Data Sheet



C-600A-02 Duratemp® Thermometer

FEATURES

- Extreme resistance to shock and vibration
- Exclusive movementless design eliminates wear and increases product life
- No head or elevation error due to bulb placement
- Maxivision[®] dial for precise readings (minimize parallax reading errors)
- Multiple case sizes 4½", 6", 8½" back connection, flush mounted for panel mounting
- Gas-operated molecular sieve

TYPICAL USES

- Offshore oil rigs
- Chemical and petrochemical plants
- Water and wastewater temperature control
- Pulp and paper
- Refineries
- Power
- General industrial
- Equipment skids
- HVAC
- Pharmaceutical/biotech
- Food and beverage



C-600A-02

41/2", 6", 81/2" dial sizes

SPECIFICATIONS	
Accuracy:	±1% of span
Sizes:	4½", 6" or 8½"
Range:	-320 °F/200 °F to 400 °F/1200 °F (-200 °C/100 °C to 200 °C/650 °C)
Over Range:	125% of span
Mounting & Connection:	Flush/Rear
Bulb Size:	3" Long x %" O.D.
Bulb Style:	12" Bendable extension with ½ NPT union connection Plain bulb with rigid extension no union Plain bulb with rigid extension ½ NPT union on armor 18" Bendable extension with ½ NPT union connection 24" Bendable extension with ½ NPT union connection
Line Length:	5ft to 80ft in standard increments
Dial:	Maxivision® anti-parallax dial, black markings on a white dial
Head/Elevation Error:	None
Hand Set:	Stationary red hand set or Externally adjustable Red set hand
Pointer:	Black, aluminum
Electric Contacts:	High and low, double high, double low, off at low

KEY BENEFITS

- Epoxy coated aluminum case
- Hinged ring for easy glass replacement or pointer adjustment
- Extremely versatile for use on many applications
- 5-year limited warranty
- Ideal for extreme process temperatures

THERMAL SY	STEM						
Bulb/Bendable ext. Material	Armor Material		Capillary Material		Connection Material		
316 SS	AISI 302 Spring Armor		316 SS		303 SS		
NON-WETTED COMPONENTS							
Window			Case		Ring		
Glass, Safety glass, Acrylic		,	Aluminum	Alı	uminum hinged ring		
TEMPERATURE LIMITS							
Version			Ambient				
Dry			-13 °F (-25 °C) to 160 °F (71 °C)				

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or high and on in-between

Data Sheet



C-600A-02 Duratemp® Thermometer

Case Style C-600A-02-C01 - 4½" Case size, SS bayonet ring, surface mount, lower connection	ORDERING CODE	Example:	C-600A-02-C12	B01	A1	L01	AB	XSG
C-600A-02-C11 - 4½ Case size, SS bayonet ring, flush mount, rear connection C-600A-02-C35 - 8½ Case size, aluminum hinged ring, flush mount, rear conn Bubl Style (Note 1) B01 - 12 Bendable extension with ½ NPT union connection B03 - Plain bubl with rigid extension, to union B09 - Plain bubl with rigid extension, with ½ NPT union connection B18 - 24' Bendable extension with ½ NPT union connection B18 - 24' Bendable extension with ½ NPT union connection B18 - 24' Bendable extension with ½ NPT union connection B18 - 24' Bendable extension with ½ NPT union connection Armor Style A1 - Stainless steel spring A1 A2 - Stainless steel interlock A3 - PVC caded stainless steel interlock Line Length (Capillary length is measured from bottom of case to top of bulb extension) L01 - 5' L03 - 10' L05 - 15' L07 - 20' L29 - 25' L09 - 30' L30 - 35' L11 - 40' L13 - 50' L15 - 60' L19 - 80' Ranges (See table below for range codes) AB - 320' F/200' F AB - 320' F/200 F AB - 320' F/200' S AB - 32	Case Style							
C-600A-02-C35 - 8½ Case size, aluminum hinged ring, flush mount, rear conn Bulb Style (Note 1) B01 - 12* Bendable extension with ½ NPT union connection B03 - Plain bulb with rigid extension, it NPT union on armor (Not available with A3 armor style) B17 - 18* Bendable extension with ½ NPT union on armor (Not available with A3 armor style) B18 - 24* Bendable extension with ½ NPT union connection B18 - 24* Bendable extension with ½ NPT union connection Armor Style A1 - Stainless steel spring A1 - A2 - Stainless steel interlock Line Length (Capillary length is measured from bottom of case to top of bulb extension) Lio1 - 5* Lio3 - 10* Lio4 - 25* Lio5 - 36* Lio5 - 45* Lio5 - 60* Lio5 - 45* Lio5 - 60* Li	C-600A-02-C01 - 41/2" Case size, SS bayonet ring, surface mount, lower	connection	C-600A-02-C12					
Bulb Style (Note 1) B01 - 12' Bendable extension with ½ NPT union connection B01 B01 - 12' Bendable extension, no union B08 - Plain bulb with rigid extension, ½ NPT union on armor (Not available with A3 armor style) B17 - 18' Bendable extension with ½ NPT union connection B18 - 24' Bendable extension with ½ NPT union connection Armor Style	C-600A-02-C11 - 41/2" Case size, SS bayonet ring, flush mount, rear con	nection						
B01 - 12° Bendable extension with ½ NPT union connection B03 - Plain bulb with rigid extension, no union B08 - Plain bulb with rigid extension, no union B08 - Plain bulb with rigid extension, no union B08 - Plain bulb with rigid extension, w NPT union on armor (Not available with A3 armor style) B17 - 18° Bendable extension with ½ NPT union connection B18 - 24° Bendable extension with ½ NPT union connection A1 - Stainless steel spring A1 - Stainless steel interlock A3 - PVC coated stainless steel interlock Line Length (Capillary length is measured from bottom of case to top of bulb extension) L01 - 5° L03 - 10° L05 - 15° L07 - 20° L29 - 25° L09 - 30° L30 - 30° L11 - 40° L53 - 45° L11 - 40° L53 - 45° L13 - 50° L15 - 60° L19 - 80° Ranges (See table below for range codes) AB320° F/200° F AB Options (if choosing an option(s) must include an "X") X CS - Dual scale DM - Dial marking EO - Externally adjustable red set hand EP - Externally adjustable maximum pointer EQ - Externally adjustable minimum pointer EQ - Externally adjustable minimum pointer EQ - Externally adjustable minimum pointer EQ - Safety glass	C-600A-02-C35 - 81/2" Case size, aluminum hinged ring, flush mount, rea	ar conn						
B03 - Plain bulb with rigid extension, no union B08 - Plain bulb with rigid extension, % NPT union on armor (Not available with A3 armor style) B17 - 18' Bendable extension with ½ NPT union connection B18 - 24' Bendable extension with ½ NPT union connection Armor Style A1 - Stainless steel spring A1 A2 - Stainless steel interlock A3 - PVC coated stainless steel interlock Line Length (Capillary length is measured from bottom of case to top of bulb extension) L01 - 5' L05 - 16' L07 - 20' L29 - 25' L09 - 30' L30 - 35' L11 - 40' L53 - 45' L13 - 50' L15 - 60' L19 - 80' Ranges (See table below for range codes) A8 - 320 "F/200" F AB - 520	Bulb Style (Note 1)							
B08 - Plain bulb with rigid extension, ½ NPT union on armor (Not available with A3 armor style) B17 - 18' Bendable extension with ½ NPT union connection B18 - 24' Bendable extension with ½ NPT union connection Armor Style A1 - Stainless steel spring A1 A2 - Stainless steel interlock A3 - PVC coated stainless steel interlock Line Length (Capillary length is measured from bottom of case to top of bulb extension) L01 - 5' L01 L03 - 10' L05 - 15' L07 - 20' L29 - 25' L09 - 30' L30 - 35' L11 - 40' L53 - 45' L13 - 50' L15 - 60' L19 - 80' Ranges (See table below for range codes) A8 - 320 "F/200 "F AB Options (If choosing an option(s) must include an "X") CS - Dual scale DM - Dial marking EO - Externally adjustable maximum pointer EQ - Externally adjustable minimum pointer EQ - Externally adjustable minimum pointer EQ - Externally adjustable minimum pointer EQ - Safety glass	B01 - 12" Bendable extension with ½ NPT union connection			B01				
B17 - 18" Bendable extension with ½ NPT union connection B18 - 24" Bendable extension with ½ NPT union connection Armor Style	B03 - Plain bulb with rigid extension, no union							
B18 - 24" Bendable extension with ½ NPT union connection Armor Style	B08 - Plain bulb with rigid extension, ½ NPT union on armor (Not available	ole with A3 armor	r style)					
Armor Style A1 - Stainless steel spring A2 - Stainless steel interlock A3 - PVC coated stainless steel interlock Line Length (Capillary length is measured from bottom of case to top of bulb extension) L01 - 5' L03 - 10' L05 - 15' L07 - 20' L29 - 25' L09 - 30' L30 - 35' L11 - 40' L53 - 45' L11 - 40' L13 - 50' L15 - 60' L19 - 80' Ranges (See table below for range codes) AB 320 'F/200 'F AB - 320 'F/200 'F Options (If choosing an option(s) must include an "X") CS - Dual scale DM - Dial marking EO - Externally adjustable red set hand EP - Externally adjustable maximum pointer EQ - Externally adjustable minimum pointer EQ - Externally adjustable minimum pointer EQ - Externally adjustable minimum pointer SG - Safety glass	B17 - 18" Bendable extension with ½ NPT union connection							
A1 - Stainless steel spring A1 A2 - Stainless steel interlock A3 - PVC coated stainless steel interlock Line Length (Capillary length is measured from bottom of case to top of bulb extension) L01 - 5' L01 L03 - 10' L05 - 15' L07 - 20' L29 - 25' L09 - 30' L19 - 80' L11 - 40' L53 - 45' L11 - 40' L53 - 45' L13 - 50' L11 - 80' L19 - 80' Ranges (See table below for range codes) AB 320 °F/200 °F AB - 320 °F/200 °F AB Options (ff choosing an option(s) must include an "X") CS - Dual scale DM - Dial marking EC) - Externally adjustable maximum pointer EQ - Externally adjustable minimum pointer NH - Stainless steel tag NH PD - Acrylic window SG - Safety glass	B18 - 24" Bendable extension with ½ NPT union connection							
A2 - Stainless steel interlock A3 - PVC coated stainless steel interlock Line Length (Capillary length is measured from bottom of case to top of bulb extension) L01 - 5' L03 - 10' L05 - 15' L07 - 20' L29 - 25' L09 - 30' L30 - 35' L11 - 40' L53 - 45' L13 - 50' L15 - 60' L19 - 80' Ranges (See table below for range codes) AB320 °F/200 °F AB Options (if choosing an option(s) must include an "X") X CS - Dual scale DM - Dial marking EO - Externally adjustable maximum pointer EQ - Externally adjustable minimum pointer NH - Stainless steel tag NH PD - Acrylic window SG - Safety glass	Armor Style							
A3 - PVC coated stainless steel interlock Line Length (Capillary length is measured from bottom of case to top of bulb extension) L01 - 5' L01 L03 - 10' L05 - 15' L07 - 20' L29 - 25' L09 - 30' L30 - 35' L11 - 40' L53 - 45' L13 - 50' L15 - 60' L15 - 60' L19 - 80' Ranges (See table below for range codes) AB320 °F/200 °F AB Options (if choosing an option(s) must include an "X") CS - Dual scale DM - Dial marking EO - Externally adjustable red set hand EP - Externally adjustable maximum pointer EN - Externally adjustable minimum pointer EN - Safety glass NH PD - Acrylic window SG - Safety glass	A1 - Stainless steel spring				A1			
Line Length (Capillary length is measured from bottom of case to top of bulb extension) L01								
L01 - 5' L01 L03 - 10' L05 - 15' L07 - 20' L29 - 25' L09 - 30' L30 - 35' L11 - 40' L13 - 50' L13 - 50' L15 - 60' L19 - 80' Ranges (See table below for range codes) AB320 °F/200 °F AB Options (if choosing an option(s) must include an "X") CS - Dual scale DM - Dial marking EO - Externally adjustable maximum pointer EP - Externally adjustable maximum pointer EQ - Externally adjustable minimum pointer HH - Stainless steel tag NH PD - Acrylic window SG - Safety glass	A3 - PVC coated stainless steel interlock							
L03 - 10"	Line Length (Capillary length is measured from bottom of case to top o	f bulb extension)						
L05 - 15' L07 - 20' L29 - 25' L09 - 30' L30 - 35' L11 - 40' L53 - 45' L13 - 50' L15 - 60' L19 - 80' Ranges (See table below for range codes) AB - 320 °F/200 °F AB Options (If choosing an option(s) must include an "X") CS - Dual scale DM - Dial marking EO - Externally adjustable red set hand EP - Externally adjustable maximum pointer EQ - Externally adjustable minimum pointer EN - Stainless steel tag NH - Stainless steel tag NH - Stainless steel tag NH - Stainless steel tag SG - Safety glass	L01 - 5'					L01		
L07 - 20' L29 - 25' L09 - 30' L30 - 35' L11 - 40' L53 - 45' L13 - 50' L15 - 60' L19 - 80' Ranges (See table below for range codes) AB320 °F/200 °F AB Options (If choosing an option(s) must include an "X") C3 - Dual scale DM - Dial marking E0 - Externally adjustable maximum pointer E0 - Externally adjustable minimum pointer E0 - Externally adjustable minimum pointer E0 - Externally adjustable minimum pointer SH - Stainless steel tag NH PD - Acrylic window SG - Safety glass	L03 - 10'							
L29 - 25' L09 - 30' L30 - 35' L11 - 40' L53 - 45' L13 - 50' L15 - 60' L19 - 80' Ranges (See table below for range codes) AB320 °F/200 °F AB Options (If choosing an option(s) must include an "X") CS - Dual scale DM - Dial marking EO - Externally adjustable red set hand EP - Externally adjustable maximum pointer EQ - Externally adjustable minimum pointer NH - Stainless steel tag NH PD - Acrylic window SG - Safety glass	L05 - 15′							
L09 - 30' L30 - 35' L11 - 40' L53 - 45' L13 - 50' L15 - 60' L19 - 80' Ranges (See table below for range codes) AB320 °F/200 °F AB Options (If choosing an option(s) must include an "X") CS - Dual scale DM - Dial marking EO - Externally adjustable red set hand EP - Externally adjustable maximum pointer EQ - Externally adjustable minimum pointer NH - Stainless steel tag NH PD - Acrylic window SG - Safety glass	L07 - 20'							
L30 - 35' L11 - 40' L53 - 45' L13 - 50' L15 - 60' L19 - 80' Ranges (See table below for range codes) AB320 °F/200 °F AB Options (If choosing an option(s) must include an "X") CS - Dual scale DM - Dial marking EO - Externally adjustable red set hand EP - Externally adjustable maximum pointer EQ - Externally adjustable minimum pointer NH - Stainless steel tag NH PD - Acrylic window SG - Safety glass	L29 - 25'							
L11 - 40' L53 - 45' L13 - 50' L15 - 60' L19 - 80' Ranges (See table below for range codes) AB320 °F/200 °F AB Options (If choosing an option(s) must include an "X") CS - Dual scale DM - Dial marking EO - Externally adjustable red set hand EP - Externally adjustable maximum pointer EQ - Externally adjustable minimum pointer NH - Stainless steel tag NH PD - Acrylic window SG - Safety glass	L09 - 30′							
L53 - 45' L13 - 50' L15 - 60' L19 - 80' Ranges (See table below for range codes) AB320 °F/200 °F AB Options (If choosing an option(s) must include an "X") CS - Dual scale DM - Dial marking EO - Externally adjustable red set hand EP - Externally adjustable maximum pointer EQ - Externally adjustable minimum pointer NH - Stainless steel tag NH PD - Acrylic window SG - Safety glass	L30 - 35′							
L13 - 50° L15 - 60° L19 - 80° Ranges (See table below for range codes) AB320 °F/200 °F Options (If choosing an option(s) must include an "X") CS - Dual scale DM - Dial marking EO - Externally adjustable red set hand EP - Externally adjustable maximum pointer EQ - Externally adjustable minimum pointer NH - Stainless steel tag NH PD - Acrylic window SG - Safety glass	L11 - 40′							
L15 - 60' L19 - 80' Ranges (See table below for range codes) AB320 °F/200 °F AB Options (If choosing an option(s) must include an "X") CS - Dual scale DM - Dial marking EO - Externally adjustable red set hand EP - Externally adjustable maximum pointer EQ - Externally adjustable minimum pointer NH - Stainless steel tag NH PD - Acrylic window SG - Safety glass	L53 - 45′							
L19 - 80' Ranges (See table below for range codes) AB320 °F/200 °F Options (If choosing an option(s) must include an "X") CS - Dual scale DM - Dial marking EO - Externally adjustable red set hand EP - Externally adjustable maximum pointer EQ - Externally adjustable minimum pointer NH - Stainless steel tag NH PD - Acrylic window SG - Safety glass	L13 - 50′							
Ranges (See table below for range codes) AB320 °F/200 °F Options (If choosing an option(s) must include an "X") CS - Dual scale DM - Dial marking EO - Externally adjustable red set hand EP - Externally adjustable maximum pointer EQ - Externally adjustable minimum pointer NH - Stainless steel tag NH PD - Acrylic window SG - Safety glass	L15 - 60′							
AB320 °F/200 °F Options (If choosing an option(s) must include an "X") CS - Dual scale DM - Dial marking EO - Externally adjustable red set hand EP - Externally adjustable maximum pointer EQ - Externally adjustable minimum pointer NH - Stainless steel tag NH PD - Acrylic window SG - Safety glass	L19 - 80′							
Options (If choosing an option(s) must include an "X") CS - Dual scale DM - Dial marking EO - Externally adjustable red set hand EP - Externally adjustable maximum pointer EQ - Externally adjustable minimum pointer NH - Stainless steel tag PD - Acrylic window SG - Safety glass	Ranges (See table below for range codes)							
CS - Dual scale DM - Dial marking EO - Externally adjustable red set hand EP - Externally adjustable maximum pointer EQ - Externally adjustable minimum pointer NH - Stainless steel tag NH PD - Acrylic window SG - Safety glass	AB320 °F/200 °F						AB	
DM - Dial marking EO - Externally adjustable red set hand EP - Externally adjustable maximum pointer EQ - Externally adjustable minimum pointer NH - Stainless steel tag NH PD - Acrylic window SG - Safety glass	Options (If choosing an option(s) must include an "X")							X
EO - Externally adjustable red set hand EP - Externally adjustable maximum pointer EQ - Externally adjustable minimum pointer NH - Stainless steel tag NH PD - Acrylic window SG - Safety glass	CS - Dual scale							
EP - Externally adjustable maximum pointer EQ - Externally adjustable minimum pointer NH - Stainless steel tag NH PD - Acrylic window SG - Safety glass	DM - Dial marking							
EQ - Externally adjustable minimum pointer NH - Stainless steel tag NH PD - Acrylic window SG - Safety glass	EO - Externally adjustable red set hand							
NH - Stainless steel tag PD - Acrylic window SG - Safety glass	EP - Externally adjustable maximum pointer							
PD - Acrylic window SG - Safety glass	EQ - Externally adjustable minimum pointer							
PD - Acrylic window SG - Safety glass	NH - Stainless steel tag							NH
	SG - Safety glass							

NOTES

- 1. Minimum recommended insertion length ("u" dimension) in liquids is 4 inches and in gases is 6 inches for standard $\frac{3}{6}$ " \times 3" bulb.
- Thermowells must be used on any application where the bulb of the thermometer may be exposed to pressure, corrosive fluids, or velocity. Additionally, the use of a thermowell permits instrument interchangeability or recalibration without shutting down the process.

Data Sheet



C-600A-02 Duratemp® Thermometer

TEM	TEMPERATURE RANGES								
	Single	Rang	е		Dual Range				
Ra	inge Code °F	Ra	inge Code °C		Range Code				
AA	-320 °F/300 °F	AY	-200 °C/100 °C	DP	-80 °C/40 °C and -100 °F/100 °F				
AB	-320 °F/200 °F	AX	-200 °C/40 °C	DT	-40 °C/80 °C and -40 °F/180 °F				
AC	-320 °F/100 °F	ΑZ	-200 °C/150 °C	CF	0 °C/300 °C and 50 °F/550 °F				
AD	-200 °F/100 °F	BE	-120 °C/40 °C	DK	0 °C/200 °C and 50 °F/400 °F				
AE	-100 °F/100 °F	BL	-80 °C/40 °C	CE	0 °C/120 °C and 20 °F/240 °F				
AF	-100 °F/200 °F	BM	-80 °C/100 °C	DR	10 °C/150 °C and 50 °F/300 °F				
AG	-40 °F/180 °F	DA	-40 °C/160 °C						
CN	-20 °F/300 °F	BN	-40 °C/80 °C						
АН	-20 °F/120 °F	DS	-30 °C/150 °C						
AM	50 °F/400 °F	BP	-30 °C/50 °C						
AR	50 °F/750 °F	DB	-10 °C/110 °C						
AJ	20 °F/160 °F	BR	-10 °C/70 °C						
AK	20 °F/240 °F	BW	0 °C/400 °C						
AL	50 °F/300 °F	BU	0 °C/300 °C						
AN	50 °F/550 °F	BY	0 °C/200 °C						
AT	400 °F/1200 °F	BS	0 °C/120 °C						
		BT	10 °C/150 °C						
		BJ	200 °C/650 °C						

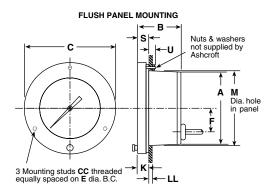


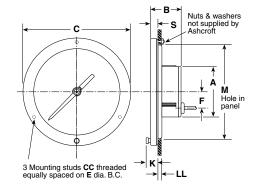
C-600A-02 Duratemp® Thermometer

DIMENSIONS in [] are millimeters

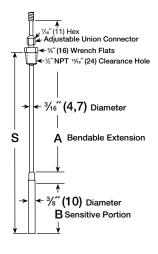
For reference only, consult Ashcroft for specific dimensional drawings

Dial Size Inches	A	В	С	СС	E	F	K	М	ш	S	U
41/2	4.75 [120.7]	2.19 [56]	6.03 [153]	10-24	5.38 [137]	1.63 [41]	1.06 [27]	4.88 [124]	0.13 0.5 [3] [13]	0.63 [16]	0.75 [16]
6	4.88 [123.7]	2.25 [57]	7.5 [190.5]	0.25 - 20	7 [178]	2.13 [54]	1.06 [27]	6.5 [165]	0.13 0.5 [3] [13]	0.63 [16]	0.75 [16]
8½	4.75 [120.7]	2.25 [57]	9.97 [352]	0.25 -20	9.63 [244]	2.13 [54]	1.06 [27]	9 [229]	0.13 0.5 [3] [13]	0.63 [16]	0.75 [16]





Bulb Style B01, B17 & B18



The bendable extensions with union connections. B01 [12" bendable extension] is the standard Duratemp bulb style and is suitable for a variety of insertion lengths and lagging requirements. B17 is a 18" bendable extension, B18 is a 24" bendable extension.

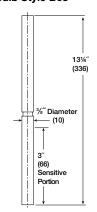
The union connection on all three styles is pressure tight and can be freely moved the entire length of the bendable portion. After installation, the bendable extension may be formed to suit the application.

Armor Style A1

AISI 302 stainless steel spring armor is supplied as standard. Originally designed for U.S. Navy Hi Shock thermometers

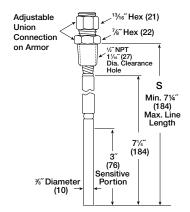
Bulb Code	Bulb Size B	Α	S MAX.	S MIN.
B01	3	12	15	4
	[76]	[305]	[381]	[102]
B17	3	18	21	4
	[76]	[457]	[533]	[102]
B18	3	24	27	4
	[76]	[610]	[686]	[102]

Bulb Style B03



13" plain bulb for applications used in open tanks where pressures and velocities are negligible

Bulb Style B08



The compression fitting fastens anywhere along the armored line. This Bulb Style is well suited for insertion requirements in excess of 13½". The B08 style is not a pressure tight connection. A thermowell is recommended for this style and for all bulb styles.

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