# GO SWITCH™

# THE ALL IN ONE PROXIMITY SENSOR AND LIMIT SWITCH.
## GO Gets It.

GO Switch is the most versatile sensing solution.
It detects like a proximity switch and functions like
a limit switch, providing higher reliability when
conventional switches fail.

IECEx · Ex · ATEX · CE · FM APPROVED · CSR · UL

Ex NEPSI · JIS · KOSHA · METRO · PG

## EMERSON™
### Process Management

# A GLOBAL LEADER IN VALVE CONTROL AND PROXIMITY SENSING



Emerson™ Process Management is a global leader in valve control and proximity sensing for the process industries. Our solutions enable plants, platforms, and pipelines to manage and control operations more intelligently and efficiently under the most demanding and extreme conditions.

### GLOBAL TECHNOLOGY LEADERSHIP

TopWorx technology advancements are at the forefront of innovation in the process automation industry. TopWorx uses wireless technologies and fieldbus protocols such as FOUNDATION Fieldbus, DeviceNet, AS-Interface, Profibus, and HART to reduce installation costs and enable predictive maintenance.

### GLOBAL HAZARDOUS AREA CERTIFICATIONS

In addition to high temperature (204°C), cold temperature (-50°C), and sub-sea (7,010 meters) applications, TopWorx products are suitable for use in Flame-proof/Explosion Proof, Non-Incendive, Intrinsically Safe hazardous areas with IECEx, ATEX, GOST, InMetro, UL, CSA, KOSHA, and NEPSI certifications.

### GLOBAL SERVICE & SUPPORT

With company locations in the United States, United Kingdom, South Africa, Bahrain, and Singapore, TopWorx is strategically positioned to provide outstanding support. In addition, over 200 Certified Product Partners throughout the world are available to provide competent local support when needed.

### WWW.TOPWORX.COM

Visit **www.topworx.com** for comprehensive information on our company, capabilities, and products – including model numbers, data sheets, specifications, dimensions, and certifications.

GO Switch provides reliable, durable proximity sensing in the most demanding conditions. Using unique technology, GO Switch outperforms all other types of sensors in applications that require high reliability and durability.

### CAPABILITIES

• Superior current rating
• Superior pressure rating
• Superior temperature rating
• Superior hazardous area ratings
• Superior resistance to physical abuse
• Superior resistance to corrosives, salt water

With GO Switch, customers enjoy:

• One-of-a-kind technology that offers high current ratings, AC/DC and NO/NC wiring flexibility and non-contact detection of ferrous metal and magnetic targets.

• Global certifications for use in Zone 0 (intrinsically safe), Zone 1 (explosion proof), Zone 2 (non-incendive) Class I, Div 1 & 2, Class ll, Div 1 & 2 and Class lll hazardous areas.

• Proven reliability in power generation, chemical, refineries, steel & aluminum, water & wastewater, oil & gas, petrochemical, food & beverage, pulp & paper, heavy equipment, mining, military vehicles, manufacturing, amusement parks, and material handling industries.

• Durability in mission-critical applications in extremely hot, cold, wet, dirty, abusive, corrosive, and explosive environments.

# GO™ SWITCH CAPABILITIES
## Common Features & Benefits

Using a unique technology, GO Switch outperforms conventional limit switches and proximity sensors in the toughest applications.

IECEx  ⟨Ex⟩  ATEX  CE  FM APPROVED  CSA  UL  Ex NEPSI  JIS  KOSHA  INMETRO  P G

## GO™ Switch Quick Selection Guide



GO SWITCH

| | Model 11 Long Range | Model 21 Side Sensing | Model 31 End Sensing | Model 81 DPDT | Model 71 3/8" diameter | Model 72 3/8" diameter | Model 73 5/8" diameter |
|---|---|---|---|---|---|---|---|
| General Purpose | ● | ● | ● | ● | ● | ● | ● |
| Class I, Div 1 | ● | ● | ● | ● | ● | | ● |
| Class I, Div 2 | ● | ● | ● | ● | ● | | ● |
| Class II, Div 1 | ● | ● | ● | ● | ● | | ● |
| Class II, Div 2 | ● | ● | ● | ● | ● | | ● |
| Class III | ● | ● | ● | ● | ● | | ● |
| Zone 0, Intrinsically Safe | ● | ● | ● | ● | | | ● |
| Zone 1, Flameproof | ● | ● | | | | | ● |
| Underwater | ● | ● | | ● | | | ● |
| High Temperature | ● | | | ● | ● | ● | ● |
| DPDT | | | | ● | | | |

**Extended Sensing**                                    **Precision Sensing**

# GO™ Switches offer the following features and benefits:

**GO SWITCH**

## Features

Proximity triggering with ferrous metal and magnetic targets - no exposed moving parts

Extended sensing with use of target magnets

Immune to electrical noise, weld fields, and radio frequency interference

Consume no power to operate

Can be wired AC or DC, N/O or N/C, in series or parallel

All-metal housings with contacts potted and sealed from the environment

Multiple wiring options, including lead wires, cables, quick disconnects, etc.

A wide variety of hazardous area certifications for Zone 0, 1, and 2

Operating temperatures ranging from -50°C (-58°F) to 204°C (400°F).

## Solutions

Eliminate broken or bent lever arms, poor mechanical alignment, and poor repeatability

Eliminates the need to purchase/acquire a different device to obtain extended sensing

Eliminate electrical problems common to inductive proximity sensors
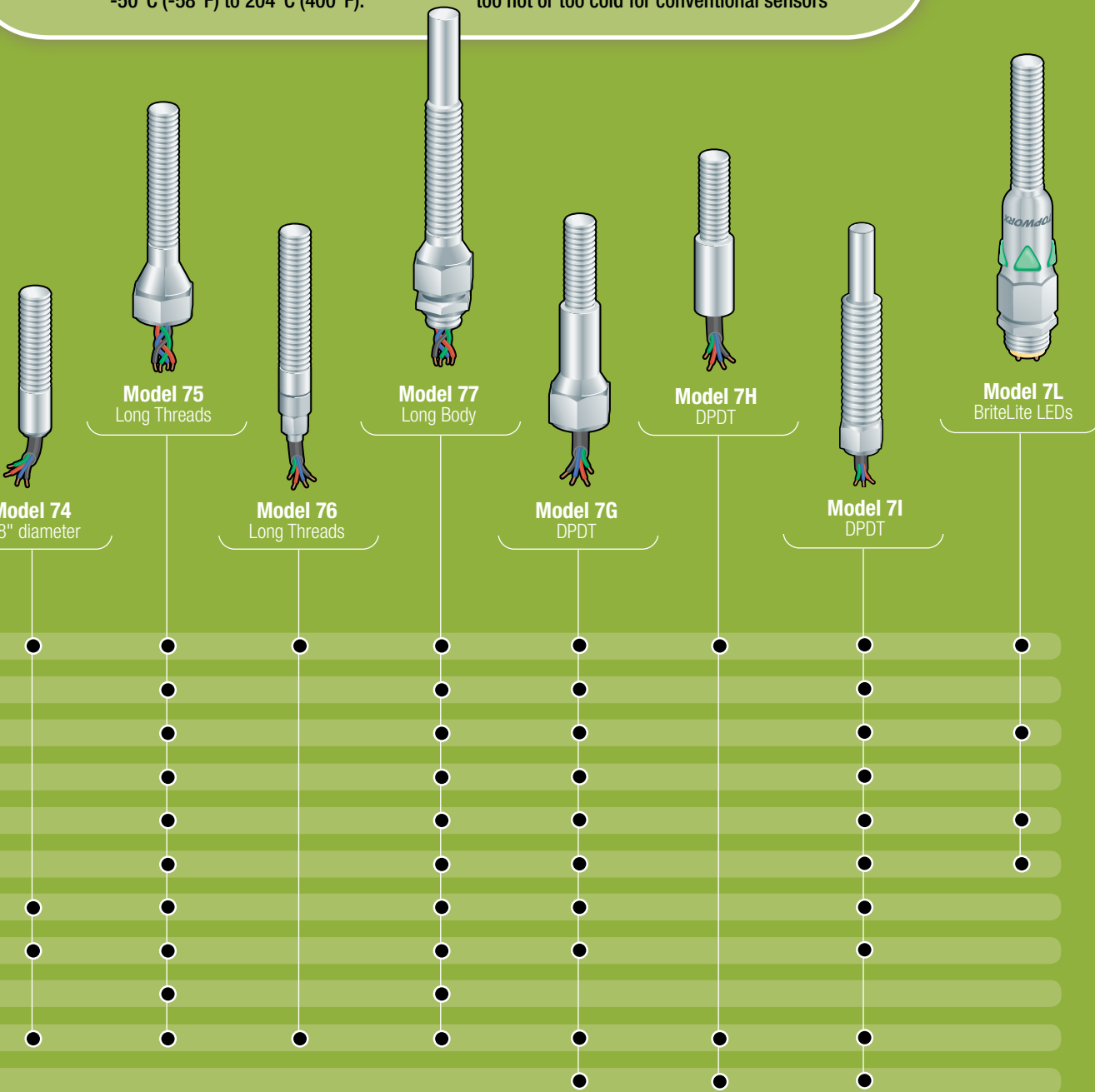
Eliminate leakage current and voltage drops

Flexibility to cover a variety of application needs with fewer part numbers

Performance is not affected by dust, dirt, moisture, or most caustics, corrosives, or chemicals

Easy installation and seamless integration into your existing plant wiring standards

Compliance with intrinsically safe, explosion proof, and non-incendive requirements
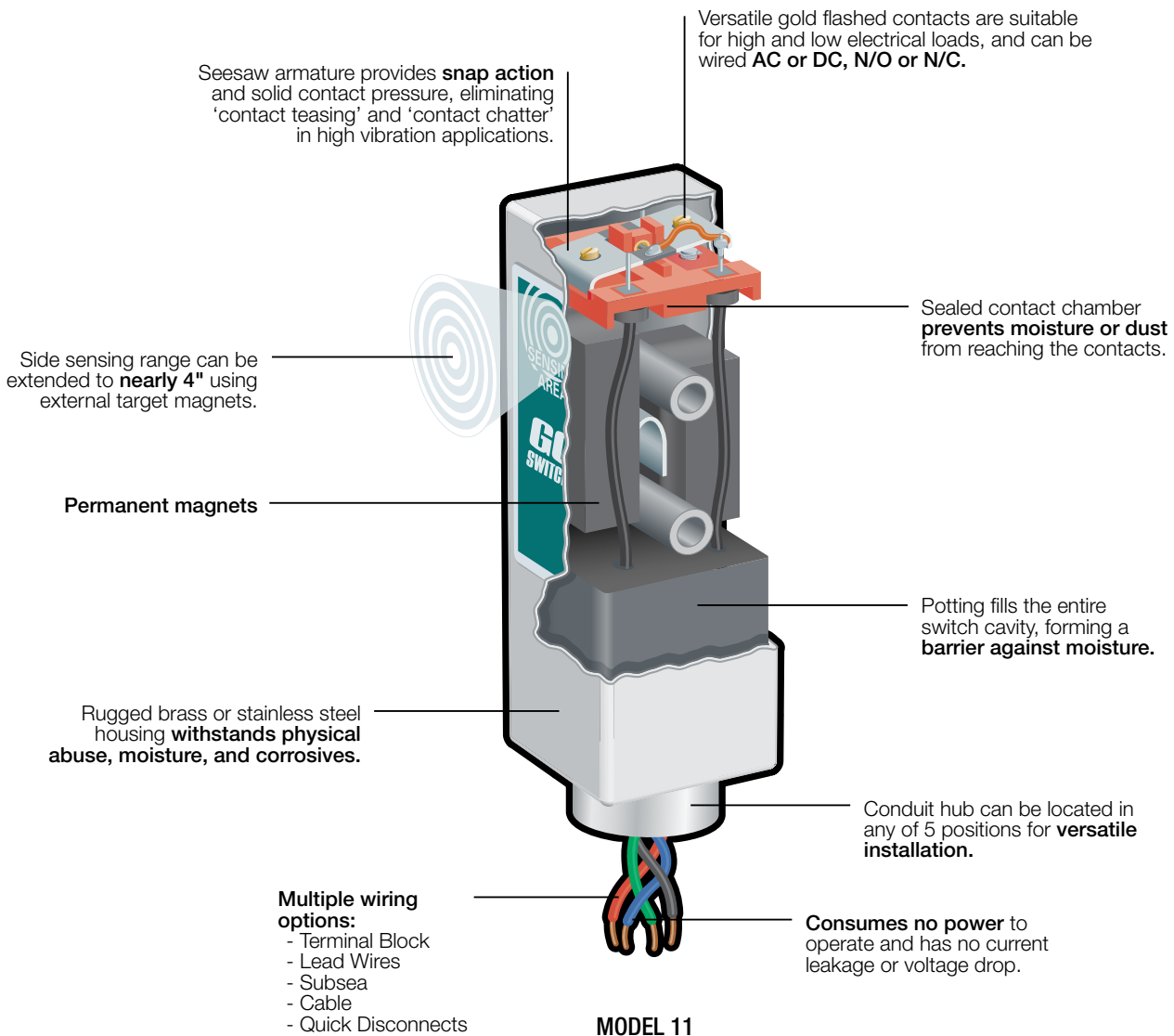
Ability to monitor plant processes in areas too hot or too cold for conventional sensors

**Model 74**
5/8" diameter

**Model 75**
Long Threads

**Model 76**
Long Threads

**Model 77**
Long Body

**Model 7G**
DPDT

**Model 7H**
DPDT

**Model 7I**
DPDT

**Model 7L**
BriteLite LEDs

# GO™ SWITCH - EXTENDED SENSING
Built to last in the most demanding conditions

GO Switch models 11, 21, 31 and 81 are the ideal replacements for traditional mechanical limit switches. Sealed contacts, rugged housings, non-contact detection of ferrous metal & magnetic targets, and snap action response make these switches the ultimate problem solvers for troublesome mechanical limit switch applications.



Seesaw armature provides **snap action** and solid contact pressure, eliminating 'contact teasing' and 'contact chatter' in high vibration applications.

Versatile gold flashed contacts are suitable for high and low electrical loads, and can be wired **AC or DC, N/O or N/C.**

Side sensing range can be extended to **nearly 4"** using external target magnets.

Sealed contact chamber **prevents moisture or dust** from reaching the contacts.

**Permanent magnets**

Potting fills the entire switch cavity, forming a **barrier against moisture.**

Rugged brass or stainless steel housing **withstands physical abuse, moisture, and corrosives.**

Conduit hub can be located in any of 5 positions for **versatile installation.**

**Multiple wiring options:**
- Terminal Block
- Lead Wires
- Subsea
- Cable
- Quick Disconnects

**Consumes no power** to operate and has no current leakage or voltage drop.

**MODEL 11**

Models 11, 21, 31, and 81 were the world's original GO™ Switches. Their simple design, rugged housings, long sensing ranges, and global approvals make these switches the ideal choice wherever reliable proximity sensing is needed. Some features common to all these models include a standard operating temperature range of -58°F to 221°F (-50°C to 105°C) and gold-plated SPDT dry contacts.

### Model 11

**Features**
- Single Pole Double Throw (SPDT) 5A/240VAC, 10A/120VAC, 3A/24VDC
- AC/DC, NO/NC Wiring Flexibility
- -58°F to 221°F (-50°C to 105°C) operating temperature
- 3/8'' (10mm) sensing distance (ferrous metal)
- Dry Contact
- Intrinsically Safe
- Side sensing
- Gold Plated Contacts

**Options**
- High Temperature: -58°F to +350°F (-50°C to +176°C)
- Brass or Stainless Steel 304 Housings
- Extended Sensing: 9/16'' (14mm)
- Terminal Block, Lead Wires, or Cables
- Latching Contacts
- SubSea Connectors
- Quick Disconnects - Micro or Mini
- Global Hazardous Area Approvals

### Model 81

**Features**
- Double Pole Double Throw (DPDT) 5A/240VAC, 10A/120VAC, 3A/24VDC
- AC/DC, NO/NC Wiring Flexibility
- -58°F to 221°F (-50°C to 105°C) operating temperature
- 1/4" (6mm) Sensing Distance (Ferrous metal)
- Dry Contact
- Intrinsically Safe
- End Sensing
- Gold Plated Contacts

**Options**
- High temperature: -58°F to 350°F (-50°C to 176°C)
- Single Pole Double Throw (SPDT) 10A/120VAC, 3A/24VDC
- Brass or Stainless Steel 304 Housings
- Lead Wires or Cables
- SubSea Connectors
- Quick Disconnects – Mini
- CSA/UL Hazardous Area Approvals

### Model 21

**Features**
- Single Pole Double Throw (SPDT) 5A/240VAC, 10A/120VAC, 3A/24VDC
- AC/DC, NO/NC Wiring Flexibility
- -58°F to 221°F (-50°C to 105°C) operating temperature
- 3/8'' (10mm) Sensing Distance (Ferrous Metal)
- Dry Contact
- Intrinsically Safe
- Side sensing
- Gold Plated Contacts

**Options**
- Brass or Stainless Steel 304 Housings
- Terminal Block, Lead Wires, or Cables
- Latching Contacts
- SubSea Connectors
- Quick Disconnects - Micro or Mini
- Global Hazardous Area Approvals

### Model 31

**Features**
- Single Pole Double Throw (SPDT) 3A/240VAC, 6A/120VAC, 2A/24VDC
- AC/DC, NO/NC Wiring Flexibility
- -58ºF to 221ºF (-50ºC to 105ºC) operating temperature
- 1/4" (6mm) Sensing Distance (Ferrous metal)
- Dry Contact
- Intrinsically Safe
- End sensing
- Gold Plated Contacts

**Options**
- Lead Wires or Cables
- Quick Disconnects - Micro or Mini
- CSA/FM Hazardous Area Approvals

# GO™ SWITCH ORDERING GUIDE - EXTENDED SENSING

Choose one option from each category to build a complete model number.

✓ Most popular options

Model 11 — Long Range

Model 21 — Side Sensing

Models 31 — End Sensing

Model 81 — DPDT

## Model

**Ordering Guide**
Fill in each box to create a complete model number.

**Models 11, 21 & 81**

✓ **11** 1 1/2" square x 4 9/16" overall. (Add 1/2" for bottom conduit outlet)

✓ **21** 1 1/2" square x 3 13/16" overall. (Add 1/2" for bottom conduit outlet)

**31** 1" square x 3 1/4" overall

**81** 1 1/2" square x 4 3/8" overall. (Add 1/2" for bottom conduit outlet)

## Contact Form

✓ **1** Single Pole Double Throw (Form C)

✓ **2** Double Pole Double Throw (Form CC) (Model 81 Only)

**3** Single Pole Double Throw (Form C) Latching (Maintained contact) (Models 11 & 21 only) (Outlet 2, 4 or 5 only)

## Sensing Range

✓ **0** 1/4" end sensing (Model 81 only)

✓ **1** Standard sensing - 3/8" side sensing (Model 11 & 21 only)

✓ **2** Extended sensing - 9/16" side sensing (Contact form must be 1 or 3) (Model 11 only)

**7** Precision sensing - 1/4" side sensing (Minimal differential) (Models 11, 21 & 31 only)

## Outlet Position

**1** Behind sensing area (Models 11, 21 & 81 only)

**2** Left of sensing area (Models 11 & 21 only)

**3** Right of sensing area (Models 11 & 21 only)

**4** Same side as sensing area (Models 11 & 21 only)

**5** Bottom of enclosure

## Enclosure Materials

✓ **1** Brass with flat black lacquer coating (Models 11, 21 & 81 only)

✓ **2** Stainless steel*

**3** Brass with corrosion resistant coating (Models 11, 21 & 81 only)

**4** Stainless steel - corrosion resistant coating (polyurethane)*

* All-welded stainless steel switches are recommended for wet or harsh environments.

## Approvals

✓ **0** CSA / FM CI I, Div 2, Grps A-D; CI II, Div 2, Grps F & G, CI III Terminal Block (Contact form must be 1 or 3) (Wiring must be 00) (Models 11 & 21 only)

**2** High temperature to 350°F (Models 11 & 81; Contact Form 1 or 3 (1 or 2 for Model 81) (Sensing 1; Enclosure 2; Wiring F only) (Models 11, 21 and 81 only)

**3** UL CI I, Div 1 & 2; Grps A-D; CI II, Div 1 & 2, Grps E-G; CI III (Enclosure must be 2 or 4) (Lead seal required) (Wiring A, B, and F only)

✓ **4** CSA / FM CI I, Div 1; Grps A-D; CI II, Div 1; Grps E-G; CI III. (Enclosure must be 2 or 4) (Lead seal required) (Wiring A, B, and F only)

**5** MSHA approved "Explosion Proof" (Enclosure 2 only) (Wiring B3 or longer) (Models 11 & 21 only) (Wiring A, B, and F only)

✓ **6** CSA / FM CI I, Div 2; Grps A-D; CI II, Div 2; Grps E-G; CI III. (Lead seal required)

**7** CSA General Purpose

✓ **8** UL General Purpose

## Wiring Options

✓ **Terminal Block**
**00** (Models 11 & 21 only)

✓ **Lead Wires** - 18 Gauge
**A2** 36"
**A3** 72"
**A4** 144"
**A_ _** Greater than 144" - specify length in 5ft increments

**Cable** - 16 Gauge (Model 81 contact form 1 only)
**B2** 36"
**B3** 72"
**B4** 144"
**B_ _** Greater than 144" - specify length in 5ft increments

**Mini Change Connector** (Models 11, 21, 31, 81)
(Approval 7 or 8 only; 3 pin is 8 only)
**DCA** 3 pin
**DCD** 4 pin
**DCG** 5 pin
**DCH** 7 pin (Model 81 only)

**Micro Change Connector** (Models 11, 21, 31, 81)
(Approval 7 or 8 only; 3 pin is 8 only)
**DBA** 3 pin
**DBD** 4 pin
**DBG** 5 pin

**SubSea Connector**
(Models 11, 21, 81) (Enclosure 2 or 4 only)
(Approval 7 or 8 only; 3 pin is 8 only)
**3DD** 3 pin
**4DD** 4 pin
**8DD** 8 pin (Model 81 only)
**3DE** 3 pin 90°
**4DE** 4 pin 90°

**Hi-Temp™ Leads** (Teflon insulated) 18 Gauge
**F2** 36"
**F3** 72"
**F4** 144"
**F_ _** Greater than 144" - specify length in 5ft increments

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| Model | Contact Form | Sensing Range | Outlet Position | Enclosure Materials | Approvals | Wiring Options |
|---|---|---|---|---|---|---|
| | | | | | | |

With all stainless steel construction, flexible AC/DC, NO/NC, and SPDT/DPDT contact configurations, superior corrosion resistance, and global certifications for all hazardous areas, 70 Series GO Switches outperform inductive proximity switches in the toughest applications.

End sensing range can be extended using external target magnets.

**Permanent magnets**

**Sensing face is stainless steel** rather than plastic, preventing damage due to incidental physical contact.

Three magnets provide **snap action** and solid contact pressure, eliminating 'contact teasing' and 'contact chatter' in high vibration applications.

**English or metric** threads available.

Unique sawtooth contacts are suitable for high and low electrical loads, and can be wired **AC or DC, N/O or N/C.**

Sealed contact chamber **prevents moisture or dust** from reaching the contacts.

Potting fills the entire switch cavity, forming a **barrier against moisture.**

One-piece stainless steel construction makes this a very durable proximity sensor.

**Consumes no power** to operate and has no current leakage or voltage drop.

**Multiple wiring options:**
-Lead Wires
-Cable
-Subsea
-Quick Disconnects

**MODEL 73**

# GO™ SWITCH – PRECISION SENSING
## Built to last in the most demanding conditions

### Model 71
**Features**
- Single Pole Double Throw (SPDT) 2A/240VAC, 4A/120VAC, 3A/24VDC
- AC/DC, NO/NC Wiring Flexibility
- -58°F to 221°F (-50°C to 105°C) operating temperature
- 0.040" (1mm) Sensing Distance (Ferrous metal)
- Dry Contact
- Intrinsically Safe
- End Sensing
- Palladium Silver Contacts

**Options**
- High Temperature: -58°F to +400°F (-50°C to +204°C)
- Stainless Steel 303 or 316 Housings
- Lead Wires or Cables
- Quick Disconnects – Micro
- 3/8" or M12 metric thread
- CSA/UL Hazardous Area Approvals

### Model 72
**Features**
- Single Pole Double Throw (SPDT) 2A/240VAC, 4A/120VAC, 3A/24VDC
- AC/DC, NO/NC Wiring Flexibility
- -58°F to 221°F (-50°C to 105°C) operating temperature
- 0.040" (1mm) Sensing Distance (Ferrous metal)
- Dry Contact
- Intrinsically Safe
- End Sensing
- Palladium Silver Contacts

**Options**
- High Temperature: -58°F to +400°F (-50°C to +204°C)
- Stainless Steel 303 or 316 Housings
- Lead Wires or Cables
- Quick Disconnects – Micro
- 3/8" or M12 metric thread

### Model 73
**Features**
- Single Pole Double Throw (SPDT) 2A/240VAC, 4A/120VAC, 3A/24VDC
- AC/DC, NO/NC Wiring Flexibility
- -58°F to 221°F (-50°C to 105°C) operating temperature
- 0.100" (2.5mm) Sensing Distance (Ferrous metal)
- Dry Contact
- Intrinsically Safe
- End Sensing
- Palladium Silver Contacts

**Options**
- High Temperature: -58°F to +400°F (-50°C to +204°C)
- Stainless Steel 303 or 316 Housings
- Pressure Rating: 2,000, 3,500, 5,000, 10,000 PSI, (140, 240, 345, 690 bars)
- Lead Wires or Cables
- SubSea Connectors
- Hermetic Seal
- Quick Disconnects – Micro or Mini
- 5/8" or M18 metric thread
- Global Hazardous Area Approvals

### Model 74
**Features**
- Single Pole Double Throw (SPDT) 2A/240VAC, 4A/120VAC, 3A/24VDC
- AC/DC, NO/NC Wiring Flexibility
- -58°F to 221°F (-50°C to 105°C) operating temperature
- 0.100" (2.5mm) Sensing Distance (Ferrous metal)
- Dry Contact
- Intrinsically Safe
- End Sensing
- Palladium Silver Contacts

**Options**
- High Temperature: -58°F to +400°F (-50°C to +204°C)
- Stainless Steel 303 or 316 Housings
- Pressure Rating: 2,000, 5,000, 10,000 PSI (140, 240, 690 bars)
- Lead Wires or Cables
- Water Resistant Squeeze Connectors
- Quick Disconnects – Micro
- 5/8" or M18 metric thread
- ATEX/IECEx Hazardous Area Approvals

### Model 75
**Features**
- Single Pole Double Throw (SPDT) 2A/240VAC, 4A/120VAC, 3A/24VDC
- AC/DC, NO/NC Wiring Flexibility
- -58°F to 221°F (-50°C to 105°C) operating temperature
- 0.100" (2.5mm) Sensing Distance (Ferrous metal)
- Dry Contact
- Intrinsically Safe
- End Sensing
- Palladium Silver Contacts

**Options**
- High Temperature: -58°F to +400°F (-50°C to +204°C)
- Stainless Steel 303 or 316 Housings
- Pressure Rating: 2,000, 5,000, 10,000 PSI (140, 240, 690 bars)
- Lead Wires or Cables
- SubSea Connectors
- Hermetic Seal
- Quick Disconnects – Micro or Mini
- 5/8" or M18 metric thread
- Global Hazardous Area Approvals

### Model 76
**Features**
- Single Pole Double Throw (SPDT) 2A/240VAC, 4A/120VAC, 3A/24VDC
- AC/DC, NO/NC Wiring Flexibility
- -58°F to 221°F (-50°C to 105°C) operating temperature
- 0.100" (2.5mm) Sensing Distance (Ferrous metal)
- Dry Contact
- Intrinsically Safe
- End Sensing
- Palladium Silver Contacts

**Options**
- High Temperature: -58°F to +400°F (-50°C to +204°C)
- Stainless Steel 303 or 316 Housings
- Pressure Rating: 2,000, 5,000, 10,000 PSI (140, 240, 690 bars)
- Lead Wires or Cables
- Water Resistant Squeeze Connectors
- Quick Disconnects – MicrO
- 5/8" or M18 metric thread

## Model 7A

**Features**
- 3.5 SCFM nominal flow rate
- 60 PSI (4 bars) max air supply
- -40ºF to 221ºF (-40ºC to 105ºC) operating temperature
- 0.062" (1.5mm) Sensing Distance (Ferrous metal)
- End Sensing
- Stainless Steel 303 Housing
- 5/8" Thread
- Plunger

**Options**
- 303 Stainless Steel base

## Model 7H

**Features**
- Double Pole Double Throw (DPDT) 1.5A/240VAC, 3A/120VAC, 1A/24VDC
- AC/DC, NO/NC Wiring Flexibility
- -58ºF to 221ºF (-50ºC to 105ºC) operating temperature
- 0.090" (2.3mm) Sensing Distance (Ferrous metal)
- Dry Contact
- Intrinsically Safe
- End Sensing
- Palladium Silver Contacts

**Options**
- High Temperature: -58ºF to +400ºF (-50ºC to +204ºC)
- Stainless Steel 303 or 316 Housings
- Lead Wires or Cables
- Quick Disconnects – Mini
- 5/8" thread

## Model 7G

**Features**
- Double Pole Double Throw (DPDT) 1.5A/240VAC, 3A/120VAC, 1A/24VDC
- AC/DC, NO/NC Wiring Flexibility
- -58ºF to 221ºF (-50ºC to 105ºC) operating temperature
- 0.090" (2.3mm) Sensing Distance (Ferrous metal)
- Dry Contact
- Intrinsically Safe
- End Sensing
- Palladium Silver Contacts

**Options**
- Single Pole Double Throw (SPDT) 2A/240VAC, 4A/120VAC, 1A/24VDC
- High Temperature: -58ºF to +400ºF (-50ºC to +204ºC)
- Stainless Steel 303 or 316 Housings
- Lead Wires or Cables
- Hermetic Seal
- Quick Disconnects – Mini
- 5/8" or M18 metric thread
- Global Hazardous Area Approvals

## Model 77

**Features**
- Single Pole Double Throw (SPDT), 2A/240VAC, 4A/120VAC, 3A/24VDC
- AC/DC, NO/NC Wiring Flexibility
- -58ºF to 221ºF (-50ºC to 105ºC) operating temperature
- 0.100" (2.5mm) Sensing Distance (Ferrous metal)
- Dry Contact
- Intrinsically Safe
- End Sensing
- Palladium Silver Contacts

**Options**
- High Temperature: -58ºF to +400ºF (-50ºC to +204ºC)
- Stainless Steel 303 or 316 Housings
- Pressure Rating: 2,000, 5,000, 10,000 PSI (140, 240, 690 bars)
- Lead Wires or Cables
- SubSea Connectors
- Quick Disconnects – Micro or Mini
- 5/8" or M18 metric thread
- Global Hazardous Area Approvals

## Model 7I

**Features**
- Double Pole Double Throw (DPDT) 1.5A/240VAC, 3A/120VAC, 1A/24VDC
- AC/DC, NO/NC Wiring Flexibility
- -58ºF to 221ºF (-50ºC to 105ºC) operating temperature
- 0.090" (2.3mm) Sensing Distance (Ferrous metal)
- Dry Contact
- Intrinsically Safe
- End Sensing
- Palladium Silver Contacts

**Options**
- High Temperature: -58ºF to +400ºF (-50ºC to +204ºC)
- Stainless Steel 303 or 316 Housings
- Lead Wires or Cables
- Quick Disconnects – Mini
- 5/8" thread
- Global Hazardous Area Approvals
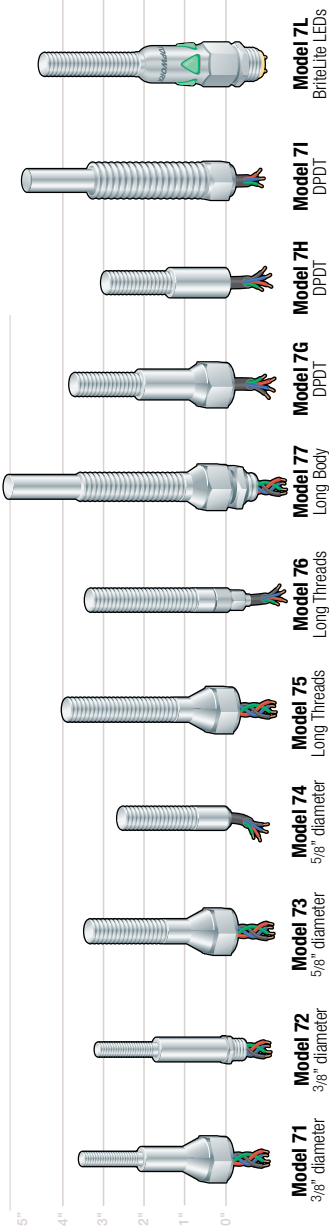
## Model 7L

**Features**
- Single Pole Double Throw (SPDT) 0.25A/120VAC, 0.25A/24VDC
- AC/DC, NO/NC Wiring Flexibility
- -40ºF to 160ºF (-40ºC to 71ºC) operating temperature
- 0.100" (2.5mm) Sensing Distance (Ferrous metal)
- End Sensing
- Stainless Steel 316 Housing
- Palladium Silver Contacts

**Options**
- Lead Wires or Cables
- Quick Disconnects – Mini or Micro
- 5/8" thread
- CSA/UL Hazardous Area Approvals

✓ Most popular options

**Model 71** 3/8" diameter
**Model 72** 3/8" diameter
**Model 73** 5/8" diameter
**Model 74** 5/8" diameter
**Model 75** Long Threads
**Model 76** Long Threads
**Model 77** Long Body
**Model 7G** DPDT
**Model 7H** DPDT
**Model 7I** DPDT
**Model 7L** BriteLite LEDs

## Model

**71** 3/8" x 3 15/16" - 1/2" NPT conduit
**71M** 12M x 100mm - 1/2" NPT conduit
✓**72** 3/8" x 3 3/8" - No conduit
**72M** 12M x 86mm - No conduit
**73** 5/8" x 3 5/8" - 1/2 NPT conduit
**73M** 18M x 92mm - 1/2" NPT conduit
**74** 5/8" x 2 3/4" - No conduit
**74M** 18M x 70mm - No conduit
**75** 5/8" x 4 5/16" - 1/2" NPT conduit
**75M** 18M x 110mm - 1/2" NPT conduit
**76** 5/8" x 3 3/16" - No conduit
**76M** 18M x 81mm - No conduit hub
**77** 3/4" x 5 13/16" - 1/2" NPT conduit
**7G** 5/8" x 4" - 1/2" NPT conduit
**7GM** 18M x 102mm - 1/2" NPT conduit
**7H** 5/8" x 3 1/4" - No conduit
**71** 1" x 5 5/8" - 1/2" NPT conduit
**7LG** 5/8" x 4 3/4" - 1/2" NPT conduit
**7LR** 5/8" x 4 3/4" - 1/2" NPT conduit

**Ordering Guide**
Fill in each box to create
a complete model number.

## Contact Form

✓**1** Single Pole Double Throw (Form C)
**2** Double Pole Double Throw (Form CC) (Model 7G, 7H only)

## Sensing Range

✓**3** Standard sensing - .100" end sensing (Models 73-77, 7L; Enclosure 2 or 6 only)

Standard sensing - .090" end sensing (Models 7G-7H; Enclosure 2 or 6 only)
**4** .072" end sensing (Models 73-77; Enclosure 3 or 7 only) (Approvals 2, 7, or 8 only) (Approval 3 if enclosure is 7)
**5** .060" end sensing (Models 73-77 only; Enclosure 4; Approvals 2, 7, or 8 only)
**6** .040" end sensing (Models 71 & 72 only)

## Outlet Position

✓**5** Bottom of enclosure

## Enclosure Materials

✓**2** 303 stainless steel (rated 2,000 psi) (Sensing 3 or 6 only)
**3** HiPressure - 303 stainless steel (rated 5,000psi) (Models 73-77; Sensing4)
**4** HiPressure - 303 stainless steel (rated 10,000 psi) (Models 73-77; Sensing 5; Approval 2, 7, 8 only)
**6** 316 stainless steel (rated 2,000 psi)
**7** HiPressure - 303 stainless steel (rated 3,500psi) (Models 73, 75, 77; Sensing 4; Approval 3 only)

## Approvals

**2** HiTemp to 400°F (Wiring must be F)
**3** UL Cl I Div 1 & 2 Groups A-D; Cl II Div 1 & 2, Groups E-G (Models 71, 73, 75, 77 & 7G) (Wiring A, B, or F) (Lead seal req'd within 18")
✓**4** CSA Cl I Div 1 Groups A-D; Cl II Div 1, Groups E-G; Cl III (Models 71, 73, 75, 77 & 7G) (Wiring A, B, or F) (Lead seal req'd within 18")
**6** CSA Cl I, Div 2 Groups A-D; Cl II, Div 2 Groups E-G; Cl III (Models 71, 73, 75, 77 & 7G) (Wiring A, B, or F) (Lead seal req'd within 18")
**7** CSA General Purpose
**8** UL General Purpose
**9** ATEX/IEC Ex Zone 1 Ex d IIC, Ex tD; A21; IP66 T85C (-20C to +50C) (Model 73, 75, 77, 7G & 7I) (Wiring H for HiTemp to +150C)
**T** ATEX/IEC Ex Zone 1 Ex d IIC, Ex tD; A21; IP66 T85C (-20C to +50C) (Hermetically Sealed) (Model 73 & 7G-1 only) (Wiring H for HiTemp to +150C)
**F** ATEX/IEC Ex Zone 0Ex ia IIC T6 Ga Ex iD IIIC T85C Da (Tamb = -20C to +50C) (Hermetically sealed) (Model 73 & 7G-1 only)
**G** ATEX/IEC Ex Zone 0, Ex ia IIC T4 Ga, Ex iD IIIC T135C Da (-20C to +100C) (Hermetically Sealed) (Model 73 & 7G-1 only; Wiring must be H)
**H** ATEX/IEC Ex Zone 0, Ex ia IIC T3 Ga (-20C to +150C) (Hermetically Sealed). (Model 73 & 7G-1 only; Wiring must be H)
**L** INMETRO BR-Ex d Gb, BR-Ex tD A21 T85C (-20C to +50C) (Hermetically sealed, Model 73 & 7G-1 only) (Wiring H for HiTemp to +150C)
**M** INMETRO BR-Ex d Gb, BR-Ex tD A21 T850C (-20C to +50C) (Models 73, 75, 77, 7G & 7I) (Wiring H for HiTemp to +150C)
**N** NEPSI Ex d IIC T3/T6 (Model 73 only) (Wiring H for HiTemp to +150C)

*** Note: Lead seal not req'd for hermetically sealed contacts (Contact Form 1).

## Wiring Options

✓**Lead Wires** - 18 Gauge (DPDT = 20 gauge)
**A2** 36"
**A3** 72"
**A4** 144"
**A___** Greater than 144" - specify length in 5ft. increments

**Cable** - 18 Gauge (DPDT = 22 guage)
**B2** 36"
**B3** 72"
**B4** 144"
**B___** Greater than 144" - specify length in 5ft. increments

**Water Resistant Squeeze Connector** (Models 72, 74, 76 only)
(Approval 7 or 8 only)
**C2** 36"
**C3** 72"
**C4** 144"
**C___** Greater than 144" - specify length in 5ft. increments

**Mini Change Connector** (Models 71, 73, 75, 77, 7G only)
(Approval 7 or 8 only; 3 pin is 8 only)
**DCA** 3 pin
**DCD** 4 pin
**DCG** 5 pin
**DCH** 7 pin (7G only)

**Micro Change Connector** (Models 72, 74, 76)
(Approval 7 or 8 only; 3 pin is 8 only)
**DBA** 3 pin
**DBD** 4 pin

**SubSea Connector** (Models 73, 75, 77) (Approval 7 or 8 only; 3 pin is 8 only)
**3DD** 3 pin
**4DD** 4 pin
**8DD** 8 pin (7G only)
**3DE** 3 pin 90°
**4DE** 4 pin 90°

**Hi-Temp™ Leads** (Teflon insulated) 18 Gauge (DPDT = 20 gauge)
**F2** 36"
**F3** 72"
**F4** 144"
**F___** Greater than 144" - specify length in 5ft. Increments

**Hi-Temp™ Leads** (Peek insulated) (Models 71-77)
**H2** 36"
**K3** 72"
**H4** 144"
**H___** Greater than 144" - specify length in 5ft. Increments

| Model | Contact Form | Sensing Range | Outlet Position | Enclosure Materials | Approvals | Wiring Options |
|---|---|---|---|---|---|---|
| | | | | | | |

## DISCRETE VALVE CONTROL SENSORS

35 Series GO™ Switches have set the standard for reliable performance in valve monitors.

With hermetically sealed contacts, low hysteresis, and superior resistance to vibration, moisture, contaminants, and temperature extremes, the 35 Series clearly outperforms any other valve monitoring switch or sensor available. When ordering valve position monitors and switchboxes, be sure to specify **GO Switch.**

### Features
- AC/DC, NO/NC flexibility
- Intrinsically safe
- Hermetically sealed contacts

### Options
- SPDT rated 4A/120VAC and 3A/24VDC (Copper coated with flat black lacquer)
- DPDT rated 4A/120VAC and 3A/24 VDC (Stainless steel housing)



**GO SWITCHES FOR TOPWORX™ VALVE CONTROLLERS**
Hermetically Sealed
DPDT Contacts
Stainless Steel Housing

## HYDRAULIC/PNEUMATIC CYLINDER END-OF-STROKE SENSORS

Stroke-To-GO cylinder proximity sensors 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 (206 bars) operating (tested to UL's 4X burst requirement) while withstanding the extreme external conditions such as weld slag, coolants, cutting fluids, physical abuse and even high temperatures. Stroke-to-GO incorporates the same 70 Series GO Switch mechanism that has been proven in the field in the most rigorous applications. This unique design offers the greatest benefits in cylinder position end-of-stroke indication.

### Features
- SPST or SPDT contacts
- AC/DC, NO/NC flexibility
- Stainless steel housings
- 3,000 psi (206 bars) operating pressure
- -58°F to 221°F (-50°C to 105°C) operating temperature
- 360° adjustable

### Options
- -58°F to 400°F (-50°C to 204°C) high temperature
- Quick disconnect connector
- Underwater capabilities
- LED indication





| 7C | 7D | 7E | 7F |
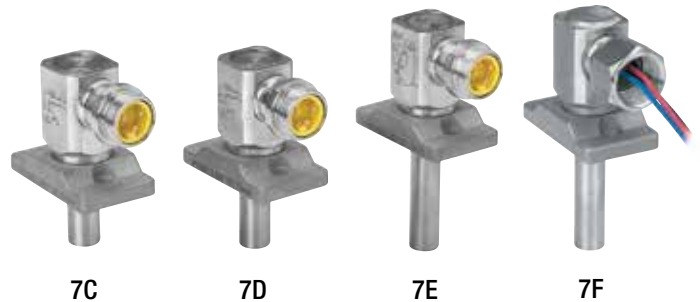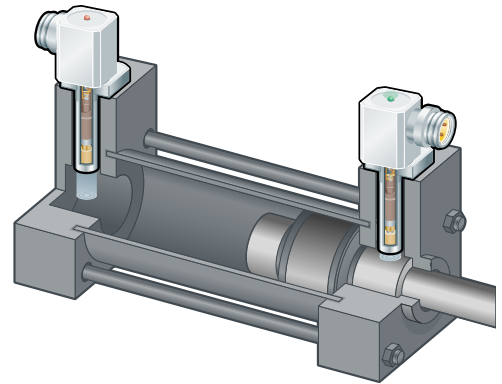
# GO™ SWITCH SPECIALTY SENSORS
## Sensing Solutions for Process and Factory Automation

### HIGH TEMPERATURE SENSORS

GO™ Switch HiTemp™ sensors are rated for continuous operation in temperatures up to 204°C/400°F. This proves especially useful in steam turbines as well as other high heat applications such as driers, boilers, aluminum die-casting, steel processing and valve position monitoring on steam valves.



### PNEUMATIC VALVE

GO Switch Model 7A is a pneumatic valve designed to work with a 60 PSI air pilot signal.  Incorporating the same GO Switch technology found in our popular model 70 series GO Switches, the 7A offers reliable pneumatic control in air logic systems.  The 7A uses three permanent magnets and a push-pull plunger assembly to control a poppet. The switch operates with a snap-action response and low hysteresis, providing precision airline switching. This unique technology allows for non-contact detection of ferrous metal and magnetic targets to switch from the outlet port to the exhaust port.

**Features**
- 3-port design (P = Supply, A =  Outlet Port, E = Exhaust)
- .062" (1.5mm) Sensing distance (Ferrous metal)
- -40°F to 221°F (-40°C to 105°C) operating temperature
- Intrinsically safe
- Operates small cylinders
- 60 PSI (4 bars) max air supply
- 3.5 SCFM nominal flow rate



### 70 SERIES JUNCTION HEAD

GO Switch models 71, 73, 75, 77, 7G, and 7I are available with a junction head option.  The junction head carries an ATEX/IECEx 'e' coding.  Combined with the GO Switch's ATEX/IECEx 'd' coding, the complete GO Switch, junction head assembly carries an Ex 'de' coding.  The Ex 'de' coding gives the GO Switch, junction head assembly an increased safety rating helping to reduce installation costs in Zone 1 hazardous areas.  This option allows for termination directly into the switch.

**Features**
- Light-weight aluminum and stainless steel junction heads
- -40°F to 212°F (-40°C to 100°C) operating temperature
- Intrinsically safe
- Zone 1, Ex 'de'



### SUBMERSIBLE SENSORS

GO™ Switch submersible sensors are submersible up to depths of 7,010m/23,000ft and offer trouble-free position sensing in applications such as offshore oil platforms, lock and dam gates, ships and vessels, pin placement detection, wastewater rendering areas, bilge level, high pressure washdown, draw bridges and subsea valve position monitoring.

# GO™ SWITCH POWER PLANT SOLUTIONS
## Sensing Solutions for the Power Generation Industry

GO Switches are the ideal solution for troublesome mechanical limit switch applications in power plants, including coal and ash handling equipment, soot blowers and wall blowers, dampers, igniters, feedwater heaters, hopper valves, water demineralization valves, and scrubber valves.

### DEFENDER™ TURBINE TRIP MONITORS

In the power generation industry, reliability is a must. This is especially true when it comes to turbine control valves. But one of the more common difficulties in power plants is the typical limit switch arrangement on throttle, governor, intercept, and reheat stop valves. Conventional limit switches in this application are notorious for failing due to heat and physical abuse, and for falling out of tolerance and requiring readjustment.

The Defender provides dependable monitoring of throttle, governor, intercept, and reheat stop valves.

It is a self-contained, pre-wired system packed with up to ten GO™ Switches and is a drop-in replacement for existing limit switches on Westinghouse valves, and is easily adaptable to valves from General Electric and others.

#### Features
° Easy switch setting
° Switches rated to 400°F/204°C
° Mil spec quick disconnect
° Heavy duty 11 Guage Steel (12''x10''x5'')

### TOPWORX™ GO NUCLEAR QUALIFIED SENSORS

GO Switch Nuclear Globally Qualified Sensors are designed for maximum, long-life dependability in Containment LOCA, Containment Non-LOCA (Harsh Duty), and Mild Duty applications. Unique and robust, the GO Switch is a "Set and Forget" sensor that will replace and exceed the operation and reliability of lever arm mechanical switches in Nuclear and Commercial applications.

#### Advantages of GO Switch Nuclear Qualified Sensors
° By far the highest, most up to date environmental qualifications for qualified life, temperature, pressure, seismic and radiation
° Direct replacement for most mechanical switch applications – Contact output N/O N/C AC or DC
° No physical contact is required
° Only one internal moving part
° No lever arm to adjust
° Not affected by most caustics or chemicals
° Water-proof/submersible options
° Explosion-proof options
° Not influenced by RFI and EMC



TURBINE TRIP MONITOR SWITCH SYSTEM



C8

C7

SV7/H7/M7

# QUICK DISCONNECTS & CORDSETS

Quality-engineered connectors and cordsets make installation and maintenance a snap. Standard designs are shown, with custom connectors available on special order. Refer to the Wiring Options portion of each GO Switch Ordering Guide for detailed information.

### MICRO CHANGE™ QUICK DISCONNECT
22 gauge (3 pin .23" dia.; 4 pin .25 dia.; 5 pin .26 dia.) molded PVC anodized aluminum shell rated 221°F (105°C) 300V

Available on all GO Switches

### MINI CHANGE™ QUICK DISCONNECT
16 gauge (3 pin .41" dia.; 4 pin .44" dia.; 5 pin .52" dia.; 7 pin .54 dia.) molded PVC anodized aluminum shell rated 221°F (105°C) 600V

Available on most GO Switches

### WATER RESISTANT SQUEEZE CONNECTOR
Stainless steel water resistant strain relief. Approx. 1" (25 mm) in length.

Available on GO Switch
Models 72, 74, 76, 7C, 7D, 7E and 7F

### HIGH PRESSURE SUBSEA QUICK DISCONNECT
Molded NeopreneTM Quick Disconnect with DelrinTM lock-sleeves. Provides water-tight seal, safety and quick change-out. Overall length of connector is 2.9" (74 mm) X 1.23" (31 mm) dia.

Available on 10, 20, 70, 80 Series and Stroke to GO Switches

### HIGH PRESSURE RIGHT ANGLE SUBSEA QUICK DISCONNECT
Overall length of connector is 2.85" (72 mm) X .65" (17 mm).

Available on 10, 20, 70, and 80 Series GO Switches

Standard mounting brackets are available to cover most GO Switch installations. They are designed to provide secure installation without interfering with the operation of the switch.

**HEAVY DUTY MOUNTING BRACKET**
Side mount bracket for 10 Series GO Switches

**UNIVERSAL MOUNTING BRACKET FOR 10/20 SERIES**
Universal mounting bracket for 10 Series and 20 Series GO Switches

**COMBINATION COVER PLATE AND MOUNTING BRACKET**
Bottom mount for 10 or 20 Series GO Switches

**UNIVERSAL MOUNTING BRACKET FOR 80 SERIES**
Side mount bracket adapts 80 Series GO Switches for rotary valve position indication

**STRAP BRACKET**
Strap brackets for 30 Series GO Switches

**HEAVY DUTY "L" MOUNTING BRACKET**
"L" bracket for 70 Series Model 73, 74, 75, 76 & 7G GO Switches

**COVER PLATES**
Cover plate for 10 and 20 Series GO Switches. Bottom mount cover plate/conduit for 10 and 20 Series GO Switches. Furnished with gasket and screws

**JAM NUTS**
Nickel plated brass jam nuts for 70 Series GO Switches

**PARKER SEAL NUT AND WASHER**
ThredSeal Kits for 70 Series GO Switches. Zinc plated steel with nitrile rubber (standard) or Viton (hi-temp or hydraulic fluids detergent) washer

**SEALANT TAPE**
Grafoil sealant tape for 70 Series GO Switches. Forms a leak-tight temperature stable joint. Recommended for high pressure and/or high temperature

# TARGET MAGNETS
## Increase the Sensing Range of GO Switches

Standard magnets are available to increase the sensing distance of any GO Switch model. This feature gives the customer the flexibility of using the magnet as the target and increasing the sensing distance up to 10 times that of ferrous metal targets.

### AMP3 MAGNET/RESIN COVER
AMC3 magnet in plastic molded bracket with mounting holes. 7/8" (22 mm) x 29/16" (65 mm) x 17/32" (13 mm) thick with 7/32" (6 mm) holes.

For all GO Switches

### AMS7 MAGNET/STAINLESS
Magnet assembly. 2" (50 mm) x 1/2" (13mm) 7/16-20 UNC threads.

For 70 Series GO Switches

### AMS4 MAGNET/STAINLESS COVER
AMC4 magnet molded into stainless steel cover, with mounting holes. 11/4" (32 mm) x 17/16" (37 mm) x 1" (25 mm) thick with 3/16" (5 mm) holes.

For all GO Switches

### AMS12 MAGNET
Magnet assembly. 2 3/5" (66mm) x 7/8" (22mm) 7/16-20 UNF threads.

For 70 Series GO Switches
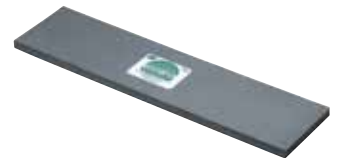
### AMC5 MAGNET/STAINLESS COVER
AMC1 magnet molded into stainless cover with mounting holes. 7/8" (22 mm) x 29/16" (65 mm) x 17/32" (13 mm) thick with 7/32" (6 mm) holes.

For all square GO Switches

### AMF6 MAGNET (MACHINABLE)
Flexible sensing amplifier/external magnet. 3" (76 mm) x 12" (305 mm) x 3/8" (10 mm) thick.

For all square GO Switches

| Model | Ferrous Metal Sensing Distance | AMP3 Sensing Distance | AMS4 Sensing Distance | AMF6 Sensing Distance | AMC5 Sensing Distance | AMS7 Sensing Distance | AMS12 Sensing Distance |
|---|---|---|---|---|---|---|---|
| 11 | 10mm (3/8'') | 25mm (1") | 32mm (1-1/4") | 62mm (2-7/16") | 86mm (3-5/8") | - | - |
| 21 | 10mm (3/8'') | 25mm (1") | 35mm (1-3/8") | 62mm (2-7/16") | 86mm (3-3/8") | - | - |
| 31 | 6mm (1/4") | 19mm (3/4") | 25mm (1") | 41mm (1-5/8") | 67mm (2-5/8") | - | - |
| 71 | 1mm (.040") | 3mm (.120") | 4mm (.150") | - | - | 3mm (.130") | 11mm (7/16") |
| 72 | 1mm (.040") | 3mm (.120") | 4mm (.150") | - | - | 3mm (.130") | 11mm (7/16") |
| 73 | 2.5mm (.100") | 5mm (.200") | 9mm (.350") | - | - | 5mm (.200") | 13mm (1/2") |
| 74 | 2.5mm (.100") | 5mm (.200") | 9mm (.350") | - | - | 5mm (.200") | 13mm (1/2") |
| 75 | 2.5mm (.100") | 5mm (.200") | 9mm (.350") | - | - | 5mm (.200") | 13mm (1/2") |
| 76 | 2.5mm (.100") | 5mm (.200") | 9mm (.350") | - | - | 5mm (.200") | 13mm (1/2") |
| 77 | 2.5mm (.100") | 5mm (.200") | 9mm (.350") | - | - | 5mm (.200") | 13mm (1/2") |
| 7G | 2mm (.090") | 4mm (.150") | 5mm (.200") | - | - | 4mm (.150") | 13mm (1/2") |
| 7H | 2mm (.090") | 4mm (.150") | 5mm (.200") | - | - | 4mm (.150") | 13mm (1/2") |
| 7I | 2mm (.090") | 4mm (.150") | 5mm (.200") | - | - | 4mm (.150") | 13mm (1/2") |
| 7L | 2.5 (.100") | 5mm (.200") | 9mm (.350") | - | - | 5mm (.200") | 13mm (1/2") |
| 81 | 6mm (1/4") | 24mm (15/16") | 35mm (1-3/8") | 70mm (2-34") | 98mm (3-7/8") | - | - |

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**About Emerson Process Management**
Emerson Process Management is a powerful, global, single source of process improvement technology and expertise. We help major companies in selected industries optimize their plants and processes to achieve higher quality, greater reliability and faster time to market, while steadily advancing productivity and profitability. We can build it - providing experienced project management, engineering and a single point of accountability for the entire instrumentation and automation system. We can connect it -- seamlessly integrating people and technology at every level of the process. We can improve it -- creating more efficient utilization of energy and raw materials. And we can sustain it -- producing greater reliability, month after month, year after year. From the field, to the plant, to the bottom line -- where performance is the question, Emerson is the answer.

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