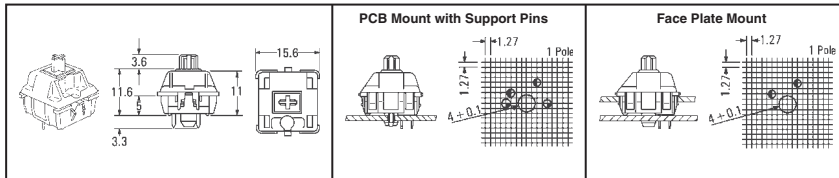




## MX Key Switches

**Main Advantages:** • The MX is a modern full-travel low-profile keyswitch • This module is designed to meet all current ergonomic standards demanded for word and data processing applications • Gold wire crossbar contacts ensure long life expectancy • High reliability also during quick actuation • All switches are momentary N/O type • **Specifications:** • Maximum Voltage 12 • Maximum Current 10mA • Contact Resistance 200mΩ • Capacity at 1MHz <1pF • Bouncing Time at 0.4 ≤5ms



Description	Digi-Key Part No.	Price Each			Cherry Part No.
		1	10	50	
<b>PCB Mount</b>					
Linear Feel	CH160-ND	.86	.77	.64	MX1A-11NW
Click Tactile Feel	CH197-ND	.95	.84	.70	MX1A-E1NW
Soft Tactile Feel	CH310-ND	.70	.63	.52	MX1A-C1NW
<b>Face Plate Mount</b>					
Linear Feel	CH162-ND	.86	.77	.64	MX1A-11NN
Click Tactile Feel	CH196-ND	.86	.77	.64	MX1A-E1NN
Soft Tactile Feel	CH198-ND	1.16	1.04	.86	MX1A-C1NN

## Pushwheel Switches

Fig.	Output Code	Posi-tions	Read-Out	Features	Digi-Key Part No.	1	10	50	100	Cherry Part No.
<b>PA Pushwheel</b>										
1A	BCD	10	0-9	Extended Buttons	CH178-ND	18.33	16.30	13.58	11.21	PACA-3000
	BCD Compl.	10	0-9	Extended Buttons	CH179-ND	28.27	25.13	20.94	17.28	PAEA-3000
	BCD	10	0-9	Ext. Board for Diodes	CH180-ND	22.33	19.85	16.54	13.65	PACA-4000
	Decimal	10	0-9	Extended Buttons	CH682-ND	22.49	20.00	18.75	15.83	PAAA-3000
	Octal	8	0-7	Extended Buttons	CH683-ND	21.30	18.94	15.78	13.02	PABA-3000
	Octal	8	0-7	Flush Buttons	CH684-ND	22.92	20.38	16.98	14.01	PABA-3114
	BCD	10	0-9	Extended Buttons	CH685-ND	19.87	17.67	14.72	12.15	PACA-3100
	BCD	10	0-9	Flush Buttons	CH686-ND	19.87	17.67	14.72	12.15	PACA-3114
	Hexadecimal	16	0-15	Extended Buttons	CH687-ND	15.88	14.12	11.76	9.71	PAGA-3100
	Hexadecimal	16	0-15	Flush Buttons	CH688-ND	15.88	14.12	11.76	9.71	PAGA-3114
Right End Caps for PA Switches					CH188-ND	.73	.65	.54	.48	0609-0799
Left End Caps for PA Switches					CH189-ND	.73	.65	.54	.48	0609-0801
Housing .300" (7.62mm) PA Blank Black Matte					CH678-ND	1.11	.99	.93	.78	0609-0797
Spacer .100" (2.54mm) PA Blank Black Matte					CH679-ND	1.11	.99	.93	.78	0609-0803
<b>PB Pushwheel — "Dustproof" Front Mount — RoHS Compliant</b>										
1B	BCD	10	0-9	—	CH185-ND	10.48	9.32	7.76	—	PBC1-E015
Right End Caps for PB Switches					CH194-ND	.73	.65	.54	.48	0609-1347
Left End Caps for PB Switches					CH195-ND	.73	.65	.54	.48	0609-1346
Spacer .100" (2.54mm) for PB Series Black					CH680-ND	1.11	.99	.93	.78	0609-1348
<b>PE Pushwheel — RoHS Compliant</b>										
1C	Decimal	10	0-9	Extended Buttons	CH239-ND	21.17	18.82	15.68	12.94	PEAA-3000
	BCD	10	0-9	Extended Buttons	CH181-ND	20.66	18.36	15.30	12.63	PECA-3000
	Hex	16	0-15	Extended Buttons	CH240-ND	28.46	25.30	21.08	17.40	PEGA-3000
	Hex	16	0-9, A-F	Extended Buttons	CH281-ND	28.11	24.99	20.82	17.18	PEHA-3000
	BCD	10	0-9	Ext. Board for Diodes	CH183-ND	26.16	23.26	19.38	15.99	PECA-4000
Right End Caps for PE Switches					CH190-ND	.73	.65	.54	.48	0609-0756
Left End Caps for PE Switches					CH191-ND	.73	.65	.54	.48	0609-0754
Spacer .300" (7.62mm) PE Blank Black Matte					CH677-ND	1.11	.99	.93	.78	0609-0752
<b>T57 Pushwheel — Back Mount</b>										
2	Decimal	10	0-9	Not for new designs	CH242-ND	14.50	12.89	10.74	9.40	0T57-01M0
<b>L20 Leverwheel</b>										
3	Decimal	10	0-9	Not recommended	CH233-ND	16.28	14.48	12.06	10.56	0L20-01A0
	Decimal	10	0-9	for new designs	CH234-ND	16.82	14.96	12.46	10.91	0L20-01M0

◆ RoHS Compliant NOTE: PAGA: QC terminal PAGE: Right angle header PAGN: Locking right angle header.

Fig.	Description	Digi-Key Part No.	1	10	100	Cherry Part No.
<b>Connectors — RoHS Compliant</b>						
4	Connector for PA Series BCD/HEX, PC Mount Terminal	CH271-ND	4.48	3.99	3.16	C2K0-P107
	Connector for PE Series BCD/HEX, PC Mount Terminal	CH274-ND	4.78	4.25	3.37	C2R0-P111
	Connector for PE Series BCD/HEX Solder Eyelet Terminal.	CH681-ND	4.78	4.25	3.37	C2RFN116

Fig. 1 – PA, PB and PE Series

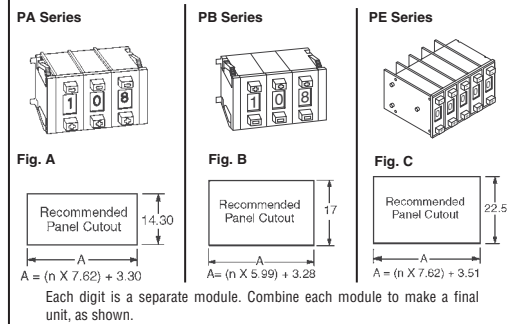


Fig. 2 – T57

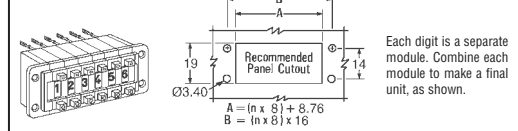


Fig. 3 – L20 (Right and Left End Caps)

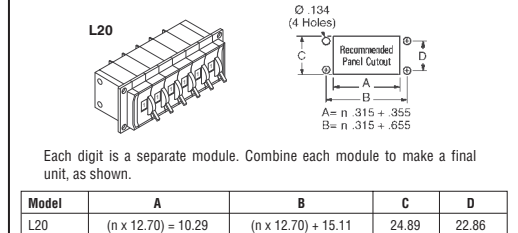
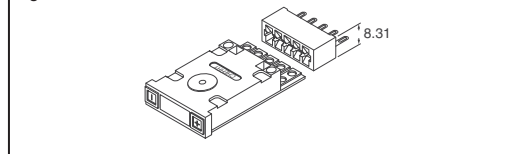


Fig. 4 – Connectors



## NKK® Series FM Membrane Switch Keypads

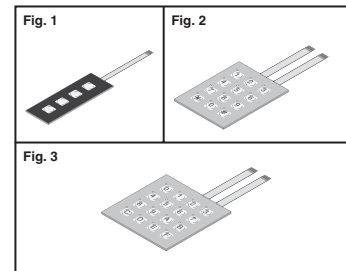


**Characteristics:** • 1.0mm (.039") tail pitch • Actuating dome offers crisp, tactile feedback to positively indicate circuit transfer • Illuminated models feature legends on embossed keypads • Adhesive backing for easy mounting • **Specifications:** • Power Level: 20mA @ 24VDC • Contact Resistance: 500Ω maximum (10mA @ 10VDC) • Insulation Resistance: 100MΩ minimum • Dielectric Strength: 250VAC minimum, for one minute minimum • Operational Life: 1,000,000 operations minimum • Contact Timing: 10 milliseconds maximum • Operating Temperature: -15°C - 50°C • **LED Specifications:** • Forward Voltage: 2.1V • Forward Current: 20mA • **Connectors:** • Recommended for 5 pin: Molex 0528060570 • Recommended for 8 pin: Molex 0528060810 • 1 connector required for Non-illuminated • 2 connectors required for Dot with Overlay

**Note:** • 4-Key Keypads have 5 pins • 12-Key and 16-Key Keypads have 8 pins

Fig.	Illumination	No. of Keys	Surface Sheet	Digi-Key Part No.	Price Each	NKK Part No.
1	Non-illuminated	4	Black	360-2294-ND	18.90	FMBN04BD
	Non-illuminated		Gray	360-2295-ND	18.90	FMBN04BE
2	Dot with Overlay	12	Gray	360-2298-ND	36.08	FMBP12BF
3	Non-illuminated	16	Black	360-2296-ND	25.00	FMBN16BD
			Gray	360-2297-ND	25.00	FMBN16BE
			Dot with Overlay	360-2299-ND	41.80	FMBP16BF

Description	Digi-Key Part No.	Price Each	Molex Part No.
<b>Molex Mating Connectors for FM Membrane Keypads</b>			
Connector for 12- and 16-Key Keypads	WMS315-ND	.50 .41 .32	52806-0810



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