Incyte Arc Expert - 420

Specification Sheet (Part/REF # 243950-0214)

Incyte Arc sensors provide a means for directly measuring viable cell density in real-time, meeting the increasing need for PAT in the biopharmaceutical industry. Achieve advanced process control with unprecedented data availability. Clear, instantly available information ensures critical events that could have been missed between off-line samples are now immediately recognizable.

Product Specifications

Sensor Family	Incyte Arc Expert
a-length	420 mm
Parameter	Viable Cell Density
Electrical Connector	VP8
Sensor Output	Arc: Modbus
Measurement Principle	Permittivity
Measuring Range	0 to 700 pF/cm, equivalent to 5 x 10^5 to 8 x 10^9 cells/mL (mammalian)
Accuracy at 25 °C	Conductivity (at 0 pF): ± 25 µS or ± 1 % Whichever value is greater over the entire measuring range
Precision at 25 °C	Permittivity (at 1 MHz): ± 1 pF or ± 1 % Whichever value is greater over the entire measuring range
Temperature Sensor	Yes
Configurable Values	VCD, Conductivity, Temperature
Diameter	12 mm
Process Connection	PG13,5
Wetted Parts	Platinum Stainless Steel 1.4435 PEEK (Polyetheretherketone) EPDM (Ethylene propylene elastomer)
O-ring Material	EPDM (Ethylene propylene elastomer)
Surface Quality of Steel	Ra < 0.4 µm (N5)
Digital Interface	RS485 Modbus (max. 31 addresses)
Baud Rate	19200, 38400, 57600,115200 Bd
Operating Voltage	24 V (± 10 %)
Serial Number	Yes
Certificate	Yes
Autoclavable	Yes, max. Temperature 130 °C (Incyte Arc Revision 00) Yes, max. Temperature 140 °C (Incyte Arc Revision 01 and higher)
CIP	Yes
Steam Sterilizable	Yes, max. Temperature 140 °C
Operating Temperature Range	0 to 60 °C
Conductivity Range	1 to 80 mS/cm for firmware below CDCUM003

	0.5 to 80 mS/cm for firmware CDCUM003 and above (with Hamilton calibration)
Pressure Range bar g	0 to 12 bar
Resolution at 25 °C	0.1 pF/cm
Max. Accuracy	Conductivity (at 0 pF): ± 100 µS (for whole operating temperature range)
Max. Precision	Permittivity (over all frequencies): ± 1 pF (for whole operating temperature range)