



# electrical catalog 9016

## Hazardous Location Electrical Products



### Innovative Global Explosion Protection by R. STAHL

R. STAHL, INC.

9016

HAZARDOUS LOCATION ELECTRICAL PRODUCTS

# ConSig 8040 Series

CONTROL & SIGNALING STATIONS



CONTROLS

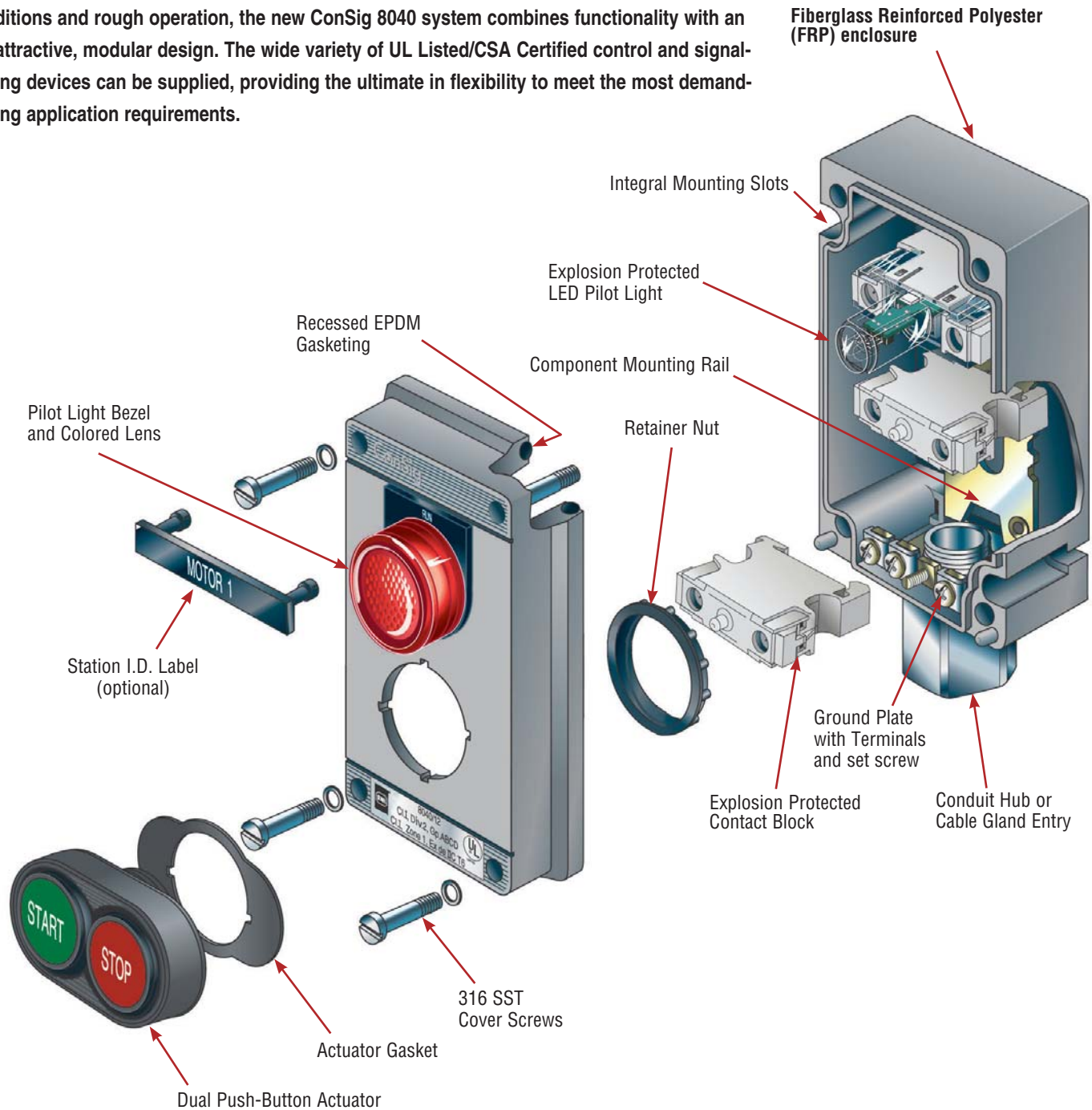
STAHL

## 8040 Features:

- Attractive space efficient design.
- A variety of enclosure sizes made of Fiberglass Reinforced Polyester (FRP).
- Snap-on mounting of individual components.
- High illumination LED pilot light from 12V to 254V, AC or DC with an operating life time over 100,000 hours.
- A variety of pushbuttons.
- Control switches.
- Illuminated pushbutton.
- Durable EPDM enclosure gaskets are concealed to protect from damage or premature aging by UV light and chemicals.
- Fluorsilicate gasket in standard pushbutton actuators is suitable for a wide temperature range.

# ConSig "PUTS YOU IN CONTROL"

R. STAHL is setting new standards for function, design and technology with the new ConSig 8040 Series of control and signaling stations. Designed for complex industrial conditions and rough operation, the new ConSig 8040 system combines functionality with an attractive, modular design. The wide variety of UL Listed/CSA Certified control and signaling devices can be supplied, providing the ultimate in flexibility to meet the most demanding application requirements.



The ConSig 8040 Series is a new generation of control and signaling stations utilizing explosion protected components with non-metallic enclosures for the ultimate flexibility, safety and durability in Hazardous (Classified) and Hostile (Corrosive) Locations.

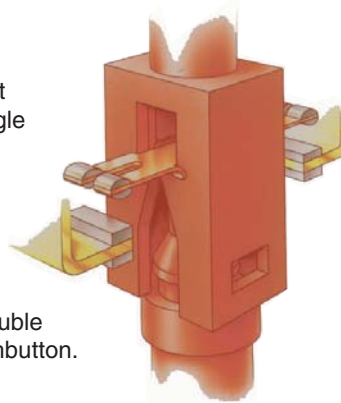
This control and signaling station utilizes snap-on mounted components making field assembly quick and easy. Components include contact blocks with a variety of actuator options, LED pilot lights in all of the standard colors and voltages from 12V to 254V AC/DC, 2-pole and 4-pole control switches configurations and direct or indirect reading ammeters.

### Enclosures

ConSig 8040 Series can be specified as one, two or three gang configurations and is made of Fiberglass Reinforced Polyester (FRP). Enclosure gasketing is durable EPDM which is concealed to protect it from premature aging by UV light and chemical elements. Components snap-on to the rail provided.

### Contact Blocks

The contact system incorporates 8082 Series contact blocks which are individually explosion protected single pole units and are available as 1 N.O. or 1 N.C. The contact blocks incorporate a parallel bridge contact (H-contact) designed to ensure utmost contact reliability even with very low control voltages and currents. Any combination can be installed to provide a complete range of control configurations. Standard actuator styles include a double push-button, booted pushbutton and illuminated pushbutton.



### LED Pilot Lights

ConSig 8040 Series introduces an extraordinary compact LED pilot light unit. The 8010 Series pilot light incorporates electronics which allow the same unit to operate at any voltage from 12 to 254 Volts, DC to 60 Hz. High output LEDs are used to provide superior illumination levels which are visible in direct sunlight from the front or side. The bezel is clear and the snap-on lenses are added in the colors Red, Green, Amber, White and Blue!

### Control Switches

8008 Series control switches offer over 300 different switching configurations. They are available as 2-pole and 4-pole units incorporating maintained or spring return action. The control switch is for quick and easy snap-on mounting. Three styles of handles, with or without padlocking provision can be used in conjunction with the switches.

### Illuminated Push-Buttons

Illuminated push-buttons make it possible to have control and signaling functions in the space of one. This is achieved by combining the 8082 Series Contact Blocks and 8010 Series LED Pilot Lights under a special illuminated pushbutton actuator which is spring return with a clear bezel and five colored snap-in filter disks in Red, Green, Amber, White and Blue.


### Ammeters

ConSig 8040 Series offers a cost effective ammeter station as a solution for applications in a Hazardous (Classified) Location. The 8405 Series ammeter is a moving iron core instrument available in direct or indirect read versions. A manually adjustable red pointer provides quick and easy comparison of the actual circuit operation. The ammeter is for quick and easy snap-on mounting.



### CLASSIFICATIONS

NEC- Class I, Zones 1 & 2 AEx de IIC T6  
Class I, Division 2, Groups A,B,C,D  
Class II, Division 2, Groups F,G  
Class III  
Enclosure Type 3,4 & 4X; IP66

 FILE No. E182378

CEC- Class I, Zones 1 & 2 Ex de IIC T6  
Class I, Division 2, Groups A,B,C,D  
Class II, Divisions 1 & 2, Groups E,F,G  
Class III

 CSA ENCLOSURES 3, 4 & 4X; IP66  
CERTIFIED - FILE No. LR99480

 II 2 G Ex de IIC T6  
II 2 D Ex tD A21 IP66 T80°C  
PTB 01 ATEX 1105

### IECEx

Ex de IIC T6  
Ex tD A21 IP66 T80°C  
IECEx PTB 06.0025

Ambient Temperature Range:  
+40°C (+104°F) Max.  
-20°C (-4°F) Min.

Special Ambient Temperature Range:  
\*Consult Factory



PRE-CONFIGURED CONTROL STATIONS

**STAHL**

**Ordering Information**

FUNCTION	CONTACT SYMBOL		CATALOG NUMBER
	IEC	NEMA	
"START" Green Momentary Pushbutton, 1 NO			8040/114 - X011
"STOP" RED Momentary Pushbutton, 1NC			8040/114 - Y012
"E-STOP" SMALL RED Maintained Mushroom, 1 NC			8040/114 - Y100
"E-STOP" JUMBO RED Maintained Pushbutton, 1 NC			8040/114 - Y150
"E-STOP" Keyed Maintained Red Mushroom, 1 NC			8040/114 - Y090
"OFF - ON" Selector Switch 2-Position/10 Amps			8040/114 - 02MN1
"LOCAL REMOTE" Selector Switch 2-Positions/10 Amps			8040/114 - U2MN4
"Hand - 0 - Auto" Maintained Selector Switch 3-Positions/10 Amps			8040/114 - 03MMN3
"START-STOP" Double PB Momentary 1 NO / 1 NC			8040/114 - U2312
"PILOT LIGHT" RED LED 12V-254V AC / DC			8040/114 - PLR0
"PILOT LIGHT" GREEN LED 12V-254V AC / DC			8040/114 - PLG0

All above stations include one 3/4" hub bottom.



## PRE-CONFIGURED CONTROL STATIONS

### Ordering Information

FUNCTION			CONTACT SYMBOL		CATALOG NUMBER
①	②	③	IEC	NEMA	
RED LED Pilot Light 12V-254V AC / DC	---	---			8040/124 - PLR0
"START" Green Momentary Pushbutton 1 NO / 1 NC	---	---			8040/124 - U011
"E-STOP" RED JUMBO Mushroom Maintained 2 NC	---	---			8040/124 - C150
"OFF - ON" Maintained Control Switch 2-Pos./2-Pole 10 amps	---	---			8040/124 - N021
RED LED Pilot Light 12V-254V AC / DC	"OFF-ON" Maintained Control Switch 2-Pos./2-Pole 10 amps	---			8040/224 - PLR0-N021
"H - O - A" Maintained Control Switch 3-Pos./2-Pole 10 amps	---	---			8040/124 - N273
"LOCAL REMOTE" Control Switch 2-Positions 10 amps	---	---			8040/124 - N164
"STOP-RUN START" Control Switch 3-Pos./2-Pole Spring Return From Right 10 amps	---	---			8040/124 - N385
"START" Momentary Green Pushbutton 1 NO / 1 NC	"STOP" Momentary Red Pushbutton 1 NO / 1 NC	---			8040/224 - U011-U012
RED LED Pilot Light 12V- 254V AC / DC	"START-STOP" Double PB Momentary 1 NO / 1 NC	---			8040/224 - PLR0-U2312
RED LED Pilot Light 12V-254V AC / DC	"Start" Green Momentary Pushbutton 1 NO / 1 NC	"STOP" Red Momentary Pushbutton 1 NO / 1 NC			8040/3 34 - PLR0-U011-U012

All above stations include one 3/4" hub bottom.







## CUSTOM CONFIGURATION LOGIC

### Start Here

#### CLASSIFICATIONS

**NEC-** Class I, Zones 1 & 2 AEx de IIC T6  
 Class I, Division 2, Groups A,B,C,D  
 Class II, Division 2, Groups F,G  
 Class III  
 Enclosure Type 3, 4 & 4X; IP66  
 LISTED FILE No. E182378

**CEC-** Class I, Zones 1 & 2 Ex de IIC T6  
 Class I, Division 2, Groups A,B,C,D  
 Class II, Divisions 1 & 2, Groups E,F,G  
 Class III  
 CSA ENCLOSURES 3, 4 & 4X; IP66  
 CERTIFIED - FILE No. LR99480

 See page F10

IECEx See page F10

**HOUSING MATERIAL AND GASKETING**  
 Fiberglass Reinforced Polyester (FRP)  
 with EPDM recessed gasketing.

#### FEATURES

The ConSig 8040 Series of control & signaling stations with its many enclosure sizes and components is uniquely flexible. If the preconfigured control stations on pages F11 and F12 do not meet your specific application needs, take advantage of the flexibility of ConSig 8040 and use the custom configuration logic tables on the right to custom configure a control station which can exactly meet your particular application.

#### How to use configuration logic tables:

Fill in the blanks in the light blue striped fields located on the top of pages F13 and F14 left to right from information stated below the individual fields.

**Step 1:** Select enclosure size

**Step 2:** Select entry or entries











**Step 3:** Select the device mounted to the cover as well as the device mounted into the back box.

**Step 4:** Repeat step 3 when configuring a two-gang station.

**Step 5:** Repeat step 3 when configuring a three-gang station.

#### DIMENSIONS

For dimensional data see page F23.

ConSig	Enclosure	
Control Station 8040 /	Enclosure Size ( ___ )	Entry or Entries ( ___ )
	 <b>11</b> 1-device Compact	<b>Entry Type:</b> <b>Conduit Hub</b> <b>0</b> = 1/2" Hub Top Feed <b>1</b> = 1/2" Hub Bottom Feed <b>2</b> = 1/2" Hub Feed-Thru <b>3</b> = 3/4" Hub Top Feed <b>4</b> = 3/4" Hub Bottom Feed <b>5</b> = 3/4" Hub Feed-Thru  <b>Compression Gland - FOR IECEx or ATEX</b> <b>6</b> = M25 Gland Top Feed <b>7</b> = M25 Gland Bottom Feed <b>8</b> = M25 Gland Feed-Thru <b>9</b> = Special  <b>Threaded Opening - In Internal Ground Plate</b> <b>A</b> = 1/2" NPT plate Top Feed <b>B</b> = 1/2" NPT plate Bottom Feed <b>C</b> = 1/2" NPT plate Feed-Through <b>D</b> = 3/4" NPT plate Top Feed <b>E</b> = 3/4" NPT plate Bottom Feed <b>F</b> = 3/4" NPT plate Feed-Through <b>G</b> = 1/2" NPT plug Feed-Through <b>H</b> = 3/4" NPT plug Feed-Through <b>L</b> = M20 Plate Bottom Feed <b>M</b> = M25 Plate Bottom Feed  <b>Other Special Entries</b> <b>Non-Metallic Cable Glands</b> <b>J</b> = M20 Gland Bottom Feed <b>K</b> = M20 Gland Feed-Through  <b>Metal Clad Cable Connectors</b> <b>Q</b> = TMC050 Bottom Feed <b>V</b> = TMC075 Bottom Feed  <b>8040 Control Station Coupling</b> <b>Z</b> = Coupling Frame Bottom
	 <b>12</b> 1-device Expanded	
	 <b>22</b> 2-device	
	 <b>64</b> 2-device Expanded	
	 <b>33</b> 3-device	
	 <b>42</b> Ammeter	
	 <b>54</b> Ammeter plus 1-device	
	 <b>73</b> One 4 Pole switch Deep	
	 <b>84</b> Two 4 Pole switch Deep	
	 <b>94</b> Ammeter 1- 4 Pole switch Deep	



### CUSTOM CONFIGURATION LOGIC

Device Specification (1, 2 or 3 devices described from top to bottom)		
First or only position (_____)	Second position (_____)	Third position (_____)

PUSHBUTTONS		
<b>Contact type</b> <b>X</b> = 1 N.O. <b>Y</b> = 1 N.C. <b>U</b> = 1 N.O./ 1 N.C. <b>O</b> = 2 N.O. <b>C</b> = 2 N.C. <b>M</b> = 2 N.C./ 1 N.O. <b>W</b> = 1 N.C./ 2 N.O. <b>T</b> = 3 N.C. <b>R</b> = 3 N.O. <b>D</b> = 2 N.O./ 2 N.C. only with actuator 23 in enclosures 12, 54 & 64	<b>Actuator type</b> <b>01</b> = Standard Momentary <b>02</b> = Booted Momentary <b>03</b> = Black Momentary small Mushroom <b>09</b> = Keyed E-STOP Red Mushroom Maintained <b>10</b> = E-STOP Red small Mushroom Maintained <b>12</b> = Black small Mushroom Maintained <b>15</b> = Emergency STOP Red Jumbo Mushroom Maint. <b>23</b> = Double Pushbutton Momentary <b>P733</b> = Device Close-up Plug	<b>Legend</b> <b>0</b> = none <b>1</b> = START <b>2</b> = STOP <b>3</b> = ON <b>4</b> = OFF <b>5</b> = RUN <b>6</b> = RESET <b>7</b> = OPEN <b>8</b> = CLOSE <b>9</b> = special (specify from F22)

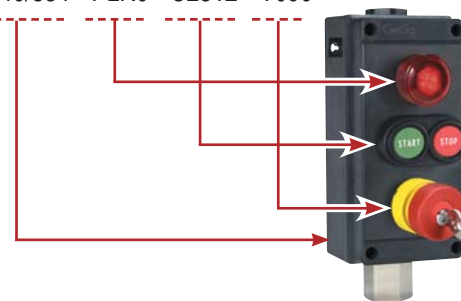
SELECTOR SWITCHES				
<b>X</b> = 1 N.O. <b>Y</b> = 1 N.C. <b>U</b> = 1 N.O./ 1 N.C. <b>O</b> = 2 N.O. <b>C</b> = 2 N.C.	<b>2SK</b> <b>2MK</b> <b>3SSK</b> <b>3MMK</b> <b>3SMK</b> <b>3MSK</b>	<b>2SN</b> <b>2MN</b> <b>3SSN</b> <b>3MMN</b> <b>3SMN</b> <b>3MSN</b>	<b>2SL</b> <b>2ML</b> <b>3SSL</b> <b>3MML</b> <b>3SML</b> <b>3MSL</b>	<b>Note:</b> For Actuator Descriptions see page F16

PILOT LIGHTS		
<b>PL</b>	<b>Color</b> <b>A</b> = amber <b>B</b> = blue <b>G</b> = green <b>R</b> = red <b>W</b> = white	<b>Legend</b> Same # as pushbutton

CONTROL SWITCHES		
<b>Actuator type</b> <b>N</b> = Non-lockable <b>S</b> = Small-lockable <b>L</b> = Large lockable	<b>Switch arrangements 2 pole</b> <b>02</b> = 2-pos. Maintained (OFF-ON) <b>05</b> = 2-pos. Maintained (ON-OFF) <b>16</b> = 2-pos. Maintained (LOCAL-REMOTE) <b>27</b> = 3-pos. Maintained (HAND-O-AUTO) <b>38</b> = 3-pos. Maint., Spring Return from Right (OFF-RUN-START) <b>Switch arrangements 4 pole</b> <b>102</b> = 2-pos. OFF-ON <b>106</b> = 2-pos. LOCAL-REMOTE <b>119</b> = 3-pos. HOA only for deep enclosures 73, 84 & 94 For more switching arrangements see pgs. F19 and F20.	<b>Legend</b> <b>0</b> = none <b>1</b> = OFF-ON <b>2</b> = ON-OFF <b>3</b> = HAND-O-AUTO <b>4</b> = LOCAL-REMOTE <b>5</b> = STOP-RUN-START <b>6</b> = O - I <b>7</b> = blank one line text <b>8</b> = blank two lines text <b>9</b> = special (specify)

ILLUMINATED PUSHBUTTONS			
<b>Spring Return</b> <b>SR</b> = <b>SG</b> = <b>SA</b> = <b>SW</b> = <b>SB</b> =	<b>Colors</b> red green amber white blue	<b>Contact type</b> <b>X</b> = 1 N.O. <b>Y</b> = 1 N.C. <b>U</b> = 1 N.O. / 1 N.C. <b>O</b> = 2 N.O. <b>C</b> = 2 N.C.	<b>Legend</b> Same # as pushbuttons

**Example**  
8040/334 - PLR0 - U2312 - Y090



PUSHBUTTON LOCKOUTS/GUARDS
<b>LK01</b> = Momentary Lockout (01 & 02) <b>LK02</b> = Momentary Exclusion (01 & 02) <b>LK03</b> = Small Mushroom Guard (03,10,12 & 13) <b>LK10</b> = Small Mushroom Lockout (03,10,12 & 13) <b>LK11</b> = Small Mushroom Pin & Chain Lockout (03,10,12, 13 & 15) <b>LK20</b> = Small Mushroom Exclusion Lockout (03,10,12 & 13) <b>LK21</b> = Momentary Pushbutton (01 & 02) exclusion <b>LK23</b> = Double Pushbutton Lockout, 1-device (23)

POTENTIOMETERS	
Dial Increments	Resistance (Ohm) Range
<b>P1</b> = 0-10 scale	<b>01</b> = 100Ω <b>06</b> = 4.7 kΩ <b>11</b> = 220 kΩ <b>02</b> = 220Ω <b>07</b> = 10 kΩ <b>12</b> = 470 kΩ
<b>P2</b> = 0-100 scale	<b>03</b> = 470Ω <b>08</b> = 22 kΩ <b>13</b> = 1 MΩ <b>04</b> = 1 kΩ <b>09</b> = 47 kΩ <b>14</b> = 2.2 MΩ
<b>P6</b> = 0-6 scale	<b>05</b> = 2.2 kΩ <b>10</b> = 100 kΩ <b>15</b> = 4.7 MΩ

AMMETERS	
Direct reading (2X overload): <b>AD....</b>	Scales <b>0-0.02/0.04A</b> <b>0-1/2A</b> <b>0-4/8A</b> <b>0-10/20A</b> <b>0-15/30A</b>
Indirect reading for Current Transformer (5X overload): <b>A1....</b> For 1 AMP C.T.	<b>0-1/5</b> <b>0-50/250</b> <b>0-2/10</b> <b>0-75/375</b> <b>0-5/25</b> <b>0-100/500</b> <b>0-10/50</b> <b>0-150/750</b> <b>0-15/75</b> <b>0-200/1000</b> <b>0-20/100</b> <b>0-250/1250</b> <b>0-30/150</b> <b>0-300/1500</b> <b>0-40/200</b>
or <b>A5....</b> For 5 AMP C.T.	

**Ammeter Example:**  
8040/424-A1 20/100, Ammeter for CT 1AMP,  
Scale 0-20/100A in  
Enclosure Size 42 with 3/4" NPT Bottom Hub.







**APPROVALS**

- UL** US FILE No. E182378 LISTED
- SFA** CERTIFIED - FILE No. LR99480
- Ex** PTB 01 ATEX 1129 U

IECEX PTB 06.0014 U

STAHL offers a large variety of push-button actuator versions including momentary and maintained action in standard, booted, mushroom, keyed and selector switch styles. A new double push-button actuator combines two control functions in the space of one with the same size button.

Up to three 8082 contact blocks can be mounted under each push-button actuator. Under the double momentary push-button 23, up to four 8082 contact blocks can be mounted. Legend disks, in a variety of standard markings, snap into the center of the actuator making the button function easily identifiable.



PUSH BUTTON ACTUATORS

*Ordering Information*








ACTUATOR DESCRIPTION	INDIVIDUAL ORDER CATALOG NUMBER	ASSEMBLY CODE			
		CONTACT BLOCK	ACTUATOR CODE	LEGEND DISK	
<b>Standard Momentary Pushbutton</b> 1.5" (38mm) O.D. Legend disks to be ordered separately, see page F14.	<b>8602A0001-1-S</b>		01 __	0 = none	
<b>Booted Momentary Pushbutton</b> 1.5" (38mm) O.D. Legend disks to be ordered separately, see page F14.	<b>8602A0002-1-S</b>		M = 2 x NC 1 x NO	02 __	1 = START
<b>Double Momentary Pushbutton</b> 1.5" (38mm) O.D. Legend disks to be ordered separately, see page F14.	<b>8602A0023-1-S</b>		W = 1 x NC 2 x NO	23 __	2 = STOP
<b>Black Mushroom Pushbutton</b> 1.5" (38mm) O.D. Momentary action. Legend disks to be ordered separately, see page F14.	<b>8602A0003-1-S</b>		T = 3 x NC	03 __	3 = ON
<b>Emergency Stop Red Pushbutton</b> 1.5" (38mm) O.D. Maintained action. Turn-to-Release. Arrow disk and yellow washer supplied.	<b>8602A0010-1-S</b>		R = 3 x NO	10 __	4 = OFF
<b>Maintained Black Mushroom Pushbutton</b> 1.5" (38mm) O.D. Maintained action. Turn-to-Release. Red arrow disk included	<b>8602A0012-1-S</b>		X = 1 x NO	12 __	5 = RUN
<b>Emergency Stop (Jumbo) Red Pushbutton</b> 2.16" (55mm) O.D. Maintained action. Turn-to-Release. Arrow disk and yellow washer supplied.	<b>8602A0015-1-S</b>		Y = 1 x NC	13 __	6 = RESET
<b>Emergency Stop Red Mushroom</b> 1.5" (38mm) O.D. Maintained action. Key-to-Release from maintained position. Arrow disk and yellow washer supplied.	<b>8602A0009-1-S -MS1</b>		U = 1 NO + 1 NC	15 __	7 = OPEN
		O = 2 x NO C = 2 x NC	09 __	8 = CLOSE	
		D = 2 x NC ① 2 x NO		9 = special (state text w/order)	

① Only possible under double pushbutton 23 in enclosures 12, 54 & 64.

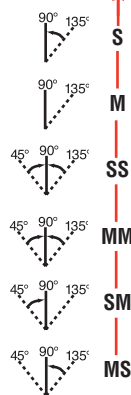


## SELECTOR SWITCH ACTUATORS

### Ordering Information

ACTUATOR DESCRIPTION	INDIVIDUAL ORDER CATALOG NUMBER	ASSEMBLY CODE		
		CONTACT BLOCK(S)	ACTUATOR CODE	LEGEND
 Key Operated Switch - 2 Positions	<b>8602A0008-1-2-r-V-MS1</b>	 X = 1 x NO	_2SK_	0 = none
			_2MK_	
 Key Operated Switch - 3 Positions	<b>8602A0008-1-3-rr-V-MS1</b>	X = 1 x NO	_3SSK_*	1 = OFF-ON
			_3MMK_	
 Rotary Actuator 2 Positions Non-lockable	<b>8602A0726-1-2-r</b>	Y = 1 x NC	_2SN_	2 = ON-OFF
			_2MN_	
 Rotary Actuator 3 Positions Non-lockable	<b>8602A0726-1-3-rr-V</b>	U = 1 NO + 1 NC	_3SSN_	3 = HAND-OFF-AUTO
			_3MMN_	
 Rotary Actuator 2 Positions Padlockable in center	<b>8602A0727-1-2-r-V</b>	O = 2 x NO	_3SMN_	4 = LOCAL-REMOTE
			_3MSN_	
 Rotary Actuator 3 Positions Padlockable in center	<b>8602A0727-1-3-rr-V</b>	C = 2 x NC	_2SL_	5 = STOP-RUN-START
			_2ML_	
			_3SSL_	6 = 0 - I
			_3MML_	
			_3SML_	7 = blank, one-line text
			_3MSL_	
				8 = blank, two-lines text
				9 = special (specify)

Replacement actuators include parts to convert maintained positions into spring return and to convert key removable positions into non-removable positions.



\* Standard:  
Key removable in all maintained positions.  
Key not removable in all spring return positions.



### APPROVALS

UL LISTED US FILE No. E182378

SF CERTIFIED - FILE No. LR99480

Ex PTB 01 ATEX 1129 U

IECEx

IECEx PTB 06.0014 U





**APPROVALS**

- FILE No. E182378
- CERTIFIED - FILE No. LR99480
- PTB 00 ATEX 1031U
- IECEX PTB 06.0014 U

The contact block Series 8082 are available in two versions.

- 1 NO
- 1 NC

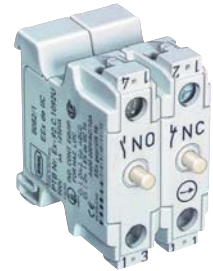
Each block is made of polyamide and designed to contain an internal explosion.

The terminals are designed to increased safety requirements

8082 CONTACT BLOCK

**Ordering Information**

DESCRIPTION	CONTACT SYMBOL		INDIVIDUAL ORDER CATALOG NUMBER
	IEC	NEMA	
Single contact block, 1 NC			<b>8082/1-1</b>
Single contact block, 1 NO			<b>8082/1-2</b>



**Technical Data**

	NEC/CEC	IEC
Rated Voltage	600VAC	500VAC
Continuous Current	10A	6A
Terminals	12AWG	2.5mm <sup>2</sup>
Mechanical Life	≥ 10 <sup>6</sup> operations	
Electrical Life	≥ 10 <sup>6</sup> operations	
Housing Material	polyamide	
Contact Material	silver plated	
Lowest Energy	50mA. @ 12VAC/DC*	

\* For lower energy use gold plated contacts, available on request.

**APPROVALS**

- FILE No. E81680 (I.S.)
- CERTIFIED - FILE No. LR99480
- PTB 01 ATEX 1160 U
- IECEX PTB 06.0016 U

The rail mounted 8010 Series LED Pilot Light accommodates any voltage from 12 to 254V AC or DC in one compact unit!

High intensity LED's provide superior illumination levels that are easily viewable in direct sunlight from the front or side.

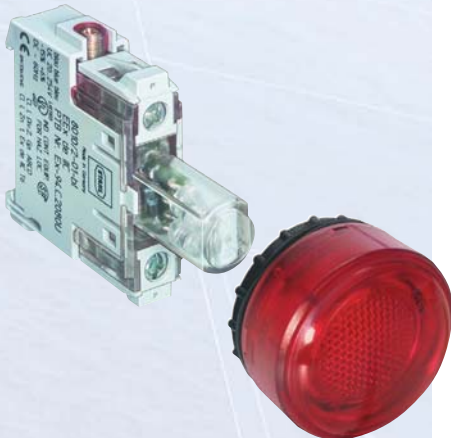
Long life & low temperature make these ideal for hazardous location applications.

8010 LED Pilot Light

**Ordering Information**

	COLORS	SYMBOL		INDIVIDUAL ORDER CATALOG NUMBER	ASSEMBLY CODE
		IEC	NEMA		
PILOT LIGHT	white			<b>8010/2-01-W</b>	Included in ordering code below.
PILOT LIGHT FOR I.S. CIRCUITS 10.8-28V AC/DC				<b>8010/3-02-WS</b>	
BEZEL WITH COLORED LENS	red			<b>86 028 03 58 7 AA</b>	PLR
	amber			<b>86 028 03 58 7 AB</b>	PLA
	green			<b>86 028 03 58 7 AC</b>	PLG
	clear			<b>86 028 03 58 7 AD</b>	PLW
	blue			<b>86 028 03 58 7 AE</b>	PLB

See page F22 for legend plate ordering information.



**Technical Data**

	NEC/CEC/IEC
Rated Voltage	12V-10% . . . 254V+6%
Frequency	DC . . . 60Hz.
Rated Current	max. 15mA.
Rated Power	max. 15mW
Electrical Life	100,000 hrs (11yrs)
Colors	Red, Amber, Green, White, Blue
Terminals	2.5mm <sup>2</sup> (12AWG)
Housing Material	polyamide



## 8082/8010 ILLUMINATED PUSHBUTTON

### Ordering Information

CONTACT SYMBOL	CONTACT SYMBOL		COLOR	INDIVIDUAL ORDER CATALOG NUMBER	ASSEMBLY CODE
	IEC	NEMA			
1NC + 1 NO			N/A	8602-A0737-1	U
2 NC			N/A	8602-A0738-1	C
2 NO			N/A	8602-A0739-1	O
Actuator					
Spring Return	Includes red, green, amber, white and blue color filter disks		red green amber white blue	8602-A0735-1	SR SG SA SW SB

### Technical Data

8010 Pilot Light	NEC/CEC/IEC	
Rated Voltage	12V-10% . . . 254V+6%	
Frequency	DC . . . 60Hz.	
Rated Current	max. 15mA.	
Rated Power	max. 15mW	
Electrical Life	100,000 hrs. (11 yrs.)	
Colors	Red, Green, Amber, White, Blue,	
Terminals	12AWG (2.5mm <sup>2</sup> )	
Housing Material	polyamide	
8082 Contact Block	NEC/CEC	IEC
Rated Voltage	600VAC	500VAC
Continuous Current	10A	6A
Lowest Energy	50mA @ 12VAC/DC*	

\* For lower energy use gold plated contacts, available on request.



### APPROVALS

FILE No. E182378

CERTIFIED - FILE No. LR99480

PTB 00 ATEX 1031U  
PTB 01 ATEX 1160 U  
PTB 01 ATEX 1129 U

### IECEX

IECEX PTB 06.0011 U

IECEX PTB 06.0016 U

IECEX PTB 06.0014 U

Series 8082/8010 Illuminated Pushbuttons have contact blocks and LED pilot lights combined under one actuator. The possible contact blocks are either 2 N.C., or 2 N.O., or 1 N.O. and 1 N.C. By wiring the individual components appropriately, different switching and indicating functions can be achieved.

The lamps may be operated at any voltage between 12V and 254 V AC/DC. They are available in red, green, amber, white and blue.





**APPROVALS**

UL LISTED FILE No. E182378

CERTIFIED - FILE No. LR99480

PTB 00 ATEX 1111U

IECEX  
IECEX PTB 06.0010 U

The 8008 Series is a two pole and a four pole control switch which is rail mountable via a supplied adapter plate. Control switch bodies are made from polyester and designed to contain the pressure generated by an internal explosion. The switches are available in over 300 different contact configurations. The most common 2-pole switching arrangements are illustrated on this page. The 4 pole switching arrangements are illustrated on page F20. For more configurations, consult factory.



**Insert Actuator Code**  
L-Large Lockable  
S-Small Lockable  
N-Small Non-Locking

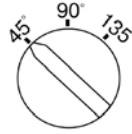
8008 CONTROL SWITCHES

**Ordering Information**

Selector switch specification example: 8008/2-38

**How to read the diagram:**

First we note that there are three positions to which the handle can be turned: 45° left position, 90° center position and 135° right position.



The first contact, designated by terminal numbers 13-14 is open when the handle is in the left position (45°) [blank square], it is also open in the center position (90°) [blank square], and is closed in the right position (135°) [square marked with an X].

The second contact, designated by terminal numbers 23-24 is open in the left position (45°) [blank square] and is closed in the center position (90°) [square marked with an X]. At the right position (135°) the contact remains closed [square marked with an X].

The terminal numbers are marked on the switch block.

See chart below for a selection of available contact configurations. For other contact configurations, consult factory.

**Technical Data for 2 and 4 Pole**

	NEC/CEC	IEC
Rated Voltage	600V	690VAC
Rated Current	10A	16A
Mechanical Life	≥ 10 <sup>6</sup> Operations	
Electrical Life	≥ 10 <sup>6</sup> Operations	
Terminals	12AWG	2.5mm <sup>2</sup>

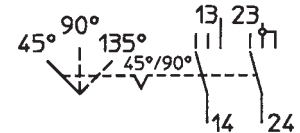
MAKE BREAK DIAGRAM

CONTACT ARRANGEMENT

ORDERING CODE 038

	13 23		
45°			
90°		X	
135°	X	X	

14 24



Note: The above denoted 45°/90° at the notch indicates that in these two positions the switch is maintained, and the 135° position is spring return to the 90° center position. The contacts are drawn in the 45° position. This is indicated by the solid 45° line.

**Ordering Information, 2 Pole Switches**

MAKE BREAK DIAGRAMS	CONTACT ARRANGEMENTS	INDIVIDUAL ORDER CATALOG NUMBER	ASSEMBLY CODE																
<table border="1"> <thead> <tr> <th></th> <th>13 23</th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>45°</td> <td></td> <td></td> <td></td> </tr> <tr> <td>135°</td> <td>X</td> <td>X</td> <td></td> </tr> </tbody> </table>		13 23			45°				135°	X	X			8008/2-002	02				
	13 23																		
45°																			
135°	X	X																	
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	11 21																		
45°	X	X																	
135°																			
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	11 23																		
45°	X																		
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	11 23																		
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	11 23																		
45°	X																		
90°	X																		
135°	X	X																	
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	13 23																		
45°																			
90°		X																	
135°	X	X																	
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	13 23																		
45°	X																		
90°																			
135°	X	X																	
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	13 23																		
45°	X																		
90°																			
135°	X	X																	

(See Switch handle ordering table on next page).



## 8008 CONTROL SWITCHES, 4-POLE



### Ordering Information, 4 Pole Switches

MAKE BREAK DIAGRAM	CONTACT ARRANGEMENT	INDIVIDUAL ORDER CATALOG NUMBER	ASSEMBLY CODE
		8008/2-102	□102
		8008/2-106	□106
		8008/2-109	□109
		8008/2-110	□110
		8008/2-113	□113
		8008/2-119	□119
		8008/2-127	□127
		8008/2-139	□139
		8008/2-148	□148

### APPROVALS

UL LISTED US FILE E182378

SP CERTIFIED - FILE LR99480

Ex PTB 00 ATEX 1111U

IECEX

IECEX PTB 06.0010 U

The most common 4-pole switching arrangements are illustrated on this page. For more configurations, consult factory.

Since the 4 pole switches are deeper than the 2 pole, they only can be mounted into deep enclosures with the assembly codes 73, 84 and 94.



Insert Actuator Code

L - Large Lockable  
S - Small Lockable  
N - Small Non-Locking

### Control Switch Handles

DESCRIPTION	TYPE	INDIVIDUAL ORDER CATALOG NUMBER	ASSEMBLY CODE
Small Rotary Actuator	not lockable	8602A0732-1	N
	lockable, one position	8602A4-0734	S
Large Rotary Actuator*	lockable	8602A1-SS-0731	L

\* Can only be installed in enclosure codes 12, 73, 54 and 94 (See page F22 for legend plate ordering information.)





**APPROVALS**

- US FILE No. E182378
- CERTIFIED - FILE LR99480
- PTB 01 ATEX 2158 U
- IECEX PTB 06.0017 U

The 8405 Series ammeters are used to measure current of a motor supply circuit in a potentially explosive atmosphere.

They are available in both direct and indirect reading versions (current transformer not supplied) with slide in scales to accommodate any amperage range required.

A red pointer can be manually adjusted for quick visual comparison of the actual value with the set value.

The supplied adapter plate allows the unit to be railed mounted for snap-on-installation.

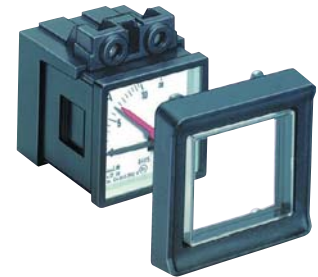
8405 AMMETERS

**Ordering Information**

TYPE	MEASURING RANGE	INDIVIDUAL ORDER CATALOG NUMBER	ASSEMBLY CODE
DIRECT READ (2X OVERLOAD)	0-20mA or 4-20mA	<b>8405/2-0.02/0.04</b>	<b>AD0204</b>
	0-1/2 A	<b>8405/2-1/2</b>	<b>AD0012</b>
	0-4/8 A	<b>8405/2-4/8</b>	<b>AD0048</b>
	0-10/20 A	<b>8405/2-10/20</b>	<b>AD1020</b>
	0-15/30 A	<b>8405/2-15/30</b>	<b>AD1530</b>
INDIRECT READ (for current transformer)	1A Secondary/ 2 and 5X Overload	<b>8405/2-1</b>	<b>A1</b> _ _ _ _
	5A Secondary/ 2 and 5X Overload	<b>8405/2-5</b>	<b>A5</b> _ _ _ _
	<b>SCALE CODES</b>		
	1/5	20/100	100/500
	2/10	30/150	150/750
	5/25	40/200	200/1000
	10/50	50/250	250/1250
	15/75	75/375	300/1500
BEZEL	2.5" x 2.5" (64 x 64mm)	<b>86 038 01 58 7</b>	Included in ordering code above

**Technical Data**

	NEC/CEC	IEC
Rated Insulated Voltage:	600V	690V
Movement:	Iron Core	
Power Consumption:	0.2W Max.	
Frequency	15-100 Hz. DC available	
Accuracy	2.5% of full range	
Terminals	12AWG	2.5mm <sup>2</sup>



**APPROVALS**

- CERTIFIED - FILE LR99480
- PTB 01 ATEX 1066U
- IECEX PTB 06.0032 U

A potentiometer functions as a variable resistor. It is used to adjust resistance in a control circuit to vary motor speed or other applications.

The housing is made from polyester and designed to contain the pressure generated by an internal explosion.

The supplied adapter makes it rail mountable for snap-on-installation.

8208 POTENTIOMETERS FOR HAZARDOUS LOCATIONS

**Ordering Information**

	INDIVIDUAL ORDER CATALOG NUMBER	ASSEMBLY CODE
<b>Potentiometer</b>	<b>8208/24-08-S002</b> _ _	
resistance values in ohms		01 = 100Ω    06 = 4.7 kΩ    11 = 220 kΩ 02 = 220Ω    07 = 10 kΩ    12 = 470 kΩ 03 = 470Ω    08 = 22 kΩ    13 = 1 MΩ 04 = 1 kΩ    09 = 47 kΩ    14 = 2.2 MΩ 05 = 2.2 kΩ    10 = 100 kΩ    15 = 4.7 MΩ
<b>Actuator</b>		
with dial scale		
0-6	<b>86 028 06 16 7 AA</b>	P6
0-10	<b>86 028 06 16 7 AB</b>	P1
0-100	<b>86 028 06 16 7 AC</b>	P2

**Technical Data**

Housing material:	Polyester
Rated Power:	2 Watt
Voltage limit:	450V
Resistance Values:	100 ohms to 4.7 mega ohms
Characteristics:	linear
Resistance tolerance:	±30%
Material of resistor:	carbon
Adjustment scale:	270 degrees
Terminals:	12AWG (2.5mm <sup>2</sup> )

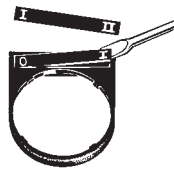


## NAME PLATES AND LEGEND DISCS



### Pushbutton Legend Disks Ordering

DESCRIPTION	CATALOG NUMBER	
Blank, Legend Disk Blue	155911	
Blank, Legend Disk Yellow	155914	
Blank, Legend Disk Red	155897	
Blank, Legend Disk Green	155901	
Blank, Legend Disk White	155908	
Blank, Legend Disk Black	155905	
Red, Legend Disk "STOP"	155615	
Green, Legend Disc "START"	155721	
Red, Legend Disk "OFF"	155654	
Green, Legend Disk "ON"	155671	
Green, Legend Disk "I"	155689	
Green, Legend Disk "II"	155706	
Red, Legend Disk "O"	155596	
Red, Legend Disk Arrow	155567	
Black, Legend Disk "UP"	200217	"UP"
Black, Legend Disk "DOWN"	200217	"DOWN"
Black, Legend Disk "RUN"	200217	"RUN"
Black, Legend Disk "SLOW"	200217	"SLOW"
Black, Legend Disk "FAST"	200217	"FAST"
Black, Legend Disk "CLOSE"	155878	
Black, Legend Disk "OPEN"	155868	
Black, Legend Disk "AUTO"	200217	"AUTO"
Black, Legend Disk "RIGHT"	200217	"RIGHT"
Black, Legend Disk "LEFT"	200217	"LEFT"
Black, Legend Disk "HAND"	200217	"HAND"
Black, Legend Disk "RESET"	200217	"RESET"
Black, Legend Disk "OFF-ON"	200217	"OFF-ON"
Black, Legend Disk Arrow	155749	
Black, Legend Disk Arrow	155761	



### Legend Plates Ordering

DESCRIPTION			CATALOG NUMBER
One-line Legend Frame			155632
Inserts:			
POS. 1	POS. 2	POS. 3	
HAND	0	AUTO	155723
OFF	•	ON	155708
	0	I	155691
I		II	155673
I	0	II	155656
0	I	II	155635
0	•	I	155598
0/OFF		I/ON	155569
Blank- one line insert			155737
Two-line Legend Frame			155687
Blank- two line insert			155875
Three-line Legend Frame			155844
Blank- Three-line insert			155925

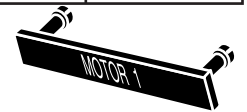
### Legend Disks for Large Control Switch Handle\* Ordering

DESCRIPTION	CATALOG NUMBER
Blank	155871
OFF-ON	155750
HAND-O-AUTO	155828


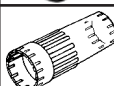
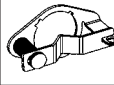







### Label Ordering

DESCRIPTION	CATALOG NUMBER
Station Identification Label	130673

\* Must be installed prior to handle assembly

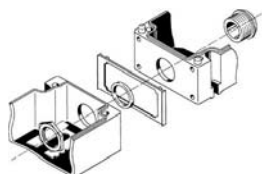


### Accessories

Description	Catalog Number	Assembly Code
 Device close-up plug	155329	P733
 Actuator wrench	130382	N/A
 Momentary PB 01, 02 lockout	155402	LK01
 Momentary PB 01, 02 exclusion	155431	LK02
 Small mushroom PB 03, 10, 12 & 13 guard	155326	LK03
 Small mushroom 03, 10, 12 & 13 lockout (actuated)	155349	LK10
 Mushrooms 10, 15 pin & chain lockout	155445	LK11
 Small mushroom 03, 10, 12 & 13 exclusion (non actuated)	155469	LK20
 Momentary PB 01, 02 exclusion	155371	LK21
 Double PB 23 lockout	155460	LK23

### Conduit & Cable Entry Parts Ordering

DESCRIPTION	CATALOG NUMBER
<b>Hub Assemblies for FRP Housings</b>	
Back Plate M20	130711
Back Plate M25	130718
Back Plate 1/2"	130732
Back Plate 3/4"	130726
3/4" NPT Fixed Hub	143739
Cable Gland, plastic M25	8161/5-M25-17
Close-up Plug M25	8290/3-M25
Locknut M25	138395
Breathing Gland, includes locknut M25	138580
Breathing Gland, 3/4"	8162/9
Reducer, 3/4" - 1/2" NPT	R-21
Coupling Kit M25	130956



Combination Coupling Kit to gang boxes



88 000 07 54 0 Installed



88 000 07 52 0



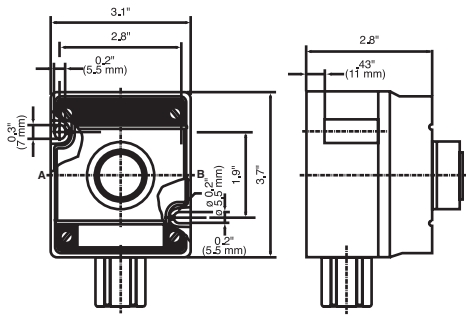
Conduit Hub Assembly



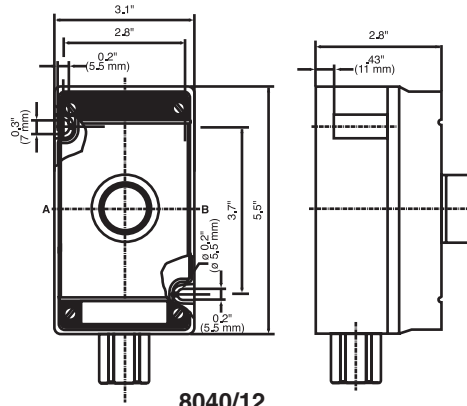
Actuator Wrench



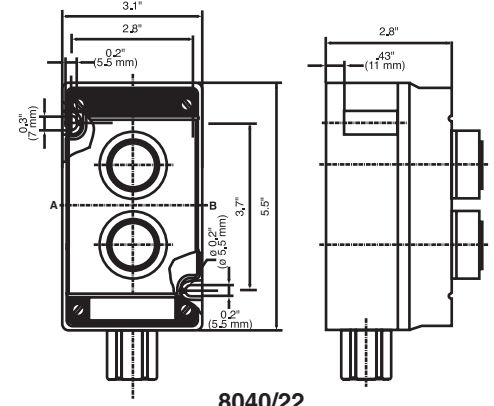
DIMENSIONS



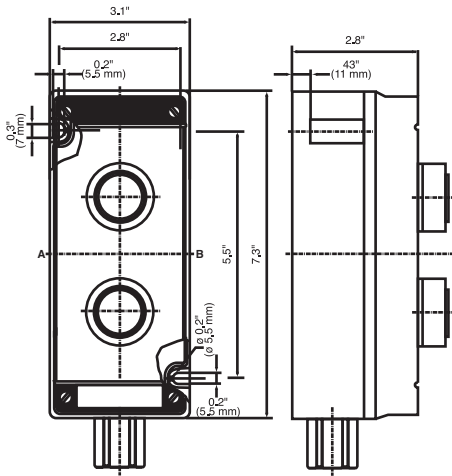
**Compact 8040/11**



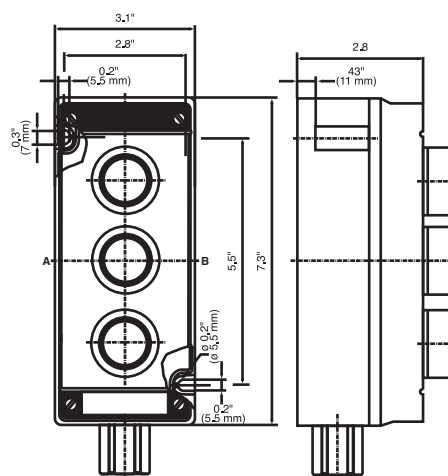
**8040/12**



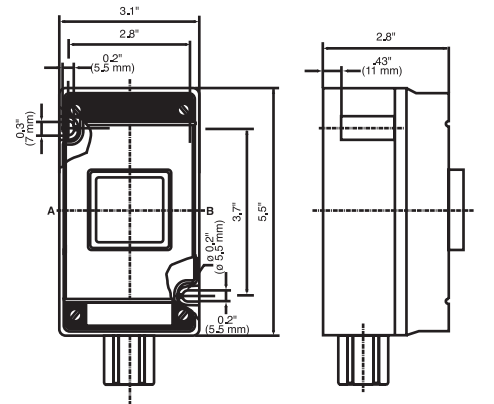
**8040/22**



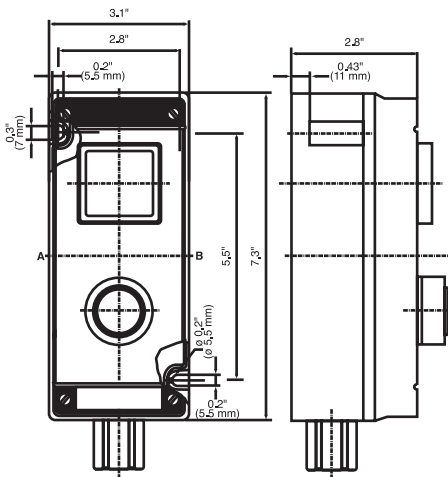
**8040/64**



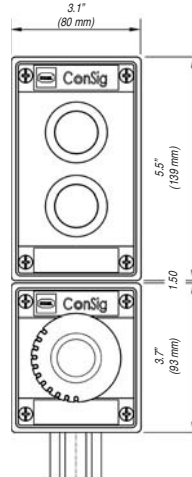
**8040/33**



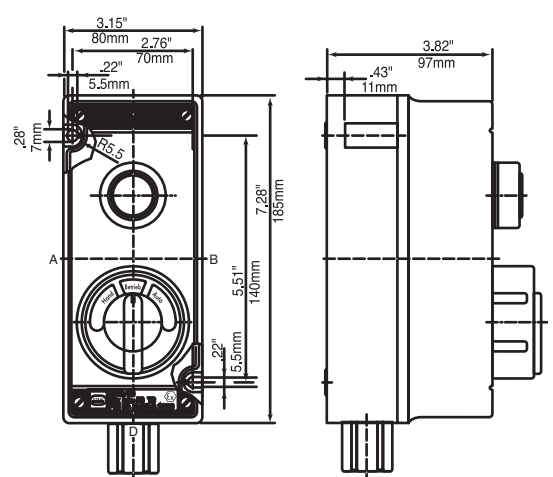
**8040/42**



**8040/54**



**Any Combination possible with kit 130956**



**8040/73,84,94**