

# TEMPERATURE CONTROLLER

## Instrument Specification

# C105

**A precision, high current mercury switch,  
Oil or Winding temperature controller for Alarm, Trip and Cooler control with optional analogue output.**



- Configured as an Oil Temperature Indicator (OTI) or Winding Temperature Indicator (WTI) for simulation of transformer 'Hot Spot' temperature.
- ONAN/OFAF Dual gradient option
- Self contained system
- Fully compensated for ambient temperature
- High current switching (15 Amps max.)
- Maximum number of control switches '5'
- Extra long capillary length 60 metres
- Weatherproof case to IP55\*  
(Higher specification versions available)
- Maximum pointer & switch test knob
- Optional selectable analogue output
- Choice of scale options
- Full Installation and Maintenance Instructions supplied
- 10 year warranty when supplied **& fitted** by Accurate Controls Ltd
- RoHS compliant by exemption



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## Accurate Controls Ltd.

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## Indicating Scale:

Diameter:- 5.5" Angular Sweep – 270°  
Range:0-120°C, 0-150°C, 30-150°C  
Accuracy: 1.5% FSD

## Accuracy of indication:

To Class 1: EN13190:2001

## Electrical Connections:

Full circuit diagram supplied.  
All circuits insulation tested with 2000 Vac.  
Terminal block conductor size: 0.5 – 4.5mm<sup>2</sup>

## Switch Configurations:

Maximum 5 Normally Open or Normally Closed  
Switch Type: 8A @ 250V ac/DC (B115)  
Switch Type: 15A @ 250V ac/DC (B916)

Changeover Switches selectable by user for operation  
as normally open or normally closed.:

Wire Common Supply Connection.

Switch Type: 5A @ 250V ac/DC (B1886)

4 Wire Independent Supply connection.

Switch Type: 5A @ 250V ac/DC (B1895)

Maximum '5' B115 or 4 of any other variant.

## Winding Temperature simulation (where fitted)

Factory set gradients to customer specification  
Dual ONAN and OFAF gradients.  
Overload protection to 200% load  
Matching unit not required  
Suitable for 10A CT currents

## Analogue Output (where fitted) :

0-10, 0-20, 2-10 & 4-20mA analogue output for  
interfacing with industry standard SCADA, substation control  
systems. (also digital or analog meters are available upon  
request)

Optional internal or external power pack with universal input  
voltage:

85-265Vac 47-63Hz or 70-360 Vdc

Lower DC input voltage range available by special request

## Standard Case:

Steel with powder coat paint C5 finish

Electrical entry point: rear & bottom

Surface mount.

\*Weatherproof to IP55—bottom entry capillary only

## Capillary System:

Material: Capillary protected by stainless steel  
sheathing. Optional P.V.C. outer cover.

Length: 2 to 60 metres.

Case entry point: Top, rear or bottom

Ambient compensation as standard

Bulb and pocket to suit customer requirements.

## Options:

Anti-condensation heater.

Anti-vibration mountings.

Surface mounting with backstraps.

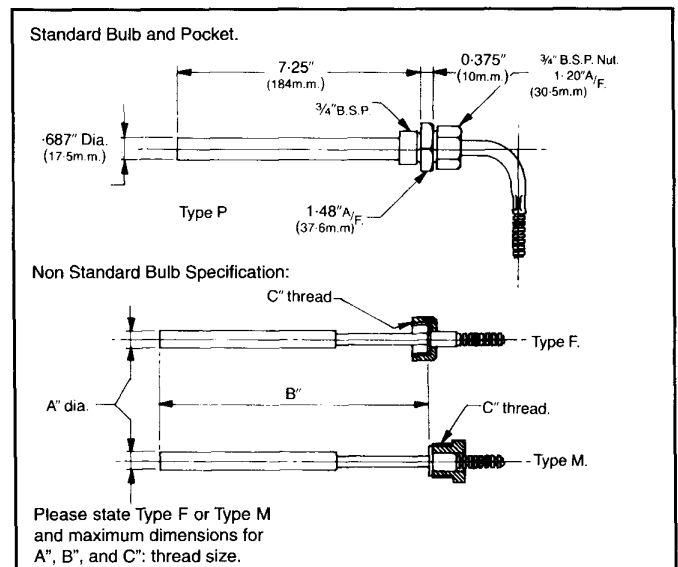
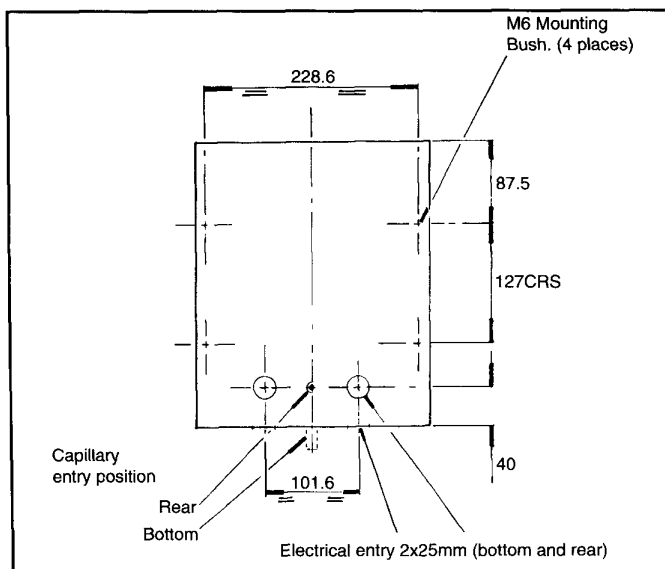
\*\* PVC coated capillary & other cases are  
available should the environment require it.

Contact factory for details.

## RoHS Compliant by Exemption:

The product qualifies for one of the specific exemptions as set  
out in the Annex to the RoHS Directive

Full on site installation, calibration and maintenance service available.  
Please contact Accurate Controls Ltd. for variants of the above, or for technical assistance.



# INSTRUMENT SPECIFICATION SHEET

## Quotation Request

# C105

For replacement of an existing instrument please advise serial number if known

Customer reference

Qty required  Delivery required

Case Mounting Surface only  Back Strap Mounting Kit   
 Case Window Standard Acrylic  Laminated Glass (99% UV blocking)   
 Case Finish Standard Painted (Normal Environments)  Customer Specified (comments box)

Capillary Length (metres) Min 2 metre  Max 60 metre

Capillary Type 304 Stainless Steel Sheathed   
 304 Stainless Steel & PVC sheathed (\*Harsh environments)

Capillary Entry Bottom  Rear  Top   
 Electrical Cable Entry Bottom  Rear

Bulb Type Accurate Std A501  DIN 42554 Std   
 Customer specified Diameter  Thread Size   
 Length  Gender   
 Customer specified matching pocket Y/ N  Mounting Thread

Scale range 0 -120°C  30 -150°C   
 0 -150°C

Instrument Type OTI  WTI (Single Gradient)   
 WTI (no gradient)  WTI (Dual Gradient)   
 1st Gradient Natural cooling  °C at  Amps  
 2nd Gradient Forced cooling  °C at  Amps

Instrument Label

Switch Options – select for each switch from table					
Switch No	Part No.	Configuration	Switch No	Part No.	Configuration
1			4		
2			5		
3					

Switch Test Knob Standard Knob  + wire lock post

Analog Output for Remote Indication Yes  No   
 PSU options Internal  External   
 mA output options 0-10mA  0-20mA   
 2-10mA  4-20mA

Anti Vibration Mounts Y / N  Test Certificate Y/ N   
 Anti Condensation Heater (requires supply at specified voltage) 110 V  240V

\* Harsh or Hazardous Environment Contact Factory for further information

Submitted by:

Name	Company & Address	Tel No.	E-mail

Comments

### Switch Options Table

C105 Mercury Switch Options			
Part No.	Description	Configurations	
B115	8 Amp SPST	NO	NC
B916	15 Amp SPST	NO	NC
B1886	5 Amp SPDT	3 wire changeover	
B1895	5 Amp DPDT	4 wire changeover	

**Warranty:**  
12 months: supply only.  
10 years: for Accurate Controls installed instruments.  
 Please contact factory for installation quote.

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