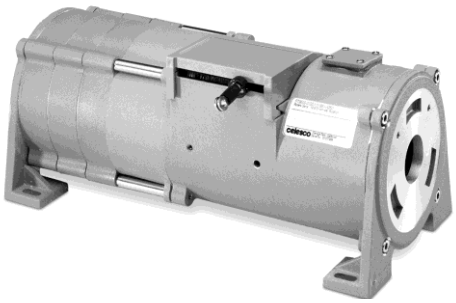
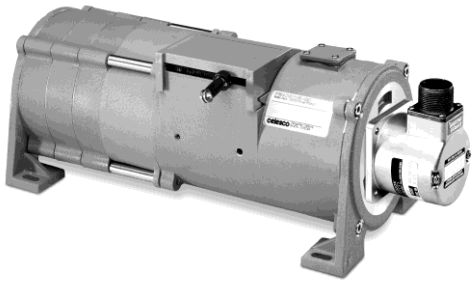




PT9600 (Extended Range)

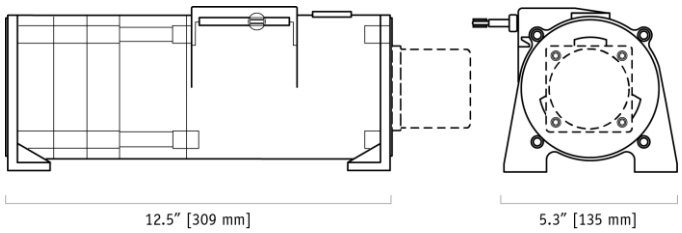
Cable Actuated Encoder Reel

Converts ANY Rotary Encoder to a Linear Position Sensor

Stroke Range Options: 0-600 to 0-1700 inches

Mates Virtually ANY Customer Supplied Encoder

Factory Supplied Encoder Available



Our unique string encoder module mates to virtually any encoder, giving you a cost-effective long-range linear position measurement solution that precisely fits your requirements.

This modular approach delivers the ultimate in flexibility. To order, simply select the measurement range, the cable tension and encoder mounting style—it's that easy! We even supply all the necessary encoder mounting tools and attaching hardware. If you can't find your encoder mounting style or you want us to provide the encoder, please give us a call.

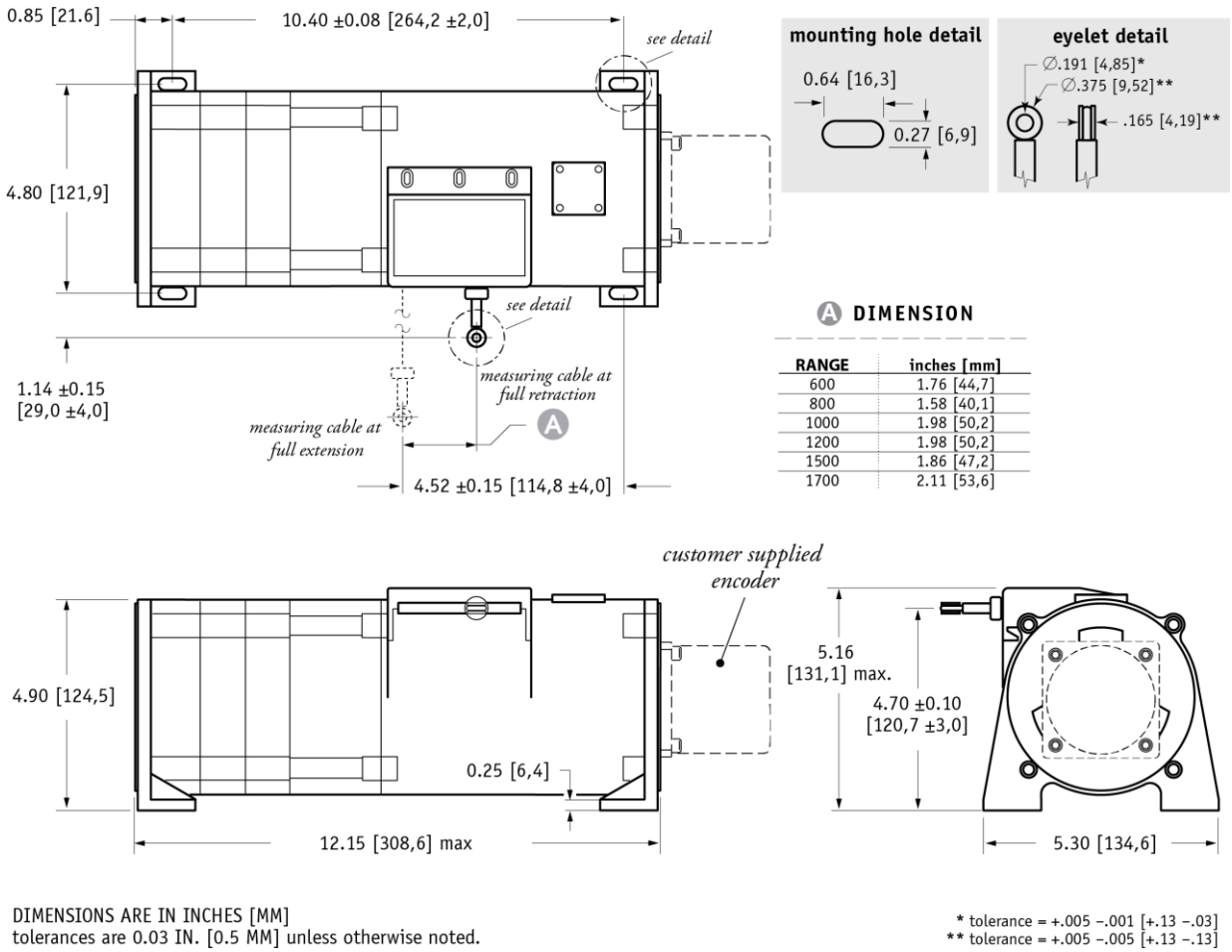
General

Full Stroke Range	0-600 to 0-1700 inches
Motion Conversion Ratio	12.6 inches per turn, see ordering information
Accuracy	the lessor of ±0.02% f.s. or ±0.04% measurement ±1/2 pulse
Accuracy, best	not less than 0.001 in. (0.03mm)
Repeatability	±0.02% of measurement ±1/2 pulse
Measuring Cable Options	see ordering information
Module Material Options	powder-painted aluminum or stainless
Encoder Coupling	aluminum flexible coupling
Maximum Allowable Rotational Sensor Torque	1.0 in-lbs.
Maximum Retraction Acceleration	see ordering information
Maximum Velocity	see ordering information
Weight Aluminum (Stainless Steel) Enclosure	14 lbs. (28 lbs.) max.

Environmental

Operating Temperature	-40° to 200°F (-40° to 90°C)

Outline Drawing



RANGE	inches [mm]
600	1.76 [44,7]
800	1.58 [40,1]
1000	1.98 [50,2]
1200	1.98 [50,2]
1500	1.86 [47,2]
1700	2.11 [53,6]

DIMENSIONS ARE IN INCHES [MM]
tolerances are 0.03 IN. [0.5 MM] unless otherwise noted.

* tolerance = +.005 –.001 [+.13 –.03]
** tolerance = +.005 –.005 [+.13 –.13]

VLS Option - Free Release Protection

The patented Celesco Velocity Limiting System (VLS) is an option for PT9000 Series cable extension transducers that limits cable retraction to a safe 40 to 55 inches per second for the single spring option and 40 to 80 inches per second for the higher tension dual spring option.

The VLS option prevents the measuring cable from ever reaching a damaging velocity during an accidental free release. This option is ideal for mobile applications that require frequent cable disconnection and reconnection. It prevents expensive unscheduled downtime due to accidental cable mishandling or attachment failure.

1. using guide below, select PT9600 model	PT9600-1200-111-F01
2. remove "PT" from the model number	~~PT~~ 9600-1200-111-F01
3. add "VLS"	VLS + 9600-1200-111-F01
4. completed model number!	VLS9600-1200-111-F01

VLS9600- ⓡ - Ⓐ Ⓑ Ⓒ - ⓓ

ⓡ	Ⓐ	Ⓑ	Ⓒ	ⓓ
0600	1	1	1	F01
0800	3	2	2	F02
1000			3	S01
1200			4	S02
1500				S04
1700				

= available options.

Ordering Information

Model Number:

PT9600- _____ Ⓡ **-** ____ Ⓐ ____ Ⓑ ____ Ⓒ **-** _____ Ⓓ
order code:

Sample Model Number:

PT9600 - 1500 - 111 - F01

Ⓡ	range:	1500 inches
Ⓐ	enclosure:	aluminum
Ⓑ	measuring cable:	nylon coated stainless steel (Ø.014 in.)
Ⓒ	cable exit:	front
Ⓓ	rotational sensor mounting style:	F01 (2.5-in. sq. flange)

Full Stroke Range:

Ⓡ *order code:*	0600	0800	1000	1200	1500	1700
full stroke range, min:	600 in.	800 in.	1000 in.	1200 in.	1500 in.	1700 in.
cable tension (±35%):	27 oz.	24 oz.	20 oz.	19 oz.	18 oz.	17 oz.
conversion ratio (nylon-coated stainless steel rope option)						
measuring cable diameter:	Ø.034-in.	Ø.019-in.	Ø.019-in.	Ø.019-in.	Ø.014-in.	Ø.014-in.
aluminum enclosure, 1 turn =	12.673 ± .016 in.	12.626 ± .016 in.	12.626 ± .016 in.	12.626 ± .016 in.	12.613 ± .016 in.	12.613 ± .016 in.
stainless steel enclosure, 1 turn =	12.579 ± .022 in.	12.532 ± .022 in.	12.532 ± .022 in.	12.532 ± .022 in.	12.519 ± .022 in.	12.519 ± .022 in.
conversion ratio (bare stainless steel rope option)						
measuring cable diameter:	Ø.031-in.	Ø.018-in.	Ø.018-in.	Ø.018-in.	Ø.014-in.	Ø.014-in.
aluminum enclosure, 1 turn =	12.662 ± .016 in.	12.623 ± .016 in.	12.623 ± .016 in.	12.623 ± .016 in.	12.613 ± .016 in.	12.613 ± .016 in.
stainless steel enclosure, 1 turn =	12.570 ± .022 in.	12.529 ± .022 in.	12.529 ± .022 in.	12.529 ± .022 in.	12.519 ± .022 in.	12.519 ± .022 in.

Enclosure Material:

Ⓐ *order code:*	1	3
enclosure material:	powder-painted aluminum	303 stainless steel
max. acceleration:	1g	1g
max. velocity:	60 inches/sec.	60 inches/sec.

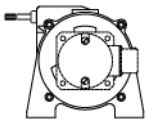
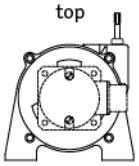
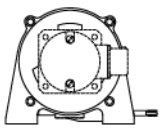
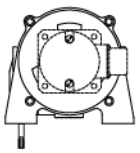
Measuring Cable:

Ⓑ *order code:*	1	2
cable construction:	nylon-coated stainless steel rope*	bare stainless steel rope*
general use:	*indoor*	*outdoor, debris, high temperature*

**cable diameter:*

stroke range:	0600	0800	1000	1200	1500	1700
nylon-coated stainless:	.034 in.	.019 in.	.019 in.	.019 in.	.014 in.	.014 in.
bare stainless:	.031 in.	.018 in.	.018 in.	.018 in.	.015 in.	.015 in.

Cable Exit:

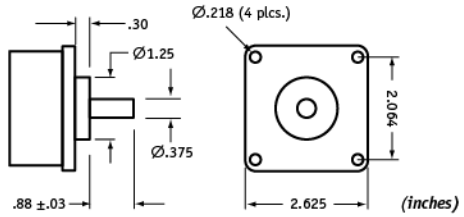
Ⓒ *order code:*	1	2	3	4
	front	top	back	down
				

Rotational Sensor Mounting Style

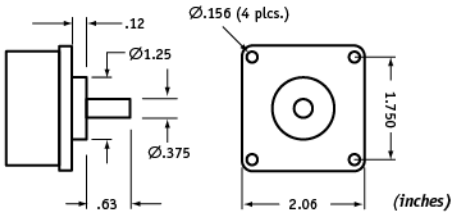
order code:	F01	F02	S01	S02	S04
	2.5-in. Flange Mount 3/8-inch shaft	2-in. Flange Mount 3/8-inch shaft	Face-Mount 6 mm shaft M4 mounting screws	Face-Mount 10 mm shaft M4 mounting screws	Face-Mount 10 mm shaft M3 mounting screws

Note: If you don't see your encoder style, please contact factory. All encoder types supported.

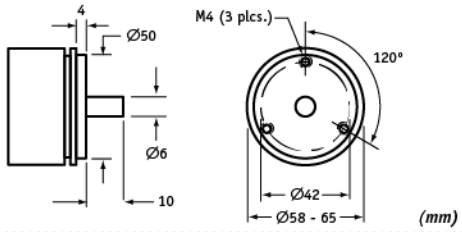
F01 - 2½-inch Sq. Flange Mount (3/8-inch shaft)



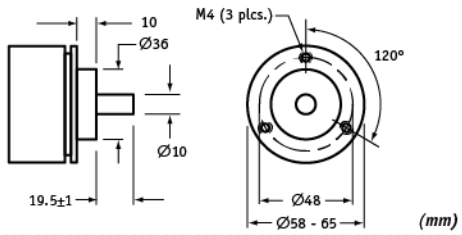
F02 - 2-inch Sq. Flange Mount (3/8-inch shaft)



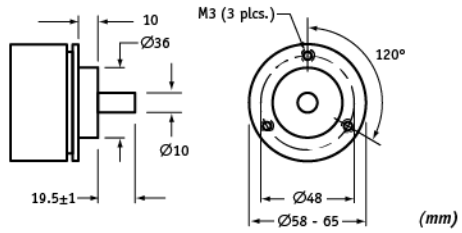
S01 - Face-Mount (6mm shaft/M4 screws)



S02 - Face-Mount (10mm shaft/M4 screws)



S04 - Face-Mount (10mm shaft/M3 screws)



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