

Technical Datasheet



Bimetallic Thermometers GE Range



Key Features

- Nominal Diameter options of 100mm and 150mm stainless steel case
- Various versions available for direct or remote mount
- Rigid, “every angle” stem, or with capillary
- Watertight casing stainless steel execution
- Indication ranges included between -80 to $+600$ °C
- Reliable measurement for any industrial application
- Cost effective solution
- Wide range of options available



Series Overview

The GE gas expansion thermometers offers customers a reliable and accurate solution to their arduous process control requirement.

Available with a wide variety of casing options and sizes, the GE gas expansion thermometers can be used for a variety of applications when pressure measurements are needed.

The Gas expansion type can be equipped with a wide range of electrical contacts, adjustable from the front.

Other products

Other products in the series include:

- Bimetal Temperature Gauges models GB



Product applications

The GE range is suitable for a wide range of applications in many industry sectors where a safety barrier & blow out back are required to give added safety:

- Oil & Gas
- Chemical
- Petrochemical
- Refining
- Power
- Food Industry
- OEM

The choice of models available ensures suitability for use in:

- Corrosive atmospheres
- Resistant to chemical attack

How can we help you?

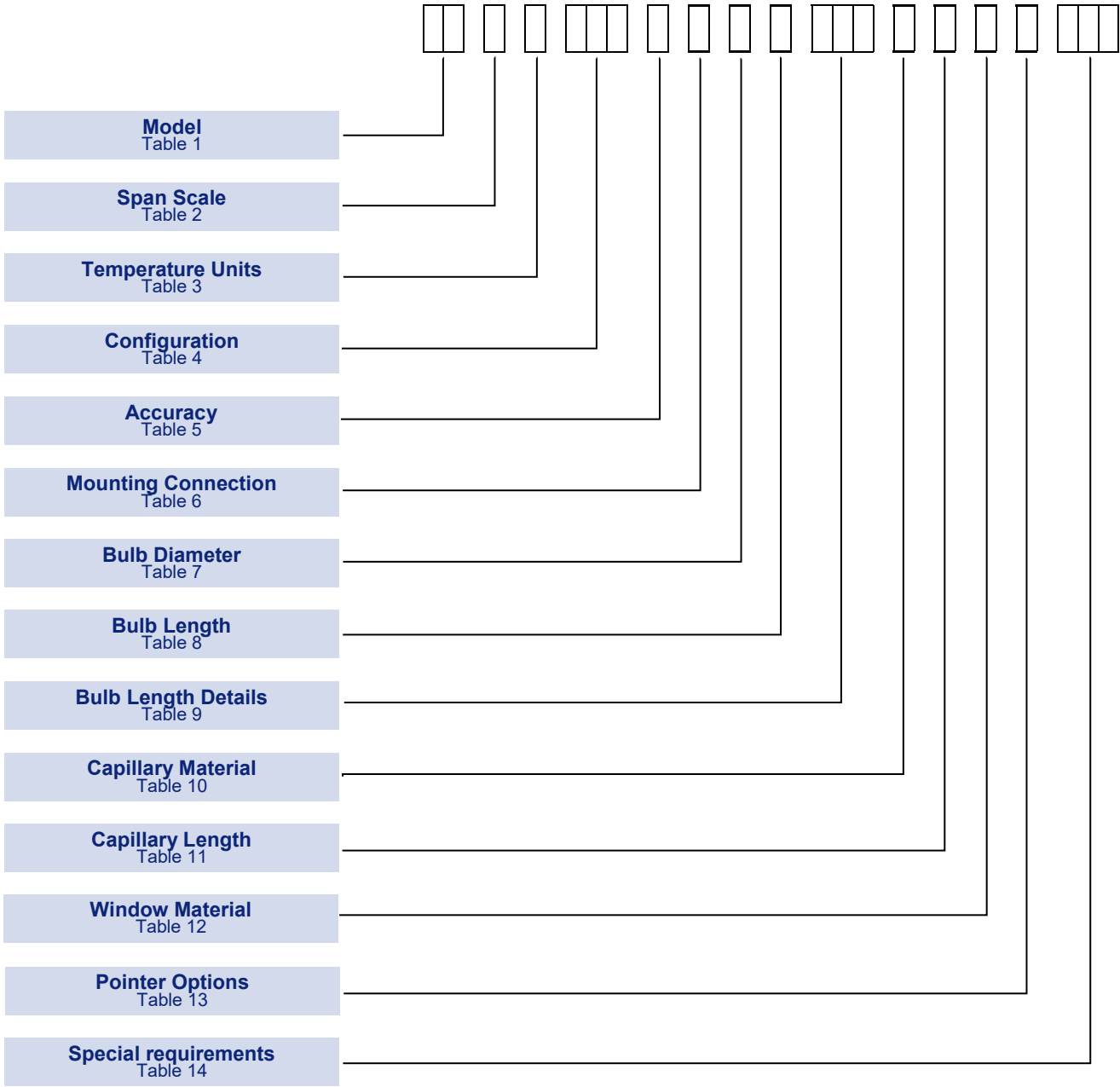
Delta Mobrey offers fast, efficient and knowledgeable support when and where you need it. Please visit our website at www.delta-mobrey.com to find your local support centre or call us on:

+44 (0) 1252 729140

Gas Expansion Thermometer
Model: GE

How to order

Gauges can be configured by selecting codes representing the desired features from the tables that follow. The chart below, describes how the model code is built up. For assistance in configuring a switch that best suits your needs, please contact your local sales office.



Gas Expansion Thermometer
Model: GE

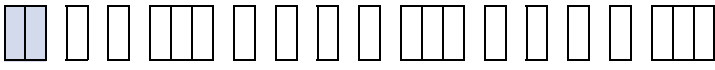
NOTE: Options shaded in the following tables are the most common options and are available on the quickest lead-times and at the lowest cost.

NOTE: Only the most common options are shown in this data sheet. Should you require a feature that is not shown, please contact your local sales office for further details.

Technical Specification

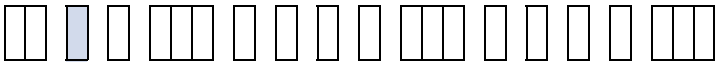
Execution:	Direct or remote with capillary
Nominal sizes:	100 and 150 mm execution B 100 and 150 mm execution S
Casing:	Case and ring in AISI 304 stainless steel or AISI 316 with bayonet bezel
Protection degree:	IP55 for dry execution, IP65 for liquid filled
Windows material:	Glass for dry execution, laminated safety glass for liquid filled execution
Thermometric element:	Inert gas filled system acting on a CrMo Steel spiral tube
Working temperature:	From 1/10 to 9/10 (referred to full scale value)
Over-temperature:	115% of full scale value (occasionally allowed)
Pointer:	Aluminium with micrometer adjustment
Dials:	White aluminium with black graduation
Movements:	Stainless steel
Accuracy:	Class 1.0 per EN 13190
Thermal drift :	With reference to the ambient temperature of 20 ⁰ C and due to the length of the capillary, thermal drift affects the instrument accuracy by +/- 0.15% per meter with every 10 ⁰ C of variation
Sensitive stem: for	Instruments are manufactured with a fixed or sliding connection also suitable an eventual thermowell connection
Thermowell:	Built-up from pipe or machined from a bar with flanged or threaded connection

Model

TABLE 1 

ENCLOSURE TYPES	Code
Gas expansion Thermometer	
100 mm and 150 mm	GE

Range

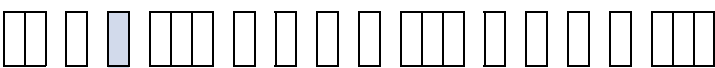
TABLE 2 

SPAN OF OUTER SCALE & BULB LENGTH	Code
0 to 60	A
0 to 100	B
0 to 120	C
0 to 160	D
0 to 200	E
0 to 250	F
0 to 300	G
0 to 400	H
0 to 500	J
0 to 600	K
-40 to +60	M
-20 to +40	N
-20 to +100	P
0 to 80	R

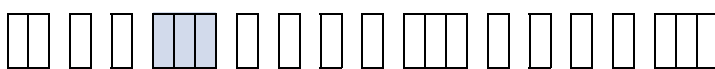
Gas Expansion Thermometer
Model: GE

Temperature Units

Configuration

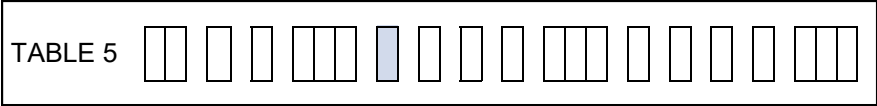
TABLE 3 

	Code
Degrees Celsius	C
Degrees Celsius and inner scale to suit in Degrees Fahrenheit	G

TABLE 4 

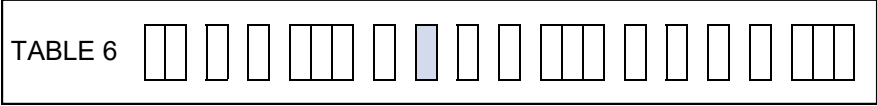
	Code
Gauge diameter, mounting, case features & safety fill. Various options available. Contact Delta Sales	XXX

Accuracy Class



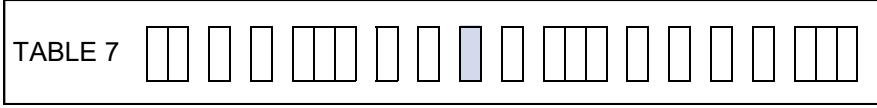
	Code
Class 1.0 (±1 per cent of full scale deflection)	A
Class 1.6 (±1.6 per cent of full scale deflection)	B
Class 0.6 (±0.6 per cent of full scale deflection) diameter150mm	C
Class 0.6 (±0.6 per cent of full scale deflection) diameter100mm	E

Mounting Connection



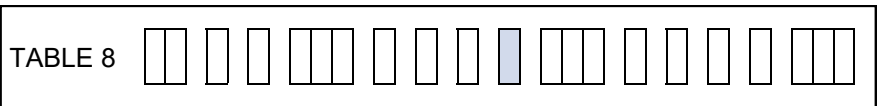
	Code
No Connector	0
R1/2 (1/2inch BSPT male), sliding and swivel	D
G1/2B (1/2inch BSPP male), sliding and swivel.	L
3/4-14 NPT External, sliding and swivel.	M
1/2-14 NPT External, sliding and swivel	R
R3/4 (3/4inch BSPT male).	Y

Bulb Diameter



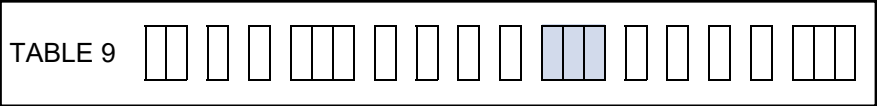
	Code
Bulb 8mm diameter	B
Bulb 12mm diameter	C

Bulb Length



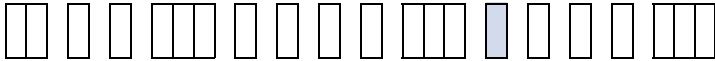
	Code
Various options available. Contact Delta Mobrey Sales	X

Bulb Length Details




	Code
Various options available. Contact Delta Mobrey Sales	XXX

Capillary Materials

TABLE 10 


	Code
Capillary 316 stainless steel without armour	A
Capillary 316 stainless steel with 304 Stainless Steel armour	B
Capillary 316 stainless steel with 316 Stainless Steel armour	C
No Capillary (rigid Stem)	R

Capillary Length

TABLE 11 

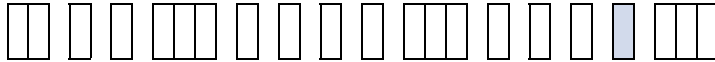
	Code
No capillary	0
Capillary length (Please specify required length in step of 1mt)	X

Window Material

TABLE 12 


	Code
Laminated Safety Glass window for nominal gauge diameter 100mm and bayonet retaining bezel.	F
Glass window	G
Laminated Safety Glass window for nominal gauge diameter 150mm and bayonet retaining bezel.	P

Pointer Option

TABLE 13 

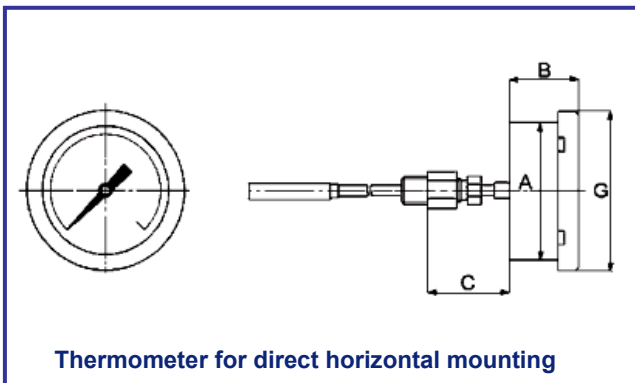
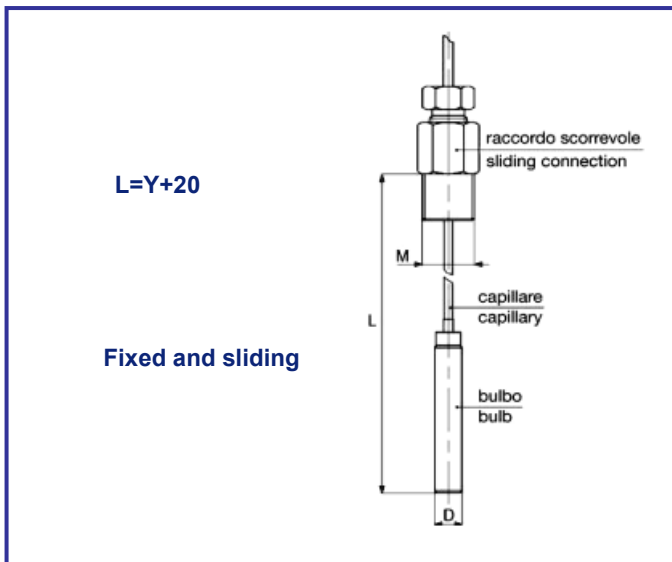
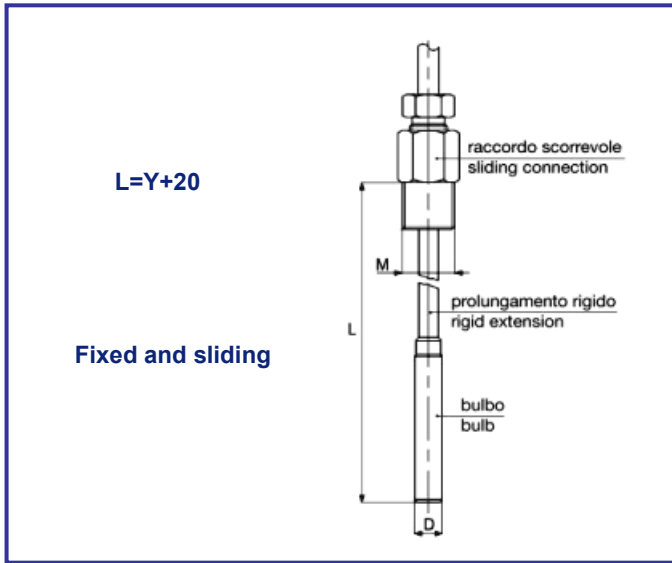
	Code
Standard assembly only	0

Special Requirements

TABLE 14 

	Code
Special requirements	XXX

Sensitive stems and connections



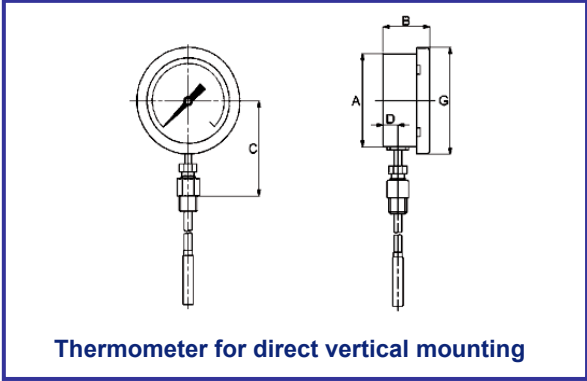
DN	A	B	C	G	Φ holes	Weight
100	103	50	60	111		0.56
150	150	50	60	161		0.80

Range °C	Bulb Dimensions			
	min	standard	min	standard
	Diameter 8mm		Diameter 12mm	
-40 to +60	170	200 - 250 300 - 400	85	100 - 150 200 - 250 300 - 400
-20 to +40	170	200 - 250 300 - 400	85	100 - 150 200 - 250 300 - 400
-20 to +100	170	200 - 250 300 - 400	85	100 - 150 200 - 250 300 - 400
0 to 60	170	200 - 250 300 - 400	85	100 - 150 200 - 250 300 - 400
0 to 100	170	200 - 250 300 - 400	85	100 - 150 200 - 250 300 - 400
0 to 120	170	200 - 250 300 - 400	85	100 - 150 200 - 250 300 - 400
0 to 160	170	200 - 250 300 - 400	85	100 - 150 200 - 250 300 - 400
0 to 200	170	200 - 250 300 - 400	85	100 - 150 200 - 250 300 - 400
0 to 250	170	200 - 250 300 - 400	85	100 - 150 200 - 250 300 - 400
0 to 300	170	200 - 250 300 - 400	85	100 - 150 200 - 250 300 - 400
0 to 400	170	200 - 250 300 - 400	85	100 - 150 200 - 250 300 - 400
0 to 500	170	200 - 250 300 - 400	85	100 - 150 200 - 250 300 - 400
0 to 600	170	200 - 250 300 - 400	120	150 200 - 250 300 - 400
0 to 80			85	To be agreed

Please refer to the Thermowells Data Sheet available on the website, for the correct coupling with the instrument

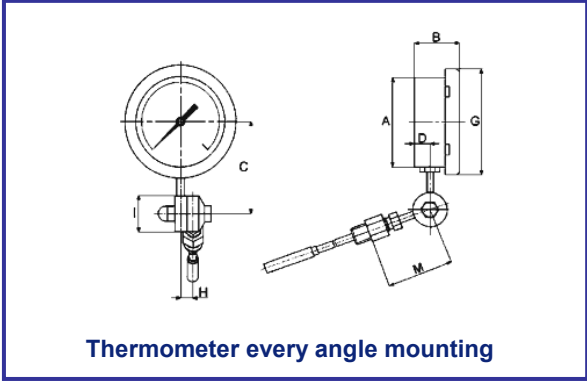
Gas Expansion Thermometer
Model: GE

Sensitive stems and connections



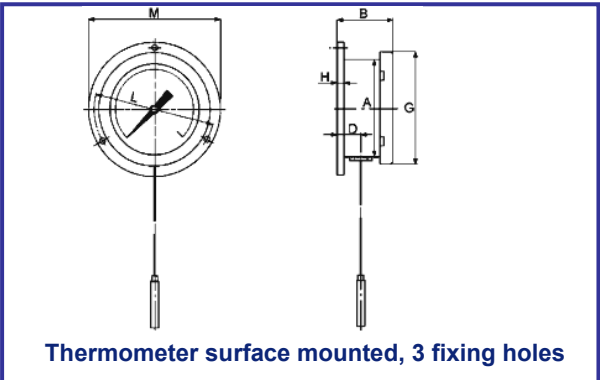
Thermometer for direct vertical mounting

DN	A	B	C	D	G	Φ holes	Weight
100	103	50	110	16.5	118		0.56
150	150	50	134	16.5	166		0.80



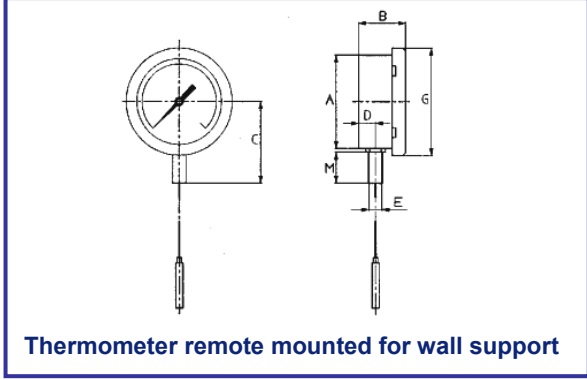
Thermometer every angle mounting

DN	A	B	C	D	G	H	I	M	Φ holes	Weight
100	103	50	110	165	111	13	40	65		0.70
150	150	50	134	165	161	13	40	65		0.94



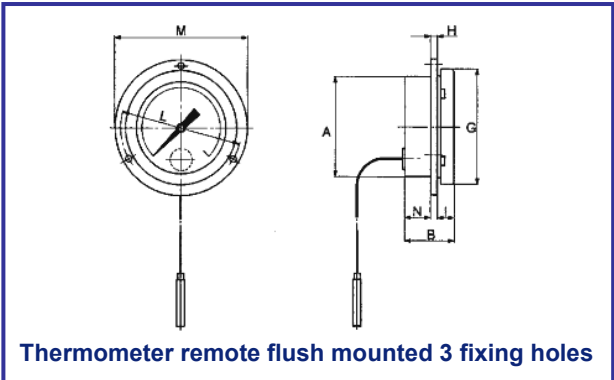
Thermometer surface mounted, 3 fixing holes

DN	A	B	D	G	H	L	M	Φ holes	Weight
100	103	57	23.5	118	7	126	140	5	0.82
150	150	57	23.5	166	7	178	192	5	1.18



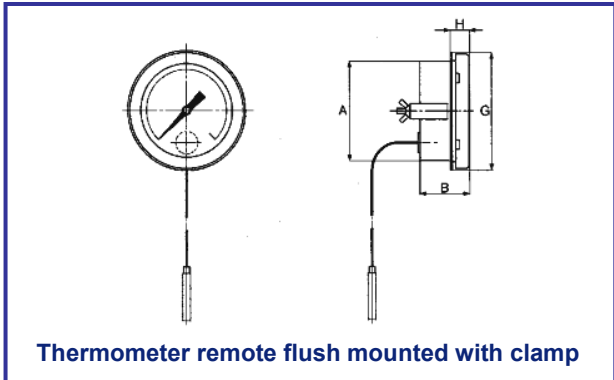
Thermometer remote mounted for wall support

DN	A	B	C	D	E	G	M	Φ holes	Weight
100	103	50	100	165	145	118	35		0.52
150	150	50	124	165	145	166	35		0.75



Thermometer remote flush mounted 3 fixing holes

DN	A	B	G	H	I	L	M	N	Φ holes	Weight
00	103	50	118	7	19	126	140	24	5	0.82
150	150	50	166	7	19	126	192	24	5	1.18



Thermometer remote flush mounted with clamp

DN	A	B	G	H	Φ holes	Weight
100	103	50	121	20		0.73
150	150	50	168	20		0.98

Gas Expansion Thermometer
Model: GE

Approvals

EUROPEAN DIRECTIVE



Pressure Equipment Directive (PED) 2014/68/EU

Compliant to PED, Module A for static Pressure > 200 Bar, SEP for Static Pressure ≤200bar

ATEX Directive 2014/34/EU



CONSTRUCTION SAFETY— Technical file storage reference SGS21ATEX0095DR

Notified body for Technical storage file : SGS Fimko Oy, Helsinki, Finland, Notified Body No 0598

- Ex h IIC T6 Gb X
- Ex h IIIC T85°C Db X

UK REGULATION



Pressure Equipment (Safety) Regulation 2016

S.I. 2016 no. 1105, as amended, Module A for static Pressure > 200 Bar, SEP for Static Pressure ≤200bar

Equipment and Protective Systems Intended for use in Potentially

Explosive Atmospheres Regulation 2016



(S.I. 2016 No. 1107 as amended)

CONSTRUCTION SAFETY— Technical file storage reference BAS21UKEx0356TDR

Approved body for Technical storage file : SGS Baseefa Ltd, Buxton, United Kingdom, Approval Body No 1180

- Ex h IIC T6 Gb X
- Ex h IIIC T85°C Db X

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