

DATE 1/Oct/2014No. V-8423

Messrs. _____

SPECIFICATION

Model: FCX-ULL

Project: _____

Distributor: _____

Reference: _____

A handwritten signature in black ink, reading 'Osamu Kitamura', is written over a horizontal line.

Fujikura Ltd.

Specifications of Oxygen Sensor Unit

V-8423

General:

This document describes the specifications of a ceramic oxygen sensor unit, FUJIKURA FCX-ULL.

Table shown below is revision records of this specification

V				
IV				
III				
II				
I				
Est.	25/Sep/2014	O. Kitamura		
	Date	Name	Comments	Remark

<u>Model</u>	<u>FCX-ULL (RoHS compliance model, Ceramic base)</u>
1. Measuring Gas	Oxygen
2. Measurement Method	Limiting current method using Zirconia Solid-Electrolyte
3. Dimension and weight	Please see the drawing 9-760-001, Approx. 5.5 g
4. Measurement Range	0 to 1000 ppmO ₂
5. Output current (IL)	35 ~ 75uA in free air , 0.7 V sensing voltage (Vs), 2W heating Theoretical output is given by following equation. $I_L = ([A]/1000) \times [O_2\text{ppm}] \quad \text{----(1)}$ [A] = Output current in 1000ppm O ₂ (uA) [O ₂ ppm] = Oxygen concentration (vol.ppm)
6. Accuracy	within 50 ppm O ₂
7. Response Time	within 30 sec. (90% value)
8. Life time	1 years in free air, continuous Vs
9. Heater	Power consumption: 2WDC +/- 5% Voltage(VH) for 2W: 1.7~3.0 VDC (individual for each sensor) Warm up rate: Maximum 40mV/sec
10. Warm-up time	about 3 min before the measurement

10. Sensing element	Recommended Vs=0.7 V for free air
11. Operating temperature	-10 ~ 50 deg. C
12. Storage temperature	-40 ~ 120 deg. C
13. Humidity	0 ~ 85 RH ... Without condensation
14. Warranty	Within one year after shipment

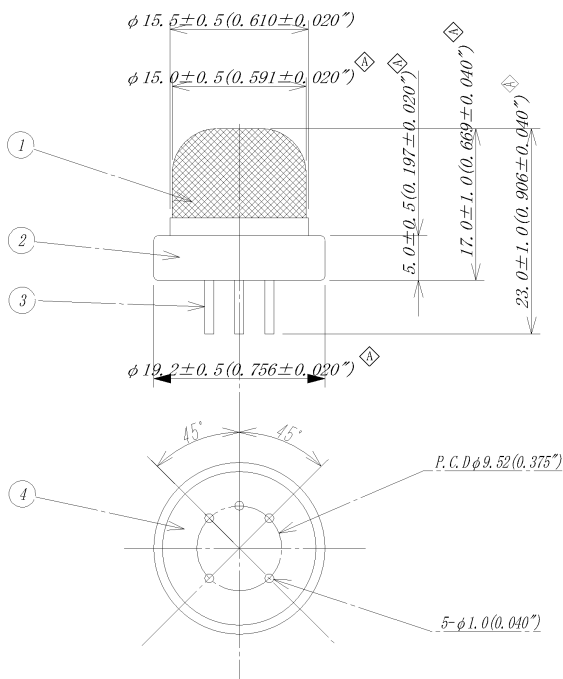
Output current of FCX-ULL

	0	50	100	200	300	400	500	600	800	1000	ppm O2
min	0.00	1.75	3.50	7.00	10.50	14.00	17.50	21.00	28.00	35.00	uA
max	0.00	3.75	7.50	15.00	22.50	30.00	37.50	45.00	60.00	75.00	uA

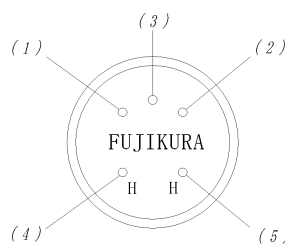
$$I_L = ([A]/1000) \times [O_2\text{ppm}]$$

[A] = Output current in 1000ppm O2 (uA)

[O2ppm] = Oxygen concentration (vol.ppm)



■接続図 : Connection Diagram



- (1) Vs (+) : センサ出力端子 (+) : Sensing terminal (+)
- (2) Vs (-) : センサ出力端子 (-) : Sensing terminal (-)
- (3) NC : 未使用端子 : Non-connected terminal
- (4) VH (+) : ヒータ電圧端子 (+) : Heater terminal (+)
- (5) VH (-) : ヒータ電圧端子 (-) : Heater terminal (-)

④	ステム STEM	Ceramics	1	
③	リードピン POST PIN	Cover	5	全メッキ Gold plating
②	リング RING	Brass	1	ニッケルメッキ Nickel plating
①	メッシュカバー MESH COVER	SUS316	1	100メッシュ 100mesh

PART NO.	部品名 NAME OF PART	材質 MAT'L	個数 QTY	摘要 REMARKS
PROJECT NAME :				
第3角法 DIMENSIONAL PRECISION		名称TITLE		
単位UNITS mm (inch)		OXYGEN SENSOR UNIT OUTLINE DIMENSIONS		
尺貫SCALE FREE		(Type' FCX-UC, UWC, ULC, ULLC, UL-03)		
DATE OF ISSUE 1997.11.04		図面番号DRAWING NO. 9-760-001		REV. MARK C
DATE OF REVISION 1996.11.25				

◇	Sensor stem material: Plastic → Ceramics	Sep 7, 2008	HN
◇	誤記訂正 (ピン配置) Correct of Mistakes (Pin arrangement)	97/11/04	R. Nagano
◇	寸法見直し (インチ表示追記)	96/11/25	R. Nagano
MARK	変更 REVISIONS	年月日 DATE	変更者 BY



承認 APPROVED BY H. Yasuhara	検図 CHECKED BY K. Nuri
設計 DESIGNED BY K. ISHIBASHI	製図 DRAWN BY R. Nagano

Headquarter Switzerland:
Angst+Pfister Sensors and Power AG

Thurgauerstrasse 66
CH-8050 Zurich
Phone +41 44 877 35 00
sensorsandpower@angst-pfister.com

Office Germany:
Angst+Pfister Sensors and Power
Deutschland GmbH
Edisonstraße 16
D-85716 Unterschleißheim
Phone +49 89 374 288 87 0
sensorsandpower.de@angst-pfister.com



We are here for you. Addresses and Contacts.

Sales Germany & Austria

Geometrical sensors
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Kurt Stritzelberger
Phone +49 89 374 288 87 22
kurt.stritzelberger@angst-pfister.com

Pressure sensors
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Gerhard Vetter
Phone +49 89 374 288 87 26
gerhard.vetter@angst-pfister.com

Gas sensors and modules

Peter Felder
Phone +41 44 877 35 05
peter.felder@angst-pfister.com

Sales Switzerland & Liechtenstein

Postcode 3000 – 9999

Basil Frei
Phone +41 44 877 35 18
basil.frei@angst-pfister.com

Postcode 1000 – 2999

Christian Mohrenstecher
Phone +41 76 444 57 93
christian.mohrenstecher@angst-pfister.com

Sales International Key Accounts

Peter Felder
Phone +41 44 877 35 05
peter.felder@angst-pfister.com

Sales Other Countries / Product Management

Pressure Sensors
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Philipp Kistler
Phone +41 44 877 35 03
philipp.kistler@angst-pfister.com

Gas sensors
Gas sensor modules

Dr. Thomas Clausen
Phone +49 89 374 288 87 24
thomas.clausen@angst-pfister.com

Flow / Level / Medical products

Dr. Adriano Pittarelli
Phone +49 89 374 288 87 67
adriano.pittarelli@angst-pfister.com

Power supplies

Sebastiano Leggio
Phone +41 44 877 35 06
sebastiano.leggio@angst-pfister.com

Linear position sensors
Angle sensors

Eric Letsch
Phone +41 44 877 35 14
eric.letsch@angst-pfister.com

Accelerometers
Sensor elements

Christoph Kleye
Phone +49 89 374 288 87 61
christoph.kleye@angst-pfister.com

Drive technology
CH Postcode 5000 – 9999 / DE

Roman Homa
Phone +41 76 444 00 86
roman.homa@angst-pfister.com

Drive technology
CH Postcode 1000 – 4999 / AT / IT / FR

Christian Mohrenstecher
Phone +41 76 444 57 93
christian.mohrenstecher@angst-pfister.com

Harald Thomas
Phone +49 89 374 288 87 23
harald.thomas@angst-pfister.com