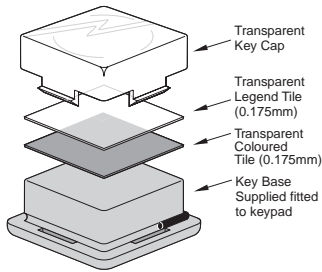
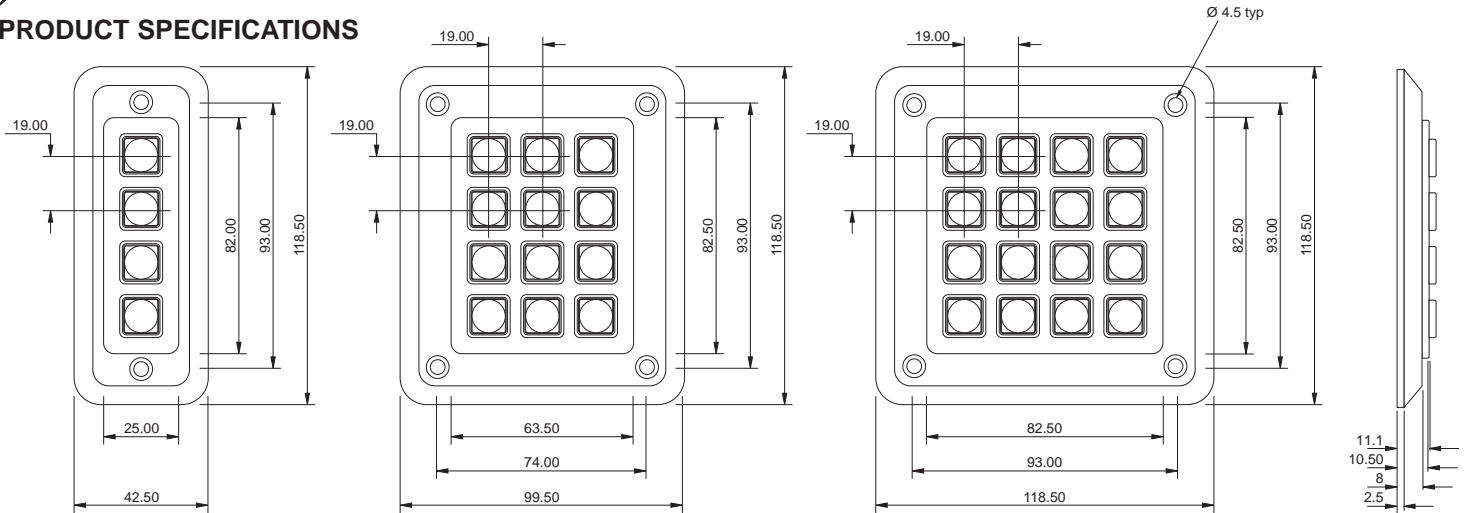


PRODUCT SPECIFICATIONS



GFX-Illuminator SERIES Keypad Assembly Instructions

Illuminated Series keypads are supplied with the key bases fitted. Each key position can be customised without dismantling the keypad. Keypad options can be selected from a library of standard symbols, characters or background colours. Alternatively, customised keypad graphics can be created using laser printed acetate film or screen printed polymer film. The total thickness of the coloured tile and legend tile should not

exceed 0.4mm. (Please note, paper is not recommended as the printed graphics may degrade if exposed to moisture / condensation.)

- 1 Orientate the keypad correctly by checking the connector position on the underside of the keypad.
- 2 Load each key position in turn. First locate the legend tile into the transparent key cap, then locate the transparent coloured tile (see diagram). **Before snapping the**

transparent key cap, including legend and customer tile, into position ensure that the legend tile's position, orientation and alignment are correct.

Please note, if it is necessary to remove the transparent key cap a suitable tool or pliers should be used. Once removed the key cap should not be re-used; spare key caps and bases are available in sets of 4, part number GS0000.

Vandal Resistant	Yes
Impact Resistant	Yes
IP Rating	Up to IP67
Key Life (cycles)	4 Million
Service Temp. (non condensing)	-40°C to +100°C
Case Material	Chromed zinc
Case Colour	Silver
Contact Materials	Carbon/Gold
Contact Bounce	5ms
Contact Resistance	100 ohms (max)
Insulation Resistance	50 Mohms (min)
Breakdown Voltage	500 V (60 secs)
Operating Voltage (contacts)	24V dc (max)
Operating Current (contacts)	50 mA (max)
Keypad Travel	1.4mm (nominal)
Actuating Force	180gm (nominal)
Connector	0.1" Pitch, gold plated square pin, male with locking ramp

VR	Yes
Impact Resistant	Yes
IP Rating	Up to IP67
Key Life (cycles)	4 Million
Service Temp. (non condensing)	-40°C to +100°C
Case Material	Chromed zinc
Case Colour	Silver
Contact Materials	Carbon/Gold
Contact Bounce	5ms
Contact Resistance	100 ohms (max)
Insulation Resistance	50 Mohms (min)
Breakdown Voltage	500 V (60 secs)
Operating Voltage (contacts)	24V dc (max)
Operating Current (contacts)	50 mA (max)
Keypad Travel	1.4mm (nominal)
Actuating Force	180gm (nominal)
Connector	0.1" Pitch, gold plated square pin, male with locking ramp

GFX	No
Impact Resistant	No
IP Rating	Up to IP54
Key Life (cycles)	2 Million
Service Temp. (non condensing)	-10°C to +75°C
Case Material	Super impact polymer
Case Colour	Black
Contact Materials	Carbon/Gold
Contact Bounce	5ms
Contact Resistance	100 ohms (max)
Insulation Resistance	50 Mohms (min)
Breakdown Voltage	500 V (60 secs)
Operating Voltage (contacts)	24V dc (max)
Operating Current (contacts)	50 mA (max)
Keypad Travel	1.4mm (nominal)
Actuating Force	180gm (nominal)
Connector	0.1" Pitch, gold plated square pin, male with locking ramp

White Back Light Power Requirement	
-------------------------------------------	--

--	--

Current limited to nx10mA @ Vf n = Number of keys Vf = 3.5V (typical) 4.2V (max) Reverse voltage, Vr = 5V max

Red Back Light Power Requirement	
-----------------------------------------	--

Current limited to nx20mA @ Vf n = Number of keys Vf = 1.8V (typical) 2.6V (max)f

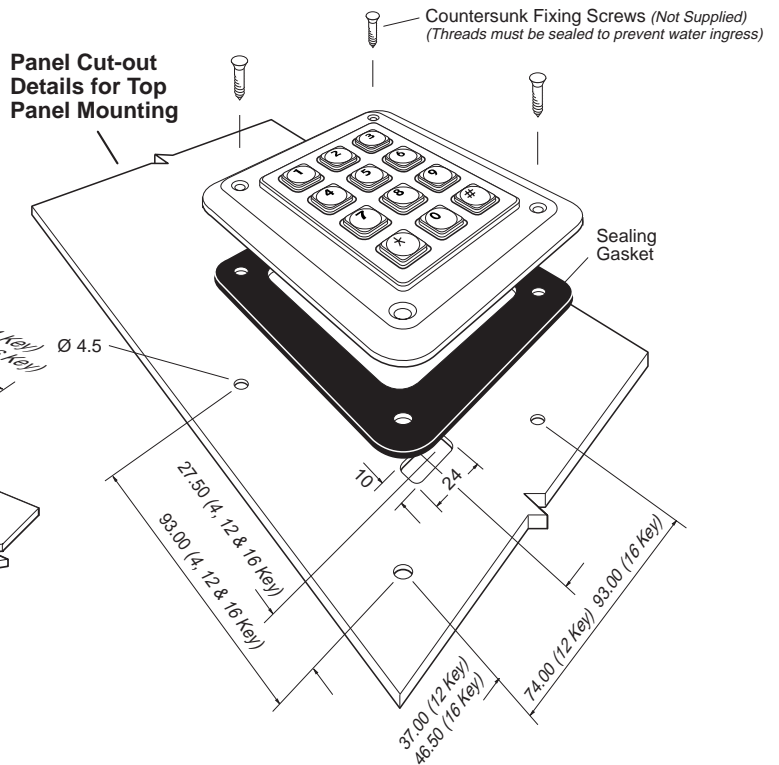
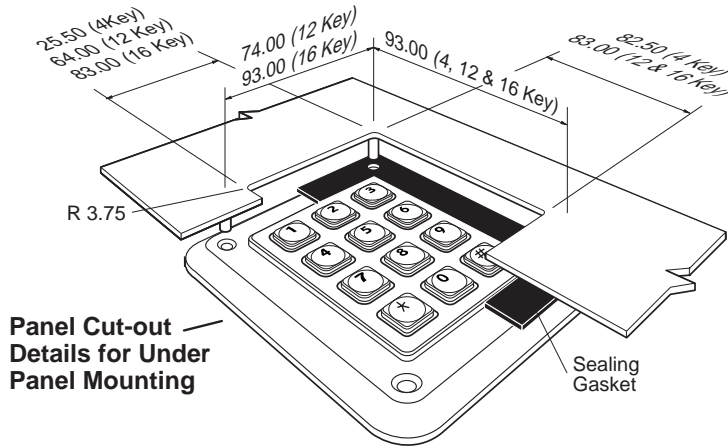
Current limited to nx20mA @ Vf n = Number of keys Vf = 1.8V (typical) 2.6V (max)

Green Back Light Power Requirement	
-------------------------------------------	--

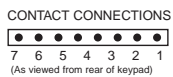
Current limited to nx20mA @ Vf n = Number of keys Vf = 2.2V (typical) 2.6V (max)

Current limited to nx20mA @ Vf n = Number of keys Vf = 2.2V (typical) 2.6V (max)

MOUNTING & CONNECTION DETAILS



Connection Details for 4 Key Keypad

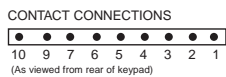


A	1
B	
C	
D	

KEY LOCATION
(As viewed from front of keypad)

CONTACT MATRIX	
CONNECT PIN	ROW/COLUMN
1	R-Anode
2	W/G-Cathode
3	common
4	C
5	B
6	A
7	R-Cathode
	W/G-Anode

Connection Details for 12 Key Keypad

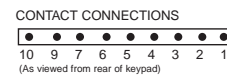


A	1	2	3
B			
C			
D			

KEY LOCATION
(As viewed from front of keypad)

CONTACT MATRIX	
CONNECT PIN	ROW/COLUMN
1	R-Anode
2	A
3	B
4	1
5	2
6	3
7	-
8	D
9	C
10	R-Cathode
	W/G-Anode

Connection Details for 16 Key Keypad



A	1	2	3	4
B				
C				
D				

KEY LOCATION
(As viewed from front of keypad)

CONTACT MATRIX	
CONNECT PIN	ROW/COLUMN
1	R-Anode
2	A
3	B
4	1
5	2
6	3
7	4
8	D
9	C
10	R-Cathode
	W/G-Anode

ACCESSORIES FOR USE WITH STORM ILLUMINATOR RANGE KEYPADS

Item	Stock No.	Notes
Universal Encoder	400000	Keypad Interface. PC/RS232
Rear Casing	RC1202	Providing space for additional components or circuitry (12 key formats only) Supplied complete with fixing hardware, sealing gaskets and fixing instructions
Blank Keypads (Storm 1000 Series) set of four	1K0000	Supplied without keypad graphics. Suitable for engraving
Privacy Shroud	1KFS02	Provides PIN / Entry Code security (12 key format only) Supplied complete with fixing hardware, sealing gaskets and fixing instructions

Graphic Keypad Accessories

Enables custom configuration of keypad graphics and colour

- Set A:** 0 - 9, ←, →, ↑, ↓, *, #, +, -, =, ., X, AC, I/O, ENT, CE/C, SP.
- Set B:** ←, →, ↑, ↓, ENT, PRINT, DEL, INS, CAP, ESC, CTRL, ALT, ON, OFF, \, /, LOCK, f1, f2, f3, f4, \$, %, &, ' , " , SP.
- Set D:** F1 TO F12, £, \$, ?, !, (,), @, <, >, Fn, ", ' , % , &, SP.
- Set F:** 0 - 9, →, A - F, CE/C, ENT, OFF, *, #, +, -, ., blank, SP.
- Set C:** "A TO Z"
- Set E:** Blank
- Set J:** French symbols
- Set K:** German symbols

1 pair for 4 key keypad, 2 pairs for 12/16 key keypads & 3 pairs for 36 key keypad.

VR-Illuminator Keypads

Description	Order Code	Description	Order Code
4 Keypad - cursor	IKL041101	12 Keypad - Standard	IKL12T101
4 Keypad - cursor	IKL041103	12 Keypad - Standard	IKL12T103
4 Keypad - Function	IKL042101	16 Keypad - Calculator	IKL160101
4 Keypad - Function	IKL042103	16 Keypad - Calculator	IKL160101
12 Keypad - Calculator	IKL120101	16 Keypad - Standard	IKL16T101
12 Keypad - Calculator	IKL120103	16 Keypad - Standard	IKL16T103

GFX-Illuminator Keypads

White Lights		Red, Green Lights	
Description	Order Code	Description	Order Code
4 Keypad	GSLW040201	4 Keypad	GSRG040201
4 Keypad	GSLW040203	4 Keypad	GSRG040203
12 Keypad	GSLW120201	12 Keypad	GSRG120201
12 Keypad	GSLW120203	12 Keypad	GSRG120203
16 Keypad	GSLW160201	16 Keypad	GSRG160201
16 Keypad	GSLW160203	16 Keypad	GSRG160203

All dimensions in millimetres (mm).
Full product specifications are available on request from your local Storm supplier.
Storm keypads incorporate key switch technology protected by International Patents.



usa office:
storm data entry technology
suite 202
364 pennsylvania avenue
glen ellyn IL 60137 USA
tel: (630) 469 2981
fax: (630) 469 2975
email: sales.usa@storm-keypads.com
website: www.storm-keypads.com

uk office:
keymat technology ltd
14 bentinck court
bentinck road
west drayton
middlesex UB7 7RQ
tel: +44 (0)1895 431421
fax: +44 (0)1895 431132
email: sales@keymat.com
website: www.keymat.com

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

102-XX-08KT - Iss2



February 2000



FM 39602

Storm is a trademark of Keymat Technology Ltd