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 USA

Rev. B

Customer Service / Inside Sales

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Revised 14 July 2021

CS Series Liquid Level Controllers - Specifications & Features Comparison		CS200	CS100
Level Measurement			
Sensor Type		8-Thermistor (Std) 4-Thermistor Fixed (Optional)	4-Thermistor Fixed
Accuracy		+1" - 0" (25.4mm - 0mm)	+1" - 0" (25.4mm - 0mm)
Resolution		1"	1"
Range		Freezer usable height	Low, Normal, High
Redundancy		Multiple discrete points	Multiple discrete points
Level Display Units		English/Metric	Low, Normal, High
Control by Temperature		Yes	No
Control Display			
LN ₂ Level		Yes	Yes
Temperature		Yes	Yes
Solenoid Valves (On/Off)		12 VDC	12 VDC
Temperature Measurement			
Sensor Type		Type T Thermocouple	Type T Thermocouple
Standard Accuracy		1°C or 1.5% of reading(minimum)	1°C or 1.5% of reading(minimum)
Greater Accuracy - Optional		0.5°C or .75% of reading(minimum)	N/A
Resolution		0.1°C	0.1°C
Number of sensor ports (channels)		2	1
Altitude Compensation for accuracy		No - not needed	No - not needed
Full Range Calibration		Automatic	Automatic
High Temp Alarm Testing		Software based	No
Temperature Display Units		°C, °F, °K, °R	°C

	CS200	CS100
Power		
Power Supply	12 VDC Universal	12 VDC Universal
Battery Backup	12 Volt	N/A
	72 hours plus on a 18aH	N/A
Battery Backup Duration	Battery	N/A
Battery Conservation firmware	Yes	N/A
Input Voltage	100-240 VAC	100-240 VAC
Input Current (Max)	1.75 A	1.75 A
Input Current (Continuous)	0.5 A	0.5 A
Power Consumption (Max)	21 W	21 W
Frequency	50/60 Hz	50/60 Hz
Output	12VDC	12VDC
Control Input Voltage	12VDC	12VDC
Power Cord	Available for all countries	Available for all countries
Solenoid Valve		
Input Voltage	12VDC	12VDC
Input Current	0.96 A	0.96 A
Communications (w/ CiSmartcom hub)		
RS232 (Serial)	Optional	Optional
RS422 (Serial)	Optional	Optional
RS485 (Serial)	Optional	Optional
MODBUS	Optional	Optional
USB	Optional	Optional
Cryowire Secure [™]	Yes	Yes
Number of Communication Ports	3 + expandable	1 port + expandable
User Interface		
Display Type	Graphics VFD	LED Array
Keys	11	4
Display Brightness Adjustment	Yes	Yes
Filling LED	Yes	Yes
"Status Wheel" provides at a glance system status	Yes	No
Large Fonts for easy viewing (one button font change)	Yes	Yes
Small Fonts to display more information	Yes	No
Languages	English, German	English
Quick look at "LASTS" screen	Yes	No
Choose Main Screen Format	Yes	No
Screen Saver	Yes	No
Proportionally spaced fonts	Yes	No
Graphics to enhance usability (scroll bars)	Yes	No
Tests		
Temperature circuit	Yes	No
Low battery	Yes	N/A
Thermistor Status	Yes	Yes
Power Up Self-Test	Yes	Yes

	CS200	CS100
Alarms		
Low Level Alarm	Yes	Yes
High Level Alarm	Yes	Yes
Sensor Error Alarm	Yes	Yes
Low Temperature (Thermocouple A, Thermocouple B)	Yes	No
High Temperature (Thermocouple A, Thermocouple B)	Yes	Yes
Temperature Thermocouple A calibration alarm	Yes	No
Temperature Thermocouple B calibration alarm	Yes	No
Thermocouple Open Alarm	Yes	Yes
Remote Alarm	Yes	Yes
Power Failure (Remote only)	Yes	Yes
Low LN ₂ Supply Alarm	Yes	Yes
Fill Time Alarm (shuts off automatic filling)	Low LN ₂ Supply Alarm	Low LN ₂ Supply Alarm
Battery Backup Alarm	Yes	N/A
Lid Open Too Long Alarm	Yes	No
Valve Stuck Open Alarm (Freeze Guard)	Yes	No
Unauthorized Access Warning	Yes	No
Usage Warning	Yes	No
Temperature Calibration Alarm	Yes	No
Usage Alarm	Yes	No
Bypass Sensor Failure	Yes	No
Bypass Time	N/A (actual LN ₂ detection)	No
Bypass Sensor Calibration	N/A (actual LN ₂ detection)	No
Power Failure (Audible, visual, remote)	Yes	Yes
Low Battery Voltage	Yes	N/A
Audible Alarm	Yes	Yes
Audible Alarm Re-trigger	Yes	Yes
Audible Alarm Disable	Yes	No
Visual Alarm Indicator	Yes	Yes
Mute Button	Yes	Yes
Logging		
Temperature	Yes	Yes
Level	Yes	Yes
Alarms	Yes	Yes
Events	Yes	Yes
Diagnostics	Yes	Yes
Encrypted Data	Yes	Yes
Security		
Password Protected - Settings	Yes	No
Password Protected - Power	Yes	No
Multiple Passwords	Yes	No
Multiple Security Levels	Yes - flexible	No
Free password recovery	Yes	No

	CS200	CS100
Outputs		
Visual LED	Yes	Yes
Audible	Yes	Yes
Global Remote Alarm Relay	Yes	Yes
Discrete Remote Contacts	Optional	Optional
Open Collector	Optional	Optional
4-20ma	Optional	Optional
ASCII Text	Yes	Optional
Encrypted Data and Commands	Yes	Optional
Scheduled Events		
Timed Fillings (Scheduled Fill)	Day and Time of Week	No
Indicates the Next Scheduled Fill	Yes	No
Maintenance Reminder	Month & Day	No
Indicates the Next Maintenance Reminder	Yes	No
Check LN ₂ Supply Reminder	Day	No
Indicates the next LN ₂ Supply reminder	Yes	No
Features		
LN ₂ Usage	Yes	No
Memory	500,000 events onboard	500,000 events onboard
External Data Storage - Flight Recorder	Optional	Optional
One Fill all Fill	Peer to Peer	Optional
Sequential Fill	Peer to Peer	Optional
Bypass Sensor calibration	N/A	N/A
Valve Open Duration	Yes	No
Valve Stuck Open Detection	Yes	No
Date/Time Format	US / International	No
Lid Switch	Yes	No
UL Lid Switch (Hardwired to disable fill when lid is open)	In software	No
Quick Chill Timer	Yes	No
Manual Defog Timer	Yes	No
Auto Defog Timer	Yes	No
User Access	Yes	No
User Identification Labels	Yes	No
Freezer Identification	Yes	No
Smart Harness - Redundant Setting Storage and Automatic Setting Transfer for a replacement control)	Yes	No
Online Support Contact Information	Yes	Yes
Elapsed time with no temperature alarm	Yes	No
Audible Re-trigger Feature	Yes	Yes
Options		
Local Gas Bypass	Optional	N/A
System Gas Bypass	Optional	N/A
ciSmart Com Global View	Optional	Optional
ciSmart Cloud Monitoring	Optional	Optional
ciSmart Com Reminders	Optional	Optional
Ethernet Connectivity	Optional	Optional