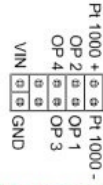




3-Way AFE

Alphasense A4 4-Electrode Gas Sensors

Fig 3 AFE pin-out



Pin-outs 2x4 AFE with Pt 1000			
VIN	Power		
GND	Power		
OP 1	Sensor 1 (SN 1)	Working electrode	
OP 2	Sensor 1 (SN 1)	Auxiliary electrode	
OP 3	Sensor 2 (SN 2)	Working electrode	
OP 4	Sensor 2 (SN 2)	Auxiliary electrode	
Pt 1000	Pt 1000 +	See Notes	
Pt 1000	Pt 1000 -	See Notes	



Pin-outs 3x4 AFE with Pt 1000			
VIN	Power		
GND	Power		
OP 1	Sensor 1 (SN 1)	Working electrode	
OP 2	Sensor 1 (SN 1)	Auxiliary electrode	
OP 3	Sensor 2 (SN 2)	Working electrode	
OP 4	Sensor 2 (SN 2)	Auxiliary electrode	
OP 5	Sensor 3 (SN 3)	Working electrode	
OP 6	Sensor 3 (SN 3)	Auxiliary electrode	
Pt 1000	Pt 1000 +	See Notes	
Pt 1000	Pt 1000 -	See Notes	



Pin-outs 3x4 AFE + PID with Pt 1000			
PID VIN	PID		
PID O/P	PID		
VIN	Power		
GND	Power		
OP 1	Sensor 1 (SN 1)	Working electrode	
OP 2	Sensor 1 (SN 1)	Auxiliary electrode	
OP 3	Sensor 2 (SN 2)	Working electrode	
OP 4	Sensor 2 (SN 2)	Auxiliary electrode	
OP 5	Sensor 3 (SN 3)	Working electrode	
OP 6	Sensor 3 (SN 3)	Auxiliary electrode	
Pt 1000	Pt 1000 +	See Notes	
Pt 1000	Pt 1000 -	See Notes	

NOTES:

Pt 1000 (+) is connected to 2.5V on-board reference voltage via 7.41 Kohm resistor.

Pt 1000 (-) is floating. Please connect to ground to measure the voltage at the (+) connector.

To measure Pt 1000 resistance with your circuit, remove resistor labeled RL/RT

Table 1 2 sensor AFE Part numbers

Part number	SN1	SN2
810-0021-00	NO ₂	O ₃
810-0021-01	NO ₂ or O ₃	NO
810-0021-02	NO ₂ or O ₃	CO or SO ₂ or H ₂ S
810-0021-03	NO	CO or SO ₂ or H ₂ S
810-0021-04	CO	SO ₂ or H ₂ S

Table 2 3 sensor AFE Part numbers

Part number	SN1	SN2	SN3
810-0019-00	NO ₂	O ₃	CO or SO ₂ or H ₂ S
810-0019-01	NO ₂	O ₃	NO
810-0019-02	NO ₂	CO	SO ₂ or H ₂ S
810-0019-03	NO ₂	CO or SO ₂ or H ₂ S	NO
810-0019-04	CO	SO ₂	H ₂ S

Table 3 3 sensor + PID AFE Part numbers

Part number	SN1	SN2	SN3	PID
810-0020-00	NO ₂	O ₃	CO or SO ₂ or H ₂ S	PID-AH
810-0020-01	NO ₂	O ₃	NO	PID-AH
810-0020-02	NO ₂	CO	SO ₂ or H ₂ S	PID-AH
810-0020-03	NO ₂	CO or SO ₂ or H ₂ S	NO	PID-AH
810-0020-04	CO	SO ₂	H ₂ S	PID-AH

Table 4 Optional AFE Accessories

Cables	Description	Notes
000-CBLE-00	10 Way IDC Cable (50mm) for 2/3 sensor AFE	Connectors are from Toby AO5 series connectors
000-CBLE-01	10 Way IDC Cable (200mm) for 2/3 sensor AFE	
000-CBLE-02	12 Way IDC Cable (50mm) for 3 sensor + PID AFE	
000-CBLE-03	12 Way IDC Cable (200mm) for 3 sensor + PID AFE	
	Socket	
Gas Hoods	Description	Notes
000-GSHD-04	Gas Hood for 2 sensor AFE	Includes fixing kit supplied with two Sawgelok SS-400-1-2RT connectors
000-GSHD-05	Gas Hood for 3 sensor AFE	
000-GSHD-06	Gas Hood for 3 sensor + PID AFE	
000-TUBE-FEP	FEP Tubing (1.5m)	
Fixing kit	Description	Notes
000-0AFE-KIT	Fixings kit for AFE circuit boards	Includes 4-off Viton sealing rings

For further information on the performance of sensors in the Alphasense range or any other subject, please contact Alphasense Ltd. For Application Notes visit "www.alphasense.com"

NOTE: as applications of use are beyond our control, the information provided is given without legal responsibility. Customers should test under their own conditions, to ensure that the sensors and transmitters are suitable for their own requirements.

In the interest of continued product improvement, we reserve the right to change design features and specifications without prior notification. The data contained in this document is for guidance only. Alphasense Ltd accepts no liability for any consequential losses, injury or damage resulting from the use of this document or the information contained in it (©ALPHASENSE LTD) Doc. Ref. AFE/NOV13