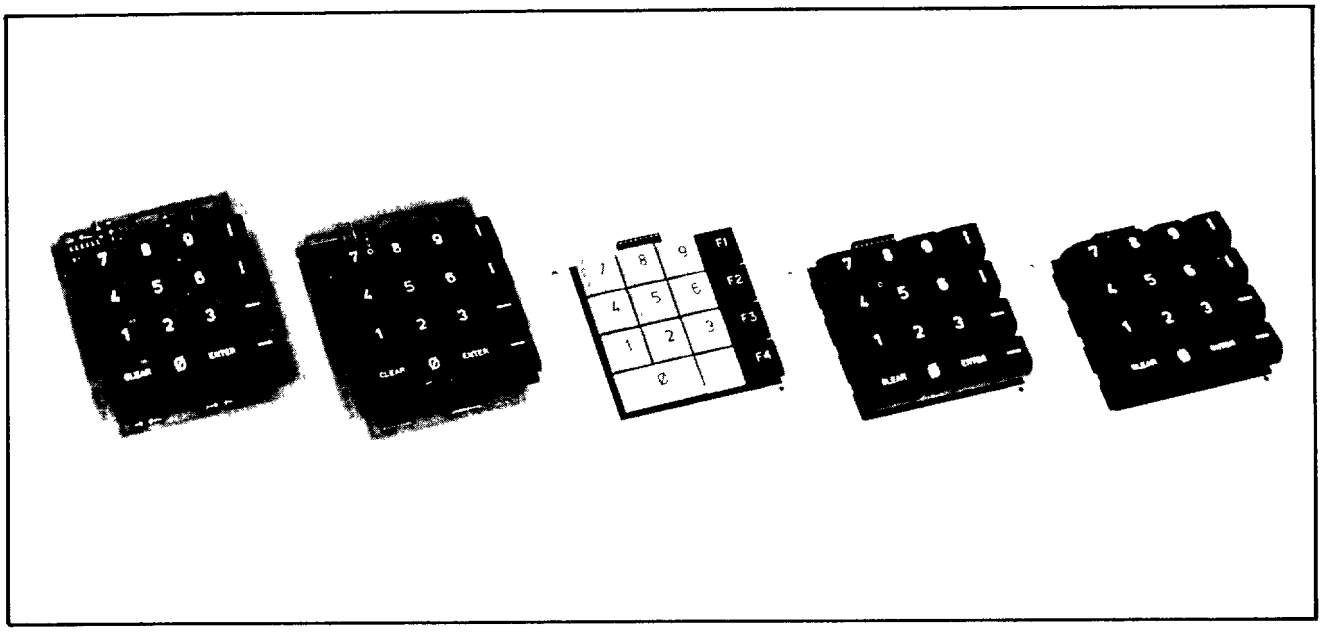
170-602

Devlin

16 position full travel keypads



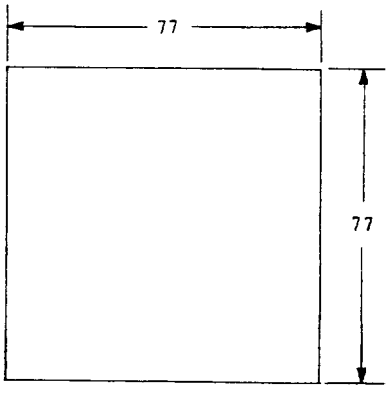
Features

- Discrete, full travel keyswitches.
- Keyplate or PCB mounting.
- Flat, stepped or low profile format available.
- X-Y matrix or encoded versions.
- Double-shot moulded keytops ; charcoal/white as standard, alternative keytop legends and colours available to order.

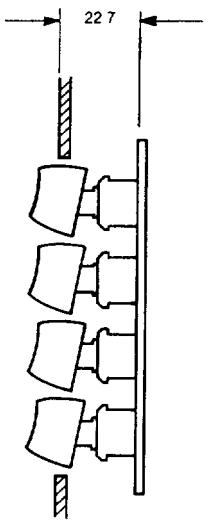
Specification

Contact rating	100mA maximum 15Vdc maximum
Initial contact resistance	1Ω maximum
Bounce time	5 ms maximum
Electrical life	>10 million ops.
Operating force	90g (typical)
Operating temperature	0°C to +65°C
Storage temperature	−20°C to +75°C
Encoded keypad	
supply voltage	3-15Vdc
supply current	25mA maximum

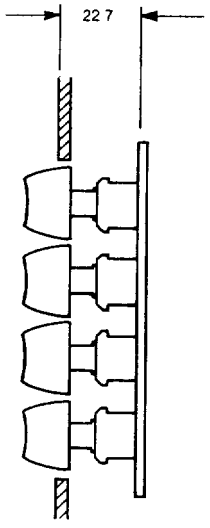
Panel cutout and profile detail



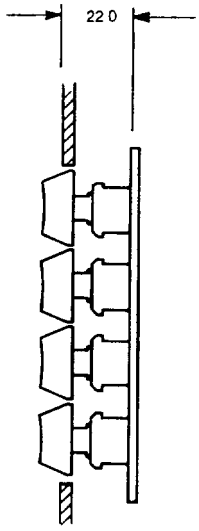
Suggested panel cutout



Stepped keypad



Flat keypad.



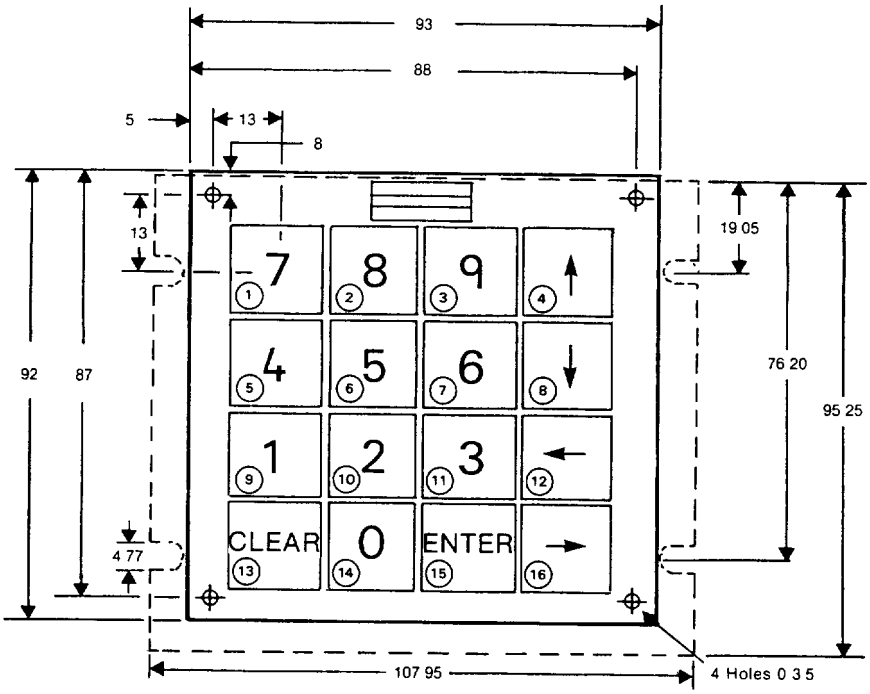
Low profile keypad.

Matrix keypads

Description

This is a range of non-encoded keypads. 16 discrete keyswitches are mounted in a rigid keyplate fitted to a p.c.b. The input and output connections are by means of a d.i.l. socket which allows off the board encoding. The matrix connections are shown in the table below.

Dimensions



N.B. Broken line shows dimensions of keyplate mounting.

Matrix connections

Pin Number	Key Number 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
2					●	●	●	●								
4		●				●				●				●		
6			●				●				●				●	
8	●	●	●	●								●				●
10				●				●					●	●	●	●
12									●	●	●	●				
14																
16	●				●				●				●			

Part numbers for keypads with standard keytop legends and colours

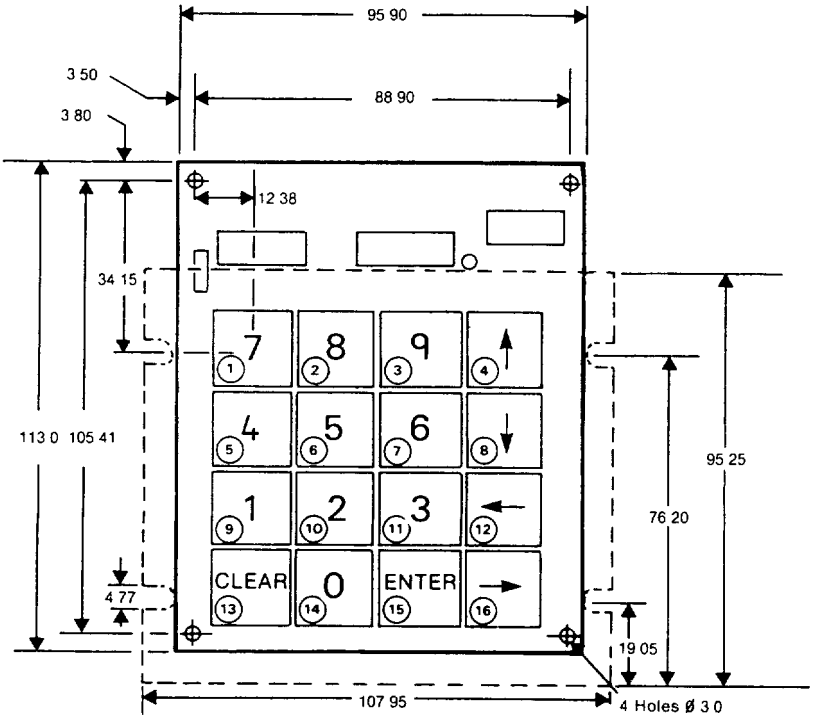
Stepped :	PCB Mounting	KUK — S16 — 01K
	Keyplate mounting	KUK — S16 — 02K
Flat :	PCB mounting	KUK — F16 — 01K
	Keyplate mounting	KUK — F16 — 02K
Low profile :	PCB mounting	KUK — F16 — 01Q
	Keyplate mounting	KUK — F16 — 02Q

Encoded keypads

Description

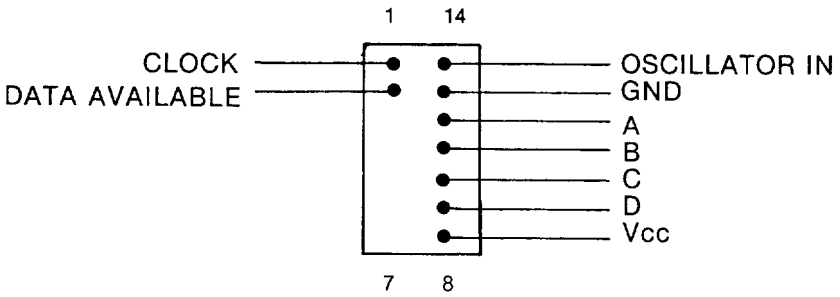
This range of encoded keypads uses the National MM 74C 922 encoder. All keyswitches have been debounced and the encoding has built-in 2 key rollover. The keypad is supplied with an oscillator but, if desired, the user can synchronize the keypad scan by removing the oscillator capacitor and driving the oscillator input directly. Also the user may prevent data being available on the output lines by providing a logical 1 to the CLK (clock) input. A logical 0 applied to the CLK input allows the data to be gated through to the output lines. If the CLK input is not needed, it is necessary to connect the CLK input to the DA output at the connector.

Dimensions



N.B. Broken line shows dimensions of keyplate mounting.

D.i.l. socket connector detail



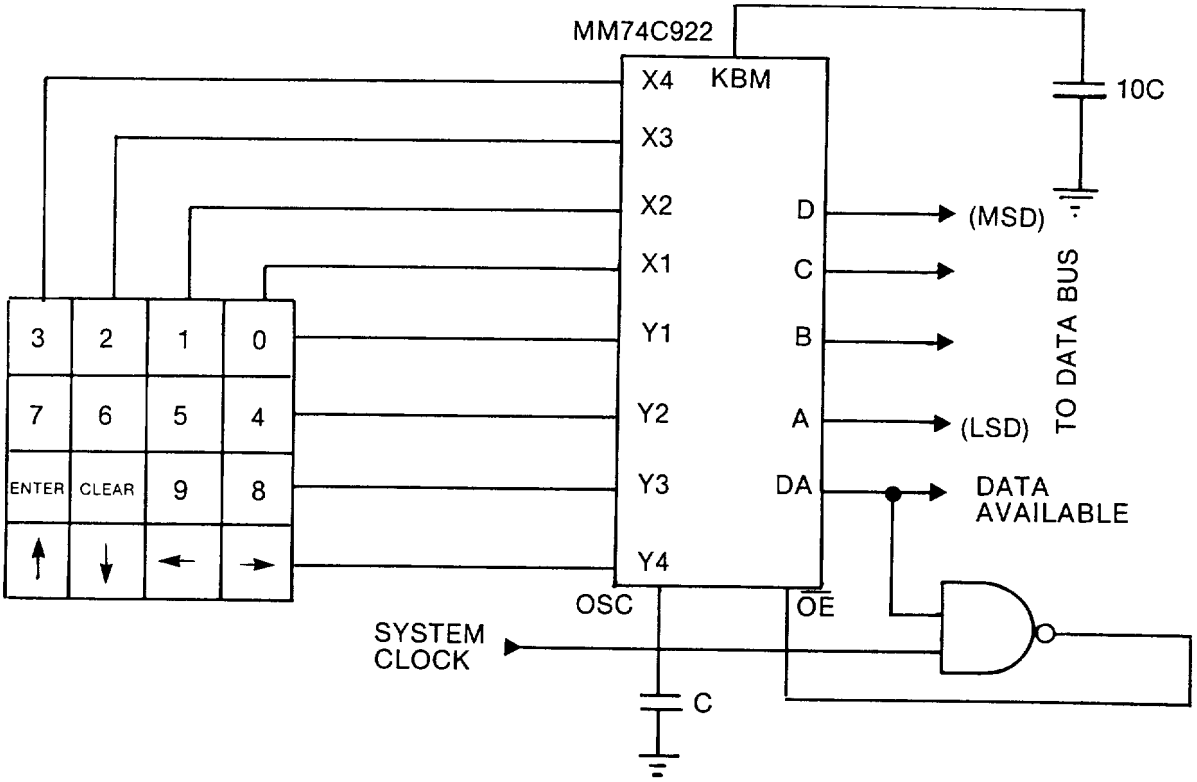
Part numbers for keypads with standard keytop legends and colours

Stepped :	PCB mounting	KUK — S16 — E1K
	Keyplate mounting	KUK — S16 — E2K
Flat :	PCB mounting	KUK — F16 — E1K
	Keyplate mounting	KUK — F16 — E2K
Low profile :	PCB mounting	KUK — F16 — E1Q
	Keyplate mounting	KUK — F16 — E2Q

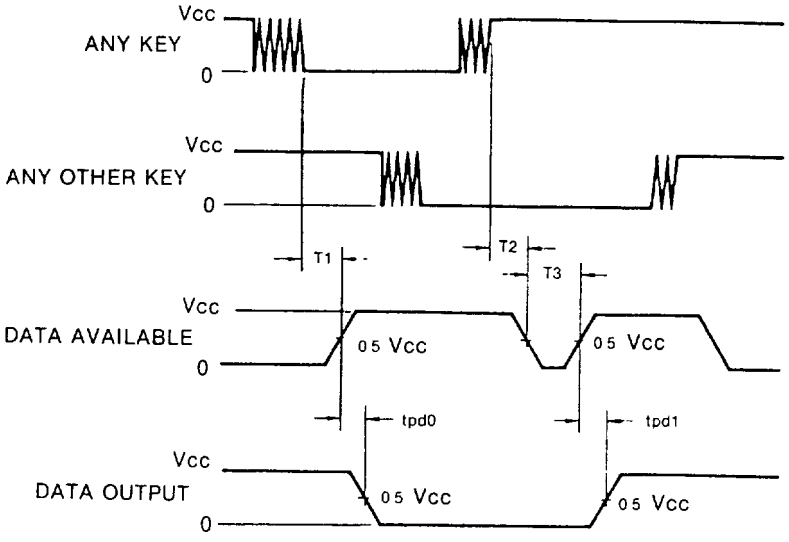
Encoded keypads (contd.)

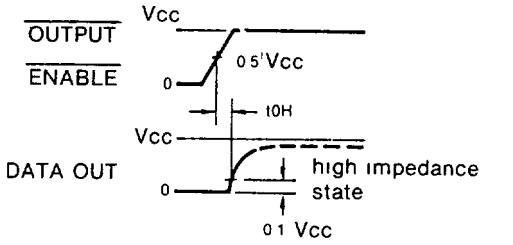
Schematic diagram

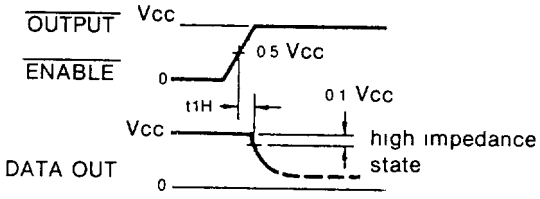
Outputs are enabled when valid entry is made and go into tri-state when key is released.



Switching time waveforms







$T1 \approx T2 \approx RC$, $T3 \approx 0.7\ RC$ where $R = 10k\Omega$ and C is external capacitor at debounce input.

(All dimensions are in mm)

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