## Product Features

- o 4.3 inch 24 Bit Colour TFT with Resistive Touch and Front Mounting Bezel
- o Supply Input Voltage 5VDC or 9V-30VDC, Outputs 5.0V, 3x Isolated 5V and 1x 3V3
- o 2x Isolated RS485/TTL, 1x Isolated RS232
- o 1x Isolated 10/100 Ethernet, 1x Isolated I2C Master
- o 1x USB Host / Device Interface 2.0 for PC or Memory Stick, 1x 4G-32G SDHC slot
- o 8x Isolated Digital Inputs, 8x Isolated Digital Outputs (inc 2xPWM)
- o 2x Isolated Thermistor, Thermocouple or Analogue 0-30V Inputs 16bit
- o 1x Isolated Analogue 4-20mA, 0-30V Input, 1x Isolated Analogue 4-20mA Output
- o 4x Isolated 9-30V 1.5Amp Power PWM outputs for solenoid or motor drive
- o Battery-backup Real Time Clock (RTC), 1x One Wire Digital Sensor Port, 1x ADC 12bit
- o Optional 2W PCM Audio Output module or additional CAN, RS232 and I2C adaptor
- o I2C expansion to Humidity, Temp, Pressure, CO2 and I/O modules
- o RS232 expansion to remote mounted Wi-Fi module
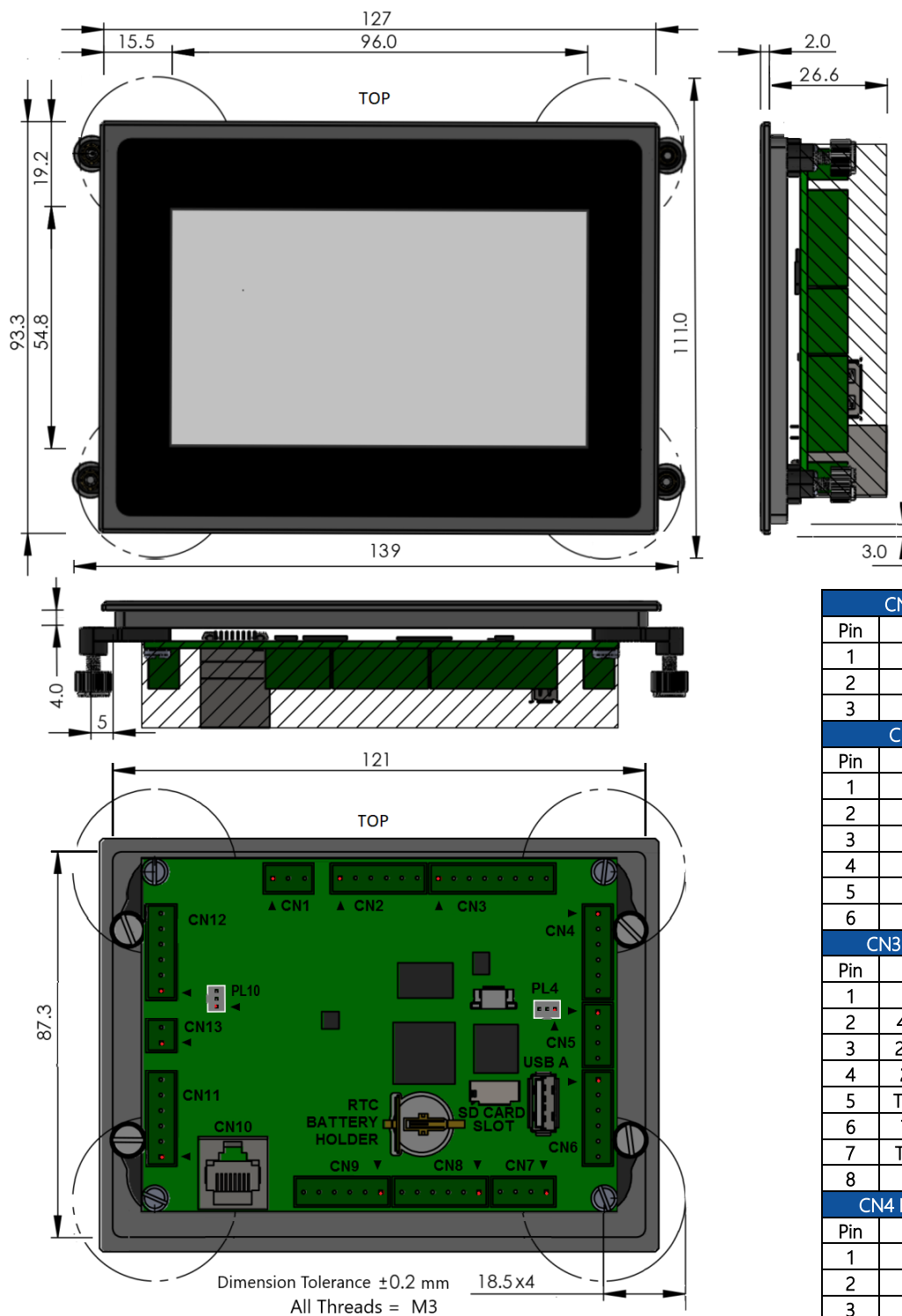- o 1x Isolated CANBUS option (-K620B using CN7 which reduces Digital In to x5)
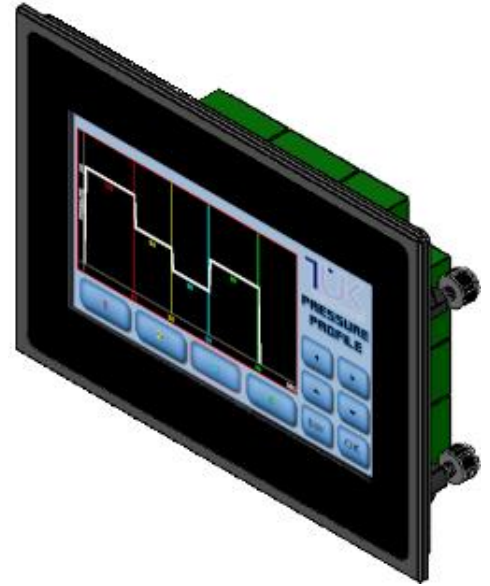
The resistive touch panel provides a cost effective one touch solution capable of accepting stylus, bare or gloved finger.
The firmware can adjust sample rate, de-bounce, auto-repeat and acceptance area depending on required action.
The bezel frame is symmetrical allowing 90 and 180 degree rotation with single software orientation command.

Product Parameters	Unit	Min	Max	Notes
Supply Voltage V_A	VDC	9	30	Power consumption ~2.5W with LED backlight 100%
Supply Voltage V_B (output when using V_A)	VDC	4.75	5.25	Power consumption ~2.5W with LED backlight 100%
Output Voltage 3V3	VDC	3.2	3.4	Maximum current 50mA extra for V_A/V_B
Output Voltage 5V0	VDC	4.5	5.5	Maximum current each output 100mA extra for V_A/V_B
Real Time Clock Battery	VDC	3	3	CR1216 / CR1225 battery holder
Operating Temperature	^{0}C	-20	70	
Storage Temperature	^{0}C	-30	70	
Relative Humidity	%	20	85	25°C operation, non-condensing
Display Brightness	cd/m2	280	350	

Interface Parameters	Unit	Input		Output		Notes
		Min	Max	Min	Max	
Isolated RS485/TTL Interfaces	VDC	-7	+12	0	+5.5	Internal Isolated / External Supply
Isolated Ethernet 10/100 Interface	Vpp	-5	+5	-5	+5	
Isolated CANBUS Interface	VDC	0	5	0	5	Internal Isolated / External Supply
Isolated RS232 Interface	VDC	-15	+15	-3	+7	Internal Isolated / External Supply
Isolated I2C Master	VDC	0	5	0	5	SCL/SDA 3V3/5V selectable
USB Host / Device Supply	VDC	4.75	5.25	4.75	5.25	
Isolated Digital Input Interfaces	VDC	3.5	30			Inputs are jumper selectable for 5V or 12-24V
Isolated Analogue DC Inputs	VDC	0	30			Selectable Jumper, 16 bit ADC, x8 amplification
Isolated 4-20mA Interfaces	VDC	0	5	0	30	20mA max current. Output min 7.5V supply
Isolated PWM/Digital Outputs 1.5Amp	VDC			9	30	Over Current / Under Voltage Protection
Isolated PWM/Digital Outputs DOUT5-12 100mA	VDC			5	30	100mA maximum each output
One Wire Digital Sensor Port – Int Isolated PL4	VDC	0	3.3	0	3.3	Internal 4.7k Pull Up to 3V3

PWM outputs can be used as digital outputs by software configuration. Since all outputs can sink and source, do not parallel connect.
This data sheet shows the maximum populated product option. Volume requirements may be quoted with certain functions omitted.

TÜK
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Dimension Tolerance ±0.2 mm
All Threads = M3
18.5 x4

PL4 ONE WIRE BUS	
Pin	Signal
1	3V3 PSU 3
2	DATA I/O
3	0V PSU 3

PL10 ADC 1	
Pin	Signal
1	3V3 PSU 3
2	ADC 1
3	0V PSU 3

CN6/CN11 RS485/TTL	
Pin	Signal
1	5Visol 1/2/ext
2	0Visol 1/2/ext
3	Tx+/TTLTx
4	Tx-
5	Rx-
6	Rx+/TTLRx

CN7 DIGITAL IN	
Pin	Signal
1	DIN6
2	DIN7
3	DIN8
4	COM

CN8 DIGITAL IN	
Pin	Signal
1	DIN1
2	DIN2
3	DIN3
4	DIN4
5	DIN5
6	COM

CN9 DOUT/PWM	
Pin	Signal
1	+Vext isol
2	0Vext isol
3	DOUT5
4	DOUT/PWM6
5	DOUT/PWM7
6	DOUT8

CN12 RS232	
Pin	Signal
1	5V isol 2 / ext
2	0V isol 2 / ext
3	TXD
4	RTS
5	RXD
6	CTS

CN13 5V OUT	
Pin	Signal
1	5V PSU 3
2	0V PSU 3

CN1 POWER	
Pin	Signal
1	+VA 12V/24V
2	0V
3	+VB 5V0

CN2 DOUT	
Pin	Signal
1	+Vext isol
2	0Vext isol
3	DOUT9
4	DOUT10
5	DOUT11
6	DOUT12

CN3 ANALOGUE	
Pin	Signal
1	4-20mA OUT
2	4-20mA SUPPLY
3	20mA IN-/0V 1/3
4	20mA IN+/AN3
5	THERM2-/ 0V 1/3
6	THERM2+/AN2
7	THERM1-/ 0V 1/3
8	THERM1+/AN1

CN4 POWER PWM	
Pin	Signal
1	+Vext isol
2	0Vext isol
3	DOUT/PWM0
4	DOUT/PWM1
5	DOUT/PWM3
6	DOUT/PWM4

CN5 I2C BUS	
Pin	Signal
1	5V isol 1 / ext
2	0V isol 1 / ext
3	SCL
4	SDA

The +VB is a non-isolated 5V output when +VA is supplied by 12V/24V.
The COM pins are connected and can be set to +ve/–ve according to the DIN state.
All +Vext pins are isolated from each other and require an input voltage.
For half duplex 2 wire RS485 operation, connect Tx+ to Rx+ and Tx- to Rx-.
The 5V/0Visol 1/2 pin pairs are jumper connectable to internally isolated PSUs 1 and 2.
CN13 is a 5V @ 100mA 'special use' output from the CPU PSU 3. Arrows define pin 1.
Please refer to the full datasheet for jumper settings required to achieve the desired interface.
The thumb screw lugs swing out once inserted for securing into a 1mm to 4mm thick front panel.

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