

Touch Screen Solutions

Custom Touch Screen solutions are the critical interface between your device, machine, equipment and the operator. One that defines the operator's experience and hence goes far beyond a basic specification, unit price or lead-time. More so, one that adds critical value to your product and process. Danielson is your European partner in this with its extensive innovative solution portfolio, long standing experience, local manufacturing and local sales engineers as an extension of your production and development team. We look forward to your inquiries about our Touch Screen solutions.



Solutions



TOUCH SCREENS

resistive - analog in 4/5/8 wire - matrix - membrane integrated touch - custom/standard solutions



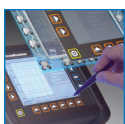
DISPLAY ENHANCEMENT

antiglare - heated - closed front



ILLUMINATION

el - led - through key



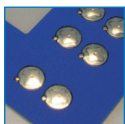
SHIELDING

environmental - emi/rfi - esd



HOUSING

metal - stainless steel - plastic - aluminium



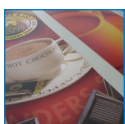
SWITCH SOLUTIONS

tactile - non-tactile - micro switches - digital switches (touch)



MMI OVERLAYS

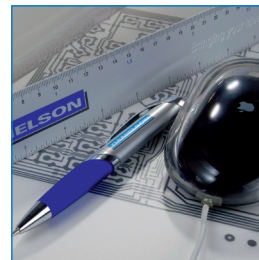
rubber keypads - polyurethane domed keys



GRAPHIC OVERLAYS

full colour - half tone - varnish

Technology



**ARTWORK DESIGN
CAD ENGINEERING
PROTOTYPING**



**SCREEN PRINTING
EMBOSSING
LASER CUTTING
DIE CUTTING
SURFACE MOUNTING
CLEAN ROOM
ASSEMBLY**



**QUALITY CONTROL
LOGISTICS**



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Touch Screen Solutions Technical Specifications

All Touch Screen constructions are customer specific applications; specific customer application specifications can be agreed.

Standard analogue Touch Screens Touch Screens including bonded graphic overlay Insulation resistance	Electrical	
	≤1.5% accuracy in both X and Y direction	Danielson test procedure
	≤2% accuracy in both X and Y direction	Danielson test procedure
Operating temperature Storage temperature Humidity	≥20MΩ @ 25 V DC	ASTM F1689-02
	Environmental	
	Between 0°C / +50°C @ 50% RH	IEC 60068-2-14 (-20°C / +70°C, 50%RH, 3hrs, 6times)
Surface finish Surface hardness Operating force	Between -20°C / +70°C @ 50% RH	IEC 60068-2-14 (-20°C / +70°C, 50%RH, 3hrs, 6times)
	90% RH with no dew condensation allowed @ maximum +35°C	IEC 60068-2-30 (+55°C, 90%RH, 9hrs, 2times)
		IEC 60068-2-3 (+40°C, 90%RH, 10days)
Point activation life 4-wire, 8-wire	Durability	
	Range of different materials available	Pencil hardness
	Typically between 2-4H depending on hard coat used	ASTM F1597-02 (Finger of 45 shore, 4mm radius spherical)
Point activation life 5-wire and matrix	Typically between 15-50 gram	Finger of 45 shore, 4mm radius spherical, 550g load at 2Hz @ ambient conditions (20°C / 50% RH)
	>1 million activations	Finger of 45 shore, 4 mm radius spherical, 550g load at 2Hz @ ambient conditions (20°C / 50% RH)
	>5 million activations	Finger of 45 shore, 4 mm radius spherical, 550g load at 2Hz @ ambient conditions (20°C / 50% RH)
Controllers	Interface Electronics	
	Danielson offers Hampshire TSHARC Touch Screen controllers. These controllers can be used for any 4/5/8 wire Touch Screen and can connect to your system using RS232, PS/2 or USB. Drivers are available for Windows 9x, ME, NT, 2000, XP, VISTA, CE, CE net, Linux & MS-DOS.	

Specifications are subject to change without notice. Other specifications upon request.