

# Tyre Temperature Monitoring System (RLACS272)

**VBOX**  
MOTORSPORT

The RLACS272 Tyre Temperature Sensors have been specifically designed to measure the highly transient surface temperature of a tyre, providing invaluable information for chassis tuning and driver development.

Each sensor can measure up to 16 temperature points on an object with surface temperatures ranging from -20 to 300° C.



## Features

- Log tyre temperatures throughout track sessions
- Up to 16 temperature points per sensor
- 120° and 60° field of view options
- Pre-configured tyre temperature VBOX Video HD2 scene to get you up and running
- CAN Bus data output

## Package Contents

### Option 1 - 60° FOV Sensors

Description	Product Code
4x 60° Field of View Tyre Temperature Sensors	ACS272-60FL/FR/RL/RR
1x Wiring Loom	ACS272LOOM

### Option 2 - 120° FOV Sensors

Description	Product Code
4x 120° Field of View Tyre Temperature Sensors	ACS272-120FL/FR/RL/RR
1x Wiring Loom	ACS272LOOM

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## Sensor Specification

Temperature Measurement Range	-20 to 300° C
Accuracy (Central 10 Channels, Nominal)	<b>±1.0° C</b> for 0° C < Tp < 50° C <b>±2.0° C</b> for Tp < 0° C and Tp > 50° C
Accuracy (First & Last 3 Channels, Nominal)	<b>±2.0° C</b> for 0° C < Tp < 50° C <b>±3.0° C</b> for Tp < 0° C and Tp > 50° C
Field of View, FOV	60° x 8° (wide) 120° x 15° (ultra-wide)
Number of Channels	16
Thermal Time Constant	2 ms
Effective Emissivity <ul style="list-style-type: none"><li>• 60° FOV</li><li>• 120° FOV</li></ul>	0.78 0.85
Spectral Range	8 to 14 µm

## Electrical Specification

Recommended Supply Voltage	5 to 12 V
Supply Current	30 mA

Features Reverse polarity protection and over-temperature protection (125° C)

## Wiring

Supply Voltage	Red
Ground	Black
CAN +	Blue
CAN -	White

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## Mechanical Specification

Weight	20 g
Protection Rating	IP 66

## CAN Specification

Standard	CAN2.0A (11 bit identifier) ISO-11898	<b>Base CAN ID's</b>	
Bit Rate	1 Mbit/s	Front Left Sensor	0x4B0
Byte Order	Big-Endian / Motorola	Front Right Sensor	0x4B4
Scale	0.1°C / bit	Rear Left Sensor	0x4B8
Offset	-100°C	Rear Right Sensor	0x4BC

### CAN ID: Base ID

Channel 1		Channel 2		Channel 3		Channel 4	
Byte 0 (MSB)	Byte 1 (LSB)	Byte 2 (MSB)	Byte 3 (LSB)	Byte 4 (MSB)	Byte 5 (LSB)	Byte 6 (MSB)	Byte 7 (LSB)

### CAN ID: Base ID+1

Channel 5		Channel 6		Channel 7		Channel 8	
Byte 0 (MSB)	Byte 1 (LSB)	Byte 2 (MSB)	Byte 3 (LSB)	Byte 4 (MSB)	Byte 5 (LSB)	Byte 6 (MSB)	Byte 7 (LSB)

### CAN ID: Base ID+2

Channel 9		Channel 10		Channel 11		Channel 12	
Byte 0 (MSB)	Byte 1 (LSB)	Byte 2 (MSB)	Byte 3 (LSB)	Byte 4 (MSB)	Byte 5 (LSB)	Byte 6 (MSB)	Byte 7 (LSB)

### CAN ID: Base ID+3

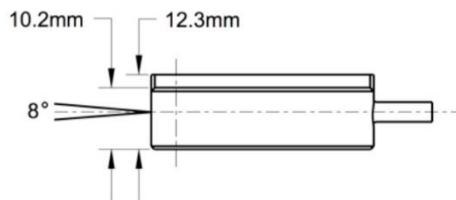
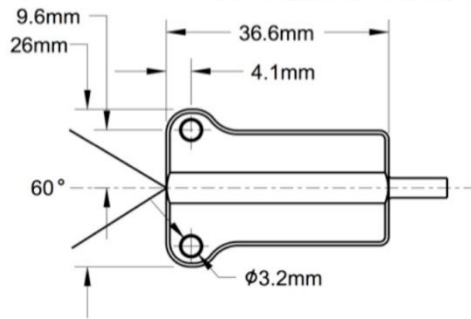
Channel 13		Channel 14		Channel 15		Channel 16	
Byte 0 (MSB)	Byte 1 (LSB)	Byte 2 (MSB)	Byte 3 (LSB)	Byte 4 (MSB)	Byte 5 (LSB)	Byte 6 (MSB)	Byte 7 (LSB)

# Tyre Temperature Monitoring System (RLACS272)

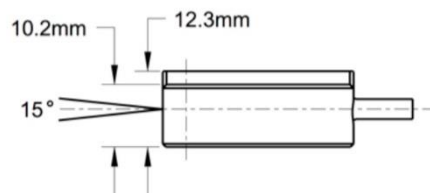
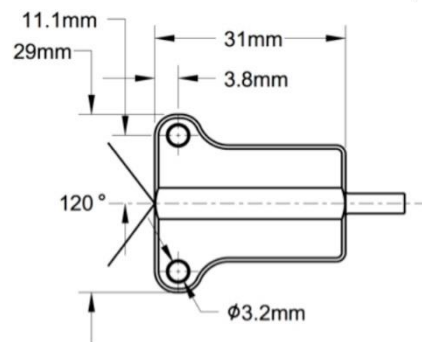
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## Sensor Dimensions

**60° Field-of-View, IRTS-60-V2**



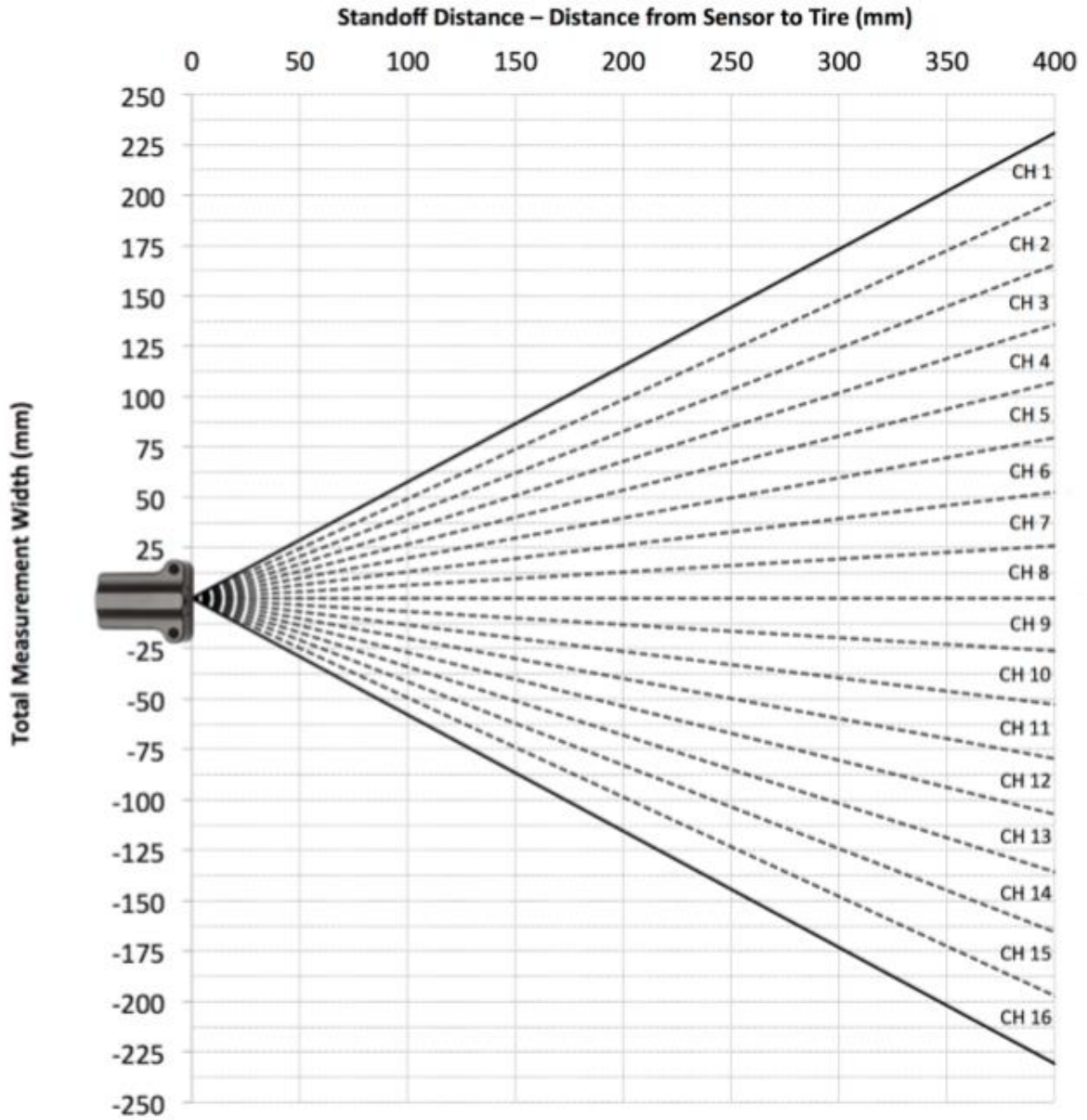
**120° Field-of-View, IRTS-120-V2**



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## Field of View - 60° Sensor



# Tyre Temperature Monitoring System (RLACS272)



## Field of View - 120° Sensor

