IR Sensors



▲ CM

- -20 to 500 °C (-4 to 932 °F) Range
- 13:1 Optics at 90% Energy
- 150ms (95%) Response Time
- RS-232 Digital Communications
- Adjustable Signal Processing
- DataTemp® Multidrop Software Compatible
- Sensor status indicator LED

Designed for easy integration, the CM sensor with J-type or K-type thermocouple output can easily replace traditional contact probes. A user scalable 0-5 volt output is available for applications susceptible to noise. This rugged, single piece NEMA4 sensor has silicon optics to provide excellent optical resolution.

### SPECIFICATIONS

Accuracy (mV):	± 1.5% of reading or ± 2 °C
Accuracy (T/C):	± 1.5% of reading or ± 4 °C
Spectral Response:	8 to 14 microns
Resolution:	0.1 °C
Emissivity:	0.10 to 1.10 (adjustable)
Transmissivity:	0.10 to 1.00 (adjustable)
Signal Processing:	Peak hold, valley hold, variable averaging
Output:	100Ω Zout (TC types) 50kΩ min load (Voltage type)
Self-diagnostics:	Alarm, out of range, unstable, fault
Power Supply:	12-24 VDC ±20% @ 10mA
Digital Output:	Two-way RS232 digital output
Alarm Output:	Transistor, 24VDC ±20% <20mA
Ambient Temperature:	0-70 °C (32-160 °F)
Housing:	IP 65 (NEMA-4) stainless steel
Size:	0.75" dia x 3.7" long, 3/4-16 UNF thread
Cable:	1m (3.3 ft) standard, 3m available

### ORDERING INFORMATION

RAYCMLTV	CM sensor, 0-5V user-scalable output
RAYCMLTJ	CM sensor, Type J TC output
RAYCMLTK	CM sensor, Type K TC output

Add suffix 3 for 3m (9.8') cable

## Kobold Ultrasonic Level Transmitters

- Monitor tanks and bins up to 24.5 feet deep
- Non-contact sensor
- Compatible with viscous, sticky or chemically aggressive media
- Compact and easily installed
- 4-20 mA transmitter
- Automatic temperature compensation
- On-board display for easy calibration
- Loop powered and Intrinsically Safe versions



▲ NEO-5001

### SPECIFICATIONS

Range:	NEO-5001: 18 feet from sensor face NEO-5003: 24.5 feet from sensor face
Span:	NEO-5001: 17.5 feet NEO-5003: 24 feet
Display:	NEO-5001: LCD; NEO-5003: LED
Dead Band:	0.5 feet (6 inches)
Accuracy:	±0.25% of span
Repeatability:	±0.125"
Fitting:	2" NPT
Probe Material:	PVDF
Enclosure Material:	PP (UL 94V0)
Temp. Range:	-40 to 140 °F
Pressure Rating:	30 PSI @ 75 °F
Beam Angle:	±8° off vertical
Sensor Frequency:	50 kHz
Signal Output:	NEO-5001: 4-20 mA DC (2-wire) into 350Ω max. NEO-5003: 4-20 mA DC (3-wire) into 350Ω max.
Supply Voltage:	14 to 36 VDC
Current Draw:	NEO-5003: 200 mA max.
Relay:	NEO-5003: SPDT 12 amps @ 240 VAC/120 VDC
Dimensions:	2.8" dia x 6.3" long, excluding cable port
Protection:	NEMA 4X
Intrinsic Safety Rating (NEO-5001IS only):	
CSA/NRTL/C:	Class I, Div 1 Groups A,B,C,D Class II, Div 1 Groups E,F & G Class III, Temp Code: T3C
Vmax, Imax:	32.0 VDC, 130 mA
Cl, Li:	0 microFarads, 0 microHenries

### Beam Divergence

Range	Radius	Range	Radius
1'	2.6"	13'	21.5"
2'	4.2"	14'	23.1"
3'	5.7"	15'	24.7"
4'	7.3"	16'	26.3"
5'	8.9"	17'	27.8"
6'	10.5"	18'	29.4"
7'	12.1"	19'	31.0"
8'	13.6"	20'	32.6"
9'	15.2"	21'	34.2"
10'	16.8"	22'	35.7"
11'	18.4"	23'	37.3"
12'	20.0"	24'	38.8"



▲ NEO-5003

### ORDERING INFORMATION

KO/NEO-5001	Loop-powered Level Transmitter with LCD display
KO/NEO-5001IS	Intrinsically safe loop-powered Level Transmitter with LCD display
KO/NEO-5003	DC powered Level Transmitter with LED display & relay output