

## Tongue Operated Switches

### 'Elf' – Miniature



- Ultra miniature case size - 75 25 29
- 8 possible actuator entry points
- Flexible mounted actuator, suitable for small radii doors and guards
- Door catch may be added to hold vibrating or larger guard doors shut
- Conduit entry versions sealed to **IP67**
- Complies with **EN1088, IEC 947-5-1** and **BG**



H = 75, W = 25, D = 29

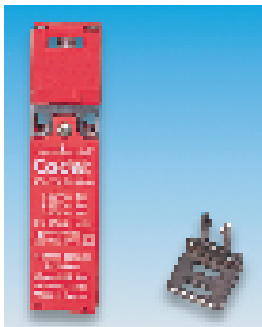
Safety contacts 1N/C or 1N/C+1N/O  
 Contact rating 1A @ 500V ac, 2A @ 250V ac  
 5A @ 100V ac  
 Conduit entry 1 M16, 1 PG9 or 3 Knockouts R = 3 (IP30)  
 Operating temperature -25°C to +80°C

Mfrs. List No: 33001 = 648-978, 33002 = 648-980, 33003 = 648-991

CTL192X

Contacts	Entry Size	Order Code	Price Each			
Switch			1+	10+	25+	50+
1N/C	M16	<b>648-978</b>				
1N/C	PG9	<b>648-980</b>				
1N/C+1N/O	Knockouts	<b>648-991</b>				
Door Catch		<b>.480-435</b>				

### 'Cadet' – IP66



- Compact safety interlock switch designed to fit flush on 25mm tubing
- Side or end actuation
- Removable head can be rotated to give eight actuator entry points
- Suited to hinged, sliding and lift off guards
- Housed in a glass filled polyester case, sealed to **IP66**
- Door catch may be added to hold larger guard doors shut
- Conforms to **BG, CSA, SA** and **SUVA**



H = 106, W = 25, D = 27.5

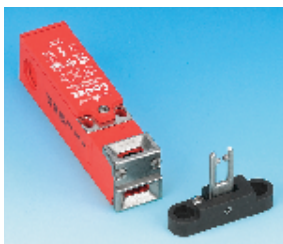
Safety contacts 1N/C or 2N/C positive break, 1A @ 500V ac, 2A @ 250V ac, 5A @ 100V ac  
 Auxiliary contacts 1N/O (rating as safety contact, 519-169 only)  
 Mechanical operations >10°  
 Conduit entry 3 M16 or 3 PG9  
 Operating temperature -25°C to +80°C

Mfrs. List No: 21001 = 519-169, 21002 = 519-170, 21003 = 594-222, 21004 = 594-234

CTL178X

Contacts	Entry Size	Order Code	Price Each			
			1+	10+	15+	30+
1N/C+1N/O	M16	<b>.519-169</b>				
2N/C	M16	<b>.519-170</b>				
1N/C+1N/O	PG9	<b>594-222</b>				
2N/C	PG9	<b>594-234</b>				
Mounting Plate		<b>594-209</b>				
Door Catch		<b>.480-435</b>	1+	10+	25+	50+

### GD2 Flexible Actuator Kit Cadet & Elf



- Stainless steel actuator guide
- Flexible actuator
- Converts standard Cadet and ELF to a GD2 type product offering
  - improves mechanical alignment
  - improved mechanical life
  - reduction of minimum operating radius ≥60mm
- DOES NOT INCLUDE SWITCH - TO BE ORDERED SEPARATELY



CTL335

Mfrs. List No.	Order Code	Price Each		
		1+	5+	10+
21030	GD2 ACC. KT.	<b>327-6879</b>		

### GKM – Key Operated Switch Miniature



H = 70, W = 34, D = 15

- Pre-wired cable or connector options
- Compact design
- Top and side entry
- Door radius 16mm minimum
- Straight and angled key options
- Key retain feature (Detent) – resistance to key removal, vibration, door chatter
- Red body colour universally identifies switch as a safety component

- Easily stack mounted for added security of switching, thus giving mechanical/electrical redundancy of the interlock scheme
- Connector versions use 4 way, M12 socket/plug connections
- Side and bottom exit versions can be daisy-chained together for multiple guard applications
- Sealed to **IP67**
- Complies with **CENELEC/UL** approvals

Standards **IEC947-5-1, EN60947-5-1, EN1088, EN60204, UL508, CSA22.2-14, UL746C**

Safety contacts 1 N/C with positive break contacts  
 Utilisation category AC15, DC13  
 Thermal current 10A  
 Rated insulation voltage 500V  
 Impulse withstand voltage 2500V  
 Auxiliary contact 1 N/O  
 Operating temperature -25°C to +85°C  
 Mechanical life 1 million operations  
 Min. force to break welded contact 20N  
 Degree of protection **IP67, EN60529, NEMA 1, 12, 13**  
 Max. actuation speed 0.2ms  
 Max. actuation rate 2 operations per second  
 Shock **IEC68-2-27 (BS2011, Part 2.1 Ea): 50g**  
 Vibration **IEC68-2-6 (BS2011, Part 2.1 Fc): 10g**

Mfrs. List No.	Order Code	Mfrs. List No.	Order Code	Mfrs. List No.	Order Code
GKMA13W2	602-681	GKMC03W2	602-723	GKMF03W2	305-4354
GKMB13W2	602-693	GKMD03W2	602-735	GKME03D2	603-624
GKMA13D2	602-700	GKMC03D2	602-747	GKMSTRKEY	603-958
GKMB13D2	602-711	GKMD03D2	602-569		

FOR SUITABLE 4 WAY SOCKET & PLUG CONNECTIONS SEE HIRSCHMANN M12 RANGE OR BRAD HARRISON M12 RANGE

CTL215

Standard – with 90° Key	Order Code	1+	Price Each	
			5+	25+
Side exit, 1m cable	<b>602-681</b>			
Bottom exit, 1m cable	<b>602-693</b>			
Side exit, 1m cable – Detent	<b>602-700</b>			
Bottom exit, 1m cable – Detent	<b>602-711</b>			
Side exit, connector	<b>602-723</b>			
Bottom exit, connector	<b>602-735</b>			
Side exit, connector – Detent	<b>602-747</b>			
Bottom exit, connector – Detent	<b>603-569</b>			
Side/Bottom exit, connector	<b>305-4354</b>			
Side/Bottom exit, connector – Detent	<b>603-624 †</b>			
<b>Accessories</b>				
Straight key	<b>603-958</b>			
† Available until stocks are exhausted				

### GKM-Low Energy Key Operated Switch Miniature



- For applications where the switch is the primary break circuit for machine motion
- Usually used for small bench mounted machinery where the risk of injury is low
- On more dangerous applications, used in conjunction with safety relays
- Gold plated contacts ensure conduction integrity
- Supplied in cable and connector variants, side and bottom entry variants

Standards **IEC 947-5-1, EN60947-5-1, EN1088, EN60204, UL508, CSA22.2-14, UL746C**

Safety Contacts 1 N/C with positive break contacts  
 Utilisation category AC15, DC 13  
 Thermal current 10A\*  
 Rated insulation voltage 500V  
 Impulse withstand voltage 2500V  
 Auxiliary contacts 1 N/O  
 Operating temperature -25°C to +85°C  
 Mechanical life 1 million operations  
 Break contact min. force 20N  
 Degree of protection **IP67, EN60529, NEMA, 1, 12, 13**  
 Max. actuation speed 0.2m/s  
 Max. actuation speed 2 operations/second  
 Cable length 3m  
 Shock **IEC68-2-27 (BS2011, Part 2.1 Ea): 50g**  
 Vibration **IEC68-2-6 (BS2011, Part 2.1 Fc): 10g**

\*Connector type switches can only be used upto 4A due to connector rating

**Honeywell**

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