

THERMAL MANAGEMENT

PRODUCT CATALOG



# TEMPERATURE SENSORS

# TAKING EFFICIENT THERMAL MANAGEMENT TO THE NEXT LEVEL

Associated to our vast range of Quick Connectors (QC), ARaymond temperature sensors are **easily and securely integrated** into coolant lines.



**COMPACT**  
for any tight space



**LIGHTWEIGHT**  
plastic enclosure



**FIRE RESISTANT**  
UL94 V0 rated materials

## HIGHLY MODULAR AND CUSTOMIZABLE







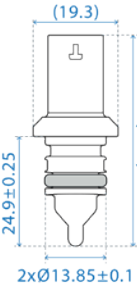
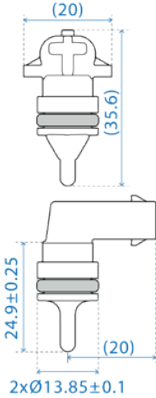
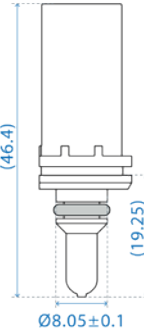
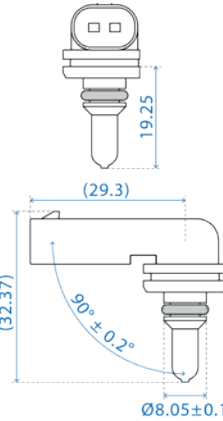
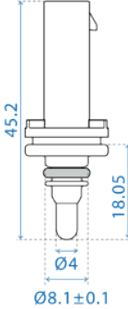
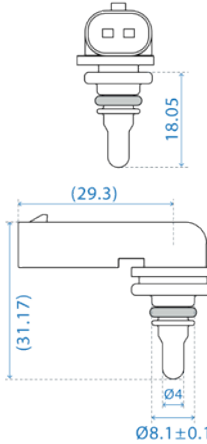


- Multiple sensor options—adaptable to various fluid-handling components
- Tailored design on demand

## METAL-HYBRID HOUSING OPTION



- Higher heat and thermal resistance
- Faster response time

CATALOG CODE	TS1S	TS1E	TS2S	TS2E	TS2MS	TS2ME
SENSOR MODEL						
DIMENSIONS (mm)						
SENSOR MOUNT	NT520		NT523			
WEIGHT (without retainer)	~6g		~5g		~6g	
OPERATING TEMPERATURE RANGE	-40°C to +125°C <sup>1</sup>					
RESPONSE TIME (stirred water)	T63% < 5s		T63% < 10s		T63% < 4s	
TYPICAL CONNECTOR INTERFACE	MLK – 1.2 Keying A, B or C According to USCAR 120-S-002-1-Z02		MLK – 1.2 Keying A or B According to USCAR 120-S-002-1-Z02			
PIN COATING	Silver <sup>2</sup>		Tin			
RESISTANCE @25°C/B25/85 <sup>3</sup>	2,2kΩ / 3970K 10kΩ / 3974K 30kΩ / 3943K		2,1kΩ / 3511K 10kΩ / 3435K 10kΩ / 3977K 100kΩ / 3250K			
BODY MATERIAL	PPS		PPS		PPS+Steel	
PROTECTION	IP69K					

<sup>1</sup>Possible to operate at a higher temperature depending on the QC temperature range.

<sup>2</sup>Tin coating on demand.

<sup>3</sup>Detailed R-T curves available upon request.

# VDA

DIAMETER **JA32** STRAIGHT 270°

NW 12



VDA LOW PUSH  
Hose 12

DIAMETER **NB93** 25° 180° **NB94** STRAIGHT 270° **NB103** STRAIGHT **NB71** 45°

NW 16



VDA LOW PUSH  
Hose 14



VDA LOW PUSH  
Hose 16



VDA LOW PUSH  
Hose 16



VDA LOW PUSH  
Hose 16

**NB98** STRAIGHT **NB72** STRAIGHT **NB65** 30° 90° **NB73** 55° 270°



VDA LOW PUSH  
Hose 19



VDA LOW PUSH  
Hose 19

NEW TOOL REQUIRED



VDA LOW PUSH  
Hose 19



VDA LOW PUSH  
Hose 19

# METRIC

DIAMETER **L35** STRAIGHT

18.00



SELFY®  
Tube 16.5x18.5

# COMPACT QC

DIAMETER	YC6	STRAIGHT	YC7	STRAIGHT	YC27	STRAIGHT	YC28	STRAIGHT
18.00		2 BUTTON COMPACT Tube 15x18		2 BUTTON COMPACT Tube 15x18		SELFY® COMPACT Tube 15x18		SELFY® COMPACT Tube 15x18
	YC10	90° 	YC35	90° 	YC29	90° 	YC32	90° 
		2 BUTTON COMPACT Tube 15x18		SELFY® COMPACT Tube 15x18		SELFY® COMPACT Tube 15x18		SELFY® COMPACT Tube 15x18
	YC31	90° 	YC20	90° 	YC30	90° 	YC21	3 WAY 
		SELFY® COMPACT Tube 15x18		2 BUTTON COMPACT Tube 15x18		SELFY® COMPACT Tube 15x18		2 BUTTON COMPACT Tube 15x18
DIAMETER	YD3	90° 						
20.00		SELFY® COMPACT Tube 21x24						

## SENSOR MOUNT

All catalogue products are available with NT523 mounting interface for TS2 sensors.



# FULLY-INTEGRATED SENSORS

Enhance system **reliability and optimize** packaging thanks to fully-integrated, compact temperature sensors that **reduce fluid interfaces**.

## SINGLE-INTERFACE SOLUTION

- All-in-one-solutions<sup>(1)</sup> compatible with multiple ARaymond QC families
- Fewer fluid interfaces
- Proven reliability<sup>(2)</sup>
- Numerous customization capabilities

*Temperature sensor assembled on the line*

**4 INTERFACES**

*Temperature sensor FULLY-INTEGRATED into one of our QCs*

**1 INTERFACE**

(1) Full warranty included / (2) Tested and validated for automotive applications



**STANDARD**

**DIAMETER** **HA4** STRAIGHT 

NW 8



VDA LOW PUSH  
Tube 8x10 or 3/8in

**DIAMETER** **PB4** STRAIGHT

NW 18



VDA LOW PUSH  
Tube 19x22

**DIAMETER** **XB1** STRAIGHT

NW 22



VDA LOW PUSH  
Tube 24x27

**TECHNICAL CHARACTERISTICS**

OPERATION TEMPERATURE RANGE	-40°C to +125°C
RESPONSE TIME	T63% < 10s
CONNECTOR INTERFACE	2-WAY 1.2MM PER USCAR 120S-002S-I-Z02 / KEY A or B
PIN COATING	TIN
RESISTANCE @25°C/ B25/85*	10kΩ / 3435K
BODY MATERIAL	PA66 or PP
PROTECTION	IP69K

\*Detailed R-T curves available upon request



**CUSTOM**

Complex, codesigned options available on demand.



# ARAYMOND, AROUND THE WORLD



DISCOVER OUR  
E-CATALOG



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