



KEY TECHNOLOGY CHINA LIMITED

深圳市键特电子有限公司



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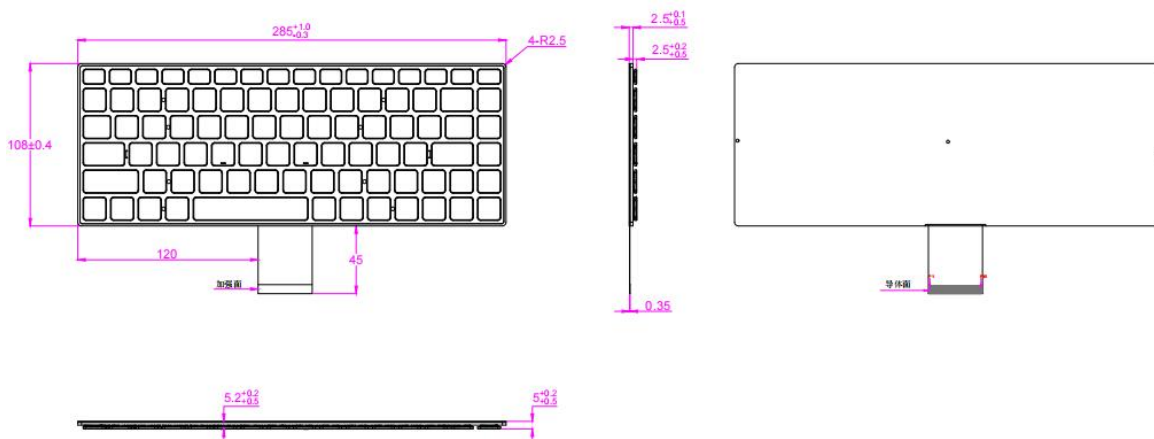
Website: www.rugged-system.com, www.rugged-key.com

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MODEL NO.: K-TEK-V285-FN-BL-FC-SC-DM-DWP

DESCRIPTION: 86 keys compact IP67 dynamic fully sealed waterproof and durable embedded ultra thin rugged **patented** scissor switch keyboard, with built-in ultra-thin Flexible Printed Circuit, 12 function keys (F1, F2, ... F12) are on top line for easy operation. It adopts scissor switch technology with $1.20\text{mm} \pm 0.10\text{mm}$ key travel with extremely good tactile feeling for fast and accurate data input without any noise, there will be no key value missing, no stuck key or repeat output during the keyboard operation, with durable coating & anti-microbial keyboard surface withstand most chemicals and liquids under harsh environment. **FN + Clean** combination keys for easy cleaning without taking the keyboard away from PC to avoid mis-operation or mis-typing. Adjustable white backlight included, dot matrix output, panel mount solution. **Designed to meet MIL-STD-810H (high and low wide temperature, low pressure, humidity, vibration, shock, temperature shock, rain, salt mist, dust, fungus, solar radiation etc.) as well as the critical military standards in these 10 aspects: reliability, safety, maintainability, testability, supportability, environmental adaptability, stability, compatibility, consistency, and continuity; MIL-STD-461G-EMC-EMI-EMS-ESD (optional). Patented keyboard (Patent number: 202422198937.6)**

Dimensions: 285.0mm x 108.0mm (L x W)





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MECHANICAL DATA

Key	86 keys
Key switch	Rugged scissor switch technology
Key travel	1.20mm±0.10mm
Key life span	more than 5 million of operations
Actuation Force	0.8N±0.2N

ELECTRICAL DATA

Supply Voltage	DC +5V±5%
Current Rating	≤30mA when backlight is off, ≤300mA with backlight on
EMC Standard	EN 55032:2015 EN 55035:2017
Lifespan	> 5 years
Interface	Dot matrix
OS	All Windows, Linux, Unix, Mac OSX, Vxworks, Android

ENVIRONMENTAL ADAPTABILITY

Operating temperature	-40℃ to + 60℃
Storage temperature	-50℃ to + 70℃
Humidity test	1. Test temperature: 30℃~60℃, 2. Test humidity: 95%RH, 3. Test period: 24h as a cycle, 10 cycles, total 240h
Atmospheric pressure	57kPa~106kPa
Vibration test	0~5.1Hz, displacement 1mm
Shock test	1. Pulse waveform: post-peak sawtooth wave 2. Peak acceleration: 40g 3. Pulse duration: 11ms 4. Test period: X,Y, Z triaxial, 3 times impact to each axial front and back, a total of 18 times
Temperature shock test	1. Test temperature: -50℃~70℃ 2. Test period: -50℃ for 2h, 70℃ for 2h, 3 cycles, a total of 12h
Fungus test	1. Test temperature: (30±1) °C 2. Relative humidity: (95±5) %RH 3. Test strains: Aspergillus flavus, Aspergillus variegatus, Penicillium cordylus, mucocellus globularis, Aspergillus Niger 4. Test period: 28 days (672 hours)
Salt spray test	1. Place the sample into the Salt Spray Corrosion Test Chamber, temperature inside the chamber is 35 °C; Spray the sample with a NaCl test solution with a concentration of 5 ± 1%





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	<p>and a PH value of 6.6 for 24h at a pressure of 96kPa; Test duration is 24 h.</p> <p>2. After 24h of spray, dry and store the sample for 24h in an environment with temperature of 23 °C and humidity of 50%;</p> <p>3. Steps 1-2 as one cycle, test for 2 cycles, total 96 h.</p> <p>4. After the test, exhaust the fog for 10 min, check the sample after cleaning it with flowing water under standard atmospheric conditions.</p>
Rain test	<p>1. Test procedure: Procedure - rainfall and blowing rain</p> <p>2. Test direction: keyboard surface</p> <p>3. Wind velocity: no less than 18 m/s</p> <p>4. Test duration: 3h</p>
Dust test	<p>1. Test procedure: Procedure - Dust Blowing</p> <p>2. Dust content: $10.6\text{g}/\text{m}^3 \pm 7\text{g}/\text{m}^3$</p> <p>3. Firstly conduct dust blowing for 6h under 23° C, then adjust the temperature to 60° C and stabilize for 1h, and then re-conduct dust blowing for 6h.</p>
Transport package drop test	<p>1. Test procedure: Transport Drop Test</p> <p>2. Sample state: Weight $\leq 45.4\text{kg}$, Maximum Size $< 91.0\text{cm}$;</p> <p>3. Drop height: 122cm;</p> <p>4. Drop count: drop to each surface, edge and corner, 26 times of drop totally.</p>
RELIABILITY	
RoHS compliant, CE and FCC certified	
MIL-STD-810H (high and low wide temperature, low pressure, humidity, vibration (Transport packaging vibration, working vibration 5.1Hz), shock, temperature shock, rain, salt mist, dust, fungus, solar radiation etc.).	
Protection Level	IP67 (front panel)
Lifespan	>5 years
MTBF	>20000H
MTTR	<30min
APPLICATION	Vehicle, aerospace, naval, defense, maritime, Radar, console, portable rugged laptop, UAV ground station etc.

