杭州凡诺电子有限公司

FANNAL ELECTRONICS CO., LTD

Specifications for Touch Panel

Model NO: FN140A001-V1.0

Revision: V1.0

☐ **Approved For Specifications Only**

■ **Approved For Specifications And Sample**

FANNAL			CUSTOMER
PREPARED	CHECKED	APPROVED	APPROVED

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1. Record of Revision

NO.	Content	Page	Date
1	Preliminary Specification was first issued	2	2017/7/4

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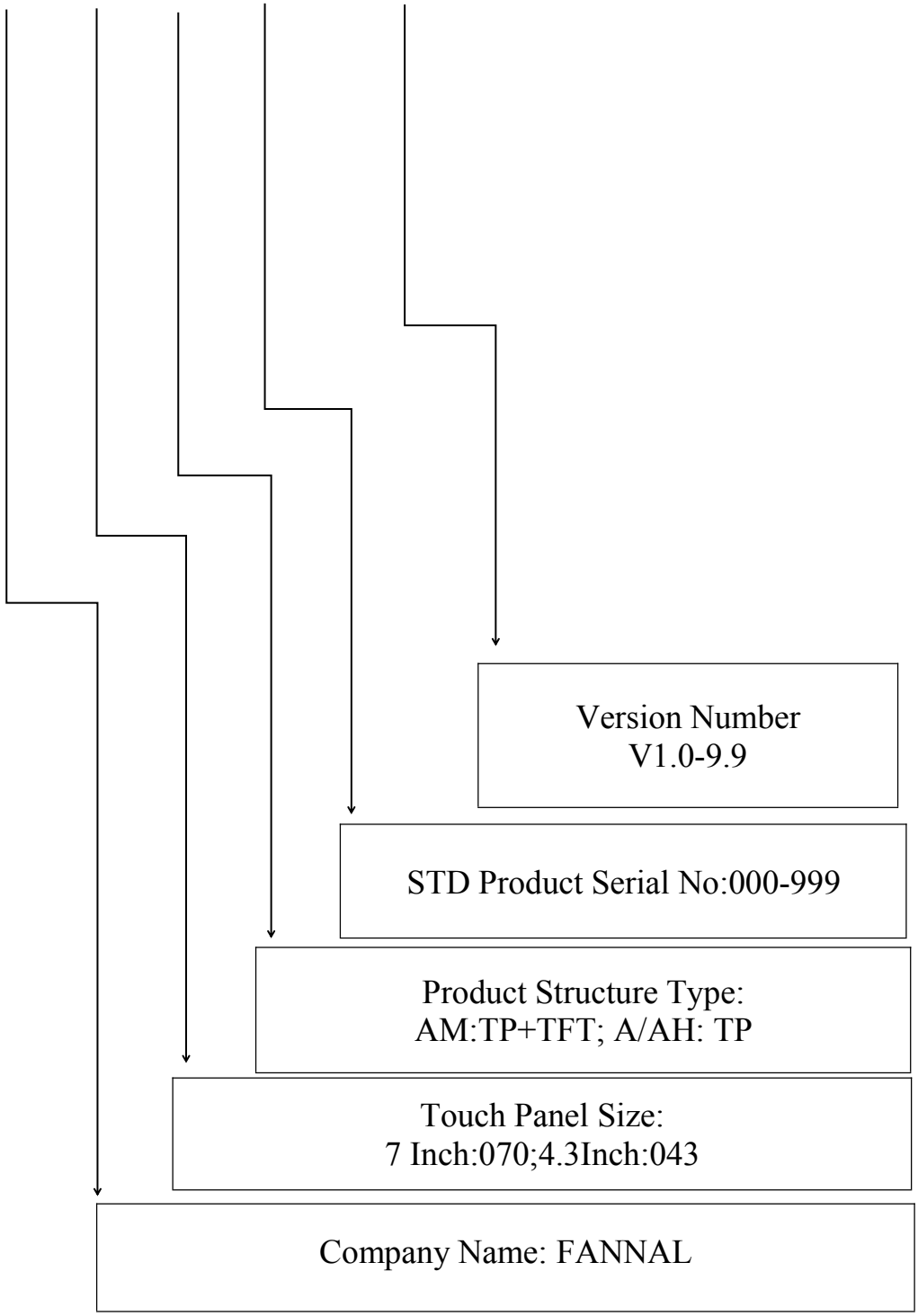
2. Table of Content

3. Module Numbering System

FN 140 A 001 - V1.0



4. Application

This improved projected capacitive touch panel module is applied to industrial applications which required touch input.

Industrial control, medical devices and automation industries (transportation, military, smart home, and others)

5. Feature

NO.	Item	Specifications
1	Type	Projected Capacitive
2	Input Mode	Finger
3	Connector	COB (FPC+Controller Board)

6. General Specification

NO.	Item	Specifications	Unit
1	Touch Panel Size	14.0(Diagonal)	inch
2	Structure	G+G	
3	View Area	311.00(H)x176.00(V)	mm
4	Outline Dimension	335.00(H)x200.00(V)x2.0(D)	mm

7. Environmental Characteristic

NO.	Item	Specifications	
		Temperature	Humidity (Non-Condensing)
1	Operation	-20~70℃	45%-90%RH
2	Storage	-30~80℃	5%-95%RH

Note: Testing environment is under normal atmospheric pressure. When the ambient temperature is above 65℃,the humidity is allowed to be below 50%RH

8. Optical Characteristic

NO.	Item	Specifications
1	Transparency	85%±5%
2	Haze	>3%

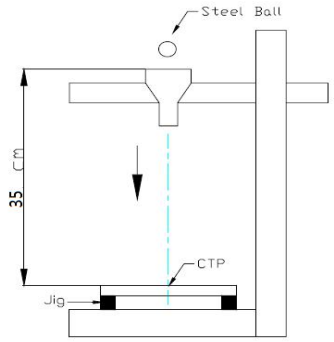
9. IC Specification

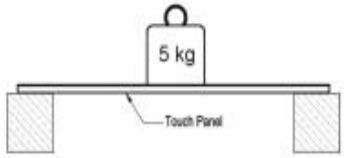
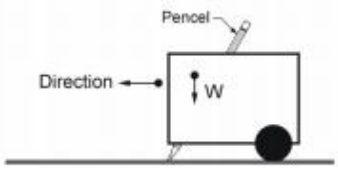
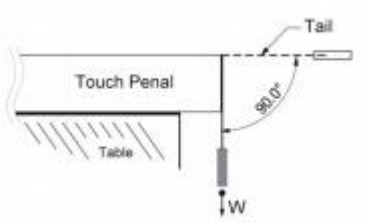
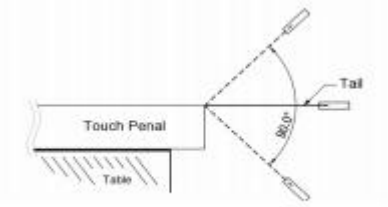
NO.	Item	Specifications
1	Driver IC	ILI2302M
2	Detect Points	10 touch
3	Interface	USB
4	Power Supply	5.0V

10. Pin Assignment

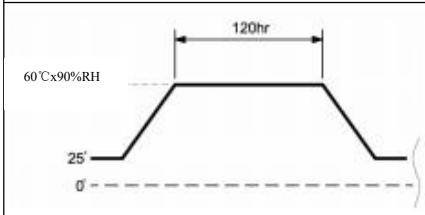
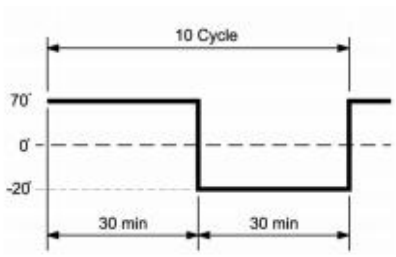
Pin No.	Symbol	I/O	Description
1	GND	---	System ground
2	D+	I/O	Data +
3	D-	I/O	Data -
4	VDD	---	Power supply

11. Mechanical Characteristic

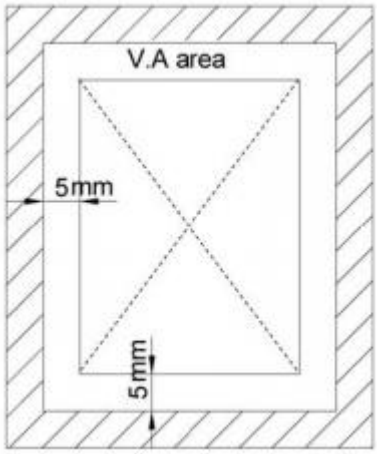
NO.	Item	Condition	Specifications
1	Operating Force	Finger≦10g	Satisfy- 1.Optical Characteristics 2.Electrical Characteristics Appearance- 1.Ignore test area 2.No mechanical damage
2	Impact	30.0ΦDIA.Steel Ball/132g/Height=35cm/1 time, Impact at center area 	

NO.	Item	Condition	Specifications
3	Static Load	5000g within 10cmΦ area for 30sec	Satisfy- 1. Optical Characteristics 2. Electrical Characteristics Appearance- 1. Ignore test area 2. No mechanical damage
			
4	Hardness	6H pencil,pressure 500g/45°	
			
5	Tail Peeling	500g/cm by vertical 90° for 30sec	
			
6	Tail Bending	90° 10times left & right	
			

12. Reliability Test

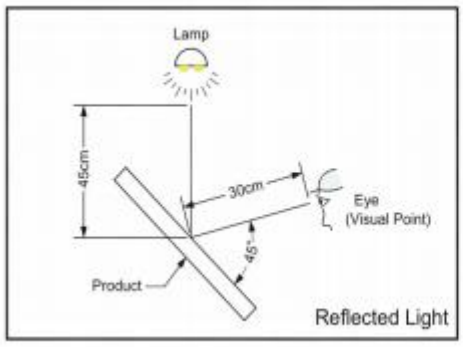
NO.	Item	Condition	Specifications
1	Constant Temperature/Humidity	60℃ X 90%RH,120hrs and normalized for 24hrs 	Satisfy- 1、Electrical Characteristics
2	Heat Cycle	80℃/120hrs and normalized for 24hrs	
3	Cold Cycle	-30℃/120hrs and normalized for 24hrs	
4	Thermal Cycle	-20℃~70℃ [30min/cycle]*10cycles and normalized for 24hrs 	

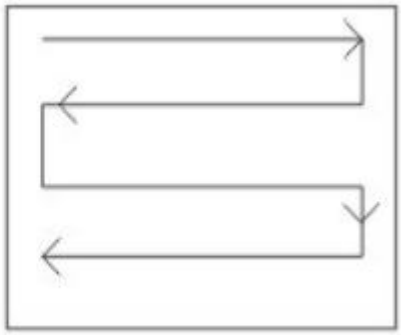
13. Function test

Function Test	Test Method: Use Φ8 copper stick to draw the square diagonal line. Test Area: 5mm inward view area. Disapproval Criteria: It is NG when we see the off-liner or jumping out spec shift.	

14. Appearance Inspection

The inspection is to be performed with 20W(1200 LUX)fluorescent lamp lighting from the back or side.The panel is to be placed 30cm away from eyes.(Figure 13-1)





15. Appearance Specification

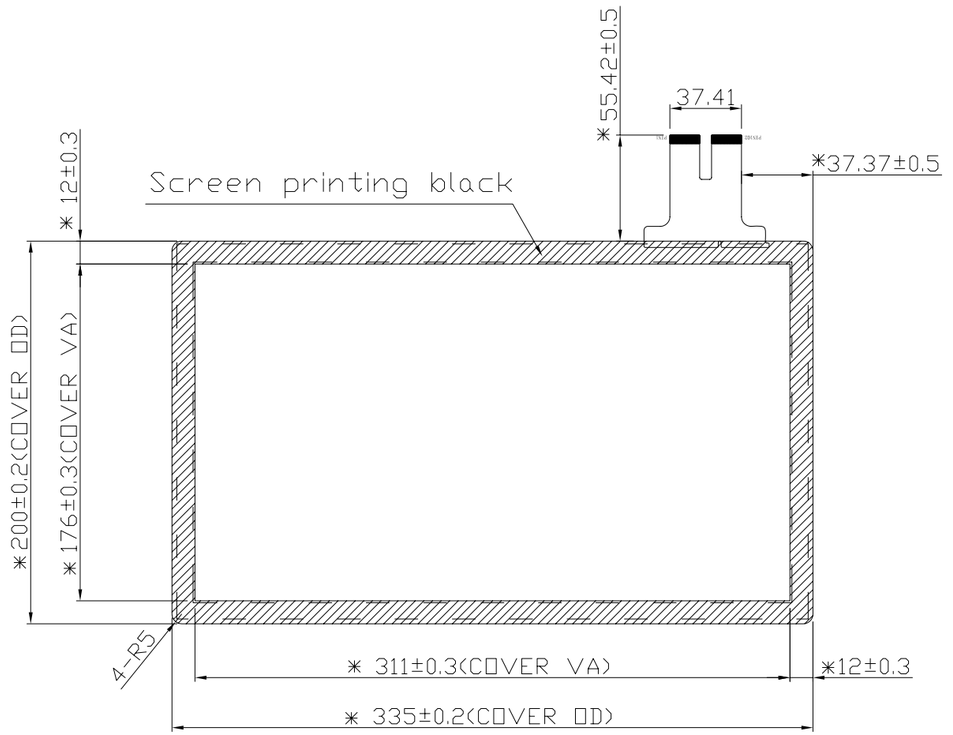
NO.	Item		Specifications	PASS CRIRERA
1	线状不良 Linear Defects (刮伤/擦痕/线状/杂质) （Scratch/Scrub/Fiber）		W≤0.1mm	Ignore
			0.1mm<W≤0.25mm,L≤8mm	N≤3,Distance≥30mm
			W>0.25mm	Not Allowed
2	点状不良 Dot Defects (气泡/杂质/白点/黑点/凹洞) （Bubble/Fiber/Particle/Spot/Dent）		D≤0.25mm	Ignore
			0.25mm<D≤0.5mm	N≤3,Distance≥50mm
			D>0.5mm	Not Allowed
3	印刷不良 Printing Defects	针孔 Pine Hole	D≤0.30mm	Ignore
		漏光 Light Leakage	Peak to Peak≤0.3mm	Border Area Acceptable
			Peak to Peak≤0.2mm	Logo/icon Area Acceptable

<Endorse>

1.All cosmetic defects are not accounted if found outside Active Area.
(except for glass breakage, corner flaw, edge flaw, crack, etc. Please follow Appearance Inspection criteria upon inspection)
2.D=Diameter / W=Width / L=Length
3.Tail: Slight bend mark is allowed on the tail; crack or tear is not allowed.
4.Particle Spots: Flaws found coating if transparent, please follow Particle Spots specification.

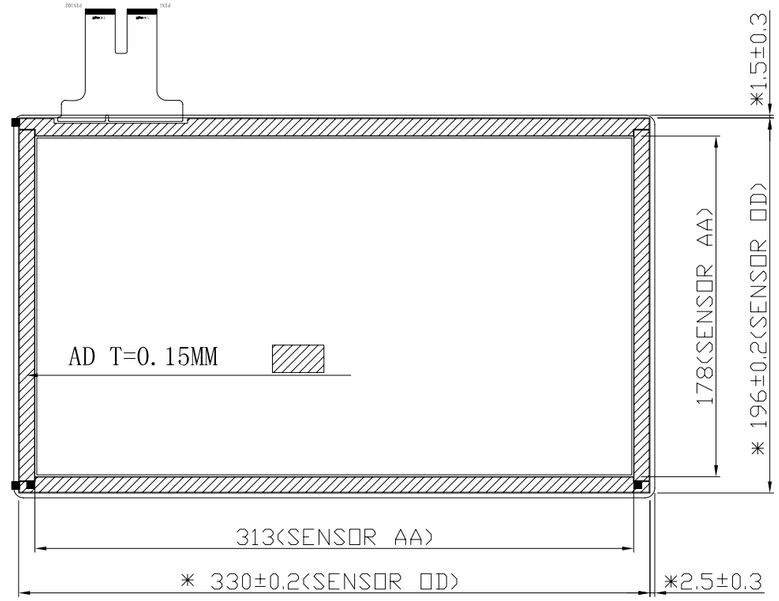
16. Mechanical Drawing

Rev	Revision note	Date
V1.0	First Release	2017-6-6



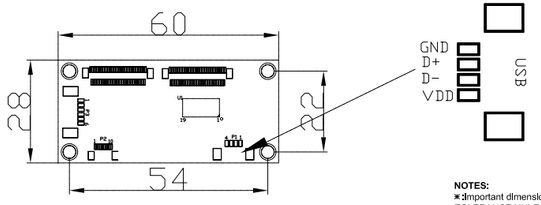
Front view

Side view



Back view

TECHNOLOGY CHARACTERISTICS CTP	
PROPERTY	Requirement
IC Contorller	ILI2302M
NO OF TOUCH	10
COVER GLASS Thickness	1.10mm
ITO GLASS Thickness	0.7mm
Surface Hardness	✳6H
Light Transmittance	85%±5%
Operating Temperature	-20-70°C
Storage Temperature	-30-80°C
Operating Humidity	45-90%RH
Storage Humidity	5-95%RH



(3:1)

TP USB-PIN :			
1	2	3	4
GND	D+	D-	VDD

NOTES:
✳:Important dimensions
TOLERANCE UNLESS: x.x ±0.5
OTHERWISE SPECIFIED: x.xx ±0.3
DIMENSIONS IN MM: ANGULAR:±1°

RoHS

TM

FANNAL ELECTRONICS CO., LTD

MODEL NO: FN140A001-V1.0

THIRD ANGLE PROJECTION

	NAME	SIGN	DATE
DRAWN:	Hong		2017-6-6
CHECKED:			
APPROVED:			

PROJECT NO:

CUSTOMER NO:

FILE NO:

SHEET 1 OF 1

17. Packaging

TBD