

# V series

Stainless steel keypads for harsh environments



## DISTINCTIVE FEATURES

- Round or square keys
- Rear mounting
- 316L stainless steel : frame and keytops
- Panel sealed to IP65
- Custom markings on request



## ENVIRONMENTAL SPECIFICATIONS

- Front sealing : IP65 according to NFC 21-010, IEC 60529 and DIN 40050
- Operating temperature : -20 °C to +70 °C (-4 °F to +158 °F)
- Storage temperature : -40 °C to +85 °C (-40 °F to +185 °F)
- Impact resistance : IK09 according to EN 50102
- Flame resistance : UL94 HB horizontal position (30 seconds max).
- Salt spray : 96 hours according to IEC 512-6, test 11f
- Washable : most commonly used detergents and solvents



## ELECTRICAL SPECIFICATIONS

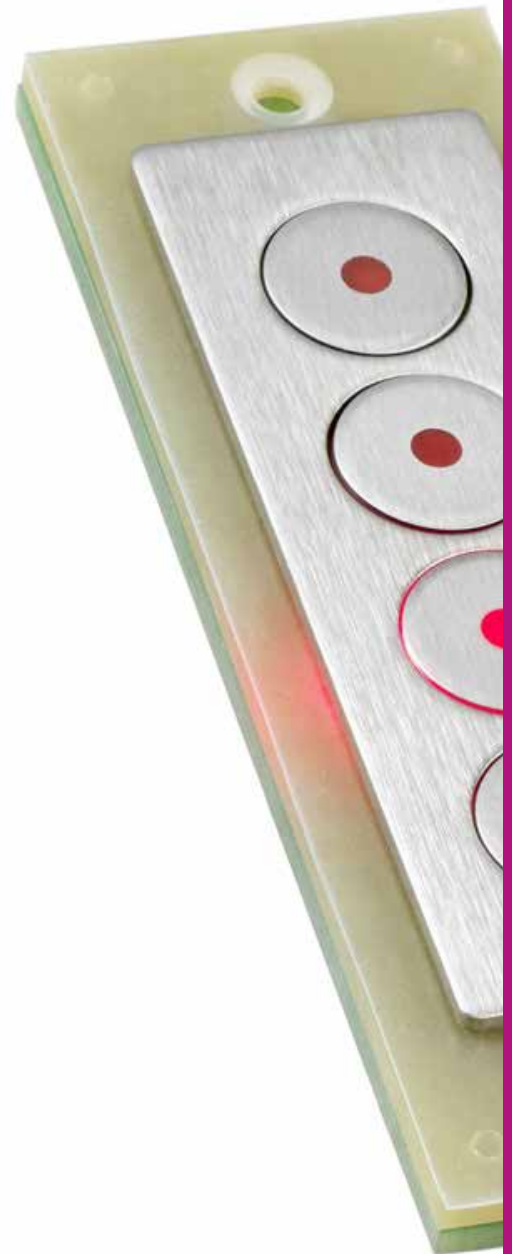
- Output type : matrix (NO contacts)
- Max. current/voltage rating with resistive load : 50 mA at 12 VDC
- Initial contact resistance ON : 10Ω max.
- Insulation resistance : 1GΩ min. at 500 VDC
- LED backlight : 12 VDC (standard)



## GENERAL SPECIFICATIONS

- Contact force : 4 N ± 0.5 N (non-illuminated version)  
3.5 N (illuminated version)
- Stroke : 0.5 mm (.019)
- Low level or mechanical life : 1 million cycles
- Panel thickness : 2.5 mm (.098) (standard version)
- Connection : male connector

The company reserves the right to change specifications without notice.



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## MATERIALS

- Keytop : 316L stainless steel
- Keys : ABS or PA6 nylon (illuminated versions)
- Key holder : ABS or PA6
- Frame : 316L stainless steel
- PCB : FR4
- Seal : 0.4 mm thick silicone
- Actuator : stainless steel snap domes AISI 304
- Contacts : gold plated

APEM products may be recycled at end-of-life for the re-claiming of valuable metal components.



### BUILD YOUR PART NUMBER

#### BASIC PART NUMBER



##### MODELS

<b>VR0</b>	Ø 17 (.669) round keys
<b>V00</b>	Ø 20 (.787) round keys
<b>VH0</b>	Ø 20 (.787) round keys with plastic bezel
<b>VQR</b>	17 x 17 (.669x.669) square keys
<b>VQ0</b>	22 x 22 (.866x.866) square keys

VH0 not available with 12 or 16 keys  
VQR non-illuminated only



##### NO OF KEYS

<b>01</b>	1 key
<b>04</b>	4 keys
<b>12</b>	12 keys
<b>16</b>	16 keys



##### FRAME

<b>0</b>	No frame (1 key models)
<b>1</b>	With frame (other models)



##### ILLUMINATION

<b>0</b>	Non-illuminated
<b>L</b>	Illuminated (not for VQR)

#### OPTIONS



##### LED COLORS

<b>XX</b>	No LED
<b>0R</b>	Red
<b>0B</b>	Blue
<b>0G</b>	Green
<b>0Y</b>	Yellow
<b>0W</b>	White
<b>XR</b>	Green/blue/ yellow/red
<b>RB</b>	Red/blue
<b>RG</b>	Red/green



##### VOLTAGE

<b>XX</b>	Without
<b>05</b>	5 VDC
<b>12</b>	12 VDC
<b>24</b>	24 VDC



##### MARKING

<b>0</b>	Blank keys
<b>S</b>	Standard marking
<b>C</b>	Custom marking



### ABOUT THIS SERIES

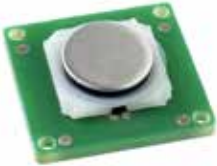
Some configurations are shown on the following pages. Other drawings are available on request.

**Notice** : please note that not all combinations of above numbers are available. Refer to the following pages for further information.

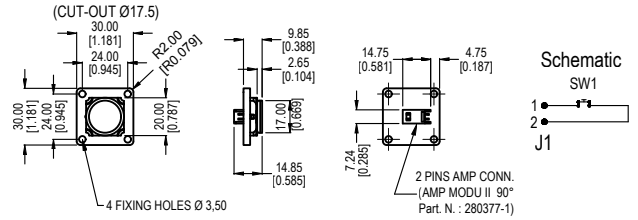
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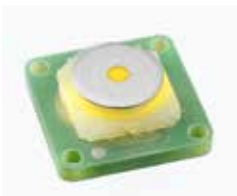
Ø 17 MM (.669) ROUND KEY  
SINGLE KEY MODEL - NON-ILLUMINATED



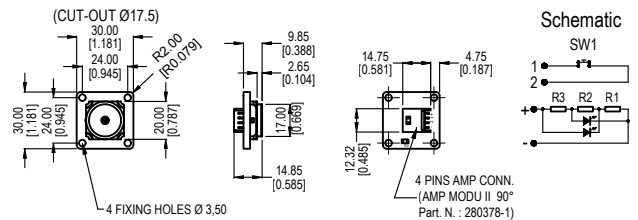
VR00100



Ø 17 MM (.669) ROUND KEY  
SINGLE KEY MODEL - ILLUMINATED



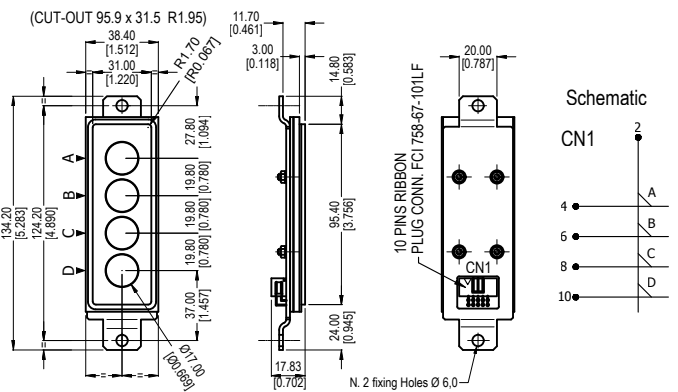
VR0010L



Ø 17 MM (.669) ROUND KEYS  
4-KEY MODEL - NON-ILLUMINATED



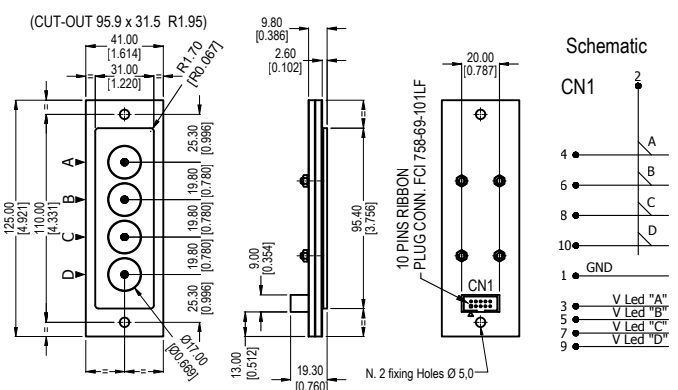
VR00410



Ø 17 MM (.669) ROUND KEYS  
4-KEY MODEL - ILLUMINATED



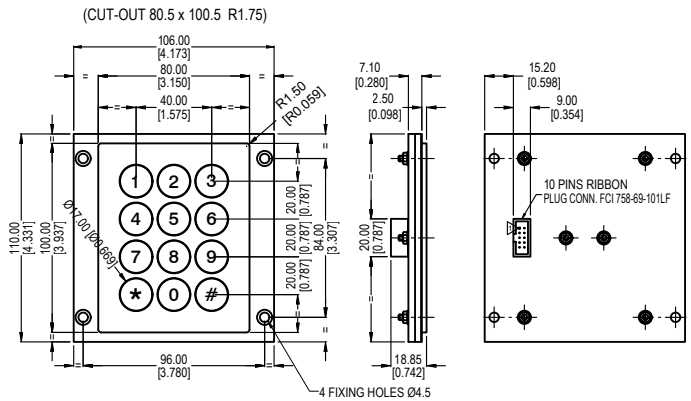
VR0041L



Ø 17 MM (.669) ROUND KEYS  
12-KEY MODEL - NON-ILLUMINATED



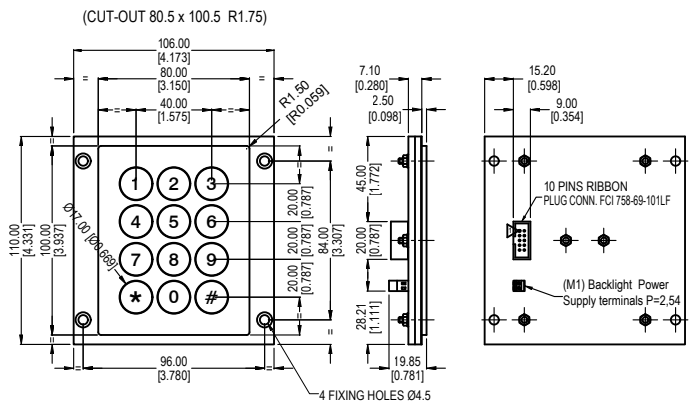
VR01210



Ø 17 MM (.669) ROUND KEYS  
12-KEY MODEL - ILLUMINATED



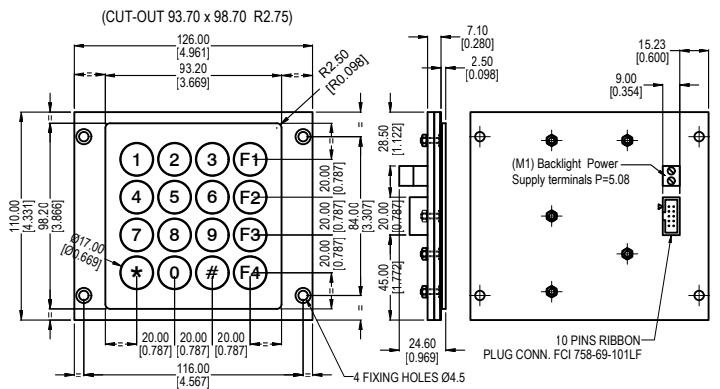
VR0121L



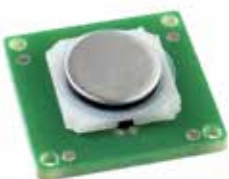
Ø 17 MM (.669) ROUND KEYS  
16-KEY MODEL - NON-ILLUMINATED



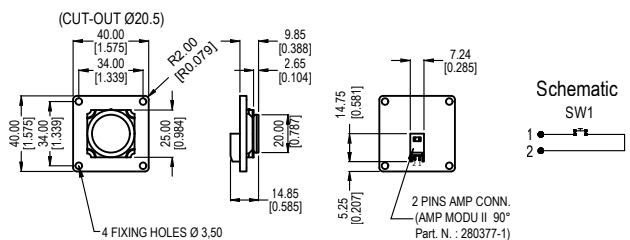
VR01610



Ø 20 MM (.787) ROUND KEY  
SINGLE KEY MODEL - NON-ILLUMINATED



V000100



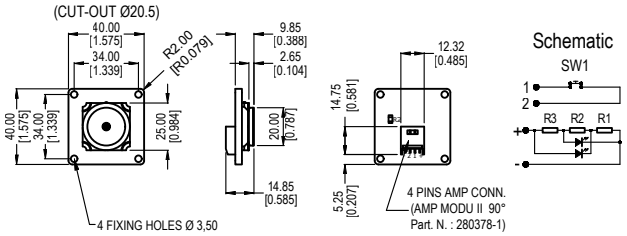
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Ø 20 MM (.787) ROUND KEY  
SINGLE KEY MODEL - ILLUMINATED



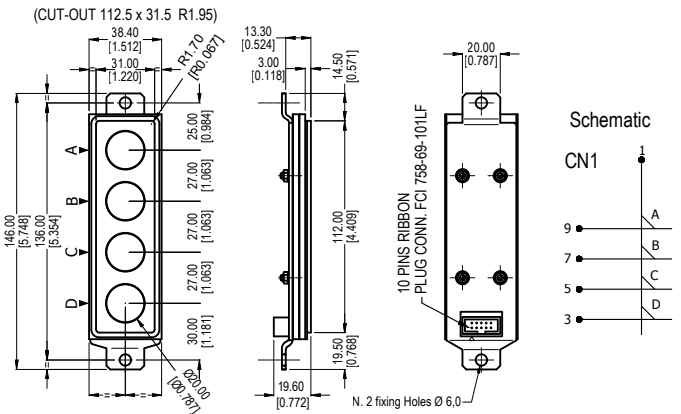
V00010L



Ø 20 MM (.787) ROUND KEYS  
4-KEY MODEL - NON-ILLUMINATED



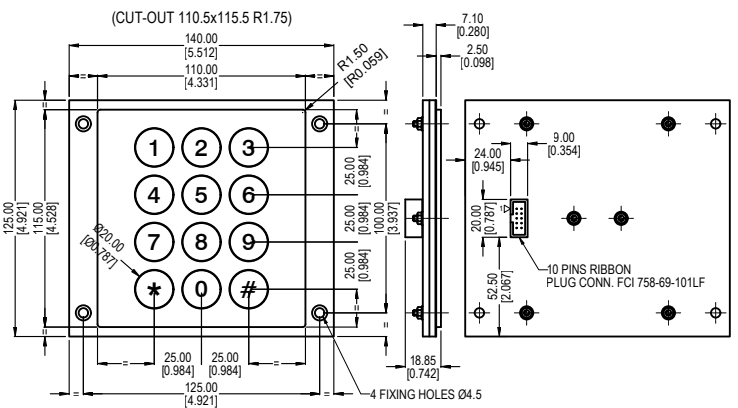
V000410



Ø 20 MM (.787) ROUND KEYS  
12-KEY MODEL - NON-ILLUMINATED



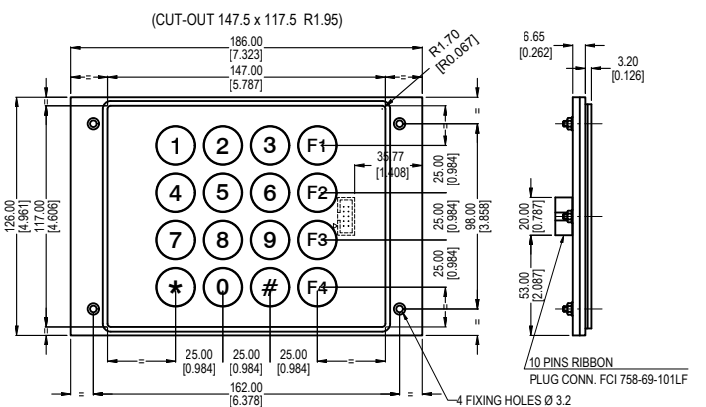
V001210



Ø 20 MM (.787) ROUND KEYS  
16-KEY MODEL - ILLUMINATED



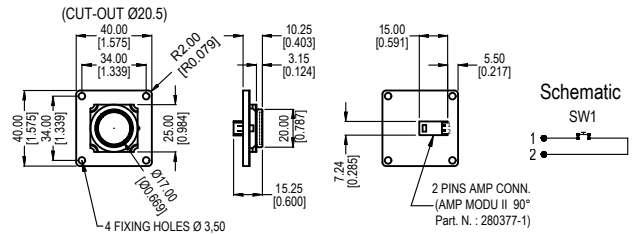
V001610



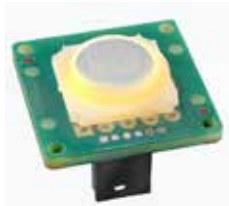
### Ø 20 MM (.787) ROUND KEY SINGLE KEY MODEL - NON-ILLUMINATED



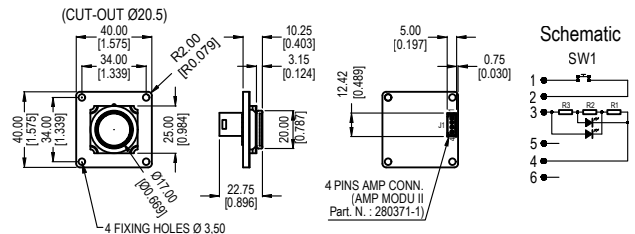
VH00100



### Ø 20 MM (.787) ROUND KEY SINGLE KEY MODEL - ILLUMINATED



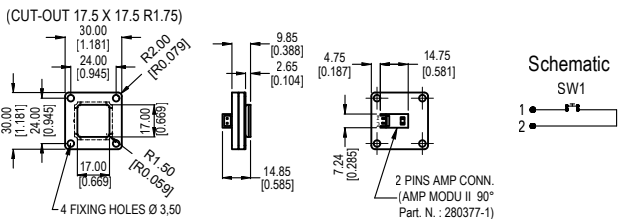
VH0010L



### 17 MM (.669) SQUARE KEY SINGLE KEY MODEL - NON-ILLUMINATED



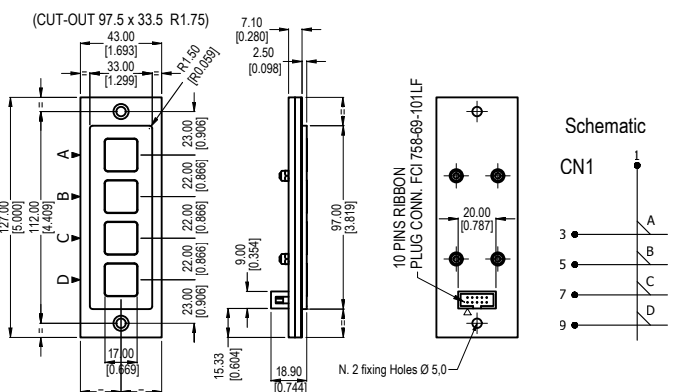
VQR0100



### 17 MM (.669) SQUARE KEYS 4-KEY MODEL - NON-ILLUMINATED



VQR0410



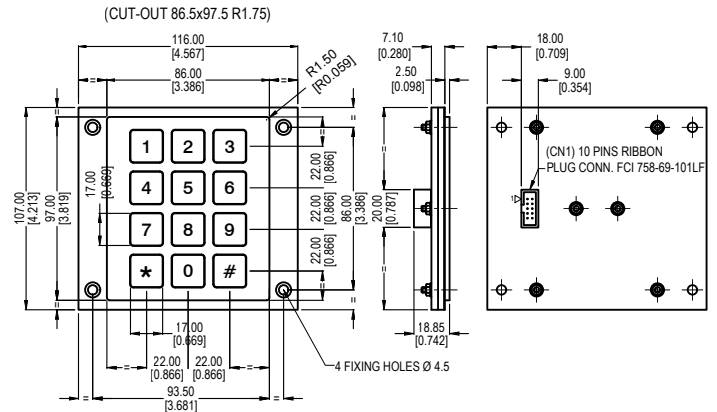
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17 MM (.669 X .669) SQUARE KEYS  
12-KEY MODEL - NON-ILLUMINATED



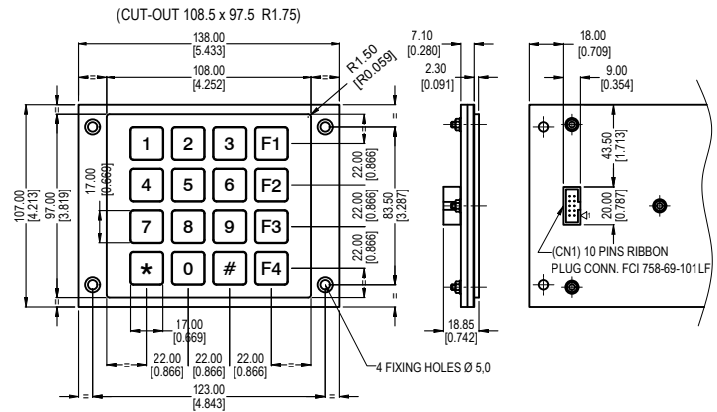
VQR1210



17 MM (.669) SQUARE KEYS  
16-KEY MODEL - NON-ILLUMINATED



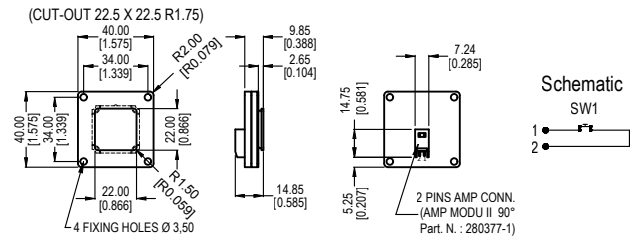
VQR1610



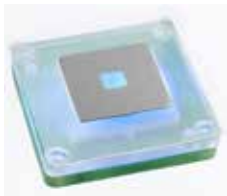
22 MM (.866) SQUARE KEY  
SINGLE KEY MODEL - NON-ILLUMINATED



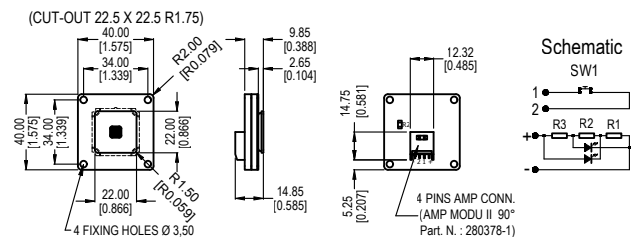
VQ00100



22 MM (.866) SQUARE KEY  
SINGLE KEY MODEL - ILLUMINATED



VQ0010L





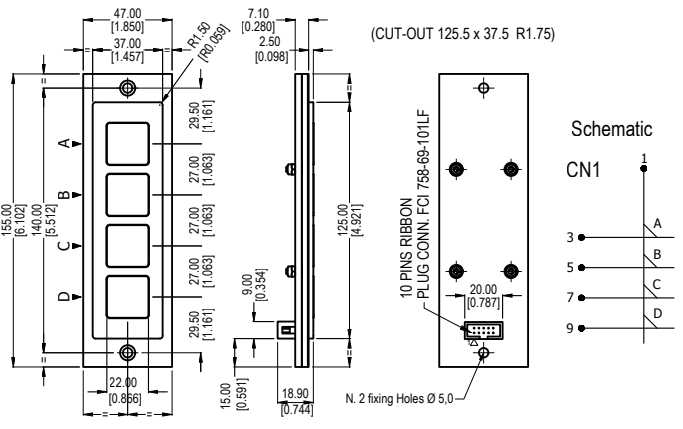
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22 MM (.866) SQUARE KEYS  
4-KEY MODEL - NON-ILLUMINATED



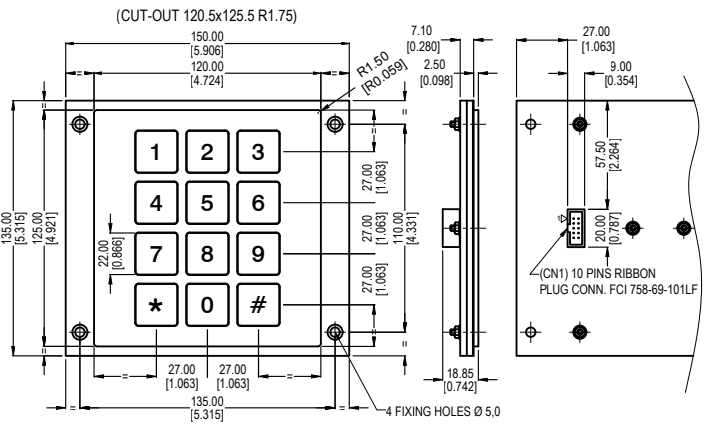
VQ00410



22 MM (.866) SQUARE KEYS  
12-KEY MODEL - NON-ILLUMINATED



VQ01210



22 MM (.866) SQUARE KEYS  
16-KEY MODEL - NON-ILLUMINATED



VQ01610

