

Displacement Sensor Ultraflat Industrial Potentiometer Membrane



FEATURE

- Sealed
- Infinite resolution
- High integration capacity
- Durability
- Rectilinear: POT-10
- Rectilinear: POT-14
- Rotational: POT-30
- Material categorization: for definitions of compliance
Please see www.vmanx.com



ISO13485


 RoHS
COMPLIANT


REACH

QUICK REFERENCE DATA

Sensor type	LINEAR or ROTATIONAL, conductive plastic
Output type	Output by connector
Market appliance	Industrial
Dimensions	1mm (thickness max.)

ELECTRICAL SPECIFICATIONS

PARAMETER	POT-10	POT-14	POT-30
Total resistance (Rn)	5.0kΩ	8.5kΩ	4.0kΩ
Tolerance on Rn	± 30%		
Temperature coefficient	-300 ppm/°C ± 300 ppm/°C		
Collector / track current (Ic)	≤1mA		
Recommended current Ic	≤100uA		
Recommended load impedance	≥100Rn		

MECHANICAL SPECIFICATIONS

PARAMETER	POT-10	POT-14	POT-30
Design	Flexible insulating films	Flexible insulating films	Flexible insulating films
Mechanical travel	Electrical continuity travel	Electrical continuity travel	Electrical continuity travel
Backlash	<0.1mm	<0.1mm	<0.3°C
Mounting	With double-sided adhesive on flat, clean, and dry support		
Speed displacement	≤1.5m/s		
Drive	Force≥0.3N	Torque≥1N cm	
Protection class (NFC 20 010)	IP66 (electrical connection and plug excluded)		
Maximum alignment fault	±1mm	--	

PERFORMANCE

PARAMETER	POT-10	POT-14	POT-30
Life	>3M cycles(depending on chosen wiper)		
Operating temperature range	-10°C to +50°C		
Storage temperature range	-40°C to +50°C		
Support	Flat, clean, and dry		

Note

- Nothing stated herein shall be construed as a guarantee of quality or durability

PART NUMBERING GUIDELINES-POT-10/14/POT-30

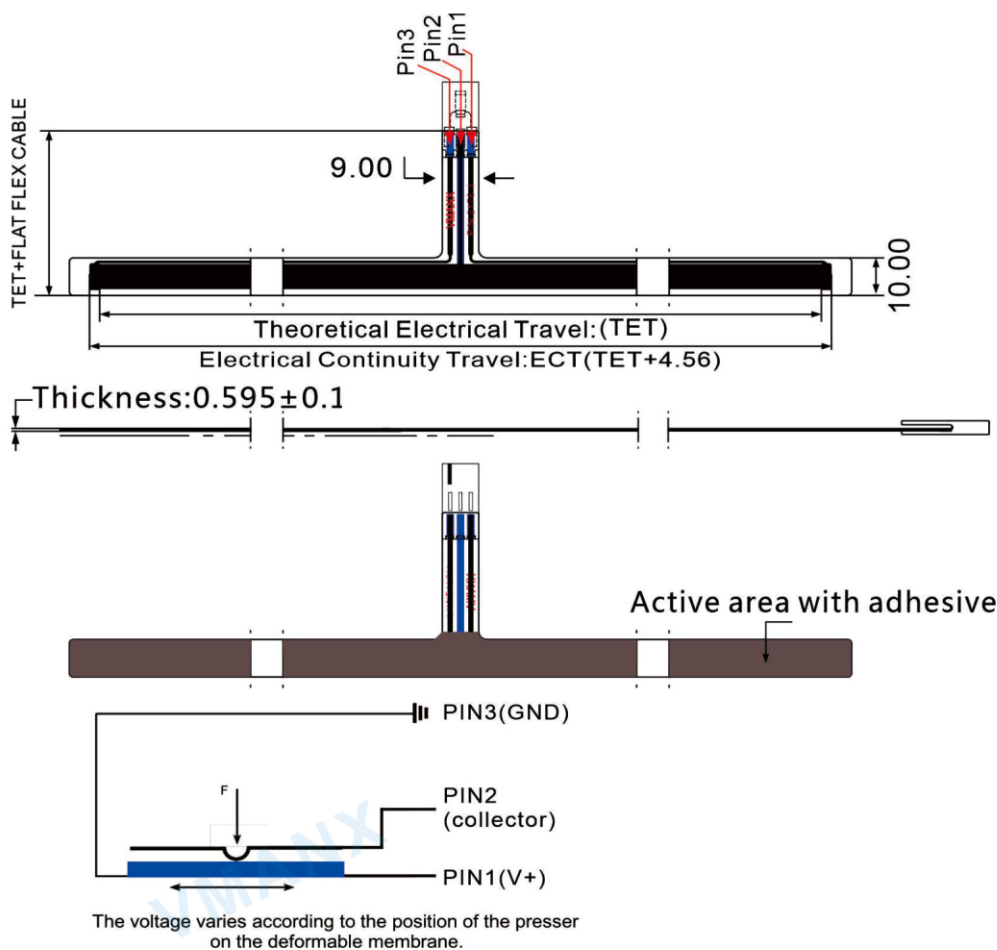
MODEL	TYPE	POT-10: THEORETICAL ELECTRICAL TRAVEL(mm) POT-14: THEORETICAL ELECTRICAL TRAVEL(mm) POT-30: EXTERNAL DIAMETER(mm)	TYPE	SHAPE	WIRE	CONNECTOR	INDUCTION STROKE
POT-10	10=Width	193	Industrial	Customizable	Customizable	can be selected as needed	Customizable
POT-14	14=Width	86 113 165	Industrial	Customizable	Customizable	can be selected as needed	Customizable
POT-30	30=Diameter	30	Industrial	Customizable	Customizable	can be selected as needed	Customizable

CONNECTONS

Connector 2 .54mm

DIMENSIONS in millimeters

POT-10



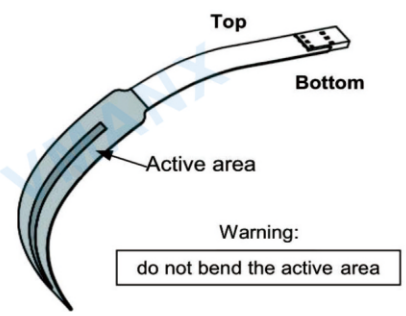
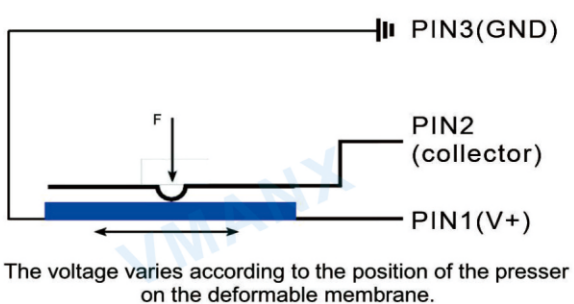
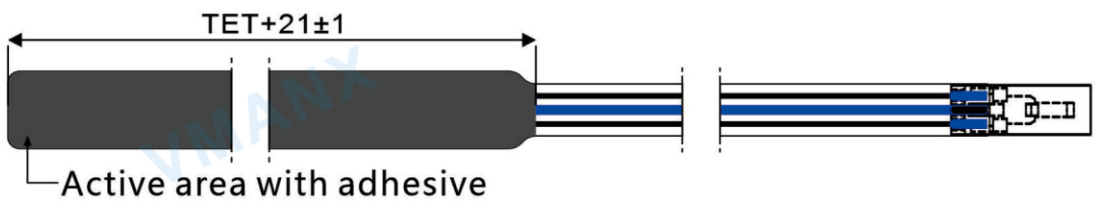
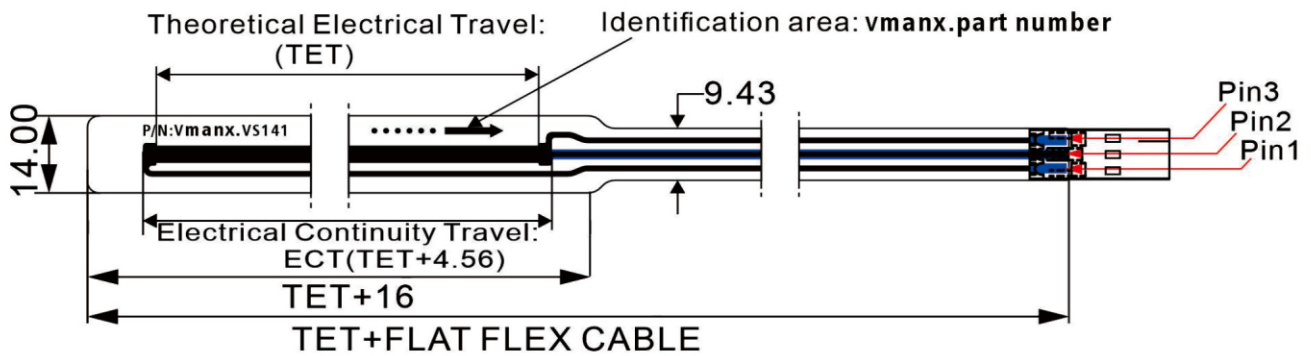
TET (mm)	FLAT FLEX CABLE (mm)
183	33.10

Notes

- Tolerancing according to ISO 8015
- General tolerances according to ISO 2768-mK

DIMENSIONS in millimeters

POT-14

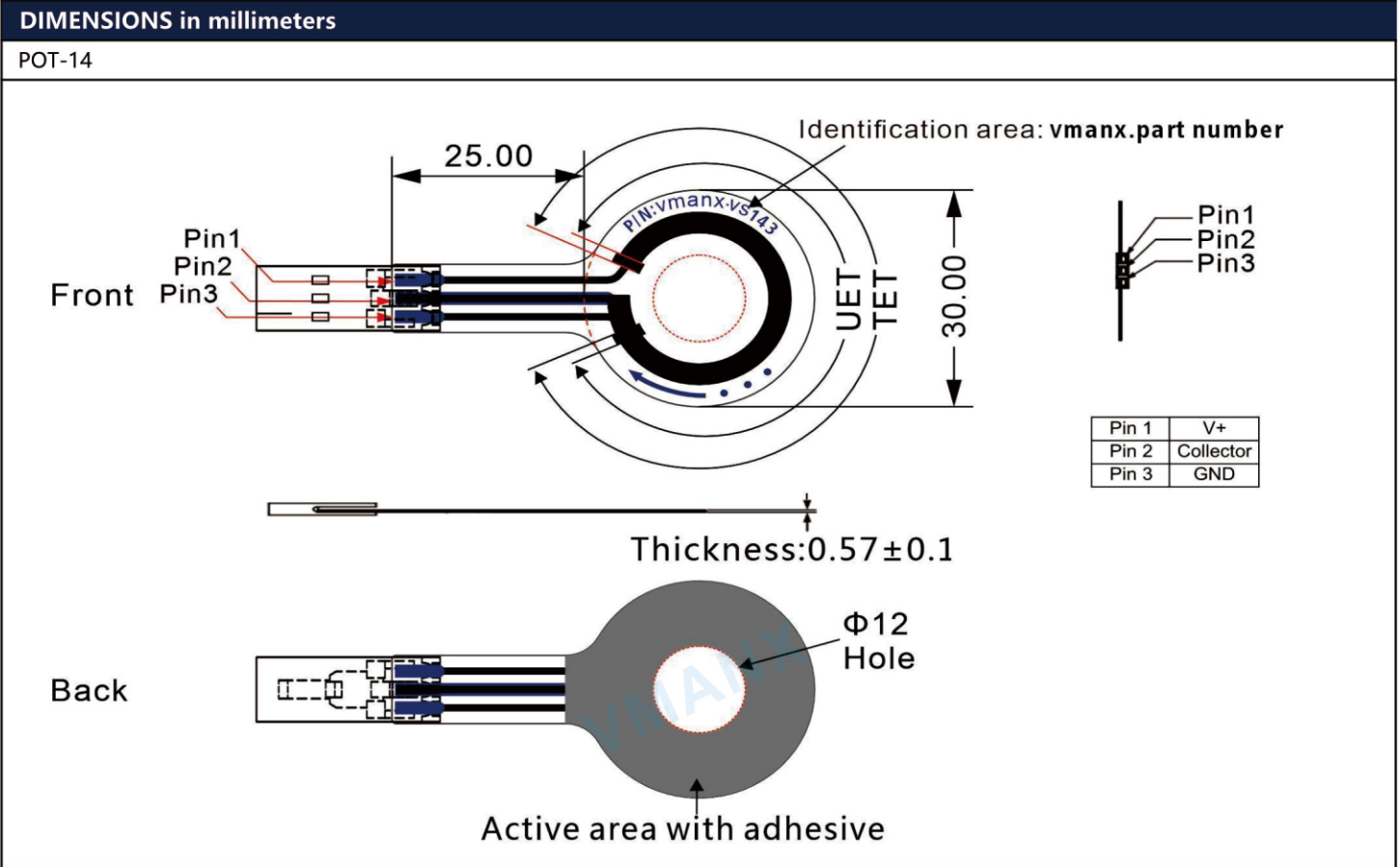


TET (mm)	FLAT FLEX CABLE (mm)
183	82.00
113	91
165	103

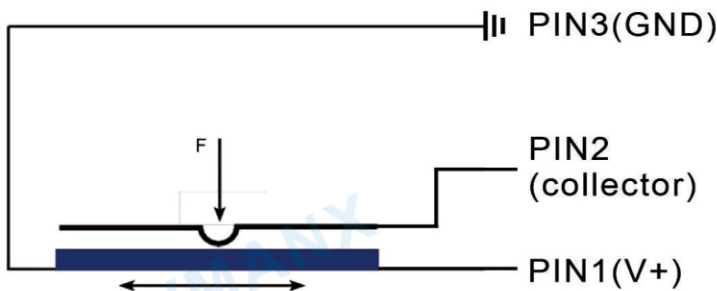
- Notes**
- Tolerancing according to ISO 8015
 - General tolerances according to ISO 2768-mK

MOUNTING REQUIREMENTS

1. The shape of the customer interface over the active area shall be: $\square_{0.05}$
2. The roughness of the customer interface over the active area shall be: $\sqrt{Ra} 1.6$
3. Before sticking the sensor, the interface surface shall be free of all traces of dirt, grease, foreign objects, and burrs.
4. The bending of the flat flex cable shall be: $\varnothing 3$ mm min.



ELECTRICAL DIAGRAM

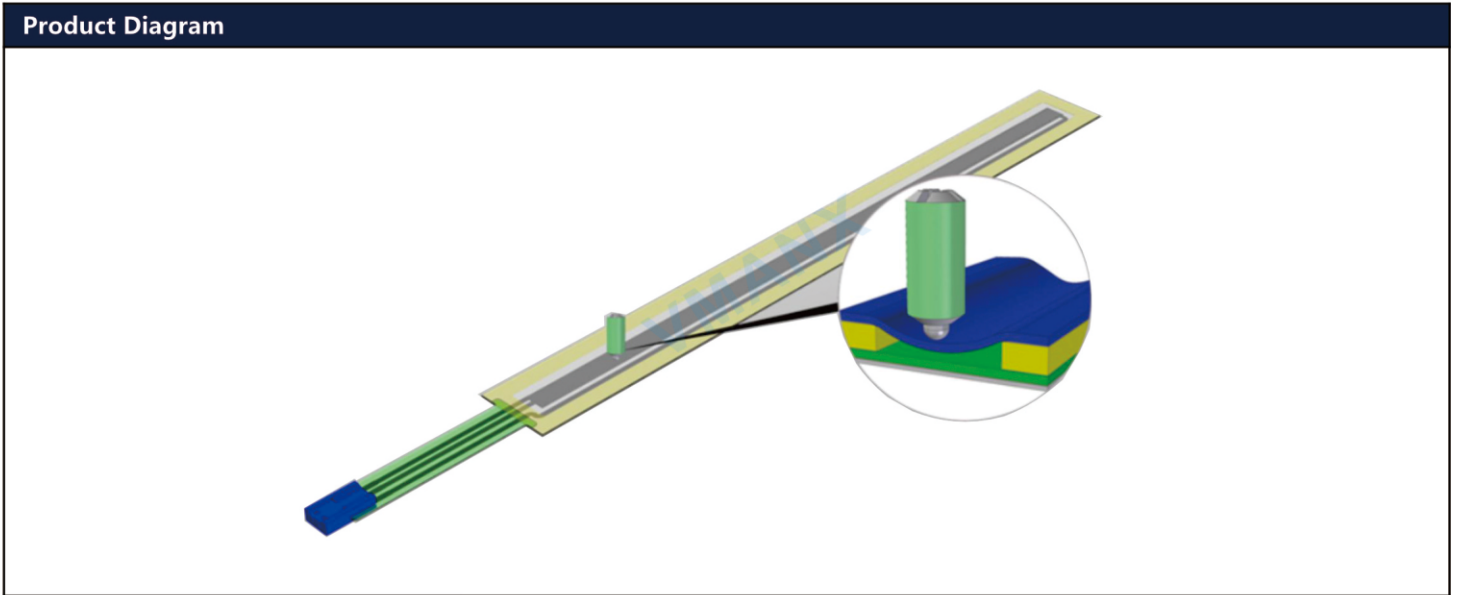


The voltage varies according to the position of the presser on the deformable membrane.

SPECIFIC VERSIONS (on request)

- Other electrical or mechanical characteristics
- Other bases
- Integration in equipment
- Other versions: outdoor design, ...
- Integration in equipment (flat flex cable, contacts, wires, ...)

SPECIFIC POT-14 CHARACTERISTICS		
THEORETICAL ELECTRICAL TRAVEL(TET) (mm)	ELECTRICAL CONTINUITY TRAVEL(ECT) (mm)	FILM LENGTH (mm)
86	90.56	168
113	117.56	204
165	169.56	268



ON REQUEST

POT-14 VMANX.VS149 WITH WIRES OUTPUT

