

Fisher® Level Instrument Selection Guide



W8678
DLC3000 DIGITAL LEVEL CONTROLLER IN COMBINATION WITH A 249W SENSOR (DL3 DIGITAL LEVEL TRANSMITTER)



W8679
2500 SERIES CONTROLLER IN COMBINATION WITH A 249W SENSOR (L3 PNEUMATIC LEVEL CONTROLLER)



W8418-1

L2 LIQUID LEVEL CONTROLLER



W9331

L2sj LIQUID LEVEL CONTROLLER

Figure 1. Typical Constructions

- FIELDVUE® Digital Level Instruments—** Microprocessor-based, communicating digital level transmitter for liquid level, specific gravity (density), and liquid level interface. Using the HART® communications protocol, DLC3000 Series digital level controllers give easy access to information critical to process operation. Available in combination with a 249 Series sensor to meet mounting requirements, as shown in figure 1.

- Pneumatic Liquid Level Instruments—** Proportional control mode. The 2500 Series controller/transmitter receives the change in fluid level or fluid-to-fluid interface level from the change in buoyant force the fluid exerts on the sensor displacer. Available in combination with a 249 Series

sensor to meet mounting requirements, as shown in figure 1.

- L2 Liquid Level Controller—** Snap-acting or throttling controller. Displacer-type liquid level sensor for mounting to side of tank. Displacer travel is transmitted to controller by pivotal movement of displacer rod.

- L2sj Low Emission Liquid Level Controller—** On-off / direct acting controller. Displacer-type liquid level sensor for mounting to side of tank. The energy responsible L2sj features a low-bleed relay to help to conserve natural gas to reduces emissions.



Level Instruments

FIELDVUE® Digital Level Instruments

FIELDVUE DLC3000 Series digital level controllers (figures 2 and 6) are loop-powered instruments. In conjunction with a 249 Series sensor, they measure changes in liquid level, the level of an interface between two liquids, or liquid specific gravity (density). A level, density, or interface level change in the measured fluid causes a change in the displacer position.

This change is transferred to the torque tube assembly and to the digital level controller lever assembly. The rotary motion moves a magnet attached to the lever assembly, changing the magnetic field that is sensed by the Hall-effect sensor. The sensor converts the magnetic field signal to a varying electronic signal, which is converted to a 4-20 mA output signal.

Standard or Custom Configuration... With the integration of a wafer-style liquid level sensor and transmitter into one product, the DL3 (DLC3000 Series digital level controller in combination with a 249W Series sensor) enables users to install digital level transmitters to a variety of industry standard or custom process vessel connections. The sensor consists of a wafer body, torque tube assembly and displacer and is rated for CL150, 300, and 600. The wafer body mounts between NPS 3 or 4 raised face

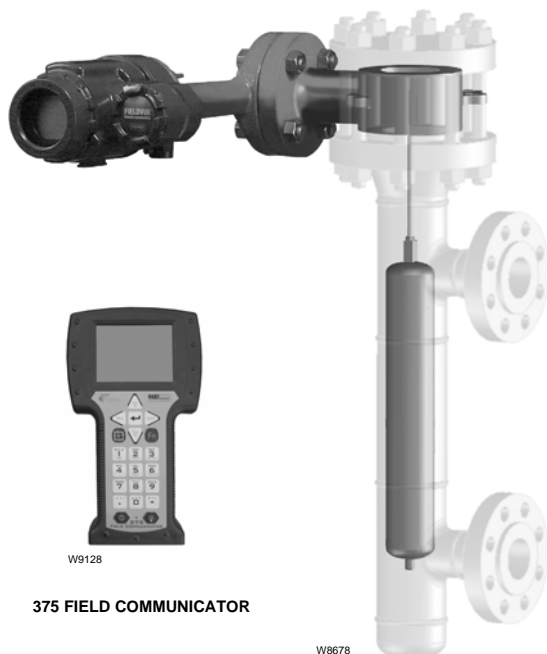


Figure 2. DL3 Digital Level Transmitter (DLC3000 Series Digital Level Controller in Combination with a 249W Series Sensor) —Installed in a Typical Customer-Supplied Cage

flanges. Custom configurations are also available to meet your specific application requirements. Refer to the DLC3000 Series specifications in tables 1, 2, and 11, and the 249 Series specifications in tables 6, 7, 8, 9, 10, and 11 for complete product line capabilities and options.

HART/AMS Compliant... The DLC3000 uses HART protocol to interface with the 375 Field Communicator (see figure 2) for field interface operations. Advanced user-interface capabilities are enabled by AMS® Suite: Intelligent Device Manager (see figure 3).

Simplified Setup and Calibration... With the electronic Setup Wizard, digital level controller startup is straightforward and fast. Level and temperature alarms, specific gravity tables, calibration trim, and trending are readily configurable. DLC3000 Series digital level controllers also support re-ranging without a fluid reference.

Responsive to Small Process Change... Accurate, high-gain analog-to-digital conversion enables measurement of small changes in the process variable. In addition, an input filter and output damping may be adjusted by the user to attenuate noise from mechanical disturbance or liquid turbulence at the displacer.

Easy Maintenance... Field wiring connections are in a compartment separated from the electronics. This helps to protect the electronics from any moisture brought into the housing by the field wiring. This also eases installation and maintenance. The digital level controller does not have to be removed to facilitate troubleshooting or service. However, if it is necessary to remove the digital level controller for in-shop maintenance and calibration, field wiring does not need to be disconnected.

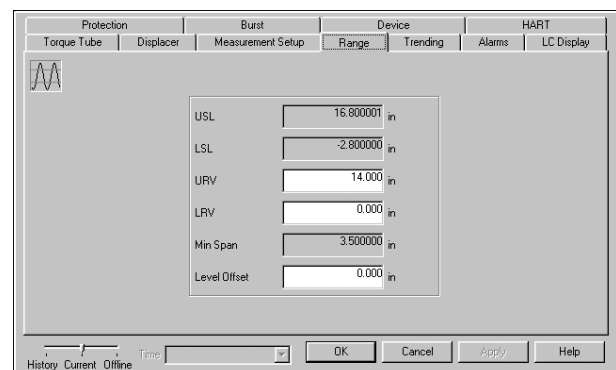


Figure 3. AMS® Suite: Intelligent Device Manager Configuration Screen

Pneumatic Liquid Level Instruments

2500 Series (figures 4 and 7) are rugged, dependable, and simply constructed pneumatic instruments. In conjunction with a 249 Series sensor, they sense liquid level or interface level in a vessel, and produce a standard pneumatic output signal proportional to the process variable.

Standard or Custom Configuration... With the integration of a wafer-style liquid level sensor and transmitter into one product, the L3 (2500 controller in combination with a 249W Series sensor) enables users to install pneumatic level controllers to a variety of industry standard or custom process vessel connections. The sensor consists of a wafer body, torque tube assembly and displacer and is rated for CL150, 300, and 600. The wafer body mounts between NPS 3 or 4 raised face flanges. Custom configurations are also available to meet your specific application requirements. Refer to the

2500 Series specifications in tables 3, 4, 5, and 11, and the 249 Series specifications in tables 6, 7, 8, 9, 10, and 11 for complete product line capabilities and options.

Easy Adjustment... Simple dial-knobs make set point and proportional valve opening changes straightforward and easy.

Simple, Durable Construction... Few moving parts are used. Knife-edged driver bearing in sensor, and plated brass instrument case ball bearing for torque tube rotary shaft help provide low friction operation.

Reduced Maintenance and Operating Costs... Spring-out wire provides for in-service cleaning of relay orifice. Supply pressure conservation is enhanced because relay exhaust opens only when output pressure is being reduced.



W8679

Figure 4. L3 Pneumatic Level Controller (2500 Controller in Combination with a 249W Sensor)— Installed in a Typical Customer-Supplied Cage

Level Instruments

L2 and L2sj Liquid Level Controllers

Rugged L2 and L2sj liquid level controllers use a displacer type sensor to detect liquid level or the interface of two liquids of different specific gravities.

The reliability of the design make these controllers well suited for high pressure liquid level applications in natural gas production, compression and processing. The device delivers a pneumatic output signal to a control valve. The sensor uses a threaded 2 NPT connection to the vessel. Standard constructions use materials that comply with the requirements of NACE MR0175-2002.

L2 and L2sj controllers, in combination with the sensor, work on the principle that a body immersed in liquid will be buoyed up by a force equal to the weight of the liquid displaced. The buoyant force and resultant movement of the displacer in the liquid is transmitted to the controller which delivers a pneumatic signal to a control valve.

L2 Liquid Level Controllers

Snap-Acting or Throttling Control... One standard controller available as either throttling or snap-acting.

Field-Reversible Output... The controller can be adjusted in the field for direct or reverse action without additional parts. The controller also has adjustable gain sensitivity.

Easy Maintenance... Both the controller and the sensor can be easily disassembled to inspect the process seals and for maintenance.

L2sj Liquid Level Controllers

Designed for use with Natural Gas... The L2sj controller is intended for use with natural gas as the pneumatic supply.

Reduced Carbon Footprint... Low-bleed relay helps to conserve natural gas to reduce greenhouse gas emissions.

Reduced Operating Costs, Increased Revenue... Integral action relay with rugged metal seats requires less maintenance and provides more dependable liquid level control, which can improve uptime. Reduced emissions result in an increase in natural gas available to the sales line.



L2 LIQUID LEVEL CONTROLLER



L2sj LIQUID LEVEL CONTROLLER

Figure 5. L2 and L2sj Liquid Level Controller

DLC3000 Series Digital Level Controllers

Note

Mountings for Masoneilan®, Yamatake and Foxboro®/Eckhardt sensors are available. Contact your Emerson Process Management sales office for mounting kit information.



Figure 6. DLC3000 Digital Level Controller

DLC3000 Series Digital Level Controllers

Table 1. DLC3000 General Specifications




Controller Selections (also refer to tables 6, 7, 8, and 9)	For use with 249 Series caged and uncaged displacer sensors	DLC3010
Input Signal		Level, Interface or Density: Rotary motion of the torque tube shaft proportional to changes in liquid level, interface level, or density that change the buoyancy of the displacer. Process Temperature: Interface for 2- or 3-wire 100 ohm platinum RTD for sensing process temperature, or optional user-entered target temperature to permit compensating for changes in specific gravity
Output Signal	Analog	4-20 mA DC direct (increasing input increases output) or reverse action
	Digital	HART 1200 baud FSK (frequency shift keyed)
Supply		12-30 VDC; the instrument has reverse-polarity protection
Ambient Relative Humidity		0 to 95% non-condensing
Approximate Weight (Controller)		2.7 kg (6 pounds)
Option		Heat insulator
Electrical Housing		NEMA 4X, CSA Enclosure Type 4x, and IP66
Hazardous Area Classification		 Explosion proof, Intrinsic Safety, Dust-Ignition proof  APPROVED Explosion proof, Non-Incendive, Intrinsic Safety, Dust-Ignition proof ATEX Intrinsic Safety, Type n, Flameproof SAA Flameproof IECEx Intrinsic Safety, Type n  NEPSA Intrinsic Safety, Flameproof, Dust-Ignition proof


Table 2. DLC3000 Performance⁽¹⁾

Performance Criteria	Stand-Alone	w/ NPS 3 249W, Using a 14-inch Displacer	w/ All Other 249 Series
Independent Linearity	± 0.25% of output span	± 0.8% of output span	± 0.5% of output span
Hysteresis	< 0.2% of output span	---	---
Repeatability	± 0.1% of full scale output	± 0.5% of output span	± 0.3% of output span
Dead Band	< 0.05% of input span	---	---
Hysteresis and Dead Band	---	< 1.0% of output span	< 1.0% of output span
Process Sensor Range (Input Signal)	Fluid Level or Fluid Interface Level	From 0 to 100 percent of displacer length ⁽²⁾ —standard lengths for all sensors are 356 mm (14 inches) or 813 mm (32 inches); other lengths available depending on sensor construction	
	Fluid Density	From 10 to 100 percent of displacement force change obtained with given displacer volume—standard volumes are 1016 cm ³ (62 in ³) for 249C and 249CP sensors and 1622 or 1360 cm ³ (99 or 83 in ³) for most other sensors; other volumes available depending upon sensor construction	
Allowable Specific Gravity (Standard)	Fluid Level or Fluid Interface Level	Specific gravity range, 0.05 to 1.10; Minimum differential specific gravity 0.05 ⁽³⁾	
	Fluid Density	Specific gravity range, 0.1 to 1.10; Minimum change in specific gravity 0.05 ⁽³⁾	
Zero Adjustment	Fluid Level or Fluid Interface Level	Continuously adjustable to position span of less than 100 percent anywhere within displacer length, and report the value in engineering units with any desired bias.	
	Fluid Density	Continuously adjustable to position span of less than 90 percent anywhere within 10 to 100 percent of displacement force change obtained with given displacer volume.	

1. At full design span, reference conditions.
 2. The torque tube and the displacer must be properly sized for the application in order for 0 to 100% of displacer length to be available.
 3. With a nominal 4.4 degrees torque tube shaft rotation for a 0 to 100 percent change in liquid level (specific gravity=1), the digital level controller can be adjusted to provide full output for an input range of 5% of nominal input span. This equates to a minimum differential specific gravity of 0.05 with standard volume displacers. Operating at 5% proportional band will degrade accuracy by a factor of 20. Using a thin wall torque tube, or doubling the displacer volume will each roughly double the effective proportional band. When proportional band of the system drops below 50%, changing displacer or torque tube should be considered if high accuracy is a requirement.

2500 Series Controllers and Transmitters

Table 3. 2500 Series General Specifications

Controller and Transmitter Selections (also refer to tables 6, 7, 8, and 9)	2500	Proportional pneumatic controller
	2502	Proportional-plus-reset pneumatic controller
	2502F	Proportional-plus reset pneumatic controller with anti-reset windup
	2500T	Proportional pneumatic transmitter
	2500S	Differential gap (on-off) pneumatic controller with full adjustment
	2503	Differential gap (on-off) pneumatic controller with limited adjustment
Process Sensor Range (Input Signal)	Fluid level or fluid interface level	From 0 to 100 percent of displacer length ⁽¹⁾ —standard lengths for all sensors are 356 mm (14 inches) or 813 mm (32 inches); other lengths available depending on sensor construction
	Fluid density	From 0 to 100 percent of displacement force change obtained with given displacer volume—standard volumes are 1016 cm ³ (62 in ³) for 249C and 249CP sensors and 1622 or 1360 cm ³ (99 or 83 in ³) for most other sensors; other volumes available depending upon sensor construction
Allowable Specific Gravity (Standard)	Fluid level or fluid interface level	2503 and 2503R: Specific gravity range, 0.25 to 1.10 All other types: Specific gravity range, 0.20 to 1.10
	Fluid density	2503 and 2503R: Minimum change in specific gravity, 0.25 All other types: Minimum change in specific gravity, 0.20
Set Point Adjustment (Controllers only)		Continuously adjustable to position control point or differential gap of less than 100 percent anywhere within displacer length (fluid or interface level) or displacement force change (density)
Zero Adjustment (Transmitters only)		Continuously adjustable to position span of less than 100 percent anywhere within displacer length (fluid or interface level) or displacement force change (density)
Reset Adjustment (Proportional-Plus-Reset Controllers Only)		Continuously adjustable from 0.005 to over 0.9 minutes per repeat (from 200 to under 1.1 repeats per minute)
Anti-Reset Differential Relief (2502F and 2502FR Controllers Only)		Continuously adjustable from 0.14 to 0.48 bar (2 to 7 psi) differential to relieve excessive difference between proportional and reset pressures
Output Signal--Direct (Increasing Level Increases Output) or Reverse Action	Proportional or reset controllers and transmitters	0.2 to 1.0 or 0.4 to 2.0 bar (3 to 15 or 6 to 30 psig)
	Differential gap controllers with full adjustment	0 and 1.4 or 0 and 2.4 bar (0 and 20 or 0 and 35 psig)
	Differential gap controllers with limited adjustment	0 and full supply pressure
Hazardous Area Classification		2500 Series controllers comply with the requirements of ATEX Group II Category 2 Gas and Dust. 
Options		Stainless steel heat insulator assembly Liquid level sight gauges Mechanical level indicator
1. The torque tube and the displacer must be properly sized for the application in order for 0 to 100% of displacer length to be available.		

2500 Series Controllers and Transmitters

Table 4. 2500 Series Performance

Independent Linearity (Transmitters Only)	1 percent of output pressure change at span of 100 percent
Hysteresis	0.6 percent of output pressure change at 100 percent of proportional band, differential gap, or span
Repeatability	0.2 percent of displacer length or displacement force change
Deadband (Except Differential Gap Controllers)	0.05 percent of proportional band or span
Typical Frequency Response	4 Hz and 90-degree phase shift at 100 percent of proportional band, differential gap, or span with output pipe to typical instrument bellows using 6.1 meters (20 feet) of 6.3 mm (1/4-inch) tubing

Table 5. 2500 Series Supply Pressure

Output Signal	Standard Supply and Output Pressure Gauge Indications ⁽¹⁾	Normal Operating Supply Pressure ⁽²⁾		Air Consumption at Normal Operating Supply Pressure ⁽³⁾			
		Bar	Psig	Normal m ³ /h ⁽⁴⁾		Scfh ⁽⁴⁾	
				Min ⁽⁵⁾	Max ⁽⁶⁾	Min ⁽⁵⁾	Max ⁽⁶⁾
0.2 to 1.0 bar (3 to 15 psig), except 0 and 1.4 bar (0 and 20 psig) ⁽²⁾ for on-off controllers	0 to 30 psig	1.4	20	0.11	0.72	4.2	27
0.4 to 2.0 bar (6 to 30 psig), except 0 and 2.4 bar (0 and 35 psig) ⁽²⁾ for on-off controllers	0 to 60 psig	2.4	35	0.19	1.1	7	42

1. Consult your Emerson Process Management sales office about gauges in other units.
2. Control and stability may be impaired if this pressure is exceeded (except 2503 or 2503R controller without proportional valve).
3. Except 2503 or 2503R controller, which bleeds only when relay is open at exhaust position.
4. Normal m³/hr=normal cubic meters per hour at 0°C and 1.01325 bar. Scfh=standard cubic foot per hour at 60°F and 14.7 psia.
5. At zero or maximum proportional band or span setting.
6. At setting in middle of proportional band or span range.

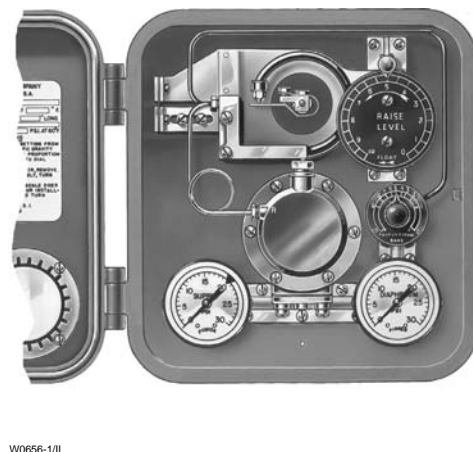


Figure 7. Typical Controller

Level Instruments

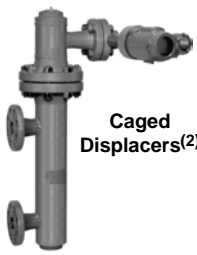

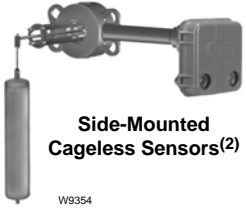

249 Series Sensors

249 Series sensors, in conjunction with either DLC3000 Series digital level controllers or 2500 Series controllers and transmitters, are designed to measure changes in liquid level, liquid interface level, or density/specific gravity inside a process vessel.

249 Series level sensors are available in both caged

and cageless configurations, as shown in the table below. Caged sensors provide more stable operation than do cageless sensors for vessels with internal obstructions or considerable internal turbulence. Cageless sensors are generally used on applications requiring large displacers that are accommodated by large flange connections. Different displacer stem lengths permit lowering the displacer to the desired depth.

Table 6. 249 Series Sensor Displacer Diameters, Sensor Connections, and Ratings

Sensor Type Number ⁽¹⁾	Pressure Rating	Connection Size	Connection Type	
 <p>Caged Displacers⁽²⁾ W8171</p>	249	CL125 or 250	NPS 1-1/2 or 2 Screwed or flanged	
	249B 249BF	PN 10/40 or 63/100	NPS 2 Flanged	
		PN 10/16, 25/40, or 63	DN 40	
		CL600	DN 50	
	249C	CL150, 300, or 600	NPS 1-1/2 or 2	NPT or socket-welding ends Raised-face flanged or ring-type joint flanged
		CL600	NPS 1-1/2 or 2	Screwed
	249K	CL150, 300, or 600	NPS 1-1/2	Raised-face
			NPS 2	
249L	CL1500	NPS 1-1/2 or 2	Raised-face flanged or ring-type joint flanged	
249L	CL2500	NPS 2 (if a top connection is specified, it will be NPS 1 flanged)	Ring-type joint flanged	
 <p>Top-Mounted Cageless Sensors⁽²⁾ W8334-1</p>	249BP	CL150, 300, or 600	NPS 4 Raised-face flanged or ring-type joint flanged	
	249CP	CL150 or 300	NPS 6 or 8 Raised-face flanged	
		CL150, 300, or 600	NPS 3 Raised-face flanged	
	249P	PN 10/16, 25/40, or 63 (Ratings to PN 250 also available)	DN 100 Flanged	
		CL900 or 1500	NPS 4 Raised-face flanged or ring-type joint flanged	
	CL150 through 2500	NPS 6 or 8 Raised-face flanged		
 <p>Side-Mounted Cageless Sensors⁽²⁾ W9354</p>	249VS	PN 10 to PN 160	NPS 4 Raised-face or flat-face	
		CL125, 150, 250, 300, 900, or 1500	NPS 4 Raised-face or flat-face	
		CL600, 900, or 2500	NPS 4 Butt weld end	
 <p>Customer-Supplied Cage⁽²⁾ W8678</p>	249W	PN 10/16, 25/40 Type B flange	DN 80	
		PN 25/40 Type B flange	DN 100	
		CL150, 300, 600	NPS 3	
			NPS 4	

1. Not all sensor types are available in all world areas. Contact your Emerson Process Management sales office for information on sensor availability.
2. 249 Series sensors may be mounted on either DLC3000 Series instruments, or 2500 Series controllers/transmitters.

249 Series Sensors

Table 7. 249 Series Sensors Displacer Lengths

Sensor Type Number	Standard Displacer Length	
	mm	Inches
Caged Displacers	356 or 813	14 or 32
249		
249B, 249C, 249BF, 249K, 249L	356, 813, 1219, 1524, 1829, 2134, 2438, 2743, 3048	14, 32, 48, 60, 72, 84, 96, 108, 120
Top-Mounted Cageless Sensors		
249BP, 249CP, 249P		
Side-Mounted Cageless Sensors		
249VS		
Top-Mounted or on Customer Supplied Cage		
249W		

Table 8. 249 Series Sensor Construction Materials

Part	Type Number	Material	Notes
Cage, head, torque tube arm	249	Cast iron	For optional materials, and parts not shown, contact your Emerson Process Management sales office.
	249B, 249BF, and 249BP	Carbon steel	
	249C and 249CP	CF8M (316 stainless steel)	
	249K	Steel standard	
	249L	Steel standard	
	249P	Carbon Steel	
	249VS	LCC (steel), WCC (steel), CF8M	
Wafer body, torque tube arm	249W NPS 3 NPS 4	WCC, CF8M LCC, CF8M	
Standard Trim ⁽¹⁾	All	S31600	
Bolting	All	Steel grade B7 studs or cap screws and grade 2H nuts (standard),	

1. Trim parts include displacer rod, driver bearing; displacer stem parts, and stem connection parts.

Table 9. 249 Series Displacer and Torque Tube Materials

Part	Standard Material	Other Materials
Displacer	304 Stainless Steel 316 Stainless Steel for 249C, 249CP	316 Stainless Steel, N10276, N04400, Plastic, and Special Alloys
Displacer Stem, Driver Bearing, Displacer Rod and Driver	316 Stainless Steel	N10276, N04400, other Austenitic Stainless Steels, and Special Alloys
Torque Tube	N05500 ⁽¹⁾ 316 SST for 249C, 249CP	316 Stainless Steels, N06600, N10276

1. N05500 is not recommended for spring applications above 232°C (450°F). Contact your Emerson Process Management sales office or application engineer if temperatures exceeding this limit are required.

Table 10. Maximum Unbuoyed Displacer Weight

Sensor Type	Torque Tube Wall Thickness	Displacer Weight W _T (lb)
249, 249B, 249BF, 249BP, 249W	Thin	3.3
	Standard	5.0
	Heavy	9.5
249C, 249CP	Standard	4.0
	Heavy	6.4
249VS	Thin	3.0
	Standard	5.5
249L, 249P ⁽¹⁾	Thin	4.5
	Standard	8.5
249K	Thin	3.8
	Standard	7.3

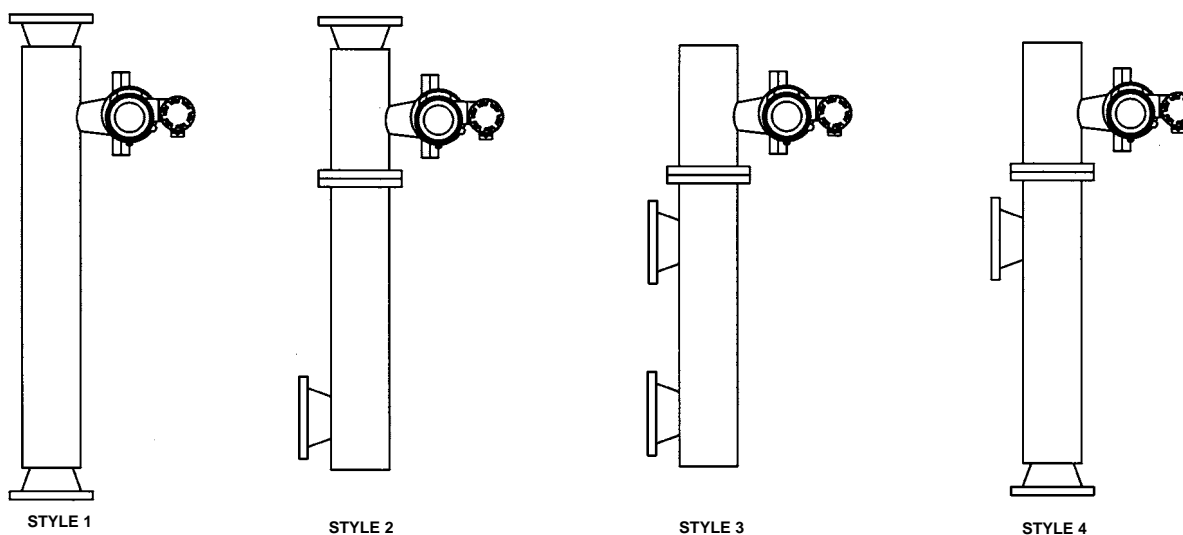
1. High pressure CL900 through 2500.

Level Instruments

Table 11. Temperatures

Temperature	Type or Material	Temperature Capability		Notes
		°C	°F	
Ambient	DLC3000 Series	-40 to 80	-40 to 176	For process temperatures below -29°C (-20°F) and for guidance on the need for a heat insulator, contact your Emerson Process Management sales office. If the ambient dew point is higher than the process temperature, ice might form and cause instrument malfunction and reduce insulator effectiveness.
	Standard 2500 Series	-40 to 71	-40 to 160	
	High-temperature 2500 Series	-18 to 104	0 to 220	
Process	Cast iron sensor parts	-29 to 232	-20 to 450	
	Steel sensor parts	-29 to 427	-20 to 800	
	Stainless steel sensor parts	-198 to 427	-325 to 800	
	N04400	-198 to 427	-325 to 800	
	Graphite/stainless steel gaskets	-198 to 427	-325 to 800	
Combination of ambient and process	N04400/PTFE gaskets	-73 to 204	-100 to 400	
	Some combinations of process and ambient temperatures within the above ranges require an optional heat insulator to protect the instrument from high or low temperatures. For example, an ambient temperature of 30°C or 86°F and a process temperature of 200°C or 392°F require a heat insulator.			

Connection Styles and Positions



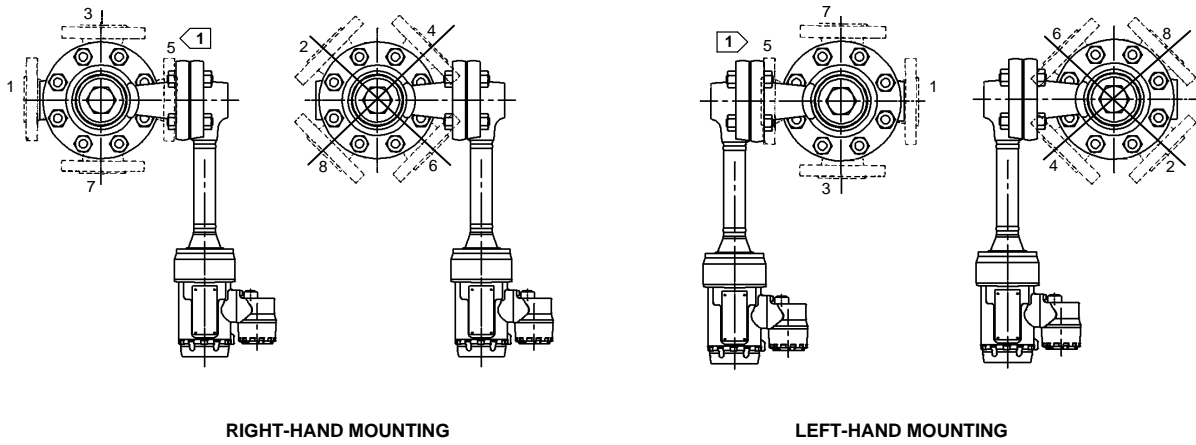
NOTE: CAGE CONNECTION STYLES SHOWN ILLUSTRATE THE DLC3000. CAGE CONNECTION STYLES ARE ALSO APPLICABLE TO THE 2500 SERIES.

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Figure 8. Cage Connection Styles (also see table 12)

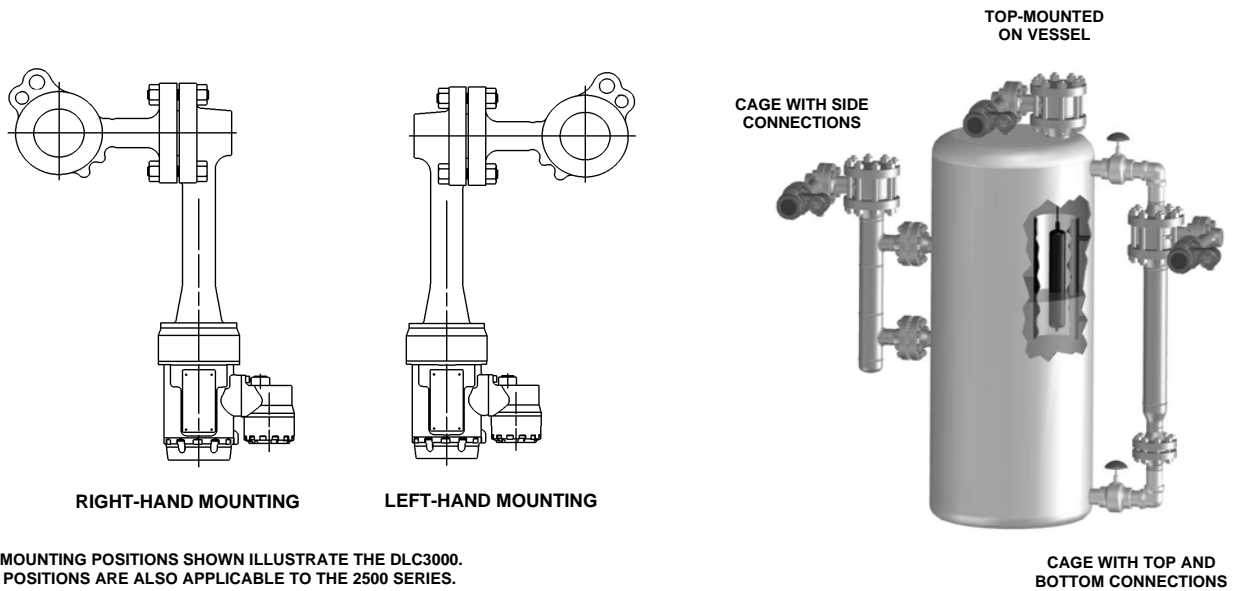
Table 12. Cage Connection Styles (also see figure 8)

Connection Types:	S = Screwed F = Flanged SW = Socket welding			
Connection Locations:	Style 1	Style 2	Style 3	Style 4
		Top and bottom	Top and lower side	Upper side and lower side
Example:	F-1 means flanged connections at the top and bottom of the cage.			



NOTE: MOUNTING POSITIONS SHOWN ILLUSTRATE THE DLC3000.
MOUNTING POSITIONS ARE ALSO APPLICABLE TO THE 2500 SERIES.
① POSITION 5 IS NOT AVAILABLE FOR NPS 2 CL300 AND 600 249C.

Figure 9. Mounting Positions—Caged Displacers



NOTE: MOUNTING POSITIONS SHOWN ILLUSTRATE THE DLC3000.
THESE POSITIONS ARE ALSO APPLICABLE TO THE 2500 SERIES.

Figure 10. Mounting Positions—Wafer Style (Customer Supplied Cage)

Level Instruments

Related Documents

Other documents containing information related to level instruments include:

- FIELDVUE® DLC3000 Series Digital Level Controllers (Bulletin 11.2:DLC3000)
- DL3 Digital Level Transmitter (Bulletin 11.2:DL3)
- 2500-249 Series Pneumatic Controllers and Transmitters (Bulletin 34.2:2500)
- L3 Pneumatic Level Controller (Bulletin 34.2:L3)

- L2 Liquid Level Controller (Bulletin 34.2:L2)
- L2sj Liquid Level Controller (Bulletin 34.2:L2sj)

Note

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