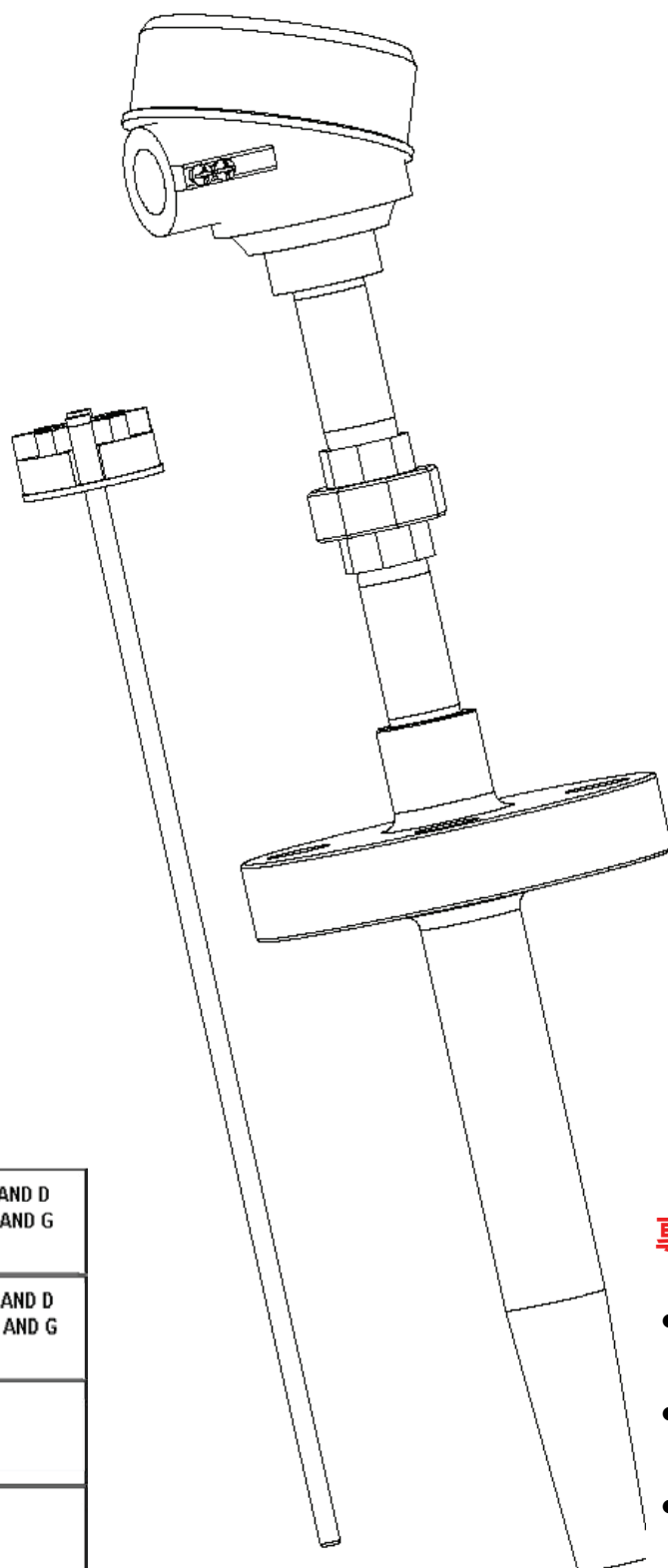


THERMOCOUPLES

熱電偶

RESISTANCE BULB



CLASS I, DIV I GROUPS B, C AND D
CLASS II, DIV I GROUPS E, F AND G
NEMA 4X



CLASS I, DIV I GROUPS B, C AND D
CLASS II, DIV I GROUPS E, F AND G
NEMA 4X



Eexd IIC ATEX II 2G
IP 66

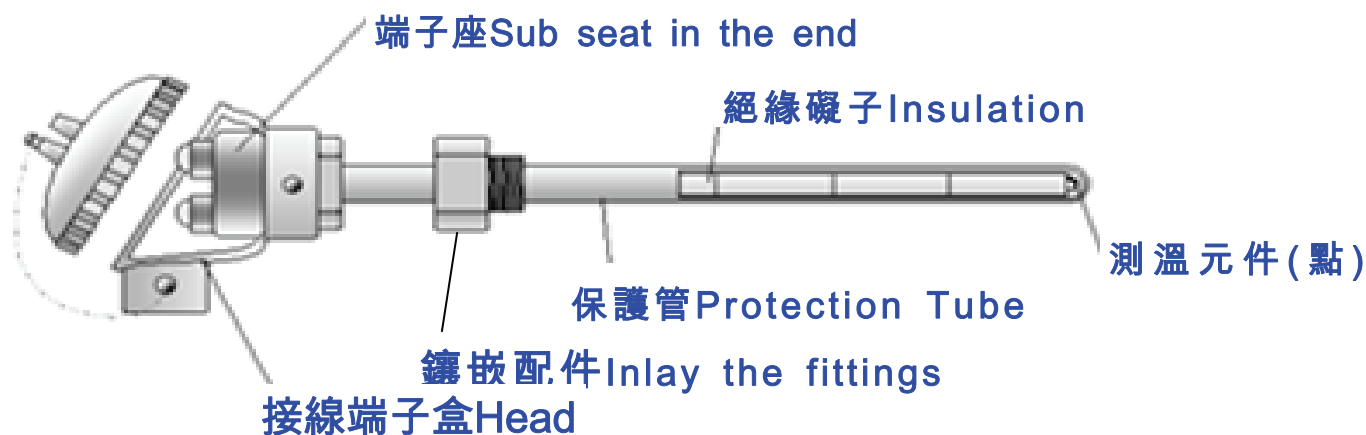


Ex de I & IIC ATEX II 2G D
IP 68

專業工廠設計/製作

- 各型式熱電偶
- 電阻式測溫體
- 溫度控制系統

熱電偶基本構造 Essential structure of electric thermocouples



熱電偶之規格 Electric thermocouples specification

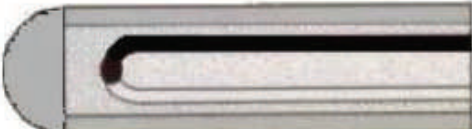
TYPE	素線徑 (mm)	常用溫度 (°C)	最大溫度 (°C)
	Plain line foot-path	Daily temperature	The greatest temperature
W5	0.25	2000	2300
	0.50		
w3	0.25	2000	2300
	0.50		
B	0.50	1,500	1,700
R	0.50	1,400	1,600
S			
N	0.65	850	900
	1.00	950	1,000
	1.60	1,050	1,100
	2.30	1,100	1,150
	3.20	1,200	1,250
K	0.65	650	850
	1.00	750	950
	1.60	850	1,050
	2.30	900	1,100
	3.20	1,000	1,200
E	0.65	450	500
	1.00	500	550
	1.60	550	600
	2.30	600	750
	3.20	700	800
J	0.65	400	500
	1.00	450	550
	1.60	500	650
	2.30	550	750
	3.20	600	750
T	0.32	200	250
	0.65	200	250
	1.00	250	300
	1.60	300	250

註：熱電偶精度大致上分為兩級

1. CLASS I 為0.4級 測得溫度= $T \times (\pm 0.004)$
2. CLASS II 為0.75級 測得溫度= $T \times (\pm 0.0075)$

可繞式熱電偶 Sheath sealing thermocouples

感溫點型式

接地式 TYPE-G (Grouned) 	量測接合點與保護管直接焊接之型式。應答直接迅速，適用高溫高壓，但因與外保護管接地，固不適用於有干擾、電壓及危險地區。
非接地式 TYPE-U (Ungrouned) 	量測接合點與保護管絕緣之型式。應答無接地型快，但軟接地型耐用。適用高溫、高壓、有干擾、電壓及危險地區。
露出式 TYPE-E (Exposed) 	量測接合點露出保護管之型式。應答最快，適用於微小溫度變化。但氣密性不佳、機械強度差，不適於在高溫、高壓及腐蝕性氣體下使用。

規格、尺寸 Specification Size

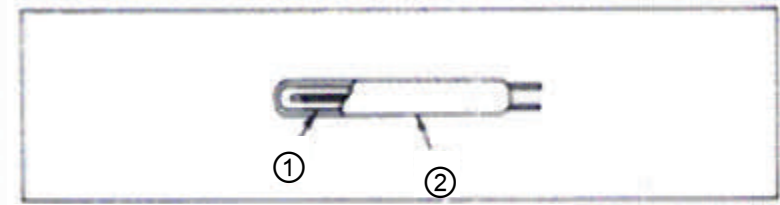
對數	外徑	素線徑	TYPE	保護材質	保護厚度	最長(M)
	0.5	0.09	K、E、J	Inconel600、304SS、316SS、310SS	0.09	50
	1.0	0.18	K、E、J、T	Inconel600、304SS、316SS、310SS	0.15	100
	1.6	0.28	K、E、J、T	Inconel600、304SS、316SS、310SS	0.23	300
	2.3	0.33	K、E、J、T	Inconel600、304SS、316SS、310SS	0.40	300
	3.2	0.58	K、E、J、T	Inconel600、304SS、316SS、310SS	0.48	157
	4.8	0.84	K、E、J、T	Inconel600、304SS、316SS、310SS	0.71	60
	6.4	1.12	K、E、J、T	Inconel600、304SS、316SS、310SS	0.94	39
	8.0	1.37	K、E、J、T	Inconel600、304SS、316SS、310SS	1.17	25
	1.6	0.28	K、E、J、T	Inconel600、304SS、316SS、310SS	0.23	300
	2.3	0.33	K、E、J、T	Inconel600、304SS、316SS、310SS	0.33	300
	3.2	0.46	K、E、J、T	Inconel600、304SS、316SS、310SS	0.48	157
	4.8	0.71	K、E、J、T	Inconel600、304SS、316SS、310SS	0.74	68
	6.4	0.94	K、E、J、T	Inconel600、304SS、316SS、310SS	1.02	38
	8.0	1.24	K、E、J、T	Inconel600、304SS、316SS、310SS	1.24	24
	3.2	0.28	K、E、J、T	Inconel600、304SS、316SS、310SS	0.33	160
	4.8	0.38	K、E、J、T	Inconel600、304SS、316SS、310SS	0.46	70
	6.4	0.48	K、E、J、T	Inconel600、304SS、316SS、310SS	0.64	41
	8.0	0.61	K、E、J、T	Inconel600、304SS、316SS、310SS	0.79	24

電阻式測溫體 Resistance Temperature Detector

電阻式測溫體組成圖 Re-
sistance Temperature Detector

白金電阻元件構造

The component of resistance of platinum is con-



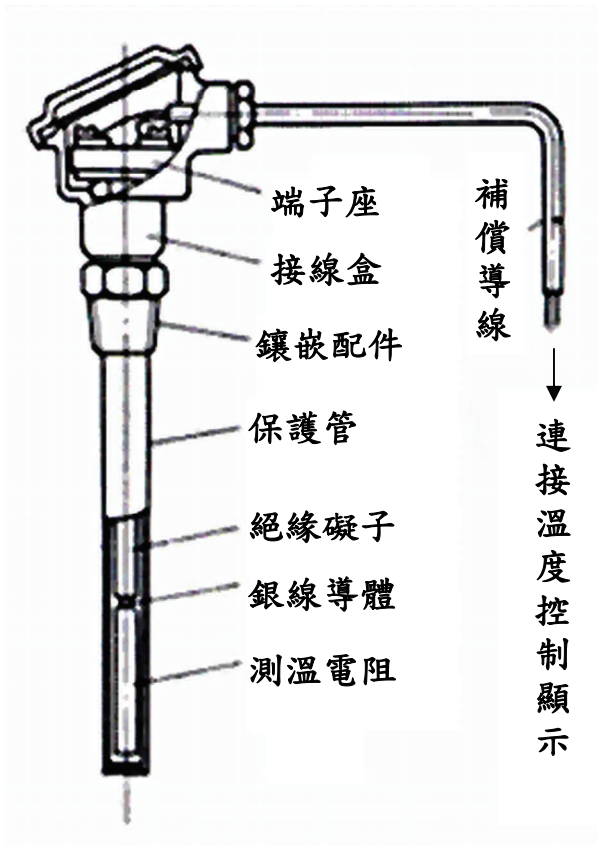
① 白金線 ② 特殊陶瓷610

白金電阻元件等級與精度

Grade of the component of resistance of platinum

等級class	精度Precision
0.15級	$\pm (0.15 + 0.0015t) \text{ }^{\circ}\text{C}$
0.2級	$\pm (0.15 + 0.002t) \text{ }^{\circ}\text{C}$
0.5級	$\pm (0.3 + 0.005t) \text{ }^{\circ}\text{C}$

上述 t 代表測定溫度Above-
mentioned t representatives
determine temperature



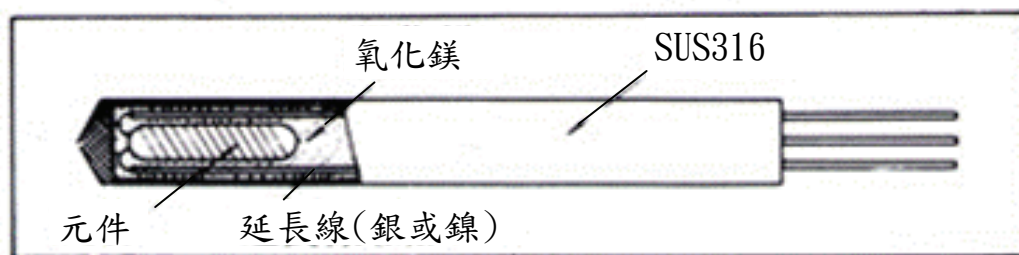
白金電阻元件之規格

Specification of the component of

規格	形式
型式Type	DIN、JIS、ANSI
0°C時電阻值Ω 0°CResistance value	50Ω、100Ω、500Ω、1000Ω
等級CLASS	0.01級(標準件)、0.15級、0.2級、0.5級
溫度範圍RANGE	低溫-200°C~常溫 中溫常溫~280°C 高溫常溫~600°C
絕緣阻抗MΩ Insulating impedance	100°C以下，500V，5MΩ以上 100°C以上，250V，1MΩ以上
保護管材質materials	304、316SS、316LSS、銅、MONEL、鈦、鉭

可繞式電阻測溫體 Sheath Resistance Temperature Detector

構造 Structure



特性 Characteristic

- 感應速度快。
- 可撓性佳，彎曲半徑小。
- 耐衝擊佳、耐震動、機械強度最佳。
- 耐熱、耐腐蝕、耐壓性強、氣密佳。
- 測溫範圍高，可從-200°C高達至+600°C。
- 製作長度較長，可長達200公尺以上，依管徑可製成雙對式、三對

規格、尺寸

對數	外徑	素線徑	保護材質	保護厚度	最長 (M)
	1.0	0.14	304SS、316SS、316LSS	0.10	100
	1.6	0.25	304SS、316SS、316LSS	0.25	300
	3.2	0.51	304SS、316SS、316LSS	0.47	157
	4.8	0.76	304SS、316SS、316LSS	0.72	60
	6.4	1.00	304SS、316SS、316LSS	0.93	39
	8.0	1.30	304SS、316SS、316LSS	1.16	25
	9.0	1.46	304SS、316SS、316LSS	1.25	25
	12.7	1.40	304SS、316SS、316LSS	1.80	25
	4.8	0.48	304SS、316SS、316LSS	0.48	68
	6.4	0.64	304SS、316SS、316LSS	0.64	38
	8.0	0.80	304SS、316SS、316LSS	0.80	24
	3.2	0.30	304SS、316SS、316LSS	0.48	160
	4.8	0.50	304SS、316SS、316LSS	0.64	70
	6.4	0.72	304SS、316SS、316LSS	0.80	41
	8.0	0.90	304SS、316SS、316LSS	1.16	24
	9.0	1.00	304SS、316SS、316LSS	1.25	24
	12.7	1.40	304SS、316SS、316LSS	1.80	24

訂購接線盒式型號 Order the terminal box type



CPR01 - D100SA - 304 - 770 - 21.3 - 2"150 - KN - 1/2"NUN100

型號 Type

元件型式規格 Modelling specification of the component

保護管材質 Protect and manage materials

插入(保護管)長度 Insert (protect and is in charge of) the length

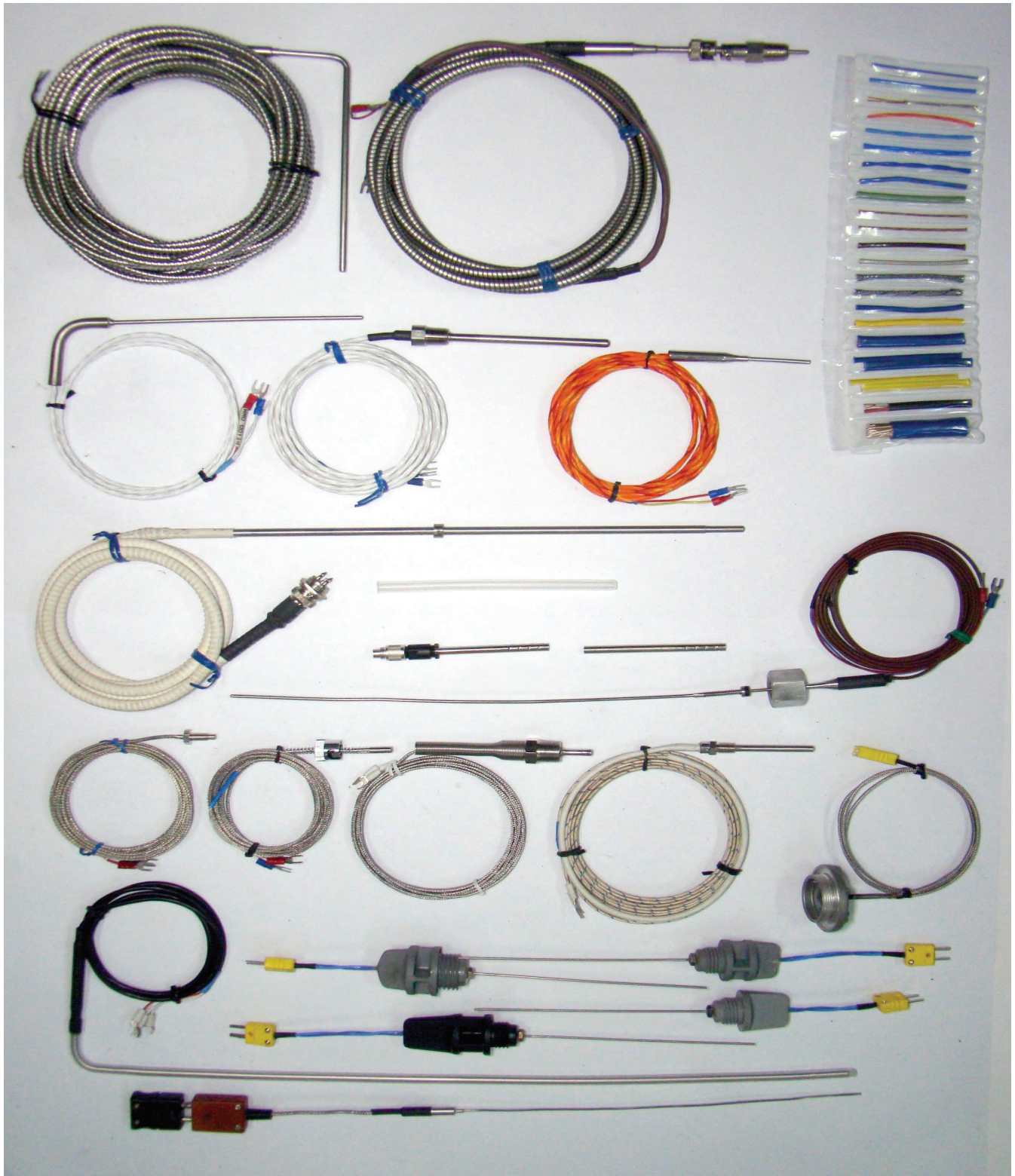
保護管之外徑 Foot-path outside protecting and is in charge of

鑲嵌配件規格 Inlay the specification of the fittings

端子盒規格 Sub box specification in the end

連接管規格及長度 Specification and length of union pipe

訂購導線式型號 Order the wire type



CPT35 - 4K640C - 770 - 1/2"NPT - EA/2M - U

↓
型號 Type

↓
元件型式規格 Modelling specification of the component

↓
插入(保護管)長度 Insert (protect and is in charge of) the length

↓
鑲嵌配件規格 Inlay the specification of the fittings

↓
導線規格長度 Length of specification of the wire

↓
感溫點規格 Some specifications of temperature sensing

感溫點規格 Some specifications of temperature sensing

導線規格長度 Length of specification of the wire

鑲嵌配件規格 Inlay the specification of the fittings

插入(保護管)長度 Insert (protect and is in charge of) the length

元件型式規格 Modelling specification of the component

金屬保護管材料性質

種 類	尺寸 (φmm)		使用溫度界限 (°C)		特 長
	O. D. 外徑	I. D. 內徑	常用	最高	
SUS304	12	9	850	950	耐熱、耐酸鹼。硫磺・還原氣體較弱。
	15	11			
	21.7	15.7			
SUS316	12	9	850	950	雖耐熱・耐酸鹼與SUS304相當，在高溫之耐蝕性較佳。
	15	11			
	21.7	15.7			
SUS316L	12	9	850	950	C之含量較SUS316少，為耐粒界腐蝕性材料。
	15	11			
	21.7	16.1			
SUS310S	15	11	1050	1100	Ni-Cr之含有率較高，在高溫抗氧化性強之耐熱鋼。
	21.7	16.1			
	27.2	21.4			
SUS446 SANDVIK P4	21.7	16.1	1100	1200	27Cr鋼，耐熱・還原炎與硫黃氣體下較強。
	21.3	16			
	26.9	21.6			
SANDVIK 253MA	21.3	16	1100	1200	高溫狀態下抗氧化、抗碳化性能極佳。機械強度特佳，不彎曲變形。
UMCo50	22	16	1150	1200	鈷合金，耐熱・耐磨損較強、硫磺氣體下也較佳。
	27	21			
MONEL	22	19.4	500	600	鎳67~70%與銅、鐵之合金，高溫、高壓、耐蝕好。
NCF600 (INCONEL 600)	16	13.5	1000	1250	不論高溫氧化・還原之氣體中皆為最強。
	22	16			
HASTELLOY C C'276	9.5	7.7	1000	1100	高溫氧化還元氣中適用，氯氣中亦可。
	16	13.5			
	21.3	17.3			
INCOLOY 800	16	13.5	870	1000	高溫耐氧化性優。高溫下而蝕性是SUS304之十倍使用壽命，抗熱衝擊。
	21.3	17.3			
鈦Ti	15	11	250	500	雖在低溫下耐蝕性非常優秀、但在高溫氧化影響下變脆。
	17.3	12.7			
	21.7	16.1			
	27.2	21.6			
鉬(Ta)	15	11	氧化300 還原2200	2200	對酸類均適用，高溫空氣中會脆化。
鉬(Mo)	15	11	氧化300 還原1700	2100	適於真空、還元、不活性氣體中使用。
鈮(Nb)	15	11		2000	適合於真空及氫、氮之不活性氣體中用。

※各種保護管與尺寸之有無庫存請先行確認。

非金屬保護管材料性質

種 類	尺寸 ϕ mm	最大長 mm	使用溫度界限℃		特 長
	外徑 O. D.		常用	最高	
氧化鋁 (Cermet)	8	1000	1300	1400	耐熱、耐磨耗性均佳。銅等熔融金屬溫度測定用。
	10				
	13				
	15				
	17				
	20				
高氧化鋁 (Mullite)	8	1000	1400	1600	耐熱・耐蝕・電氣絕緣・機械強度大。因高硬度耐磨損性優。適於煤爐、重油爐、電氣爐、加熱爐、蓄熱室的高溫測定用。
	10				
	13				
	15				
	20				
	15				
	20				
碳化矽 (SiC)	20	1000	1500	1750	耐火度高熱傳導率大。對鋅・鋁・鉛・酸鹼難浸入。對急冷，急熱較強、耐碎裂性優。適合二重保護管之外管。
	25				
	30				
	35				
自行結合 碳化矽	40		1650	2300	氣密性、抗熱衝擊、高溫下耐蝕、耐磨。1700℃氧化、還原氣團中測溫用。
	45				
	50				
	60				
鐵氟龍 (Teflon FEP)	5	100M	250	280	耐強酸、強鹼，適合用於電子製造、電鍍、衛生級場所，但要特別注意溫度，不可過高，會釋出有毒氣體。
	6	100M			
	8	50M			
	10	50M			
	15	50M			
	22	1000			

※各種保護管與尺寸之有無庫存請先行確認。

※還有其它各種特殊材質之保護管如：石墨管、F11、Strillite…等，均可設計、訂做、製造。

補償導線 Thermocouple Compensating Lead Wires

代 號 Wire Code	規 格 Specification	說 明 Description	環境溫度範圍 Temp.Range
TC-CA-H	0.32x2	玻璃纖維 Glass Fiber 素線級 T/C Grade	0-200°C
TC-CA-H	0.65x2	玻璃纖維 Glass Fiber 素線級 T/C Grade	0-200°C
TC-CA-H(OS)	0.65x2	玻璃纖維 Glass Fiber 銅網外隔離 Overcover Tinned Copper Braided	0-200°C
TC-CA-H(SOS)	0.65x2	玻璃纖維 Glass Fiber 不鏽鋼外隔離 Overcover SUS304 Stainless Braided	0-200°C
TC-CA-H(SOS)	4/0.32x2	玻璃纖維 Glass Fiber 不鏽鋼外隔離 Overcover SUS304 Stainless Braided	0-200°C
TC-IC-H(SOS)	0.65x2	玻璃纖維 Glass Fiber 不鏽鋼外隔離 Overcover SUS304 Stainless Braided	0-200°C
TC-CC-H(SOS)	0.65x2	玻璃纖維 Glass Fiber 不鏽鋼外隔離 Overcover SUS304 Stainless Braided	0-200°C
TC-PT-H(SOS)	0.65x3	玻璃纖維 Glass Fiber 不鏽鋼外隔離 Overcover SUS304 Stainless Braided	0-200°C
WCA-H	4/0.32x2	玻璃纖維 Glass Fiber	0-200°C
WCA-H	7/0.32x2	玻璃纖維 Glass Fiber	0-200°C
WCA-H	4/0.65x2	玻璃纖維 Glass Fiber	0-200°C
WCA-H	7/0.65x2	玻璃纖維 Glass Fiber	0-200°C
WCA-H(SOS)	4/0.65x2	玻璃纖維 Glass Fiber 不鏽鋼外隔離 Overcover SUS304 Stainless Braided	0-200°C
WCA-H(SOS)	7/0.65x2	玻璃纖維 Glass Fiber 不鏽鋼外隔離 Overcover SUS304 Stainless Braided	0-200°C

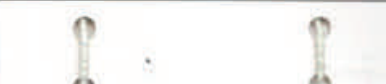
樣 品 Sample









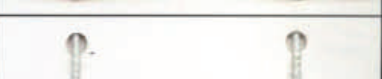






本公司線材均日本進口，台灣加工披覆，可以客製量產，並分為素線級以及補償級。

Our company line material Japan import, Taiwan is it is it cover to wrap to process, may serving's making amount produce, and is divided into the plain line grade and compensated grade.

代 號 Wire Code	規 格 Specification	說 明 Description	環境溫度範圍 Temp.Range	樣 品 Sample
WIC-H	4/0.65x2	玻璃纖維 Glass Fiber	0-200°C	
WIC-H	7/0.65x2	玻璃纖維 Glass Fiber	0-200°C	
				
WPR-H	4/0.65x2	玻璃纖維 Glass Fiber	0-200°C	
WPR-H	7/0.65x2	玻璃纖維 Glass Fiber	0-200°C	
				
TC-CA-G	4/0.32x2	PVC 素線級T/C Grade	0-105°C	
W-CA-G	4/0.32x2	PVC	0-105°C	
W-CA-G	7/0.32x2	PVC	0-105°C	
W-CA-G	4/0.65x2	PVC	0-105°C	
W-CA-G-IS	4/0.65x2	PVC 鍍錫銅網內隔離 Tinned Copper Braided Shield	0-105°C	
W-CA-G	7/0.65x2	PVC	0-105°C	
				
W-IC-G	7/0.32x2	PVC	0-105°C	
W-IC-G	4/0.65x2	PVC	0-105°C	
				
W-CRC-G-IS	4/0.65x2	PVC 鍍錫銅網內隔離 Tinned Copper Braided Shield	0-105°C	

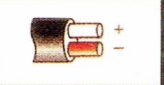
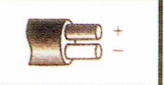
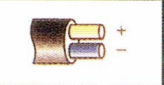
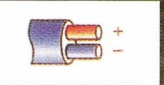
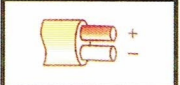
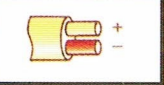
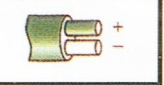
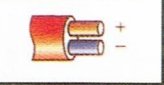
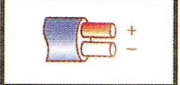
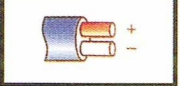
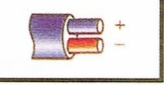
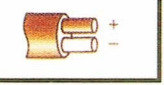
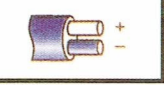
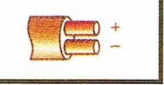
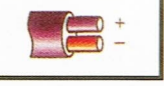
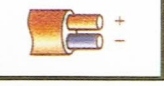
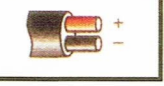
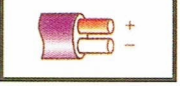
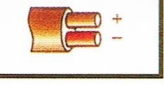
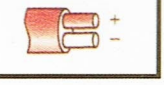
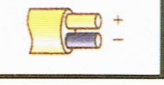
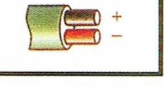
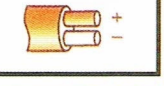
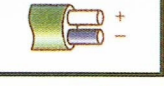
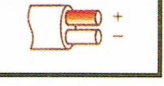
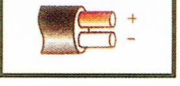
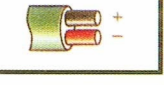
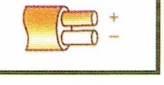
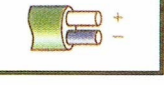
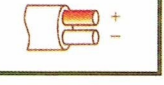
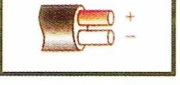
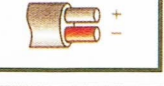
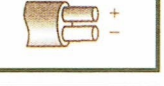
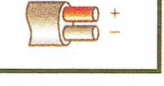
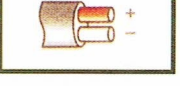
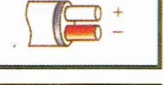
THERMOCOUPLE, EXTENSION / COMPENSATING & RTD CABLES

Types : J,K,E,T,R,S,B.....

Conductor : 7/0.2 mm, 7/0.3 mm, 16/0.2 mm, 24/0.2 mm, 48/0.2 mm
1/0.315 mm, 1/0.81 mm, 1/1.29 mm 1/0.65mm, 4/.315mm, 7/.315mm,
4/0.65mm, 7/0.65mm

Also available Instrumentation Cables in Bare, Tin, Silver or Nickel Plated Copper.

Standard Colour Coding

TYPE THERMOCOUPLE					
J					
K					
V					
T					
E					
N					
R					
S					
B					
G* (W)					
C* (W5)					
D* (W3)					
TYPE THERMOCOUPLE	ANSI MC96.1	IEC 584-3	BS 1843	DIN 43714	JIS C1610

溫度計參考圖面 The thermometer consults and pursues



CP50



CP3502



CP35



CP3501



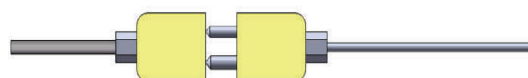
CP40



CP3500



CP08



CP95AB



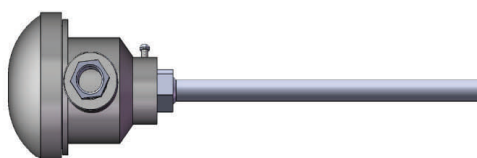
CP08



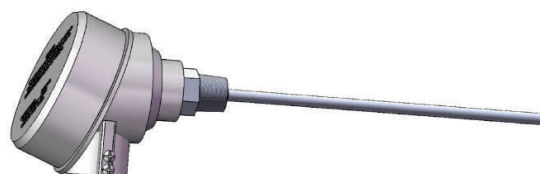
CP01



CP3503



CP35D



CP02EX



CP35L



CP07

種類型式繁多，均可配合客製、研發、代工。

The kind modelling is various, cooperate with guests to make , research and develop , take the place of workers.



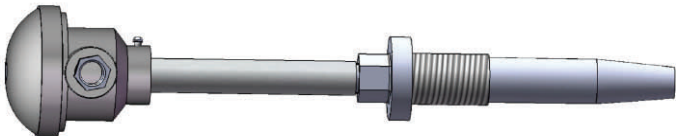
CP01



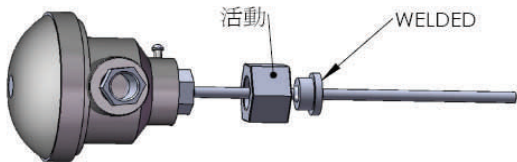
CP-TFWELL



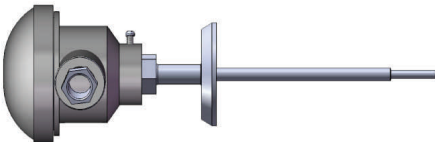
CP02W



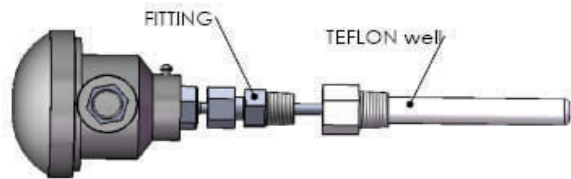
CP02-W



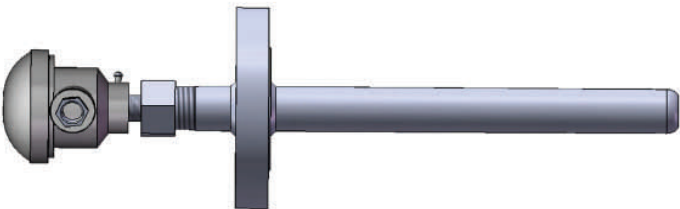
CP03



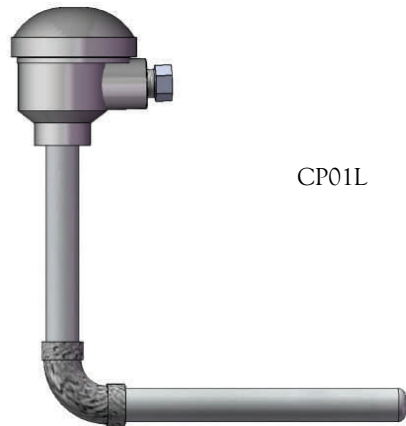
CP05



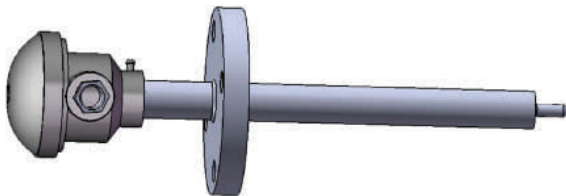
CP03-TFW



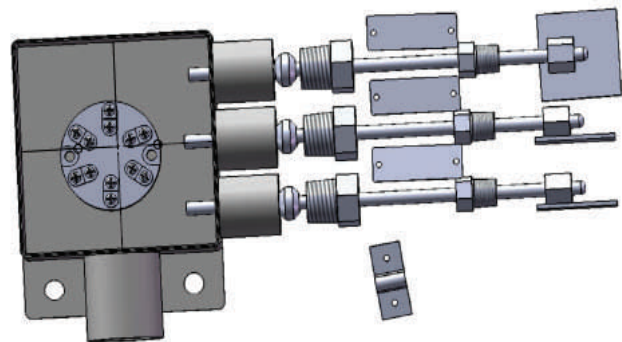
CP05



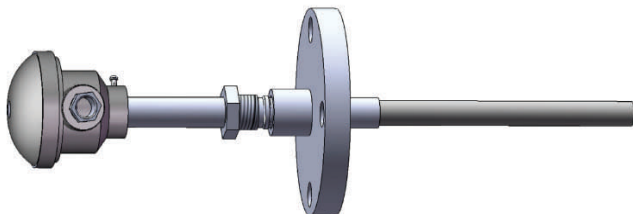
CP01L



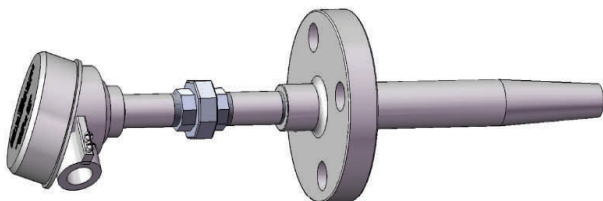
CP05-S



CP03T



CP057



CP05W

接線盒 terminal box (Head)

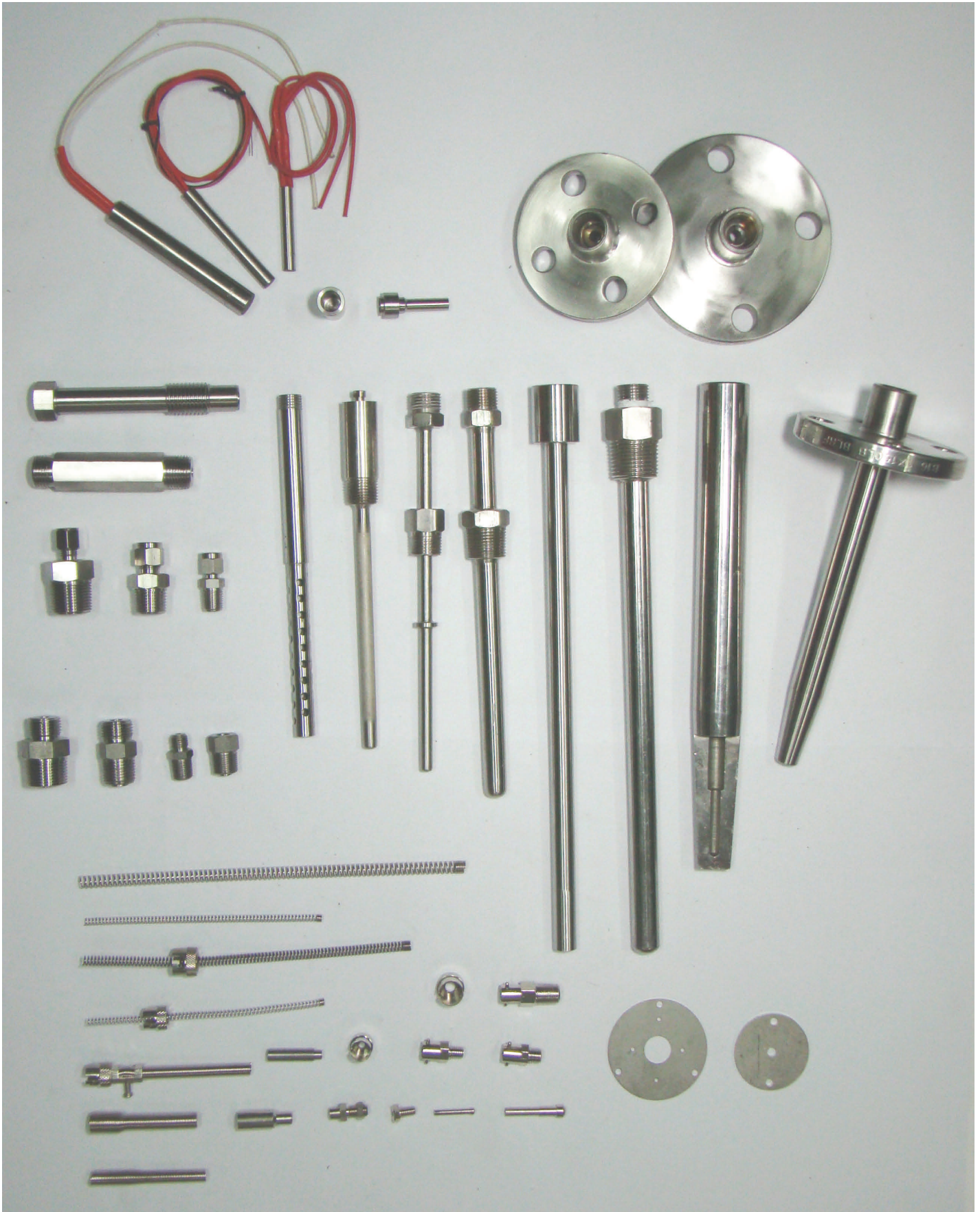
熱電偶及電阻式測溫體之接線盒各種規格配件

Electric thermocouple and resistance type examine various kinds of specifi-



鑲嵌配件 Thermowell Connection

熱電偶及電阻式測溫體之Thermowell各式法蘭、螺牙等鑲嵌配件





EU-TYPE EXAMINATION CERTIFICATE

Component intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

Certificate Number: **Sira 14ATEX1107U** Issue: **1**

Component: **XDA & XDS Flameproof Temperature Transmitter Housings**

Applicant: **Yung Chan Metal Industry Company Limited**

Address: No 30 Keji 1st Road
Tainan Technology Industrial Park
Tainan City 709
Taiwan

This component and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

Sira Certification Service, notified body number 0518 in accordance with Articles 17 and 21 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this component has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of a component intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 60079-0:2012+A11:2013 EN 60079-1:2014 EN 60079-31:2014

The above list of documents may detail standards that do not appear on the UKAS Scope of Accreditation, but have been added through Sira's flexible scope of accreditation, which is available on request.

The sign 'U' is placed after the certificate number to indicate that the product assessed is a component and may be subject to further assessment when incorporated into equipment. Any limitations of use are listed in the schedule to this certificate.

This EU-Type Examination Certificate relates only to the design and construction of the specified component. If applicable, further requirements of this Directive apply to the manufacture and supply of this component.

The marking of the component shall include the following:



II 2G D
Ex db IIC T6 Gb
Ex tb IIIC T100°C Db

Project Number 70082849


N Jones
Certification Manager

This certificate and its schedules may only be reproduced in its entirety and without change.



SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE

Sira 14ATEX1107U
Issue 1

13 DESCRIPTION OF COMPONENT

The equipment is a temperature transmitter housing manufactured from either stainless steel or aluminium alloy, where the model designation determines which material is used, i.e. XDA = Aluminium Alloy & XDS = Stainless Steel.

The equipment is considered a component, and as such bears a symbol 'U' after the certificate reference. The equipment must be re-certified for Apparatus after appropriate evaluation the to the listed standards on page 1 of this certificate to ensure continued compliance with the flameproof and dust exclusion requirements.

Variation 1 - This variation introduced the following change:

- i. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, EN 60079-0:2006, EN 60079-1:2004, EN 61241-0:2006 and EN 61241-1:2004, were replaced by EN 60079-0:2012+A11:2013, EN 60079-1:2014 and EN 60079-31:2014. As a result the marking and specific conditions of use were modified to recognise the new standards.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report number	Comment
0	27 May 2014	R70006501A	The release of the prime certificate.
1	27 April 2017	R70082849A	This Issue covers the following changes: • EC-Type Examination Certificate in accordance with 94/9/EC updated to EU-Type Examination Certificate in accordance with Directive 2014/34/EU. <i>(In accordance with Article 41 of Directive 2014/34/EU, EC-Type Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Variations to such EC-Type Examination Certificates may continue to bear the original certificate number issued prior to 20 April 2016.)</i> • The introduction of Variation 1.

15 SCHEDULE OF LIMITATIONS

- 15.1 Cables for entry into the device must be rated to at least 85°C.
- 15.2 XDA & XDS considered a component enclosure and must be re-certified as apparatus only after evaluation of weld methods for flameproof collar assembly.
- 15.3 Temperature rise testing conducted considering maximum power dissipation within the unit. Equipment, components or connection within the unit must not dissipate more than 10 W.
- 15.4 IP68 rating was tested at 1m depth (pressure of 0.1 bar) for a duration period of 1 hour.

This certificate and its schedules may only be reproduced in its entirety and without change.

Sira Certification Service

Unit 6 Hawarden Industrial Park,
Hawarden, CH5 3US, United Kingdom

Tel: +44 (0) 1244 670900
Fax: +44 (0) 1244 681330
Email: ukinfo@csagroup.org
Web: www.csagroupuk.org



SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE

Sira 14ATEX1107U
Issue 1

- 15.5 Potential Electrostatic Charging Hazard – Under certain extreme circumstances, the non-metallic parts incorporated in the enclosure of this equipment may generate an ignition-capable level of electrostatic charge. Therefore the equipment shall not be installed in a location where the external conditions are conducive to the build-up of electrostatic charge on such surfaces. In addition, the enclosure shall only be cleaned with a damp cloth.
- 15.6 Refer to drawing number XD0001 for details associated with the threaded cable entry hole provided in the enclosure for the accommodation of a suitably certified cable entry device.
- 15.7 Oil-filled circuit breakers and contactors shall not be used.
- 15.8 The content of this Ex Component enclosure may be placed in any arrangement provided that an area of at least 40 % of each cross-sectional area remains free to permit unimpeded gas flow and, therefore, unrestricted development of an explosion. Separate relief areas may be aggregated provided that each area has a minimum dimension in any direction of 12.5 mm.
- 15.9 The Ex Component enclosure incorporates parts which are required to be welded as specified by the original manufacturer of the enclosure. The complete enclosure, with welded parts and internal arrangement, shall be submitted to an appropriate Notified Body/Certification Body for assessment and testing as necessary for certification as Ex equipment.
- Refer to drawing numbers XD0005, XD0006, and XD0007 and the Instruction Manual for details with respect to the welding of parts. Following the required welding procedures, the enclosure shall be pressure tested at a minimum value of 11.25 bar for at least 10 seconds with no damage, permanent deformation or leakage permitted.
- 15.10 After final assembly the probe travel shall not exceed 6mm. Refer to the instruction manual for details with respect to assembly and re-certification as an Ex Equipment
- 16 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)**
- The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.
- 17 **CONDITIONS OF MANUFACTURE**
- 17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.
- 17.2 Holders of EU-Type Examination Certificates are required to comply with the conformity to type requirements defined in Article 13 of Directive 2014/34/EU.



NO. K07-06-334-01
Issue Date
發佈日期 2018/7/5

CALIBRATION REPORT
儀器校正報告書

Page 1 of 2

Applicant 申請者 晟品科技有限公司			
Address 地址 基隆市暖暖區源遠路 76-1 號 1 樓			
Manufacturer 製造廠商 PRESYS	Model No. 型號 T-650P	Serial No. 序號 113.06.09	
Description 儀器名稱 溫度校正爐		Received Date 收件日期 2018/6/26	
Procedure used 校正程序 MT-C-103-022		Calibration Date 校正日期 2018/7/5	
Condition of calibration 校正時之環境條件		Temp 溫度 24 °C ~ 26 °C	R.H. 相對濕度 60 % ~ 70 %
Standards Employed 校正時使用之標準器			
Equipment 儀器名稱	Manufacturer 製造廠商	Model 型號	Serial Number 序號
PLATINUM RESISTANCE THERMOMETER DIGITAL THERMOMETER	FLUKE FLUKE/HART	5628 1560/2560	3043 B31544/B48526/B45507
Traceability 追溯機構	Report No. 報告號碼	Calibration Date 校正日期	Due Date 有效日期
TRANSCAT MTC(TAF1733)	B8529090 K06-10-170-02,13	2018/6/5 2017/10/26	2020/6/4 2018/10/25

MTC in hereby certifies that the equipment noted herein has been compared with the above listed standards. The standards used to perform this calibration are traceable to the national measurement laboratory (NML) of ROC or National Time and Frequency Standard Laboratory(NTFSL). The MTC laboratories are in compliance with ISO/IEC 17025.

量測科技股份有限公司特此證明本受校儀器已與上列標準器實施比較校正，上述之標準器均可追溯至中華民國國家度量衡標準實驗室或國家時間與頻率標準實驗室。本公司所屬實驗室之運作與管理均符合 ISO/IEC 17025 之要求



Approved Signatory
報告簽署人



Lab. Head
實驗室主管



	0	-5	-10	-15	-20	-25	-30	-35	-40	-45	-50	-55	-60
-100	60.26	58.23	56.19	54.15	52.11	50.06	48	45.94	43.88	41.8	39.72	37.64	35.54
0	100	98.04	96.09	94.12	92.16	90.19	88.22	86.25	84.27	82.29	80.31	78.32	76.33
	0	5	10	15	20	25	30	35	40	45	50	55	60
0	100	101.95	103.9	105.85	107.79	109.73	111.67	113.61	115.54	117.47	119.4	121.32	123.24
100	138.51	140.4	142.29	144.18	146.07	147.95	149.83	151.71	153.58	155.46	157.33	159.19	161.05
200	175.86	177.69	179.53	181.36	183.19	185.01	186.84	188.66	190.47	192.29	194.1	195.91	197.71
300	212.05	213.83	215.61	217.38	219.15	220.92	222.68	224.45	226.21	227.96	229.72	231.47	233.21
400	247.09	248.81	250.53	252.25	253.96	255.67	257.38	259.08	260.78	262.48	264.18	265.87	267.56
500	280.98	282.64	284.3	285.96	287.62	289.27	290.92	292.56	294.21	295.85	297.49	299.12	300.75
600	313.71	315.31	316.92	318.52	320.12	321.71	323.3	324.89	326.48	328.06	329.64	331.22	332.79
700	345.28	346.83	348.38	349.92	351.46	353	354.53	356.06	357.59	359.12	360.64	362.16	363.67
800	375.7	377.19	378.68	380.17	381.65	383.13	384.6	386.08	387.55	389.02	390.48		

	-65	-70	-75	-80	-85	-90	-95	-100
-100	33.44	31.34	29.22	27.1	24.97	22.83	20.68	18.52
0	74.33	72.33	70.33	68.33	66.31	64.3	62.28	60.26
	65	70	75	80	85	90	95	100
0	125.16	127.08	128.99	130.9	132.8	134.71	136.61	138.51
100	162.91	164.77	166.63	168.48	170.33	172.17	174.02	175.86
200	199.51	201.31	203.11	204.9	206.7	208.48	210.27	212.05
300	234.96	236.7	238.44	240.18	241.91	243.64	245.37	247.09
400	269.25	270.93	272.61	274.29	275.97	277.64	279.31	280.98
500	302.38	304.01	305.63	307.25	308.87	310.49	312.1	313.71
600	334.36	335.93	337.5	339.06	340.62	342.18	343.73	345.28
700	365.19	366.7	368.21	369.71	371.21	372.71	374.21	375.7
800								

使用方法：

1. 表格之藍色部分為溫度值，
內部為阻抗值(Ω)，
利用兩邊之溫度值和及所相對應之
表格內值為其溫度與阻抗之關係。



晟品科技有限公司

CHEN PIN TECHNICAL CO., LTD.

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E-Mail: jimmy.chenpin@gmail.com

Web-site: www.tempsensor.com.tw