



CYCLE COUNTER

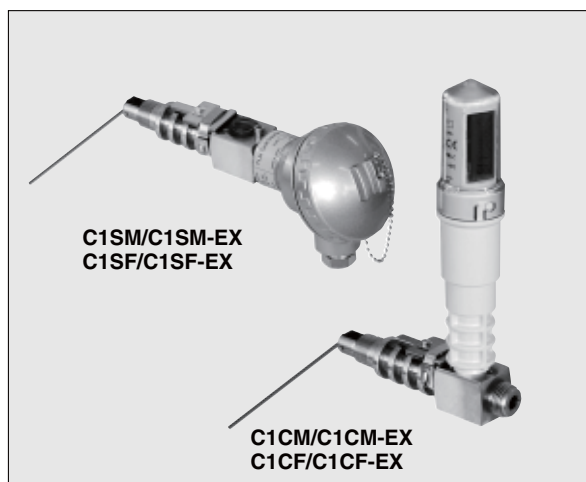
MODEL C1CM/C1CF C1SM/C1SF

COUNTER FOR MONITORING THE NUMBER OF PUMP CYCLES OF POWERTRAPS

Benefits

Enables monitoring of the number of pumping cycles of GP series PowerTraps to help determine the timing of maintenance, or estimate the volume of pumped condensate.

- Two different types are available to support various system requirements.
- The Counter Unit types C1CM(-EX) / C1CF(-EX) include a built-in LCD display and LED that flashes with each operation cycle to allow easy direct observation.
- The Terminal Box Types C1SM(-EX) / C1SF(-EX) combine with an external display to enable remote observation or integration into a broader monitoring system.
- Can be equipped on currently installed GP series PowerTraps.
- OK for installation outdoors.



Specifications

Model	C1CM	C1CM-EX	C1CF	C1CF-EX	C1SM	C1SM-EX	C1SF	C1SF-EX		
Type	Counter Unit				Terminal Box					
Installable PowerTrap Models	GP10, GP10M, GP10L, GP14, GP14M, GP14L		GP10F		GP10, GP10M, GP10L, GP14, GP14M, GP14L		GP10F			
Description	Standard	Intrinsically Safe ¹⁾	Standard	Intrinsically Safe ¹⁾	Standard	Intrinsically Safe ¹⁾	Standard	Intrinsically Safe ¹⁾		
Connection	Screwed									
Size (in)	1/2									
Max. Operating Pressure (psig) P _{MO} ²⁾	300									
Max. Operating Temp. (°F) T _{MO} ²⁾	428									
Max. Allowable Pressure (psig) P _{MA} ²⁾	300									
Max. Allowable Temp. (°F) T _{MA} ²⁾	500									
Ambient Pressure ²⁾	Atmospheric									
Ambient Temperature ²⁾	14 to 131 °F				-49 to 194 °F		-4 to 176 °F		-49 to 194 °F	
Applicable Fluids ³⁾	Steam, Air, Nitrogen, Steam Condensate, Water									
Power Supply	Special Built-in Lithium Battery (3.6V) Battery Life: approx. 10 years ⁴⁾				Max. Input Power (Pi): 1W Max. Incoming Voltage (Ui): 28V Max. Incoming Current (Ii): 120 mA Max. Internal Capacitance (Ci): 3nF Max. Internal Inductance (Li): 0 Note: (Ui)V x (Ii)A ≤ 1 W (Pi)					
Display	8 digit LCD ⁵⁾				—					
Terminal	—				Wiring Inlet: G 1/2					
Protection Class	—				IP65					
Accessories	Counter Resetter				—					

¹⁾ cULus or ATEX/IECEx/UKEX (option). See reverse side for details of applicable standards.

Connections and sizes in bold are standard

²⁾ P_{MO}/T_{MO} and P_{MA}/T_{MA} apply to the inserted portion only. Ambient Pressure/Temperature apply to the external portion.

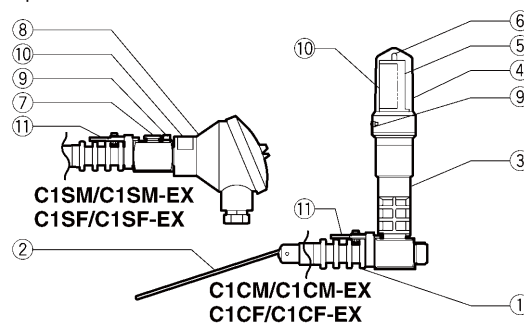
³⁾ Do not use for toxic, flammable or otherwise hazardous fluids. ⁴⁾ Battery cannot be replaced. ⁵⁾ Counter display can be reset to zero by using the included resetter.



To avoid abnormal operation, accidents or serious injury, DO NOT use this product outside of the specification range. Local regulations may restrict the use of this product to below the conditions quoted.

No.	Description	Material	ASTM/AISI*	JIS
①	Sensor Body	Stainless Steel	AISI303	SUS303
②	Sensor Arm	Stainless Steel	AISI304	SUS304
③	Counter Body	Polyetherimide	—	PEI
④	Cap	Polysulfone	—	PSF
⑤	Display (LCD)	—	—	—
⑥	LED	—	—	—
⑦	Switch Unit	Polyetherimide	—	PEI
⑧	Terminal Box	Die Cast Aluminium	—	ADC
⑨	Hex Socket Head Bolt	Stainless Steel	AISI304	SUS304
⑩	Nameplate	Polyester	—	—
⑪	Magnet Booster Kit	Stainless Steel	AISI304	SUS304

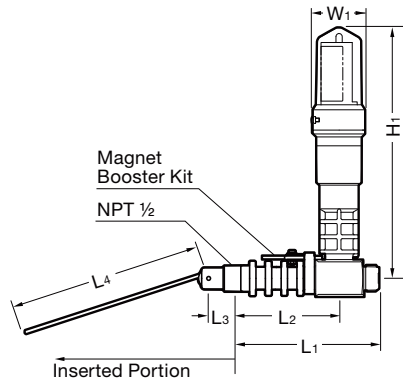
* Equivalent



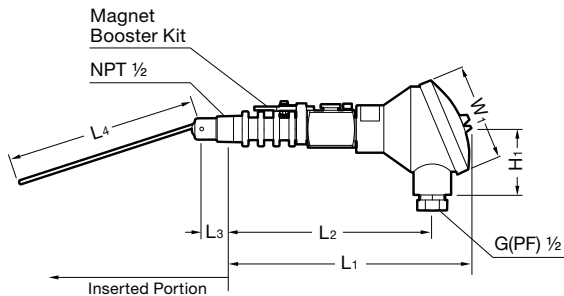
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Dimensions

• **C1CM(-EX) / C1CF(-EX) Screwed**



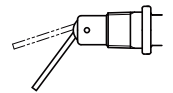
• **C1SM(-EX) / C1SF(-EX) Screwed**



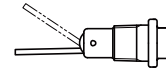
C1CM(-EX) / C1CF(-EX) Screwed* (in)

Size	L1	L2	L3	L4	H1	φ W1	Weight (lb)
1/2	4 1/2	3 1/4	7/8	5 15/16	7 7/8	1 5/8	1.45

* NPT, other standards available
C1CM/C1CM-EX shown. C1CF/C1CF-EX differ only by the travel arc of the sensor arm.



C1CM/C1CM-EX

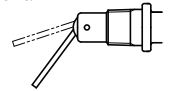


C1CF/C1CF-EX

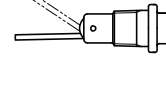
C1SM(-EX) / C1SF(-EX) Screwed* (in)

Size	L1	L2	L3	L4	H1	φ W1	Weight (lb)
1/2	7 11/16	6 7/16	7/8	5 15/16	1 15/16	3 1/8	1.54

* NPT, other standards available
C1SM/C1SM-EX shown. C1SF/C1SF-EX differ only by the travel arc of the sensor arm.



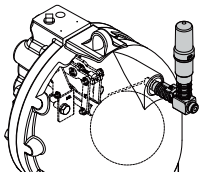
C1SM/C1SM-EX



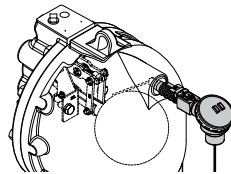
C1SF/C1SF-EX

Installation

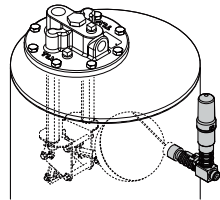
• **C1CM/C1CM-EX**



• **C1SM/C1SM-EX**



• **C1CF/C1CF-EX (C1SF/C1SF-EX)**



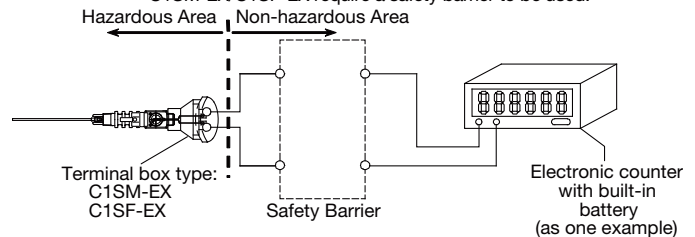
* Not shown

NOTE: Cycle Counter cannot be installed on GP series PowerTraps insulated with an insulation thickness exceeding 1 1/2 in.

Intrinsic Safety Standards

Model	Standard	Class
C1CM-EX C1CF-EX	cULus	Class I, Zone 1, AEx ib IIB T3/T2 Class I, Zone 1, Ex ib IIB T3/T2 File No. E360402
	ATEX*	⊕ II 2G Ex ib IIB T3/T2 Gb CML 18ATEX2179X
	IECEx*	Ex II 2G Ex ib IIB T3/T2 Gb, IECEx CML 18.0094X
	UKEX*	⊕ II 2G Ex ib IIB T3/T2 Gb CML 21UKEX2742X
C1SM-EX C1SF-EX	cULus	Class I, Zone 1, AEx ib IIC T3/T2 Class I, Zone 1, Ex ib IIC T3/T2 File No. E360402
	ATEX*	⊕ II 2G Ex ib IIC T3/T2 Gb DEKRA 13 ATEX 0039
	IECEx*	Ex ib IIC T3/T2 Gb, IECEx DEK 13.0004
	UKEX*	⊕ II 2G Ex ib IIC T3/T2 Gb CML 21UKEX2642

* ATEX/IECEx/UKEX compliant units are available as options.
Safety Barrier: The intrinsic safety specifications of the terminal box type C1SM-EX/C1SF-EX require a safety barrier to be used.



CAUTION DO NOT DISASSEMBLE OR REMOVE THIS PRODUCT WHILE THE POWERTRAP IS UNDER PRESSURE. Allow internal pressure of the PowerTrap to equal atmospheric pressure and its surface to cool to room temperature before disassembling or removing. Failure to do so could cause burns or other injury. READ INSTRUCTION MANUAL CAREFULLY.

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Manufacturer
TLV CO., LTD.
Kakogawa, Japan
is approved by LRQA Ltd. to ISO 9001/14001

