# Models 7C, 7D, 7E & 7F



Model

对 7D

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## Models 7C, 7D, 7E & 7F

With their solid stainless steel housings and leverless limit switch design, Stroke to GO switches have set the standard for reliability and durability in cylinder position sensing.

Sensing Range

## Features:

**Contact Form** 

SPDT 4A contacts Inherently Intrinsically Safe -40° to 221°F operating temperature

Options: -40° to 400°F high temperature Quick disconnect connector Underwater capabilities



**Outlet Position** 

## **Leverless Limit Switches**

#### **Dimensions**



#### $(U_L)$ Repeatability: .002" (.05 mm) typical Contact Material: Palladium silver with Target Material: Ferrous steel Stainless Steel type 303 2 Side entry 360° adjustable sawtooth surface configuration (Wiring must be A, B, C, or F) Response Time: 8 milliseconds Sensing Range: .090" (2.3 mm) Stainless steel (rated 3,000 No conduit hub 2 High temperature to 400°F (204°C) PSI operating) (3 to 1 safety Form: SPDT, Form C (with or without LED end sensing (3,000 PSI) (Recommended air Differential: Approx. 020" (.51 mm) indication) Single Pole, Single Throw factor applies to standard with Teflon<sup>™</sup> insulated leads gap .015" - .040") **6** Side outlet 360° adjustable probe lengths) (with or without LED indication) Form A or (Wiring must be F) (Contact form must **Operating Temperature:** -40° to 160°F with Quick Disconnect (Wiring Form B be 4, 7, or 8) (-40° to 71°C) with LEDs -40° to 221°F must be D) (Approval must be 7 or 8) Standard sensing - approx. .090" (-40° to105°C) without LEDs; HiTemp™ option Ratings: Resistive CSA certified General Purpose (2.3 mm) end sensing 7 to 400°F) (204°C) AC DC Volts Amps Volts Amps AC DC 7 Side outlet 360° adjustable Volts Amps Volts Amps with 1/2" NPT conduit hub 120 0.5 24 0.5 120 4 24 3 8 UL listed General Purpose V 7C Model 7C 240 0.5 48 0.5 240 2 48 1.25 (Wiring must be A, B, or F) 1.025" (26 mm) probe length 125 0.5 125 0.5 250 0.5 250 0.5 8 Top outlet (Wiring must be Model 7D Without LED's With LED's SubSea) 1.250" (32 mm) probe length Single Pole Single Throw (Form A) 7E Model 7E (N/O output with bi-color LED indication) (Operating voltage: 24Vdc/120Vac) 2.062" (52 mm) probe length (Optional voltage: 48Vdc/240Vac) (Leakage current is 1.0mA) **7F** Custom probe lengths 3 Single Pole Single Throw (Form B) 1.000" (26 mm) - 5.000" (N/C output with bi-color LED indication) (127 mm)\* (Operating voltage: 24Vdc/120Vac) (Optional voltage: 48Vdc/240Vac) (Leakage current is 1.0 mA) \*Probe lengths shorter than 1.000" 1 Single Pole Double Throw (Form C) **Need Accessories?** require a taller upper switch housing (without LED) (No leakage current) See pp. 93-104 for: **5** Single Pole Double Throw (Form C) (with dual LED's) (Operating voltage: Range Extending 24Vdc/120Vac) (No leakage current) Target Magnets 7 Single Pole Single Throw (Form A) Mounting Brackets N/O output w/o LED indication (No Connectors and more! leakage current) Ordering Guide 8 Single Pole Single Throw (Form B) Fill in the boxes to create your N/C output w/o LED indication (No leakage 'ordering number.' current) Model **Contact Form Sensing Range Outlet Position Enclosure Material Approvals**

Switches International (011)462-4253 / www.switches.co.za





	Wirin	g Optio	ns
Lead Wires	18 Gauge (.110" dia) potted-in PV	/C insulated A	WM / TEW stranded lead wires, rated
221°F (105°C	c) 600V UL / CSA listed		
A2	36" (914 mm)		
A3	72" (1829 mm)		
A4	144" (3658 mm)		
A	_ Lengths greater than 144" (Spec	city length in 5'	increments (e.g. $A150 = 150$ ft. of leads
Cable 18 Ga	uge (.250" dia.) potted-in PVC ca	ble, rated at 1	176°F (80°C) 300V, UL / CSA listed
B2	36" (914 mm)		
B3	72" (1829 mm)		
B4	144" (3658 mm)		
В	_ Lengths greater than 144" (Spec	city length in 5'	increments (e.g. $B150 = 150$ ft. of cable
Water Resis	tant 18 Gauge (.250" dia.) PVC c	able rated at	176°F (80°C) 300V with water-resista
squeeze con	nector.		
C2	36" (914 mm)		
C3	72" (1829 mm)		
C4	144" (3658 mm)		
C	_ Lengths greater than 144" (Spec	city length in 5'	increments (e.g. $C150 = 150$ ft. of cable
Quick Disco	nnect Male Quick Disconnect only	, potted-in con	nnector. (CSA requires a case ground)
<b>Quick Disco</b> (Approvals m	nnect Male Quick Disconnect only ust be 7 or 8)	, potted-in con	nector. (CSA requires a case ground)
Quick Disco (Approvals m	nnect Male Quick Disconnect only ust be 7 or 8) Mini-change®	, potted-in con	nector. (CSA requires a case ground) Micro-change®
Quick Disco (Approvals m DCA	nnect Male Quick Disconnect only ust be 7 or 8) Mini-change® 3 - pin Mini-change® type	, potted-in con DBA	nector. (CSA requires a case ground) <b>Micro-change®</b> 3 - pin Micro-change® type
Quick Discor (Approvals m DCA DCD	nnect Male Quick Disconnect only ust be 7 or 8) <u>Mini-change®</u> 3 - pin Mini-change® type 4 - pin Mini-change® type 5 - pin Mini-change® type	, potted-in con DBA DBD	nector. (CSA requires a case ground) <b>Micro-change®</b> 3 - pin Micro-change® type 4 - pin Micro-change® type
Quick Disco (Approvals m DCA DCD DCG	nnect Male Quick Disconnect only ust be 7 or 8) Mini-change® 3 - pin Mini-change® type 4 - pin Mini-change® type 5 - pin Mini-change® type	, potted-in con DBA DBD	nector. (CSA requires a case ground) <b>Micro-change®</b> 3 - pin Micro-change® type 4 - pin Micro-change® type
Quick Disco (Approvals m DCA DCD DCG SubS	meet Male Quick Disconnect only ust be 7 or 8)    Mini-change®    3 - pin Mini-change® type    4 - pin Mini-change® type    5 - pin Mini-change® type    eutometer Connector (Outle	, potted-in con DBA DBD t position mus	Micro-change® 3 - pin Micro-change® type 4 - pin Micro-change® type st be 8)
Quick Discor (Approvals m DCA DCD DCG SubSo 3DD	meet Male Quick Disconnect only ust be 7 or 8)    Mini-change®    3 - pin Mini-change® type    4 - pin Mini-change® type    5 - pin Mini-change® type    s pin, certified not to leak under    3 pin, certified not to leak under	, potted-in con DBA DBD t position mus erwater	Micro-change® 3 - pin Micro-change® type 4 - pin Micro-change® type st be 8)
Quick Discor (Approvals m DCA DCD DCG SubSo 3DD 4DD	nnect Male Quick Disconnect only ust be 7 or 8)    Mini-change®    3 - pin Mini-change® type    4 - pin Mini-change® type    5 - pin Mini-change® type    call the state of the state o	, potted-in con DBA DBD t position mus erwater erwater	Micro-change® 3 - pin Micro-change® type 4 - pin Micro-change® type st be 8)
Quick Discor (Approvals m DCA DCD DCG SubSr 3DD 4DD 3DE	nnect Male Quick Disconnect only ust be 7 or 8)    Mini-change®    3 - pin Mini-change® type    4 - pin Mini-change® type    5 - pin Mini-change® type    eu Underwater Connector (Outle 3 pin, certified not to leak unde 4 pin, certified not to leak unde 3 pin right-angle, certified not	, potted-in con DBA DBD t position mus erwater erwater to leak underw	Micro-change® 3 - pin Micro-change® type 4 - pin Micro-change® type st be 8)
Quick Discor (Approvals m DCA DCD DCG SubSa 3DD 4DD 3DE 4DE	meet Male Quick Disconnect only ust be 7 or 8)    Mini-change®    3 - pin Mini-change® type    4 - pin Mini-change® type    5 - pin Mini-change® type    5 - pin Mini-change® type    caution    automatic transplay    bin certified not to leak under    apin, certified not to leak under    apin, redified not to leak under    apin right-angle, certified not    4 pin right-angle, certified not	potted-in con DBA DBD t position mus erwater erwater to leak underv to leak underv to leak underv	Micro-change® 3 - pin Micro-change® type 4 - pin Micro-change® type st be 8) water water
Quick Disco (Approvals m DCA DCD DCG SubS 3DD 4DD 3DE 4DE HITemp Lea	meet Male Quick Disconnect only ust be 7 or 8) Mini-change® 3 - pin Mini-change® type 4 - pin Mini-change® type 5 - pin Mini-change® type be underwater Connector (Outle 3 pin, certified not to leak unde 4 pin, certified not to leak unde 3 pin right-angle, certified not 4 pin right-angle, certified not 4 pin right-angle, certified not 4 pin source (.070" dia. potted-in	potted-in con DBA DBD t position mus prwater erwater to leak undern to leak undern Teflon™ insul	Micro-change® 3 - pin Micro-change® type 4 - pin Micro-change® type st be 8) water water lated leads rated at 482°F (250°C) 600
Quick Discor (Approvals m DCA DCD DCG SubSa 3DD 4DD 3DE 4DE HITemp Lear CSA listed (A	meet Male Quick Disconnect only ust be 7 or 8) Mini-change® 3 - pin Mini-change® type 4 - pin Mini-change® type 5 - pin Mini-change® type be Underwater Connector (Outle 3 pin, certified not to leak unde 4 pin, certified not to leak unde 3 pin right-angle, certified not 4 pin right-angle, certified not 4 pin right-angle, certified not 4 pin zertified not 4 pin zertified not 4 pin zertified not ba 18 gauge (.070" dia. potted-in pproval must be 2, 7, or 8)	potted-in con DBA DBD t position mus prwater erwater to leak underv to leak underv Teflon™ insul	Micro-change® 3 - pin Micro-change® type 4 - pin Micro-change® type st be 8) water water lated leads rated at 482°F (250°C) 600
Quick Discor (Approvals m DCA DCD DCG SubSa 3DD 4DD 3DE 4DD 3DE 4DE HITemp Lear CSA listed (A F2	meet Male Quick Disconnect only ust be 7 or 8) Mini-change® 3 - pin Mini-change® type 4 - pin Mini-change® type 5 - pin Mini-change® type sum Connector (Outle 3 pin, certified not to leak unde 4 pin, certified not to leak unde 3 pin right-angle, certified not 4 pin zertified not be 2, 7, or 8) 36" (914 mm)	, potted-in con DBA DBD t position mus prwater prwater to leak underv to leak underv to leak underv to leak underv	Micro-change® 3 - pin Micro-change® type 4 - pin Micro-change® type st be 8) Water Water Water Mated leads rated at 482°F (250°C) 600
Quick Discou (Approvals m DCA DCD DCG SubSa 3DD 4DD 3DE 4DD 3DE 4DE HITemp Leaa CSA listed (A F2 F3	meet Male Quick Disconnect only ust be 7 or 8) Mini-change® 3 - pin Mini-change® type 4 - pin Mini-change® type 5 - pin Mini-change® type summer Connector (Outle 3 pin, certified not to leak unde 4 pin, certified not to leak unde 3 pin right-angle, certified not 4 pin right-angle, certified not 5 pin right-angle, certified not 4 pin right-angle, certified not 4 pin right-angle, certified not 5 pin right-angle, certified not 4 pin right-angle, certified not 4 pin right-angle, certified not 5 pin right-angle, certified not 5 pin right-angle, certified not 6 pin right-angle, certified not 6 pin right-angle, certified not 7 pin right-angle, certified not 6 pin right-angle, certified not 7 pin right-angle, certified not 7 pin right-angle, certified not 6 pin right-angle, certified not 7 pin right-angle,	, potted-in con DBA DBD t position mus erwater erwater to leak underv to leak underv to leak underv Teflon™ insul	Micro-change® 3 - pin Micro-change® type 4 - pin Micro-change® type st be 8) water water lated leads rated at 482°F (250°C) 600
Quick Discot (Approvals m CCA DCD DCG SubSt 3DD 4DD 3DE 4DD 3DE 4DE HITemp Leat CSA listed (A F2 F3 F4	meet Male Quick Disconnect only ust be 7 or 8) Mini-change® 3 - pin Mini-change® type 4 - pin Mini-change® type 5 - pin Mini-change® type buderwater Connector (Outle 3 pin, certified not to leak unde 4 pin, certified not to leak unde 3 pin right-angle, certified not 4 pin right-angle, certified not 18 gauge (.070" dia. potted-in pproval must be 2, 7, or 8) 36" (914 mm) 72" (1829 mm) 144" (3658 mm)	, potted-in con DBA DBD t position mus erwater erwater to leak undern to leak undern to leak undern Teflon™ insul	Micro-change® 3 - pin Micro-change® type 4 - pin Micro-change® type st be 8) water water lated leads rated at 482°F (250°C) 600

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# Models 7C, 7D, 7E & 7F

## 502.969.8000

## Leverless Limit Switches

A two digit code is required for ordering the correct custom probe length. All Application Considerations below must be met. For any discrepancies please consult factory. Please follow these steps:

- 1. Measure dimension A from both ends of your cylinder or retrieve from specification drawings.
- 2. Locate the Min/Max range that dimension A falls within on the Custom Probe Length Chart.
- 3. Locate probe length requirement and Probe Code in the next two Columns to the right.
- 4. Enter the probe code into the corresponding spaces of the Stroke-To-GO® Part Number.

#### Application Considerations

- Cylinder cushion must be ferrous.
- Air gap between switch sensing face and cushion should be .015" to .040 (outside this range please consult factory).
- Largest diameter of target (cushion) should cover at least 75% of probe sensing face.
- Sensing face of Stroke-To-GO<sup>®</sup> Switch must be at least .125" from piston rod for proper switch reset. This may at times require an air gap distance greater than .040".
- For cushion diameters less than .50", air gap should be .015" to .025".
- Mounting hardware is 1/4"-20 grade 8 socket head cap screw (included).

7F-		23658-DCA
Custom	Probe	Standard Catalog
Prohe	Code	Ontions

#### EXAMPLE: If "A" = 2.900" then:

"A"		PROBE	PROBE
MIN	MAX	LENGTH	CODE
2.890	2.915	2.875	J4

Dimension A is measured from the outside

surface of the cylinder block to the Top

Distance A may differ at each end.

Dead Center (TDC) of the ferrous cushion.

Rod	
	0
	)(

Cushion collar or sleev (must be ferrous stee

**Cylinder Position Sensors** 

Troke-To-GO<sup>®</sup> Switches provide precise end-of-stroke position indication on pneumatic and hydraulic cylinders. Designed to exceed automotive industry standards, the housing is machined from stainless steel bar stock to handle pressures to 3,000 PSI operating (tested to UL's 3X burst requirement) while withstanding the extreme external conditions such as weld slag, coolants, cutting fluids, physical abuse and even high temperatures. Stroke-to-GO<sup>®</sup> Switches incorporate the same 70 Series GO<sup>®</sup> Switch mechanism that has been tested to over 200 million mechanical cycles and field proven in the most rigorous applications. This unique design offers the greatest benefits in cylinder indication.

**Application Considerations** 

face and cushion should be .015" to .040"

(outside this range please consult factory).

Largest diameter of target (cushion) should

cover at least 75% of probe sensing face.

Sensing face of Stroke-To-GO<sup>®</sup> Switch must

gap distance greater than .040".

should be .015" to .025".

be at least .125" from piston rod for proper switch reset. This may at times require an air

For cushion diameters less than .50", air gap

Cylinder cushion must be ferrous.

Air gap between switch sensing

### **Unique Features**

### **Mechanical life:**

>200,000,000 cycles

#### Leakage current:

Without LEDs - none With LEDs - <1mA (SPST)

#### **Voltage Drop:**

Without LEDs - none SPDT w/ LEDs - I.0 volt With LEDs - 2.8 volts (SPST)

### **Temperature drift:** none

Washdown: designed to withstand 1,000 PSI washdown and NEMA 6P with Mini-Change<sup>®</sup> type connector option

Underwater: rated to 10,000 PSI with deep sea connector option Weld Field Immune: tested and exceeded General Motors EHS-320 specifications. Testing Agency - Candid Logic

Radio Frequency Interference (RFI): no affect at any frequency



"A" MIN	RANGE MAX	PROBE	PROBE	"A" R/ MIN	ANGE	PROBE	PROBE	N	"A" R	ANGE	PROBE	PROBE
1 015	1.040	1 000	A1	2 265	2 200	2 250	C1	10	715	2 740	2 700	MI
1.015	1.040	1.000	*	2.300	2.390	2.300	62	3	740	3.740	3.700	N2
1.040	1.005	1.025	٨3	2.350	2.413	2.373	63	3	765	3 700	3 750	N2
1 000	1 1 1 5	1.030	AJ	2.410	2.440	2.400	G/	3	700	3,815	3 775	N/
1 115	1 1/0	1 100	Λ <del>4</del> Λ5	2.440	2.400	2.420	65	3	815	3.840	3 800	N5
1 140	1 165	1 1 2 5	A6	2.400	2.430	2.430	66	3	840	3 865	3.825	N6
1 165	1 190	1 150	Δ7	2 515	2 540	2 500	G7	3	865	3,890	3 850	N7
1 100	1 215	1 175	A8	2.510	2.540	2.500	68	3	800	3 015	3 875	N8
1 215	1 240	1 200	Δq	2.540	2.505	2.520	GQ	3	915	3 940	3 900	NG
1 240	1 265	1 225	R1	2 590	2.000	2.500	H1	3	940	3 965	3 925	P1
1 265	1 290	1 250	**	2 615	2 640	2 600	H2	3	965	3 990	3 950	P2
1 290	1 315	1 275	B3	2.640	2.645	2 625	H3	3	990	4 015	3 975	P3
1 315	1.340	1.300	B4	2 665	2 690	2 650	H4	4	015	4 040	4 000	P4
1 340	1 365	1 325	B5	2 690	2 715	2 675	H5	4	040	4 065	4 025	P5
1 365	1 390	1 350	B6	2 715	2 740	2 700	H6	4	065	4 090	4 050	P6
1 390	1 415	1 375	B7	2 740	2 765	2 725	H7	4	090	4 115	4 075	P7
1 415	1 440	1 400	B8	2 765	2 790	2 750	H8	4	115	4 140	4 100	P8
1 440	1 465	1 425	B9	2 790	2 815	2 775	H9	4	140	4 165	4 125	P9
1.465	1,490	1.450	C1	2.815	2.840	2.800	J1	4	165	4,190	4.150	R1
1.490	1.515	1.475	C2	2.840	2.865	2.825	J2	4	190	4.215	4.175	R2
1.515	1.540	1.500	C3	2.865	2.890	2.850	J3	4	.215	4.240	4.200	R3
1.540	1.565	1.525	C4	2.890	2,915	2.875	J4	4	240	4.265	4.225	R4
1 565	1 590	1 550	C5	2 915	2 940	2 900	.15	4	265	4 290	4 250	R5
1.590	1.615	1.575	C6	2.940	2.965	2.925	J6	4	290	4.315	4.275	R6
1.615	1.640	1.600	C7	2.965	2,990	2,950	J7	4	315	4.340	4.300	R7
1.640	1.665	1.625	C8	2,990	3.015	2.975	J8	4	340	4.365	4.325	R8
1.665	1.690	1.650	C9	3.015	3.040	3.000	J9	4	.365	4.390	4.350	R9
1.690	1.715	1.675	D1	3.040	3.065	3.025	K1	4	.390	4.415	4.375	S1
1.715	1.740	1.700	D2	3.065	3.090	3.050	K2	4	415	4.440	4,400	S2
1.740	1.765	1.725	D3	3.090	3.115	3.075	K3	4	440	4.465	4.425	S3
1.765	1.790	1.750	D4	3.115	3.140	3.100	K4	4	465	4.490	4.450	S4
1.790	1.815	1.775	D5	3.140	3.165	3.125	K5	4	.490	4.515	4.475	S5
1.815	1.840	1.800	D6	3.165	3.190	3.150	K6	4.	.515	4.540	4.500	S6
1.840	1.865	1.825	D7	3.190	3.215	3.175	K7	4	.540	4.565	4.525	S7
1.865	1.890	1.850	D8	3.215	3.240	3.200	K8	4	.565	4.590	4.550	S8
1.890	1.915	1.875	D9	3.240	3.265	3.225	K9	4	.590	4.615	4.575	S9
1.915	1.940	1.900	E1	3.265	3.290	3.250	L1	4	.615	4.640	4.600	T1
1.940	1.965	1.925	E2	3.290	3.315	3.275	L2	4	.640	4.665	4.625	T2
1.965	1.990	1.950	E3	3.315	3.340	3.300	L3	4	.665	4.690	4.650	T3
1.990	2.015	1.975	E4	3.340	3.365	3.325	L4	4	.690	4.715	4.675	T4
2.015	2.040	2.000	E5	3.365	3.390	3.350	L5	4	.715	4.740	4.700	T5
2.040	2.065	2.025	E6	3.390	3.415	3.375	L6	4	.740	4.765	4.725	T6
2.065	2.090	2.050	E7	3.415	3.440	3.400	L7	4	.765	4.790	4.750	T7
2.090	2.115	2.075	E8	3.440	3.465	3.425	L8	4	.790	4.815	4.775	T8
2.115	2.140	2.100	E9	3.465	3.490	3.450	L9	4	.815	4.840	4.800	T9
2.140	2.165	2.125	F1	3.490	3.515	3.475	M1	4	.840	4.865	4.825	V1
2.165	2.190	2.150	F2	3.515	3.540	3.500	M2	4	.865	4.890	4.850	V2
2.190	2.215	2.175	F3	3.540	3.565	3.525	M3	4	.890	4.915	4.875	V3
2.215	2.240	2.200	F4	3.565	3.590	3.550	M4	4	.915	4.940	4.900	V4
2.240	2.265	2.225	F5	3.590	3.615	3.575	M5	4	.940	4.965	4.925	V5
2.265	2.290	2.250	F6	3.615	3.640	3.600	M6	4	.965	4.990	4.950	V6
2.290	2.315	2.275	F7	3.640	3.665	3.625	M7	4	.990	5.015	4.975	V7
2.315	2.340	2.300	F8	3.665	3.690	3.650	M8	5	.015	5.040	5.000	V8
2.340	2.365	2.325	F9	3.690	3.715	3.675	M9					



## **Probe Selection Chart**



# Stroke to GO Approvals & Wiring

502.969.8000

## Leverless Limit Switches

		Lea	ads
CONTACT FORMS		UL	CSA
2 - SPST	COM	Black	Black
Form A	N/O	Blue	Blue
N/O w/ LED	GND	Green	Green
3 - SPST	COM	Black	Black
Form B	N/C	Red	Red
N/C w/ LED	GND	Green	Green
4 - SPDT Form C No LED	COM N/O N/C GND	Black Blue Red	Black Blue Red Green
5 - SPDT Form C Dual LEDs	COM N/O N/C GND	Black Blue Red	Black Blue Red Green
7 - SPST	COM	Black	Black
Form A	N/O	Blue	Blue
N/O w/o LED	GND	Green	Green
8 - SPST	COM	Black	Black
Form B	N/C	Red	Red
N/O w/o LED	GND	Green	Green

# 3 Pin Micro Change with or without LED

	SPST, Form A, N/O
PIN 1	GND
PIN 2	COM
PIN 3	N/0
	SPST, Form B, N/C
PIN 1	GND
PIN 2	COM
PIN 3	N/C
	SPDT, Form C
PIN 1	COM
PIN 2	N/C
PIN 3	N/0

## **Agency Approvals**

Approvals	(2) HiTemp	(7) CSA General	(8) UL General
Termination Options	·	Purpose	Purpose
A - Potted PVC Leads		Х	Х
B - Potted PVC Cable		Х	Х
C - Water squeeze connector		Х	Х
D - Quick Disconnect		Х	Х
D - SubSea <sup>™</sup> Connector		Х	Х
F - HiTemp™ Leads	Х	Х	Х

X = Approvals Available

## **NEMA Ratings**

Models 7C, 7D, 7E, 7F		Non-Ha	zardous		Haza	rdous
NEMA CLASSES	4	4X	6	6P	7	9
A - Potted PVC leads	Х	Х				
B - Potted PVC cable	Х	Х				
C - PVC Cable w/ squeeze	Х	Х	Х	Х		
D - Quick Disconnect	Х	Х	Х	Х		
D - SubSea <sup>™</sup> Connector	Х	Х	Х	Х		
F - HiTemp <sup>™</sup> Teflon leads	Х	Х				

X = Designed to meet respective NEMA specifications



	<u>Cable</u>	Water-F	<u>lesistant</u>	<u>HiTemp</u>
UL	CSA	UL	CSA	
Black	Black	Black	Black	N/A
White	White	White	White	
Red	Red	Red	Red	
Black	Black	Black	Black	N/A
Red	Red	Red	Red	
White	White	White	White	
Black White Red	Black White Red Green	Black White Red	Black White Red Green	Black Blue Red
Black White Red	Black White Red Green	Black White Red	Black White Red Green	N/A
Black	Black	Black	Black	Black
White	White	White	White	Blue
Red	Red	Red	Red	Green
Black	Black	Black	Black	Black
Red	Red	Red	Red	Red
White	White	White	White	Green

# 4 Pin Micro Change with or without LED

SPST,	Form A, N/O
PIN 1	COM
PIN 2	N/0
PIN 3	INACTIVE
PIN 4	GND
SPST,	Form B, N/C
PIN 1	COM
PIN 2	INACTIVE
PIN 3	N/C
PIN 4	GND
SPE	T, Form C
PIN 1	COM
PIN 2	N/0
PIN 3	N/C
PIN 4	GND





Male View

# Stroke to GO Wiring

## 3 Pin Mini Change with or without LED

SPST, Form A, N/O				
PIN 1	GND			
PIN 2	COM			
PIN 3	N/0			
SPST,	, Form B, N/C			
PIN 1	GND			
PIN 2	COM			
PIN 3	N/C			
SP	DT, Form C			
PIN 1	COM			
PIN 2	N/C			
PIN 3	N/0			



### 4 Pin Mini Change with or without LED SPST, Form A, N/O COM PIN 1 N/0 PIN 2 PIN 3 PIN 4 SPST, Form B, N/C

PIN 1	COM
PIN 2	INACTIVE
PIN 3	N/C
PIN 4	GND
	SPDT, Form C
PIN 1	СОМ
PIN 2	N/0
pin 2 Pin 3	N/O N/C

INACTIVE

GND



Male View

## 502.969.8000

## 5 Pin Mini Change with or without LED

SPST,	Form A, N/O
PIN 1	N/0
PIN 2	Inactive
PIN 3	GND
PIN 4	Inactive
PIN 5	COM
SPST,	Form B, N/C
PIN 1	Inactive
PIN 2	N/C
PIN 3	GND
PIN 4	Inactive
PIN 5	СОМ
SPD	T, Form C
PIN 1	N/0
PIN 2	N/C
PIN 3	GND
PIN 4	Inactive
PIN 5	COM

## 3 4 2 **⑤** ① Male View

## **Leverless Limit Switches**

## 3 Pin SubSea without LED

4 Pin SubSea without LED

PIN 1

PIN 2

PIN 3

SPST, Form

SPST, Form A, N/O		
PIN 1	COM	
PIN 2	N/0	
PIN 3	GND	
SPST, Form B, N/C		
PIN 1	COM	
PIN 2	N/C	
PIN 3	GND	
SPDT, Form C		
PIN 1	N/C	
PIN 2	COM	
PIN 3	N/0	





0



Male View



rm A, N/0	
COM	
N/0	
INACTIVE	
GND	
rm B, N/C	

INACTIVE



## 3 Pin SubSea - Right Angle without LED

SPST	, Form A, N/O	
PIN 1	COM	
PIN 2	N/0	
PIN 3	GND	
SPST, Form B, N/C		
PIN 1	СОМ	
PIN 2	N/C	
PIN 3	GND	
SPDT, Form C		
PIN 1	COM	
PIN 2	N/0	
PIN 3	N/C	



Male View