

Data Sheet

GMS10, KGZ12 and KGZ50 Oxygen Sensors - Probe Style

FEATURES

- Oxygen pressure range 2 mbar - 3bar
- Zirconium dioxide (ZrO₂) sensing elements
- Non-consumption technology
- Integral heating element
- No need for temperature stabilisation
- No reference gas required
- High accuracy
- Linear output signal
- Operates with external interface boards
- 80mm, 220mm and 400mm probes available



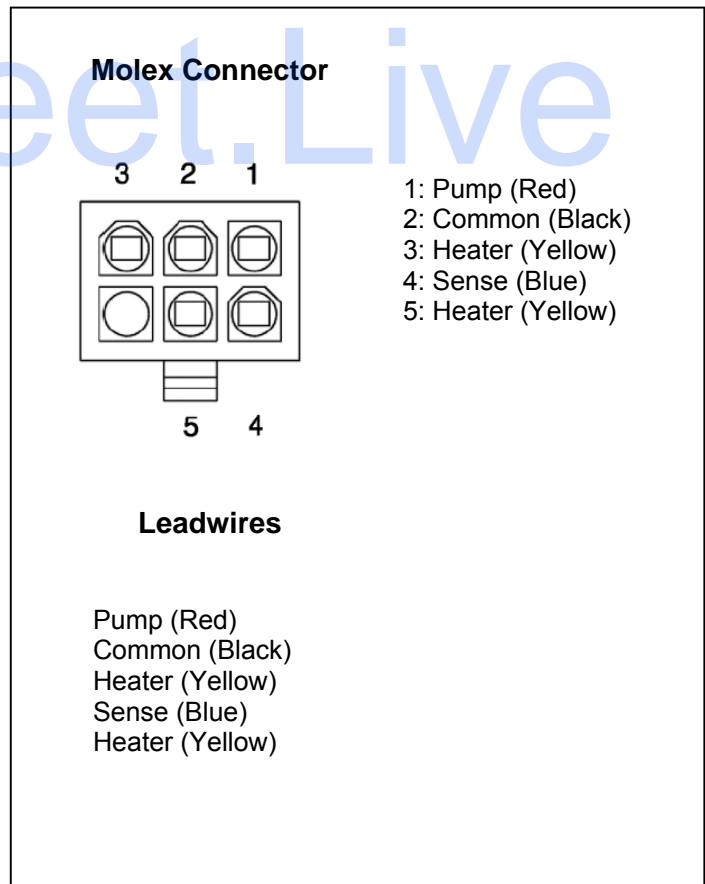
SPECIFICATIONS

Heater Supply*	
Porous Lid Cap (17.8mm)	4.00V _{DC} ± 0.1V _{DC} (1.7A)
Stand by	1.65V _{DC} (0.7A)
Full Porous Cap (15.0mm)	4.35V _{DC} ± 0.1V _{DC} (1.85A)
Stand by	2V _{DC} (0.85A)
Pump resistance @ 700°C**	< 6kΩ
Permissible gas temperature	
Standard Temp.	-100 to 250°C
Gas flow rate	0 to 10 m/s
Repetitive permissible acceleration	5 g
Incidental permissible acceleration	30 g

* It is important to measure the heater voltage as close to the sensor as possible due to voltage drops in the supply cable. Heater can also be operated with an equivalent a.c. or PWM signals.

** The constant current source used in the pump circuit should be designed to drive a load of up to 6kΩ

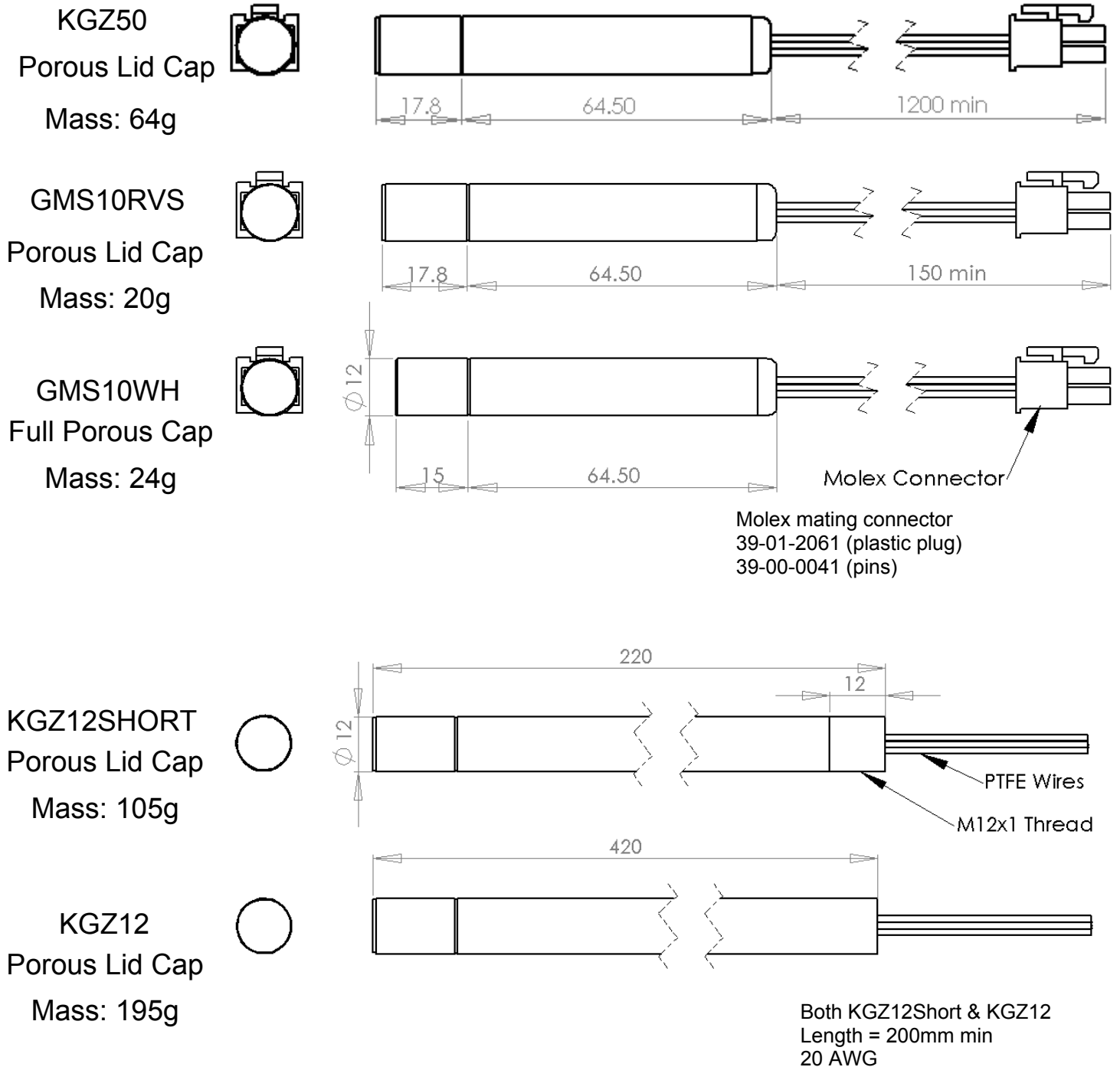
ELECTRICAL CONNECTION



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OUTLINE DRAWINGS



All dimensions in mm.
Sensor lengths are approximate.

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PERFORMANCE CHARACTERISTIC

Characteristics	Min.	Typ.	Max.	Unit
Oxygen pressure range	2		3000	mbar
Accuracy			5	
Internal operational temperature (Porous Lid Cap)		700 (4.00V _{DC})		°C
Internal operational temperature (Full Porous Cap)		700 (4.35V _{DC})		
Response time (10-90% step, Porous Lid Cap)			15	s
Response time (10-90% step, Full Porous Cap)			4	
Warm up time (prior to sensor operation)			100	
Warm up time (from stand by)			20	
Output stabilisation time		~180		

ORDERING INFORMATION

Part number	Probe Length	Permissible Gas Temperature	Sensor Response	Termination
GMS10RVS	80mm	-100 to 250°C	< 15s	150mm Cable, Molex Connector
GMS10WH	80mm	-100 to 250°C	< 4s	150mm Cable, Molex Connector
KGZ50	80mm	-100 to 250°C	< 15s	1.2m Cable, Molex Connector
KGZ12SHORT	220mm	-100 to 250°C	< 15s	Leadwires, 20 AWG, 200mm
KGZ12	420mm	-100 to 250°C	< 15s	Leadwires, 20 AWG, 200mm

WARNING

Personal Injury

DO NOT USE these products as safety or Emergency Stop devices or in any other application Where failure of the product could result in Personal injury.

Failure to comply with these instructions could Result in death or serious injury.