### Cole-Parmer®

## Cole-Parmer® Thermoregulator, IC-300-10DDC - IC-300-20DDC -IC-300-20HDC

- Temperature range of -40°C to 120°C
- Please note for sub-ambient cooling a Dip Cooler or Flow Cooler is required
- Applications <0°C and >100°C require Techne bath oil
- Excellent temperature stability: ±0.01°C at 40°C
- 4 digit setting with a bright LED digital temperature display
- Suitable for most routine laboratory applications
- User adjustable over-temperature cut-out
- Low liquid level cut-out as standard











# Cole-Parmer® Thermoregulator, IC-300-10DDC - IC-300-20DDC - IC-300-20HDC

Thermoregulators are designed to be used with the Cole-Parmer® unheated water baths or any other suitable laboratory vessels. They will heat, circulate and safely control the temperature of the liquid in the bath within precise limits.

#### **Sub-ambient cooling**

This thermoregulator can be used for sub-ambient cooling, right down to  $-40^{\circ}$ C, although a low-temperature liquid is required below 0°C. Sub-ambient cooling can be achieved using the cooling coil accessory (part number 12122-87) connected to an external chilling system, for example a cold tap. Alternatively a Techne dip-cooler or flow cooler could be used as a method of chilling.

#### **External circulation**

This thermoregulator can be used in several ways. (1) Stand-alone waterbath temperature controller with precision accuracy and stirring action. (2) Pump for recirculating chilled liquid produced in an external chiller allowing sub-ambient water bath temperature. (3) Pump for providing temperature control to an external system or device. (4) A combination of using externally chilled liquid and providing temperature control to an external system. For additional information, please see Application notes under "Downloads".

#### **Technical Specification**

Specification	IC-300-10DDC	IC-300-20DDC	IC-300-20HDC	
Temperature range*	-40°C to +120°C	-40°C to +200°C	-40°C to +250°C	
Temperature selection	Digital	Digital	Digital	
Temperature stability using water @ 40°C	±0.01°C	±0.005°C	±0.005°C	
Method of control	PID	PID	PID	
Temperature sensor	PRT	PRT	PRT	
Adjustable over-temperature cut-out	Yes	Yes	Yes	
Low liquid level cut-out	Yes	Yes	Yes	
Pump capacity litresminute	10	10	10	
PC Interface	-	-	Yes RS232	
Pump capacity (mbar)	145	145 145		
Nominal heater power at 120V (W)	1000	1500	1500	
Nominal heater power at 240V (W)	1000	1800 1800		
Cooling coil	No	No	No	
Extension below base (mm)	145	145	145	
Dimensions L x W x H (mm)	237 x 124 x 260	237 x 124 x 260	237 x 124 x 260	
Shipping weight	3.9kg	4.0kg	4.0kg	



#### **Ordering Information**

Description	Ordering Number	Series No.	Model No.	Legacy Sku.
Cole-Parmer® TE-10D digital thermoregulator, supplied with clamp (230V)	01262-07	IC-300	IC-300-10DDC	FTE10DDC
Cole-Parmer® TE-10D digital thermoregulator, supplied with clamp (120V)	01262-05	IC-300	IC-300-10DPC	FTE10DPC
Cole-Parmer® TU-20D advanced thermoregulator with RS232 and TechneWorks software, supplied with clamp (230V)	01262-15	IC-300	IC-300-20DDC	FTU20DDC
Cole-Parmer® TU-20D advanced thermoregulator with RS232 and TechneWorks software, supplied with clamp (115V)	01262-13	IC-300	IC-300-20DPC	FTU20DPC
Cole-Parmer® TU-20HT advanced high temp thermoregulator with RS232 and TechneWorks software, includes clamp (230V)	16112-55	IC-300	IC-300-20HDC	FTU20HDC
Cole-Parmer® TU-20HT advanced high temp thermoregulator with RS232 and TechneWorks software, includes clamp (120V)	16101-87	IC-300	IC-300-20HPC	FTU20HPC

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