

146-811

This series provides a means of control and security for a wide range of applications. Because of its small size, the P2 has proven invaluable to manufacturers of electronic test, office, industrial and security equipment.

The construction of the P2 switch is based on moulded packets, each containing one or two pairs of contacts, which may be assembled to give multiple switching functions. Normally a maximum of 6 packets may be incorporated. Contacts are of fine silver on phosphor-bronze spring leaves operated by a rotary cam. Two to eight positions are provided on the standard spring index mechanism which is slow break/quick make. Spring return features are also standard for some switching functions.

The range of functions is detailed on page 14/15. However, the design is very flexible and we are happy to consider other variations, including anti-static versions.

The P2 is available with a wide range of locks. The disc tumbler types are detailed below, (and part numbers for popular switching functions given on pages 12 & 13). For higher security, see the radial-pin and KABA lock versions on page 14 & 15. Alternative actuators are a 1/4" spindle to fit a 3/8" dia. panel hole (P2/1N) and a chrome-plated knob in place of the lock (P2/3N). Drawings of these are shown on page 13.

For Accessories see page 28

DISC TUMBLER LOCKS AVAILABLE

P2/3D Lock Type W50
6-disc tumbler lock 2,000 plus differs.
Meets requirements of BS 6803

P2/3F Lock Type S425
A 5-disc tumbler general purpose lock having a die-cast body with brass wards and phosphor-bronze springs. The lock face has a polished chrome finish.

Key differs are available, coded TOK 1 to TOK 100. Large stocks of this lock are normally held and where repeats or large quantities of locks alike or identical locks are required, key codes TOK 1 to TOK 10 inclusive should be specified.

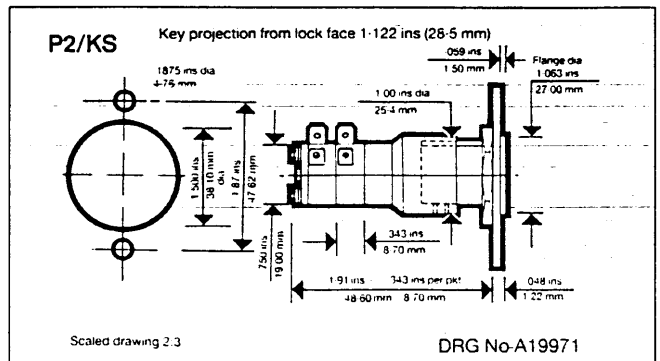
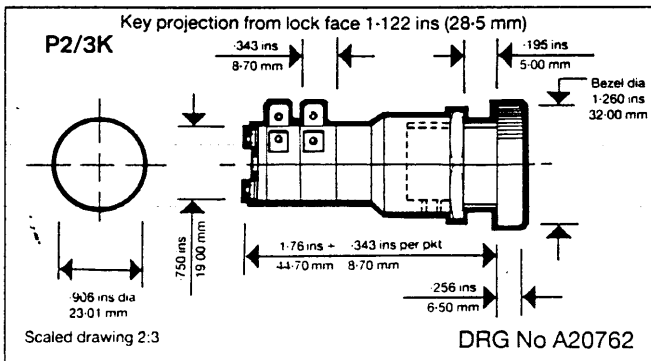
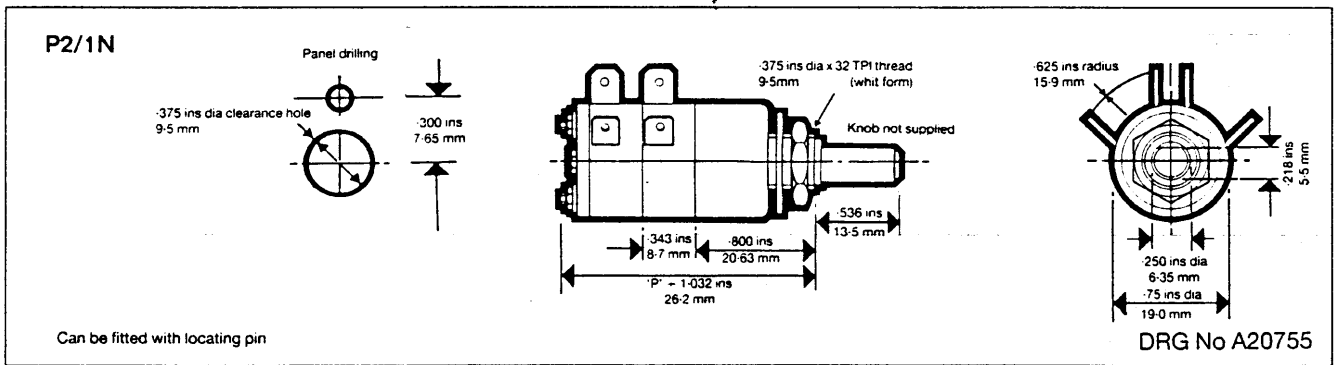
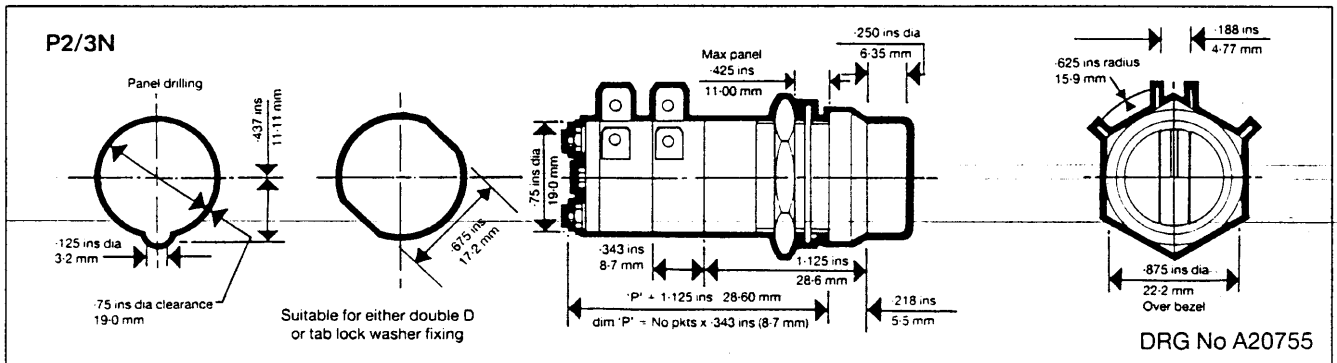
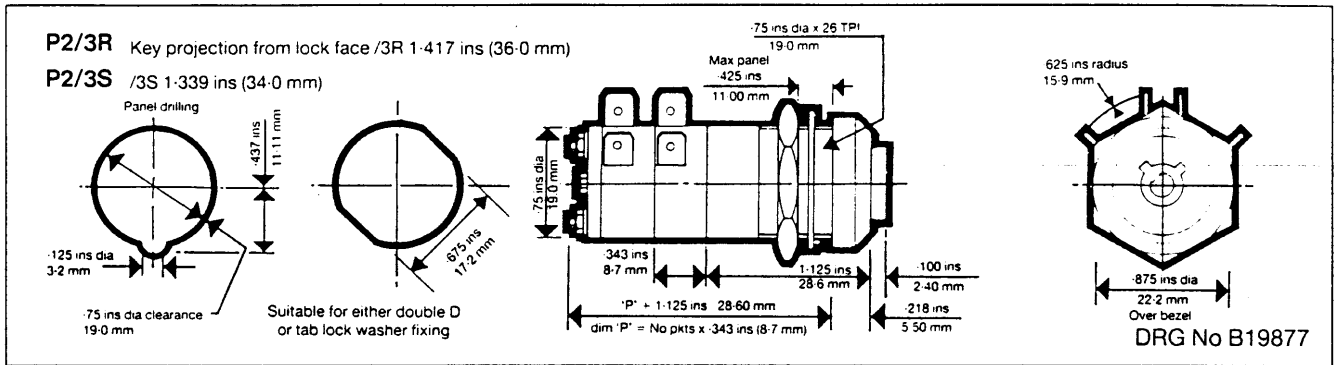
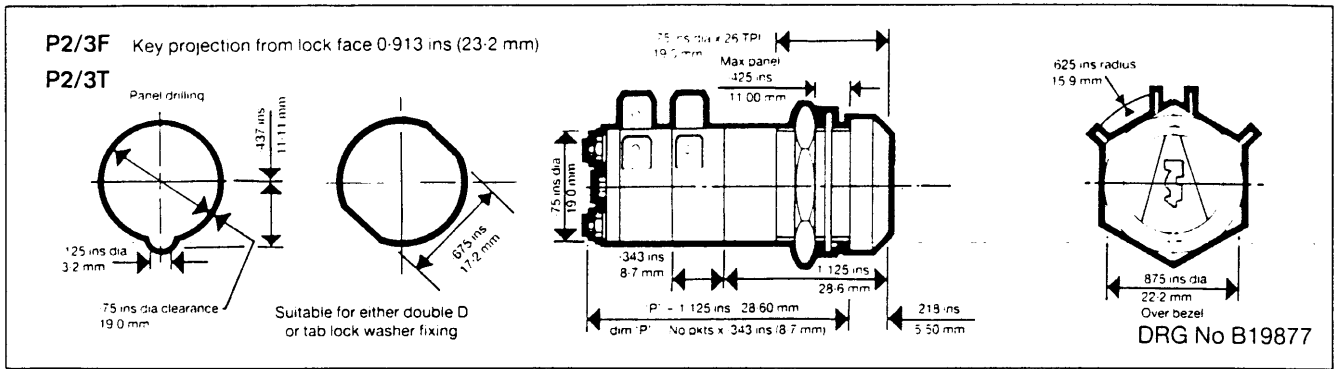
S425 Locks are supplied with the key number stamped on the face of the lock and are not generally suitable for vehicle or intruder systems.

P2/3T Lock Type S254
Similar to the S425 lock but with a special reverse key section exclusive to TOK in two ranges of 200 differs. S254 locks will not be supplied with the key number marked on the lock.

For higher security locks see pages 16 and 17

SPECIFICATIONS FOR BASIC P2 SWITCHES

Maximum Voltage	250V r.m.s. 50Hz
Electrical Rating	Resistive load : 2A at 250V a.c. 4A at 125V a.c. 10A at 12V d.c. Inductive load : 700mA at 125V a.c.
Voltage Proof	2kV for 1 minute
Contact Resistance	5 mΩ max
Life	50,000 >
Temperature Range	-20°C +55°C
Indexing	45° or 90° detent angle Spring return index angles are 35°/45° (see pages 14 /15)
No. of switch positions	2 - 4 x 90°, 2 - 8 x 45°
No. of packets	Up to 6 maximum (12 contact pairs) 2 maximum (4 contact pairs) for spring return versions
Contacts	Fine silver as standard. Available 5 micron gold- plated on 1 micron nickel
Terminals	Silver-plated for soldering or 4.8 x 0.8mm push-on connector.
Moulding Material	Self-extinguishing glass- filled nylon UL94V-1 rating
Approvals	U.L. Approved File No. E79358/9
Key entries	At 0°, 90°, 180° & 270° For spring return momentary types, the key is always trapped in biased positions
Keys supplied	2 keys are supplied with each lock as standard
Fixing	Single hole with lock-nut and tablock washer or double 'D'



1		01									
No. OF POLES		SWITCHING FUNCTION									
Specify		This code determines for each pole : <ul style="list-style-type: none"> the contact configuration. From 1 to 8 contact pairs are called up by a single code. Each contact pair is separate and must be connected externally to provide certain circuit functions (e.g. changeover). the number of switch positions and the angle between them whether a spring return is fitted to provide a momentary switching function. This function can be omitted from codes 03/04/06/08/66 by using suffix 'A' 45° index switches have a unique reference code. 									
Number											
of poles											
No. of Poles available		Switching Function		No. of Contact Pairs per Pole	No. of Packets per Pole	* No. of Positions	Angle of MVT	Pairs made in position shown			
P2	K2	Code	Description						A	B	C
1 - 12	1 / 2	01	off - on	1	1/2	2	90°		0	A	
1 - 12	1 / 2	02	on - off	1	1/2	2	90°		A	0	
1 - 4	1 / 2	03	off - on (spring return to off)	1	1/2	2	45°		0	A	mom
1 - 4	1 / 2	04	on - off (spring return to on)	1	1/2	2	45°		A	mom	
1 / 2	1	06	† Changeover (spring return to LH)	2	1	2	45°		A	B	mom
1 / 2	1	08	Changeover with centre off (spring return to off)	2	1	3	35°		A	0	B
1 - 6	1	09	† Changeover	2	1	2	90°		A	B	
1 - 4	n/a	10	† Changeover with LH off	2	1 1/2	3	90°		0	A	B
1 / 2	n/a	11	Three position selective, no off (four circuits)	4	3	3	90°		A	B	C+D
1 - 6	1	23	Changeover with centre off	2	1	3	90°		A	0	B
1 - 3	n/a	29	Two circuit collective with off (always MBB)	2	2	3	90°		0	A	A+B
1 - 4	n/a	47	† Three circuit selective, no off	3	1 1/2	3	90°		A	B	C
1 - 3	n/a	57	† Four circuit selective, no off	4	2	4	90°		D	A	B
1 - 3	n/a	58	† Three circuit selective with off	3	1 1/2	4	90°		C	0	A
1 / 2	1	66	Motor control, Stop-Normal-Start (spring return to Normal)	2	1	3	35°		mom	A	A+B
1 / 2	1	67	Motor control, Stop-Normal-Start (spring return Start to Normal only)	2	1	3	90°/35°		0	A	A+B
* Up to 8 positions available against special orders † Make-before-break contacts available 'mom' = spring bias position											
Note : The number of poles is not the same as the number of contact pairs e.g. P2/1N - 223 has a total of 4 contact pairs. The total of packets (no. per pole x no. of poles, rounded up to the nearest integer) determines the length of a P2 switch (see drawings on page 13)											
Suffixes		Additional Information									
P	Mounting plate factory fitted A20389, A20201 for 3F/ 3N/ 3R/ 3S/ 3T also 'W' Series.	M	Make-before-break contacts (only available on codes marked †). Otherwise all contact arrangements are break-before-make, except code 29	L	No side hole in barrel	N	Nickel Silver Keys (3S)	R	Moulded Red Key Bows 3F & 3T	U	Underwriter Lab approval
G	Gold-plated contacts	A	Denotes 45° Index function formerly biased only	E	Extra Locknut						
C	Screw-clamp terminals P2 only										

P2 or K2	— 3F	A	A —																																																																				
RANGE	LOCK OR ACTUATOR	INFORMATION	KEY TRAPPING																																																																				
P2 or K2	1N 0.25" Ø spindle	A All switches in batch with same key i.e. "locks alike" to be used only when subsequent orders will not require the same key. Lock selection is factory-made as follows: 3F - from keys TOK 1 to TOK 100 3T - from keys TOK101 to TOK 8000 B TOK 1 key C TOK 2 key D TOK 3 key E TOK 4 key F TOK 5 key G TOK 6 key H TOK 7 key J TOK 8 key K TOK 9 key L TOK 10 key M All switches in batch with different keys i.e. "locks to differ" 3F - keys TOK 1 to TOK 10 are not normally used for quantities less than 90 N Other specified key code (to be quoted on order)	<p>● Indicates the indexed position in which the key is trapped. Note that the key is always trapped in the spring biased position.</p> <table border="1"> <thead> <tr> <th colspan="4">90° Position</th> </tr> <tr> <th>←</th> <th>↑</th> <th>→</th> <th>↓</th> </tr> </thead> <tbody> <tr> <td>A</td> <td colspan="3">Key free in all indexed positions</td> </tr> <tr> <td>B</td> <td>●</td> <td></td> <td></td> </tr> <tr> <td>C</td> <td></td> <td>●</td> <td></td> </tr> <tr> <td>D</td> <td></td> <td></td> <td>●</td> </tr> <tr> <td>E</td> <td>●</td> <td></td> <td></td> </tr> <tr> <td>F</td> <td>●</td> <td></td> <td>●</td> </tr> <tr> <td>G</td> <td></td> <td>●</td> <td>●</td> </tr> <tr> <td>H</td> <td>●</td> <td>●</td> <td>●</td> </tr> <tr> <td>J</td> <td>●</td> <td>●</td> <td></td> </tr> <tr> <td>K</td> <td></td> <td>●</td> <td>●</td> </tr> <tr> <td>L</td> <td></td> <td></td> <td>●</td> </tr> <tr> <td>M</td> <td>●</td> <td></td> <td>●</td> </tr> <tr> <td>N</td> <td>●</td> <td>●</td> <td></td> </tr> <tr> <td>P</td> <td></td> <td>●</td> <td>●</td> </tr> <tr> <td>Q</td> <td>●</td> <td></td> <td>●</td> </tr> </tbody> </table> <p>45° Index Switches are only produced to order and are allocated a unique reference code.</p>	90° Position				←	↑	→	↓	A	Key free in all indexed positions			B	●			C		●		D			●	E	●			F	●		●	G		●	●	H	●	●	●	J	●	●		K		●	●	L			●	M	●		●	N	●	●		P		●	●	Q	●		●
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3N Chrome knob. For actuators 1N & 3N omit codes from next two columns	3F S425 lock (supercedes 713 & S311)	Available on 3F (S425 lock) only																																																																					
3T S254 lock	3D W50 lock																																																																						
3R Radial 7-pin tumbler lock	3S Radial 10-pin tumbler lock																																																																						
3K Kabal 20-pin tumbler lock	KS Kaba 20-pin tumbler lock with fixed front flange																																																																						

Special Designs

P2/K2 switches not covered by the coding system are allocated special part numbers e.g. P2/3-11814