# LTOPM Interface



# 3000 SERIES Illuminated Keypads

Responsive, illuminated keypads for low-light applications















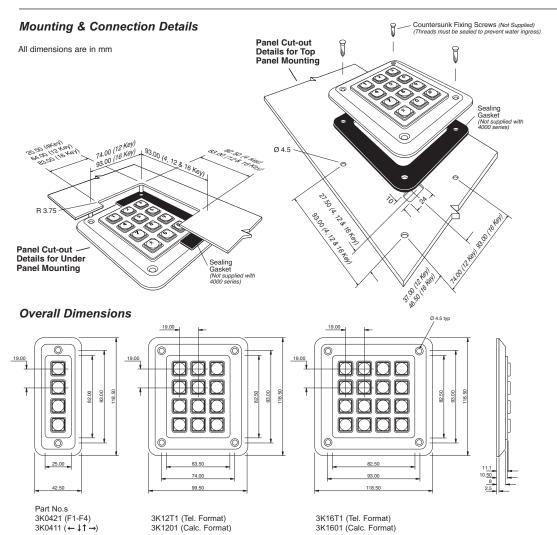
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## 3000 Series Illuminated Keypads for low-light applications

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.



#### **Connection Details** for 4 Key Keypad



	TACT TRIX			
CONNEC. PIN	ROW/ COLUMN			
1	Cathode			
2	Common D C			
3				
4				
5	В			
6	Α			
7	Anode			

CONTACT

## **Connection Details**

101 12 K	∍у г	real	Jau
CONTACT COI	NNEC	TIONS	3
• • • •	• •	• •	• •
10 9 8 7			
(As viewed fro	m rea	ar of ke	eypad)
A B C C C C KEY LOCA (As viewed fro	OITA		eypad

MATRIX						
CONNEC. PIN	ROW/ COLUMN					
1	Cathode					
2	Α					
3	B 1 2					
4						
5						
6	3					
7	_					
8	D					
9	С					
10	Anode					

CONTACT

#### Connection Details for 16

							٠.		
CON	NTA	СТ	CC	NIC	IEC	TIC	ONS	3	
•	•	•	•	•	•	•	•	•	•
10	9	8	7	6	5	4	3	2	1
(As	vie	we	d fr	om	rea	ar o	f ke	эур	ad)
	1_	2		3_	4	_			
Α			Ш						

CONTACT CONNECTIONS	PIN	COLUMN
• • • • • • • •	1	Cathode
10 9 8 7 6 5 4 3 2 1	2	Α
(As viewed from rear of keypad)	3	В
1 2 3 4	4	1
A 🗌 🗎 🗎 🗎	5	2
в	6	3
chhhh	7	4
	8	D
KEY LOCATION	9	С
(As viewed from front of keypad)	10	Anode

V V	MATRIX				
Key Keypad CONNECTIONS	CONNEC. PIN	ROW/ COLUMN			
• • • • • •	1	Cathode			
7 6 5 4 3 2 1	2	Α			
from rear of keypad)	3	В			
3 4	4	1			
	5	2			
	6	3			
	7	4			
	8	D			
CATION	9	С			

#### **Electrical**

Contact Bounce 5ms (max) 100 ohms (max) Contact Resistance 50 Mohms (min) Insulation Resistance 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

3KIW12010[x]

12 Kev 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								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

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