



- *Reliable data entry in outdoor or indoor locations*
- *High contrast keytops with integral white light LED illumination*
- *Robust construction for use in extreme, wet or dirty environments*
- *Responsive tactile keys*
- *4, 12 and 16 key formats*

3000 SERIES Illuminated Keypads

**Responsive,
illuminated
keypads for
low-light
applications**



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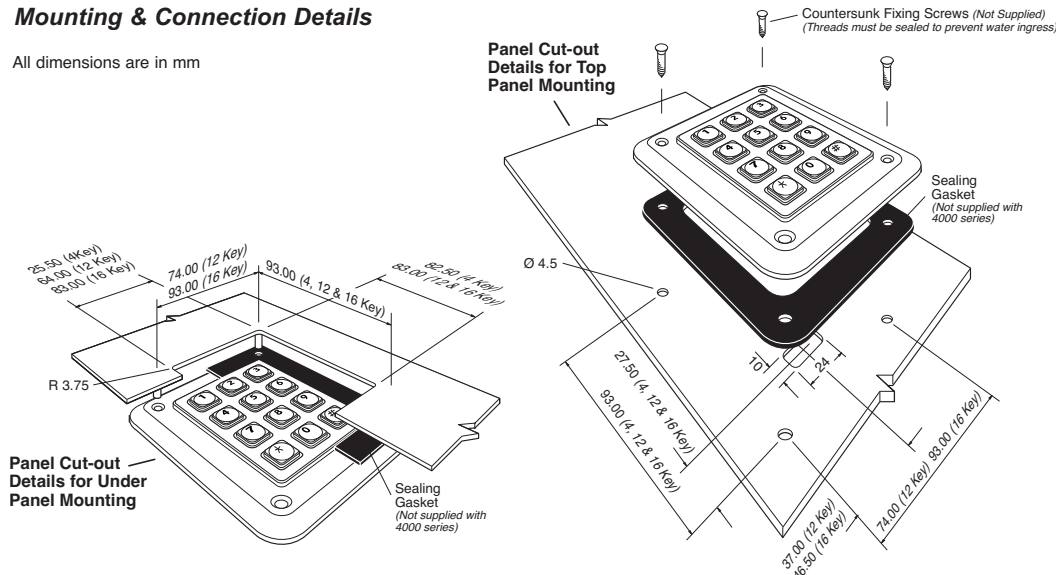


3000 Series Illuminated Keypads for low-light applications

Storm 3000 Series Illuminated Keypads are ideal for use in dark or dimly lit applications. They are constructed to survive in exposed, wet or dirty environments. Available in 4, 12 and 16 key configurations, these robust keypads can be fixed to the surface of a host enclosure or located beneath an aperture in a panel. Keys move with a positive "over-centre" action to provide a responsive tactile dynamic and reliable data entry. This excellent tactile response combined with a home pip and high contrast keytop characters make these illuminated keypads accessible for those with visual impairment.

Mounting & Connection Details

All dimensions are in mm



Connection Details for 4 Key Keypad

CONTACT CONNECTIONS

7 6 5 4 3 2 1

(As viewed from rear of keypad)

1
A
B
C
D

KEY LOCATION

(As viewed from front of keypad)

CONTACT MATRIX	
CONN. PIN	ROW/ COLUMN
1	Cathode
2	Common
3	D
4	C
5	B
6	A
7	Anode

Connection Details for 12 Key Keypad

CONTACT CONNECTIONS

10 9 8 7 6 5 4 3 2 1

(As viewed from rear of keypad)

1 2 3
A
B
C
D

KEY LOCATION

(As viewed from front of keypad)

CONTACT MATRIX	
CONN. PIN	ROW/ COLUMN
1	Cathode
2	A
3	B
4	1
5	2
6	3
7	-
8	D
9	C
10	Anode

Connection Details for 16 Key Keypad

CONTACT CONNECTIONS

10 9 8 7 6 5 4 3 2 1

(As viewed from rear of keypad)

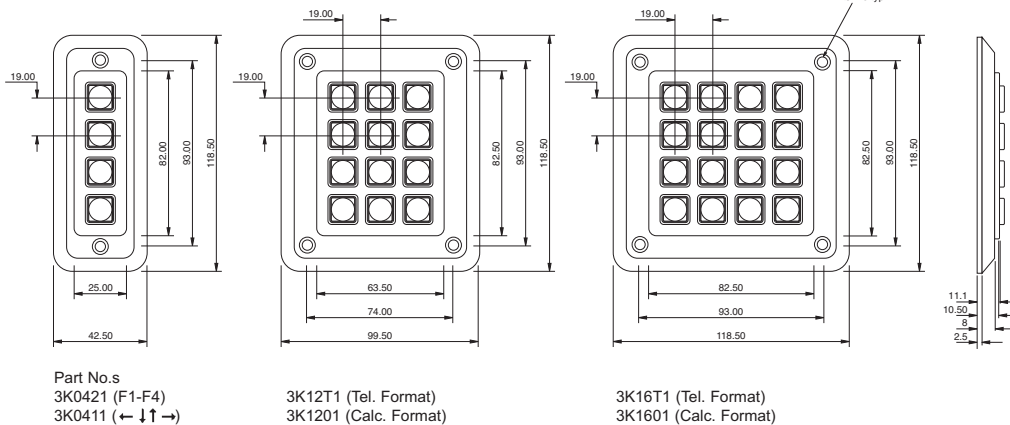
1 2 3 4
A
B
C
D

KEY LOCATION

(As viewed from front of keypad)

CONTACT MATRIX	
CONN. PIN	ROW/ COLUMN
1	Cathode
2	A
3	B
4	1
5	2
6	3
7	4
8	D
9	C
10	Anode

Overall Dimensions



Part No.s
3K0421 (F1-F4)
3K0411 (← ↑ →)

3K12T1 (Tel. Format)
3K1201 (Calc. Format)

3K16T1 (Tel. Format)
3K1601 (Calc. Format)

Electrical

Contact Bounce 5ms (max)
Contact Resistance 100 ohms (max)
Insulation Resistance 50 Mohms (min)
Breakdown Voltage 500V AC (max 60 secs.)
Operating Voltage 24V DC (max)
Operating Current 50mA (max)

Mechanical

Operational Life 2 million cycles (min) per key
Keytop Travel 1.4mm nominal
Actuation Force 180gms nominal
Connector 0.1" pitch, gold plated square pin, male connector

LED Specification

White Backlight current limited to n x 20mA @Vf
Vf = 3.5V (typical), 4.2V (max)
Reverse voltage, Vr = 5V (max)

Environmental

Water / Dust Sealed IP54 (when mounted to suitable enclosure)
Operational Temperature -10°C to +85°C (Dry)

Material

Casing General Service Polymer (black)
Keytops General Service Polymer (translucent)
Contact Circuit Gold on Nickel Plated FR4

Part Numbers

3KLW04110[x]
4 Key Pad – Cursor
3KLW04210[x]
4 Key Pad – Function
3KLW12010[x]
12 Key Pad – Calculator
3KLW12T10[x]
12 Key Pad – Telephone
3KLW16010[x]
16 Key Pad – Calculator
3KLW16T10[x]
16 Key Pad – Telephone

Accessories

4200-00[x]
RS232 Encoder Interface

Series Resistor Values

Use correct resistor to prevent damage to LEDs

4 way Connect +V via Series Resistor to Pin 7				12 way Connect +V via Series Resistor to Pin 10				16 way Connect +V via Series Resistor to Pin 10			
applied voltage	series resistor (ohms)	min resistor wattage	nominal current, per led (mA)	applied voltage	series resistor (ohms)	min resistor wattage	nominal current, per led (mA)	applied voltage	series resistor (ohms)	min resistor wattage	nominal current, per led (mA)
12	110	0.75	19	12	36	2.20	20	12	27	3.00	20
10	82	0.75	20	10	27	2.00	20	10	20	2.50	20
9	68	0.50	20	9	24	1.50	19	9	18	2.00	19
7.5	51	0.50	20	7.5	18	1.00	19	7.5	13	1.50	19

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Whilst every effort is made to ensure details are correct at time of print, specifications are subject to change without notice.

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