



**Model 81**

The GO Switch Model 81 offers end sensing and an optional Double Pole Double Throw contact arrangement. With its brass or stainless steel housings and global certifications, it is a popular choice around the world.

**Features:**

- SPDT or DPDT 10A contacts
- End Sensing
- 40° to 221°F operating temperature

**Options:**

- Suitable for Zone 0, 1, or 2 explosion proof
- 40° to 350°F high temperature
- Quick disconnect connector
- Underwater capabilities

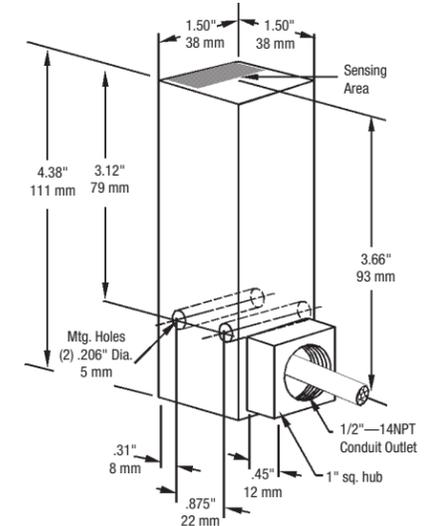
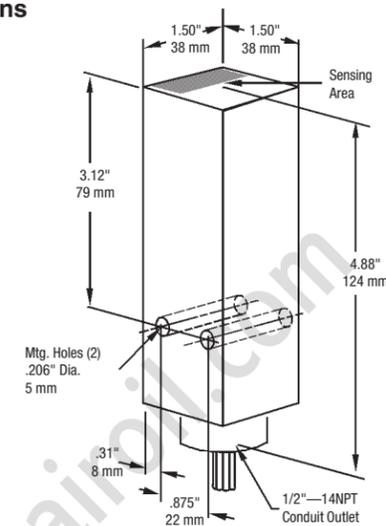
**FAST TRACK DELIVERY**

**81-20516-A2**  
CSA Class I Div 2  
DPDT Brass, 3 ft. leads

**81-20518-A2**  
UL General Purpose  
DPDT Brass, 3 ft. leads

**81-20524-A2**  
CSA Class I Div 1  
DPDT Stainless, 3 ft. leads

**Dimensions**



**Model 81**

Model	Contact Form	Sensing Range	Outlet Position	Enclosure Material	Approvals	Wiring Options																																							
<p><b>Repeatability:</b> .002" (.05 mm)</p> <p><b>Response Time:</b> 8 milliseconds</p> <p><b>Differential:</b> Approx. 1/4" (6 mm)</p> <p><b>Operating Temperature:</b> -40° to 221°F (-40°C to 105°C). HiTemp™ option to 350°F (176°C)</p> <p>81 Size: 1 1/2" (38 mm) square x 4 7/8" (124 mm) overall. Subtract 1/2" (13 mm) from length for side conduit</p> <p><b>Need Accessories?</b> See pp. 92-103 for: Range Extending Target Magnets Mounting Brackets Connectors and more!</p> <p><b>Ordering Guide</b> Fill in the boxes to create your 'ordering number.'</p>	<p><b>Contact Material:</b> Silver cadmium oxide, gold flashed</p> <p><b>Forms:</b> DPDT, Form CC; SPDT, Form C Electrically isolated</p> <p><b>Ratings:</b> Resistive</p> <table border="1"> <thead> <tr> <th colspan="2">AC</th> <th colspan="2">DC</th> </tr> <tr> <th>Volts</th> <th>Amps</th> <th>Volts</th> <th>Amps</th> </tr> </thead> <tbody> <tr> <td>120</td> <td>10</td> <td>24</td> <td>3</td> </tr> <tr> <td>240</td> <td>5</td> <td>48</td> <td>1</td> </tr> <tr> <td>480</td> <td>2.5</td> <td>120</td> <td>0.5</td> </tr> <tr> <td></td> <td></td> <td>250</td> <td>0.5</td> </tr> </tbody> </table> <p>1 Single Pole Double Throw (Form C)</p> <p>2 Double Pole Double Throw (Form CC)</p> <p><b>Form C - SPDT</b>      <b>Form CC - DPDT</b></p>	AC		DC		Volts	Amps	Volts	Amps	120	10	24	3	240	5	48	1	480	2.5	120	0.5			250	0.5	<p><b>Target Material:</b> Ferrous steel</p> <p><b>Sensing Range:</b> Approx. 1/4" (6 mm)</p> <p><b>Sensing Range with Target Magnet:</b> up to 3 7/8" (98 mm) (max)</p> <p>0 Approx. 1/4" (6 mm) end sensing</p> <p><b>Extended Sensing with External Target Magnets</b> (See Accessories for External Target Magnets)</p> <table border="1"> <thead> <tr> <th>Magnet</th> <th>Sensing</th> <th>Differential</th> </tr> </thead> <tbody> <tr> <td>AMP3</td> <td>15/16"</td> <td>3/4"</td> </tr> <tr> <td>AMS4</td> <td>1-3/8"</td> <td>1-1/8"</td> </tr> <tr> <td>AMC5</td> <td>3-7/8"</td> <td>2-1/8"</td> </tr> <tr> <td>AMF6</td> <td>2-3/4"</td> <td>1-5/8"</td> </tr> </tbody> </table>	Magnet	Sensing	Differential	AMP3	15/16"	3/4"	AMS4	1-3/8"	1-1/8"	AMC5	3-7/8"	2-1/8"	AMF6	2-3/4"	1-5/8"	<p><b>Conduit Outlet:</b> 1/2 NPT Two locations</p> <p>1 Side outlet</p> <p>5 Bottom of enclosure</p>	<p><b>Material:</b> Brass or Stainless Steel</p> <p>1 Brass - coated with flat black lacquer</p> <p>2 Stainless steel</p> <p>3 Brass - corrosion resistant coating (polyurethane)</p> <p>4 Stainless steel - corrosion resistant coating (polyurethane)</p>	<p><b>UL</b> <b>SF</b> <b>FM APPROVED</b></p> <p>2 High temperature to 350°F (176°C) with Teflon™ insulated leads (Enclosure must be 2 or 4) (Wiring must be F)</p> <p>3 UL listed explosion proof for CI I, Div 1 &amp; 2; Grps A,B,C,D; CI II, Div 1 &amp; 2, Grps E-G; CI III (Enclosure must be 2 or 4) (Wiring must be A, B or F) (Lead seal req'd within 18") (DPDT, leads only)</p> <p>4 CSA / FM certified explosion proof for CI I, Div 1; Grps A,B,C,D; CI II, Div 1, Grps E-G; CI III. (Enclosure must be 2 or 4) (Wiring must be A, B or F) (Lead seal req'd within 18")</p> <p>6 CSA / FM certified explosion proof for CI I, Div 2; Grps A,B,C,D; CI II, Div 2, Grps E-G; CI III (Wiring must be A, B or F) (Lead seal req'd within 18")</p> <p>7 CSA certified General Purpose</p> <p>8 UL listed General Purpose</p>	<p><b>Lead Wires</b> 18 Gauge (.110" dia.) potted-in PVC insulated AWM / TEW stranded lead wires rated at 221°F (105°C) 600V UL / CSA listed</p> <p>A2 36" (914 mm)</p> <p>A3 72" (1829 mm)</p> <p>A4 144" (3658 mm)</p> <p>A___ Lengths greater than 144" (Specify length in 5' increments (e.g. A150 = 150 ft. of leads))</p> <p><b>Cable</b> 18 Gauge (.450" dia.) potted-in SO rubber covered cable rated at 194°F (90°C) 600V UL / CSA listed (Contact Form must be 1)</p> <p>B2 36" (914 mm)</p> <p>B3 72" (1829 mm)</p> <p>B4 144" (3658 mm)</p> <p>B___ Lengths greater than 144" (Specify length in 5' increments (e.g. B150 = 150 ft. of cable))</p> <p><b>Quick Disconnect</b> Male Quick Disconnect only, potted-in connector. (CSA requires a case ground) (Approval must be 7 or 8)</p> <p><b>Mini-change®</b></p> <p>DCA 3 - pin Mini-change® type</p> <p>DCD 4 - pin Mini-change® type</p> <p>DCG 5 - pin Mini-change® type</p> <p><b>SubSea™ Underwater Connector</b> (Enclosure must be 2 or 4)</p> <p>3DD 3 pin, certified not to leak underwater (includes male/female Delrin™ lock sleeves)</p> <p>4DD 4 pin, certified not to leak underwater (includes male/female Delrin™ lock sleeves)</p> <p>8DD 8 pin, certified not to leak underwater (includes male/female Delrin™ lock sleeves)</p> <p>3DE 3 pin right-angle, certified not to leak underwater</p> <p>4DE 4 pin right-angle, certified not to leak underwater</p> <p><b>HiTemp Wire</b> 18 gauge (.070" dia.) potted-in Teflon™ insulated leads rated at 482°F (250°C) 600V UL / CSA listed</p> <p>F2 36" (914 mm)</p> <p>F3 72" (1829 mm)</p> <p>F4 144" (3658 mm)</p> <p>F___ Lengths greater than 144" (Specify length in 5' increments (e.g. F150 = 150 ft. of leads))</p>
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## Agency Approvals

Approvals	(3) UL Class 1 Div 1	(4) CSA/FM Class 1 Div 1	(6) CSA/FM Class 1 Div 2	(7) CSA General Purpose	(8) UL General Purpose
<b>Termination Options</b>					
00 - Terminal Block					
A - Potted PVC Leads	X	X	X	X	X
B - Potted SO Cable	X	X	X	X	X
D - Quick Disconnect				X	X
D - SubSea™ Connector				X	X
F - Potted HiTemp™ Leads	X	X	X	X	X

X = Approvals Available

## NEMA Ratings

NEMA CLASSES	Non-Hazardous				Hazardous	
	4	4X	6	6P	7	9
00 - Terminal Block	X					
A - Potted PVC Leads	X	SS	X	SS	SS	SS
B - Potted SO Cable	X	SS	X	SS	SS	SS
D - Quick Disconnect	X	SS	X	SS		
D - SubSea™ Connector	X	SS	X	SS		
F - Potted HiTemp™ Leads	X	SS	X	SS	SS	SS

SS = Stainless steel

X = Designed to meet respective NEMA specifications

## Wiring Diagrams (male view)

4 Wire PVC & HiTemp Leads	
N/C	Red
N/O	Blue
COM	Black
GND	Green

### Terminations A & F

SO Cable	
N/C	Red
N/O	White
COM	Black
GND	Green

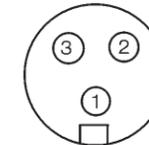
### Termination B

PVC & Teflon Leads	
N/C1 - Red	N/C2 - Red/White Stripe
N/O1 - Blue	N/O2 - Blue/White Stripe
COM1 - Black	COM2 - Black/White Stripe
(CSA approvals only) GND - Green	

### Termination A & F

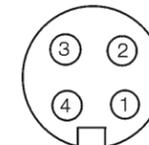
Mini-Change QDC - 3 Pin	
Pin 1	COM
Pin 2	N/C
Pin 3	N/O

### Termination DCA



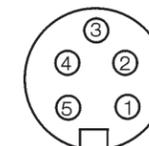
Mini-Change QDC - 4 Pin	
Pin 1	COM
Pin 2	N/O
Pin 3	N/C
Pin 4	GND

### Termination DCD



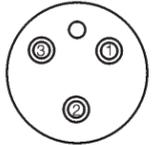
Mini-Change QDC - 5 Pin - SPDT	
Pin 1	N/O
Pin 2	N/C
Pin 3	GND
Pin 4	Inactive
Pin 5	COM

### Termination DCG



SubSea - 3 Pin - Lock Sleeve	
Pin 1	N/C
Pin 2	COM
Pin 3	N/O

### Termination 3DD



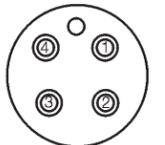
SubSea - 3 Pin - Right Angle	
Pin 1	COM
Pin 2	N/O
Pin 3	N/C

### Termination 3DE



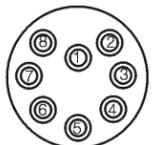
SubSea - 4 Pin - Lock Sleeve	
Pin 1	COM
Pin 2	N/O
Pin 3	N/C
Pin 4	GND

### Termination 4DD



SubSea - 8 Pin - Lock Sleeve	
Pin 1	COM <sub>1</sub>
Pin 2	N/O <sub>1</sub>
Pin 3	N/C <sub>1</sub>
Pin 4	GND
Pin 5	N/C <sub>2</sub>
Pin 6	N/O <sub>2</sub>
Pin 7	COM <sub>2</sub>
Pin 8	Inactive

### Termination 8DD



Mini-Change QDC - 7 Pin	
Pin 1	N/O <sub>2</sub>
Pin 2	COM <sub>1</sub>
Pin 3	N/C <sub>2</sub>
Pin 4	N/C <sub>1</sub>
Pin 5	COM <sub>2</sub>
Pin 6	N/O <sub>1</sub>
Pin 7	GND

### Termination DCH

