



## SERIES CP/CN/CT/CX | U M COOLPOINT® VORTEX SHEDDING FLOWMETER



### BENEFITS/FEATURES

- No moving parts to clog or wear
- Easy to set up and read, with menu buttons and bright LED display
- Lower pressure drop compared to other primary flow elements
- Selectable alarm states for increased application flexibility
- Reading unaffected by conductivity, pressure, density, temperature, and viscosity of the fluid
- Long-term stability with no zero-point shift, increasing application longevity
- Selectable engineering units
- Integrated temperature sensing option for additional sensing parameter

### APPLICATIONS

- Mining
- Concrete - Fleet management water batching
- Manufacturing
- Steel making
- Power generation
- District heating water and temperature sensing
- Water treatment
- Pulp and paper
- Semiconductor

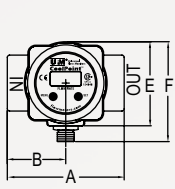
### DESCRIPTION

The **Series CP/CN/CT/CX CoolPoint® Vortex Shedding Flowmeter** is made for water, water/glycol mixtures, or low viscosity fluids. These units contain no moving parts to clog or wear, allowing for minimal maintenance in the field. This series has two versions: a 3-wire version, where power is supplied separate from the 4-20 mA output, and a 2-wire loop-powered version. The 3-wire version is equipped with a solid state relay that can be configured in the field to be either an alarm or a pulse output, an LED display which allows the user to choose between selectable engineering units (GPM or LPM), and a high temperature option. The alarm on this version is selectable between a high or low alarm (NO or NC) and the pulse output option is set at a frequency at a specific pulses per gallon. The 2-wire option allows for operation in an intrinsically safe mode only when used in conjunction with an approved intrinsic safety barrier meeting required entity parameters. This version does not come with a display or relay contacts to allow for this operation mode.

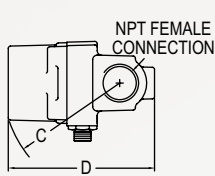
### SPECIFICATIONS

<b>Service</b>	Compatible liquids.
<b>Range</b>	See flow rate chart.
<b>Display</b>	3-digit or 4-digit LED (pipe sizes > 3"), 0.3" (7.6 mm) digit height; CP-V8: 3-digit LCD (6-digit LCD totalizer mode), 0.3" (7.6 mm) digit height.
<b>Wetted Materials</b>	Flow body: 316 SS or brass; Sensor: PEEK; Seals: FKM.
<b>Accuracy</b>	Flow: ±2% FS; Temperature: ±2°F (±0.1°C) (model selectable).
<b>Repeatability</b>	±0.25% of reading.
<b>Turndown</b>	10:1 (20:1 optional).
<b>Temperature Limits</b>	35 to 210°F (2 to 99°C).
<b>Pressure Limits</b>	10 to 300 psig (0.7 to 20.7 bar); CP flange and CX: 200 psig (20.7 bar) max.
<b>Response Time</b>	450 ms.
<b>Power Requirements</b>	10-30 VDC @ 80 mA standard; 25 mA for 2 wire option; CP-V8: 2 AA alkaline batteries, not included (45 day battery life).
<b>Output</b>	4-20 mA; 100 pulses per gallon (3-wire models only); 2", 3", and 4": 25 pulses per gallon.
<b>Deadband</b>	Alarm output: 2.5% FS for up to 1/2"; 5% FS for larger than 1/2".
<b>Viscosity</b>	15 cP max.
<b>Enclosure Rating</b>	NEMA 4X (IP65).
<b>Process Connection</b>	Female NPT, BSPT, or BSPP (model selectable).
<b>Electrical Connection</b>	Male DC micro 5 pin connector; Pigtailed or junction box with terminal strip (model selectable).
<b>Weight</b>	CX: 1.5 lb (0.7 kg); CP: 3.3 lb (1.5 kg); CP-V8: 4 lb (1.8 kg); CN, CT: 7 lb (3.2 kg).
<b>Compliance</b>	CE, ETL.

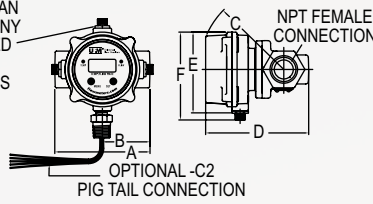
# DIMENSIONS



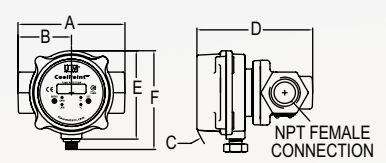
CP2, CP3, CP4



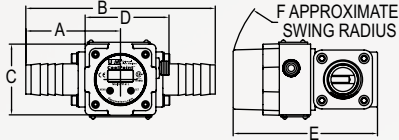
CONTROL BOX CAN BE ROTATED TO ANY OF [4] DETENTED POSITIONS IN 90° INCREMENTS



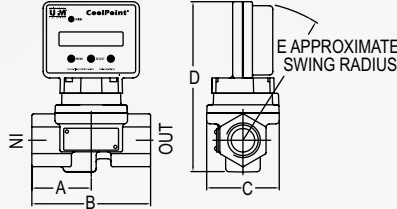
CTx (shown with -C2 pig tail connection)



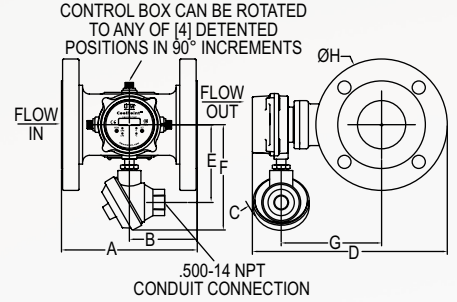
CP/CN6, CP/CN8, CN12, CN16



CX8-M7



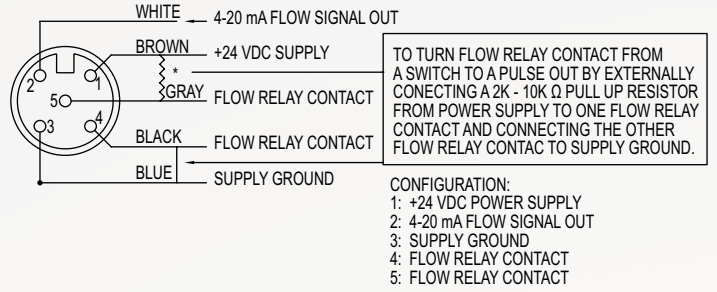
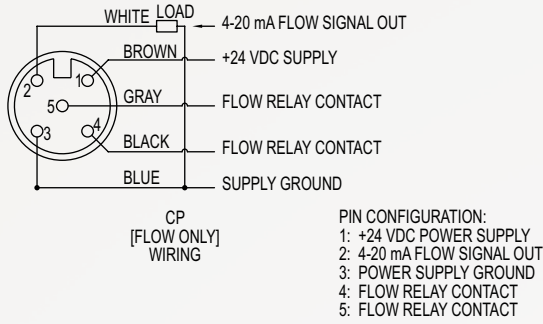
CPX-V8



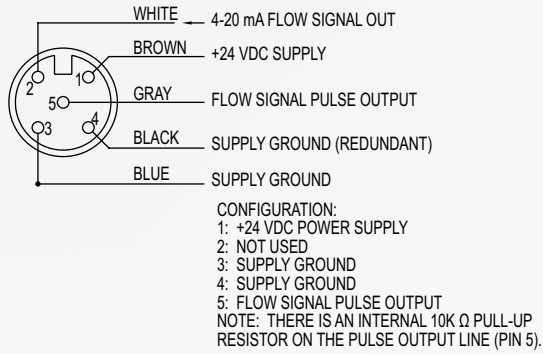
CP24, 32 (shown with -C3/-C14 conduit box)

Model	Option	A in [mm]	B in [mm]	C in [mm]	D in [mm]	E in [mm]	F in [mm]	G in [mm]	H in [mm]
CT2-CT8	Standard	4-1/2 [114.3]	2-1/4 [57.15]	4-3/64 [102.62]	4-59/64 [124.97]	3-3/4 [95.25]	4-3/16 [106.43]	-	-
CT12, CT16		6-3/4 [171.45]	3-3/8 [85.6]	4-23/32 [119.63]	6-9/64 [155.96]	3-3/4 [95.25]	4-3/16 [106.43]	-	-
CP2-V8	C1 and C2 options	1-53/64 [46.48]	3-21/32 [92.71]	2-3/8 [60.2]	5-29/32 [50.11]	4-61/64 [125.73]	-	-	-
CP3-V8									
CP4-V8									
CP6-V8									
CP8-V8		2-1/4 [57.15]	4-1/2 [114.3]	2-3/4 [67.85]	6-7/16 [163.58]	5-17/64 [133.6]	-	-	-
CP12-V8		3-3/8 [85.85]	6-3/4 [171.45]	2-7/8 [73.15]	7-11/16 [195.33]	6 [152.15]	-	-	-
CP16-V8									
CP2, CP3, CP4	C3 = Conduit box	3-1/4 [82.55]	1-11/64 [41.15]	3-1/4 [82.55]	4-5/64 [103.38]	2-15/64 [59.44]	2-49/64 [70.36]	-	-
CN6, CN8		4-1/2 [114.3]	2-1/4 [57.15]	3-35/64 [90.17]	4-39/64 [116.84]	2-3/4 [69.85]	3-3/16 [81.03]	-	-
CP6, CP8		4-1/2 [114.3]	2-1/4 [57.15]	4-3/64 [102.62]	4-59/64 [124.97]	3-3/4 [95.25]	4-3/16 [106.43]	-	-
CN12, CN16		6-3/4 [171.45]	3-3/8 [85.6]	4-1/4 [107.7]	5-55/64 [148.59]	2-7/8 [73.15]	3-1/4 [82.55]	-	-
CP24		7-3/4 [196.85]	3-7/8 [98.55]	8-29/32 [226]	11-1/8 [283]	11-1/8 [282.7]	7-1/2 [190.5]	5-47/64 [146]	7-1/2 [191]
CP32		10-3/4 [273.05]	5-3/5 [136.65]	9-15/32 [240]	12-37/64 [319]	12-37/64 [319.28]	9 [228.6]	6-7/16 [163]	9 [229]
CT24									
CT32									
CP2, CP3, CP4	C3 = Conduit box	3-1/4 [82.55]	1-11/64 [41.15]	5-13/32 [137.16]	4-5/64 [103.38]	2-15/64 [59.44]	6-13/32 [162.81]	-	-
CN6, CN8		4-1/2 [114.3]	2-1/4 [57.15]	5-11/16 [144.53]	4-39/64 [116.84]	2-3/4 [69.85]	6-51/64 [172.47]	-	-
CP6, CP8		4-1/2 [114.3]	2-1/4 [57.15]	6-33/64 [165.61]	4-59/64 [124.97]	3-3/4 [95.25]	7-51/64 [106.43]	-	-
CN12, CN16		6-3/4 [171.45]	3-3/8 [85.6]	6 [152.4]	5-55/64 [148.59]	2-7/8 [73.15]	6-55/64 [173.99]	-	-
CP12, CP16		6-3/4 [171.45]	3-3/5 [85.6]	6-7/8 [174.5]	6-9/64 [155.96]	3-3/4 [95.25]	7-51/64 [106.43]	-	-
CT2-CT8		4-1/2 [114.3]	2-1/4 [57.15]	6-3/64 [165.61]	4-59/64 [124.97]	3-3/4 [95.25]	7-51/64 [197.87]	-	-
CT12, CT16	6-3/4 [171.45]	3-3/8 [85.6]	6-23/32 [174.5]	6-9/64 [155.96]	3-3/4 [95.25]	7-51/64 [197.87]	-	-	
CP24									
CT24									
CP32									
CT32									
CX8	M7 = Hose barb	3-3/16 [80.77]	6-23/64 [161.54]	2-1/2 [63.5]	2-27/32 [72.14]	4-21/32 [118.27]	3-39/64 [91.69]	-	-
CX2, CX3, CX4	T1 = NPT female thread	1-63/64 [50.29]	3-31/32 [100.84]	2-13/32 [60.96]	4-13/16 [122.17]	4-9/32 [108.71]	3-39/64 [91.69]	-	-
CX6, CX8	T1 = NPT female thread	2-3/8 [60.45]	4-3/4 [120.65]	2-13/32 [60.96]	2-13/16 [71.37]	4-55/64 [123.19]	3-13/16 [96.52]	-	-

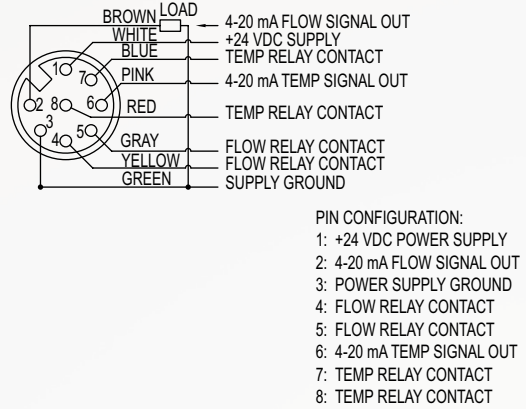
# WIRING DIAGRAMS



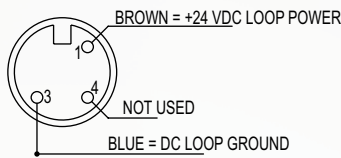
**PIN connector standard wiring**



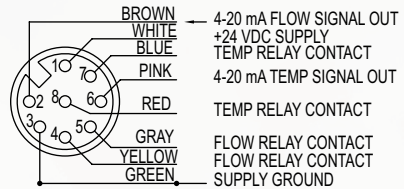
**Totalizer with pulse output**



**CT (flow and temperature) wiring**



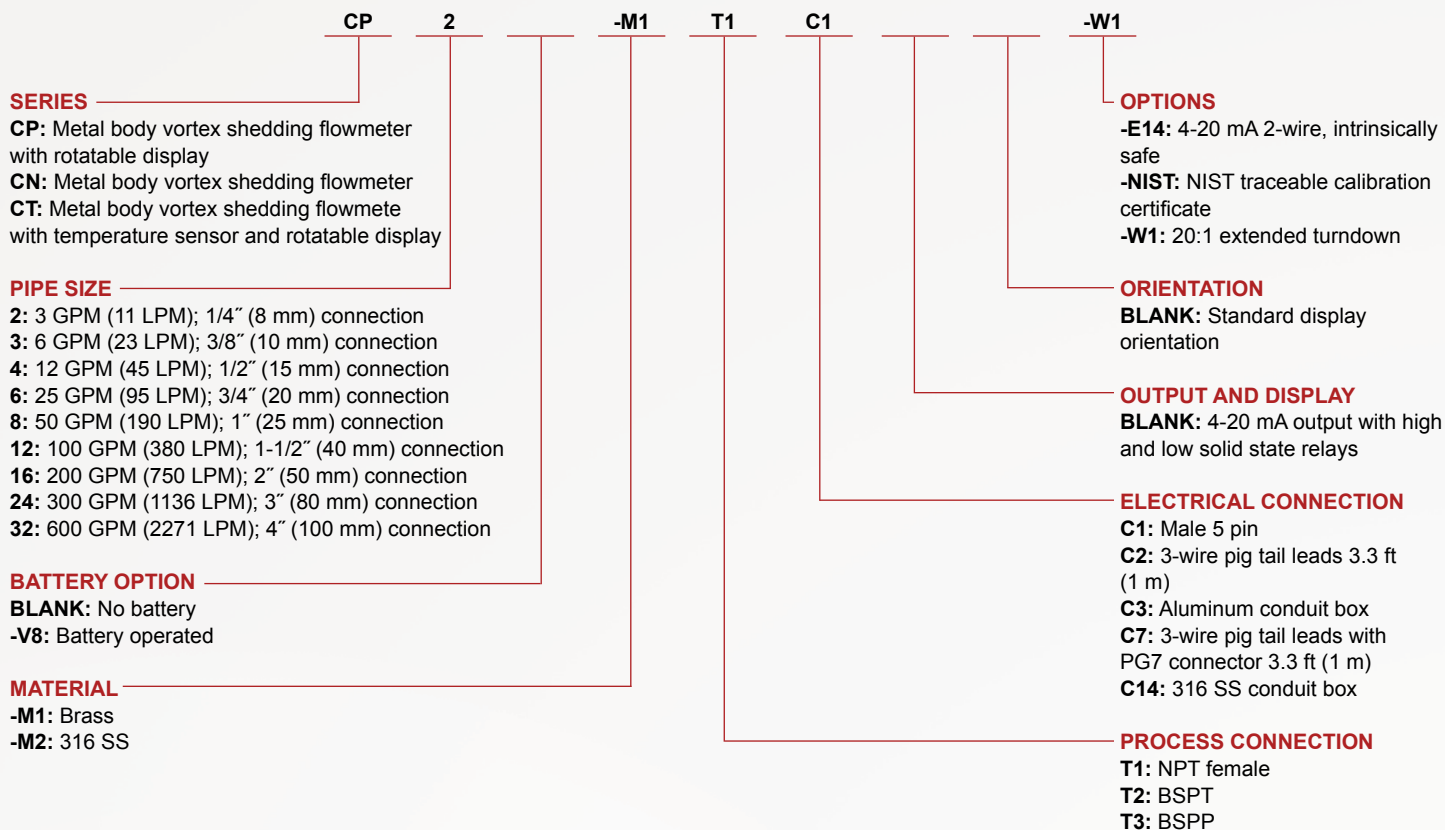
**CX2 wire transmitter**



**CT wiring**

## HOW TO ORDER

Use the **bold** characters from the chart below to construct a product code.



ORDER ONLINE TODAY!

[dwyer-inst.com](http://dwyer-inst.com)



DWYER INSTRUMENTS, LLC

©Copyright 2024 Dwyer Instruments, LLC  
Printed in U.S.A. 4/24

DS-CP-CN-CT-CX Rev. 2

Important Notice: Dwyer Instruments, LLC reserves the right to make changes to or discontinue any product or service identified in this publication without notice. Dwyer advises its customers to obtain the latest version of the relevant information to verify, before placing any orders, that the information being relied upon is current.