KC4210L Series
Serial Memory Key Receptacle

Datakey®

The power of memory. Secured.

The KC4210L panel-mount key receptacle interfaces with all Datakey serial memory keys. It is equipped with green and red LEDs to indicate when it safe for the user to insert or remove a key. The receptacle uses built-in retaining tabs for quick and easy installation – no additional hardware is required to mount the receptacle to the panel. The KC4210L also features a Last-On/First-Off (LOFO) switch that is used to detect when a key has been inserted and rotated into the engaged position. The host can monitor this line so it only powers the receptacle when a key is present. Designed for maximum reliability, the receptacle utilizes a redundant contact system that provides a reliable connection over an operating life of at least 200,000 cycles. The KC4210L receptacle is also available in a version where the PCB has been conformal coated (KC4210LCC).

MECHANICAL	
Operating Torque	85 mN-m (12 oz-in) Maximum
Operating Life	200,000 Insertion/Removal Cycles Min.
Key Stop Sustaining Torque	1.7 N-m (15 in-lbf)
Vibration	15 g (three axis)
Condition	2 mm Peak Amplitude Sinusoidal
Excitation	100 rad/s to 2000 rad/s
	No Mechanical Degradation
	No Contact Discontinuity in Excess of 1 μs
	Refer to MIL-C55302 & MIL-1344

ELECTRICAL	
Contact Resistance	Beginning of Life: 100 mΩ
	End of Life: 500 mΩ
Terminal to Adjacent Terminal	200 V
Terminal to Opposite Terminal	500 V
Terminal to Mounting Panel	1500 V

ENVIRONMENTAL	
Storage Temperature	-40°C to +105°C
Operating Temperature	-40°C to +80°C
Relative Humidity	5% to 95% (non-condensing)

MATING COMPONENT(S)	
Keys	All Serial and Secure Memory Keys

ORDERING INFORMATION[1]	
KC4210L[2]	606-0052-012A
KC4210LCC	606-0052-015A

1: "A" suffix on part number indicates RoHS compliance. See CE declaration below for details.
2: The KC4210L is also avaiable without LED indicators (see KC4210)
3: Interface specifications available at www.datakey.com.
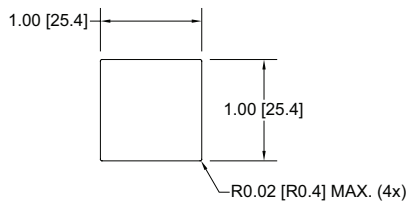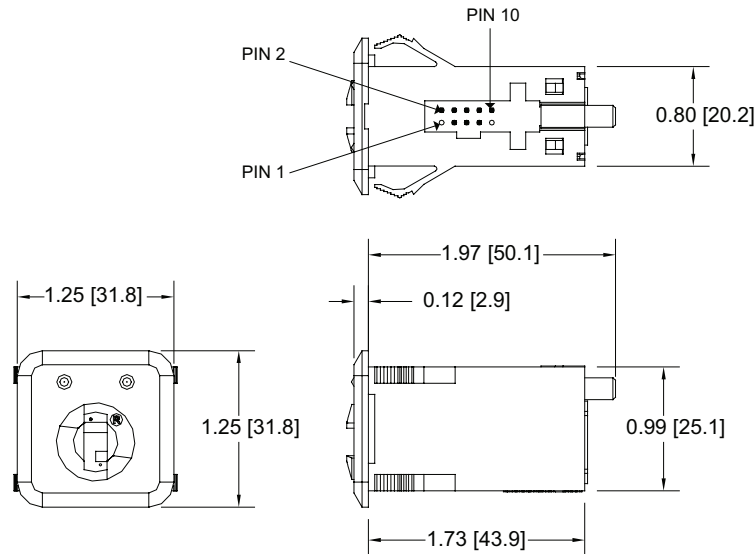4: RST signal used on IIK Series only.
NOTES:
Conforms with Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011, and as amended by Directive 2015/863/EU, on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

The KC4210L requires a 5 V power supply for proper LED operation.

CE

⚠ **WARNING**: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

PIN-OUT CHART[3]			
Pin	Microwire	I²C	SPI
1	LED Power	LED Power	LED Power
2	Power (V_{cc})	Power (V_{cc})	Power (V_{cc})
3	Ground (V_{ss})	Ground (V_{ss})	Ground (V_{ss})
4	NC	SIZE / RST[4]	/Hold
5	Chip Select	NC	/Chip Select
6	Data In	NC	Data In
7	Serial Clock	Serial Clock	Serial Clock
8	Data Out	Serial Add/Data	Data Out
9	NC	NC	NC
10	LOFO	LOFO	LOFO

NC = No Connection

KC4210 Series

PIN 10
PIN 2
PIN 1

0.80 [20.2]

1.25 [31.8]

1.25 [31.8]

1.97 [50.1]

0.12 [2.9]

0.99 [25.1]

1.73 [43.9]

1.00 [25.4]
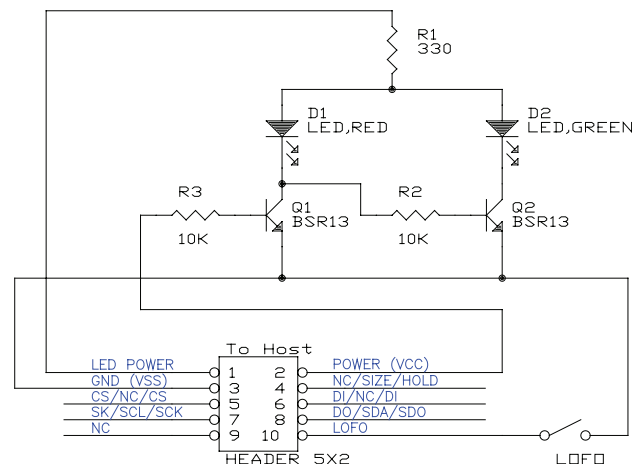
1.00 [25.4]

R0.02 [R0.4] MAX. (4x)

Suggested Panel Opening

Use for all cable connectors: 0.100" [2.54] centerline ribbon cable connector.

Retaining tabs pre-trimmed for 0.060" [1.52] thick panel.
Panel Hole: Maximum panel thickness: 0.156" [3.96].
For installation instructions, contact ATEK Access Technologies.

Drawing dimensions are in inches and millimeters [mm].
Dimensions are nominal and subject to manufacturer's tolerances.

R1
330

D1
LED,RED

D2
LED,GREEN

R3
10K

Q1
BSR13

R2
10K

Q2
BSR13

To Host

LED POWER	1 2	POWER (VCC)
GND (VSS)	3 4	NC/SIZE/HOLD
CS/NC/CS	5 6	DI/NC/DI
SK/SCL/SCK	7 8	DO/SDA/SDO
NC	9 10	LOFO

HEADER 5X2

LOFO

NOTE: Internal circuitry on the KC4210L receptacles indicates the status of power applied to the inserted keys. The host controller will provide LED Power on Pin 1 of the connector. This 5.0 V DC signal provides power for the operation of the LED indicators. The switched power signal on Pin 2 provides power to the target key as well as controlling the operation of the red and green LEDs. When switched power on Pin 2 is off, the green LED will be illuminated indicating to the user that it is safe to insert or remove a key from the receptacle. The switched power signal is turned on when the host controller is reading or writing to the target key. When power is applied, the green LED is turned off and the red LED is illuminated. This condition indicates to the user that the target key should NOT be removed from the receptacle.