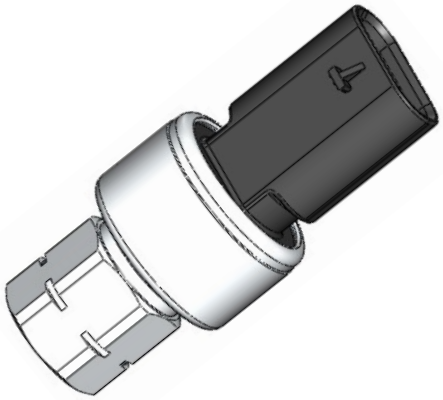
AUTOMOTIVE PRESSURE SENSOR

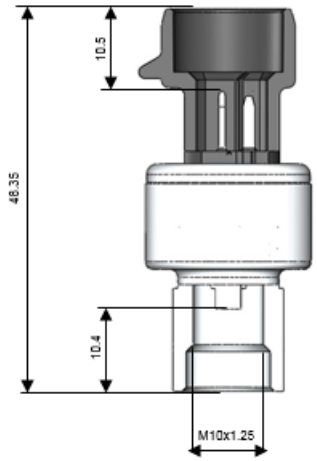
BRIMIND SENSOR, SPECIFIC FOR AUTOMOTIVE AIR CONDITIONING APPLICATION, IS A RATIOMETRIC PRESSURE DEVICE BASED ON A PIEZORESISTIVE CERAMIC TECHNOLOGY.

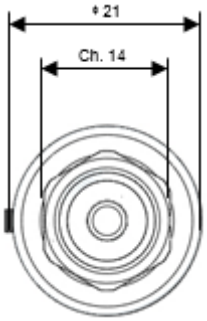
BRIMIND JOINED IN THIS PRODUCT THE TECHNOLOGICAL PERFORMANCE WITH THE OPTIMIZED DESIGN AND THE ECONOMICAL ADVANTAGE.

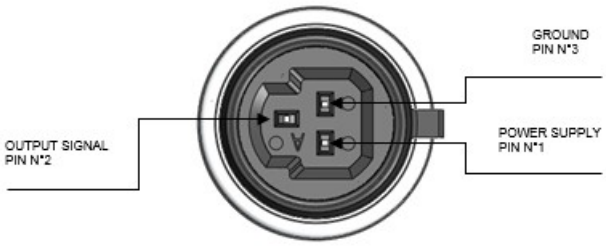


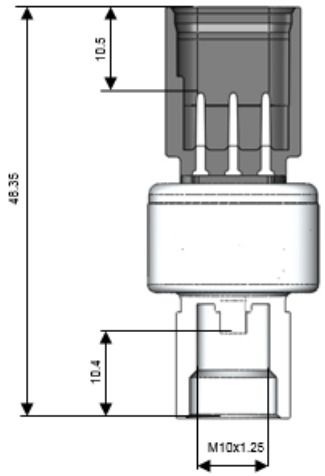
* **PERFOMANCES**
  Resistant to extreme temperatures, excellent hysteresis, high accuracy, fast response time
* **COMPATIBILITY**
  Suitable for HVACR refrigerant gases, also for new gas R1234yf and related oils
* **RESISTANCE**
  Suitable for critical application with aggressive fluids
* **FLEXIBILITY**
  Customizable with different materials, connectors and transfer function
* **COMPLIANCE**
  Compliant with Rohs and Reach Regulation
* **APPROVAL**
  Compliant with FCA electrical-electromagnetic compatibility (EMC) and environmental features

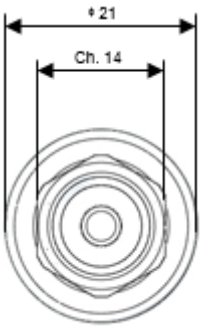
DIMENSIONS

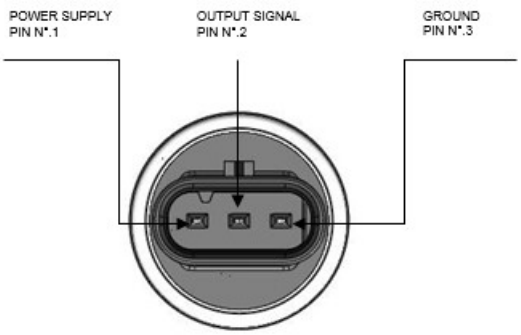












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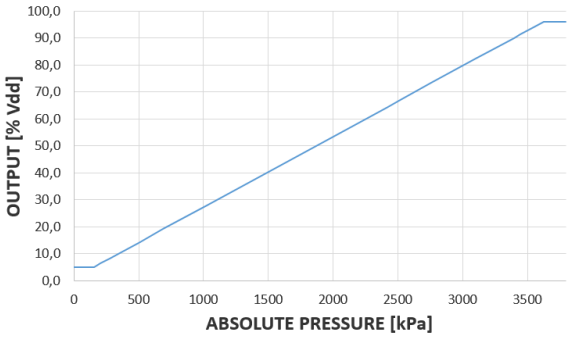
GENERAL FEATURES	
Pressure ranges	100 to 3600 kPa (abs) typical (other pressure range and transfer function available on request)
Over pressure	5300 kPa (abs) typical
Burst pressure	10000 kPa (abs) typical
Pressure connection	Female, M10 x 1.25 (other connections available on request)
Pressure connection material	Aluminum (other materials available on request)
Tightening torque	5.5 to 12 Nm
Electrical connection	Optionally compatible with (other connections available on request): Packard connector UScar connector
Electrical connection material	PBT GF30
ELECTRICAL FEATURES	
Power supply (Vdd)	5Vdc ± 10%. (Protected against polarity inversion and short circuit)
Supply current (Idd)	< 10 mA @ 5,5Vdc (8,5 mA typical)
Output voltage (Vout)	10% Vdd to 90% Vdd typical
Output current (Iout)	5mA typical
Output load	PULL UP or PULL DOWN 7,5 KΩ min. typical
Output resistance to ground (supply voltage open)	55 Ω typical
Output resistance to supply voltage (ground open)	215 Ω typical
Output response time	10 ms typical
Power supply overvoltage	18Vdc
Reverse voltage	-14Vdc
PERFORMANCE FEATURES	
Operating temperature	-40°C to 135°C
Storage temperature	-40°C to 150°C
Accuracy	± 2% Vdd typical (0°C to 25°C) ± 3% Vdd typical (-40°C to 135°C) (linearity, hysteresis, repeatability and calibration)
Cycle life	10 millions F.S. cycles
IP code	IP67 (with connector female IP67 plugged)
Fluids compatibility	HVAC refrigerants, new R1234yf refrigerant and associated oils. (other fluids compatibilities available on request)
Vacuum pressure (referred to refrigerant circuit)	0 bar (abs)
Drop (any axis)	1,5m
Weight	14 grams typical
REFERENCE STANDARD	
ENVIRONMENTAL FEATURES	Compliant with new FCA requirements based on harmonized document 9.90111/02 based on following international norms: ISO 16750-1 / ISO 16750-3 / ISO 16750-4 / ISO 16750-5 / ISO 20653 / ISO 3170 / ISO 4926 / ISO 22241-1 / ISO 12103-1 / ISO 16949 / SAE-J-639 / SAE-J-400 / SAE-J-1709 / SAE-J-1885 / IEC 60068-2-6 / IEC 60068-2-11 / IEC 60068-2-14 / IEC 60068-2-27 / IEC 60068-2-38 / IEC 60068-2-60 / IEC 60068-2-64 / IEC 60068-2-70 / IEC 60068-2-78
EMC FEATURES	Compliant with new FCA requirements based on harmonized document 9.90111/01 based on following international norms: CISPR 25 / ISO 11452-1 / ISO 11452-2 / ISO 11452-4 / SAE-J-1113-21 / ISO 7637-1 / ISO 7637-3 / ISO 10605 / ISO 16750-2

EXAMPLE OF TRANSFER FUNCTION

Vout (% Vdd) = K2 * P [kPa abs] + K1



TOLERANCE ERROR

Error (%Vdd) = (Output value - Nominal value) / Vdd * 100

Generic error for temperature value outside the range = 4%