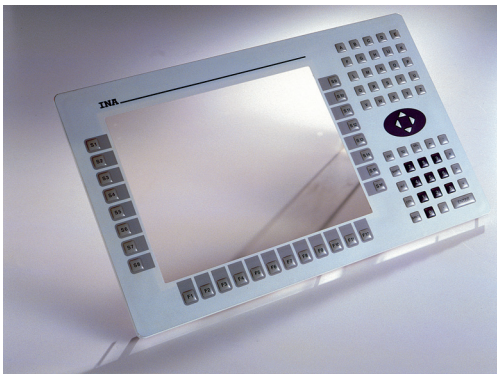
Hoffmann+ Krippner

DATA SHEET

Resistive touch screens

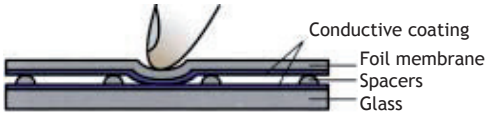


Graphical user interfaces have today become the norm. It is therefore a logical development to tap your requirements directly onto the screen or display - with your finger or wearing gloves.

Gentle pressure on the screen contact is sufficient to activate the operating function. A small controller unit monitors the touch screen and forwards the contact confirmation on. The connected computer always knows where something is happening on the screen - precisely to the millimetre - and can therefore react accordingly.

We deliver a comprehensive product range of individual standard touch screens as well as touch screens as integrated components with complete control electronics systems - of course, we can provide customised solutions.

Resistive touch screens consist of 3 layers. The basis is a stable glass plate, metallized with a conductive, transparent coating. Tiny, non-conducting transparent spacing knobs ensure that a defined distance is kept to the polyester front foil membrane. A conductive, transparent coating is also applied to the inside of this foil membrane. By lightly touching the surface with your finger or glove, a contact placed between both conductive layers is activated (see figure).



Features

- Available in many standard sizes (analogue resistive), as well as customer-specific touch screens from prototypes to series
- Standard touch screens, suitable for most commercial LC and TFT displays
- Complete solutions as membrane keyboards or front panels with integrated touch screens are our forte
- Introductory demo-kit, quick and price-effective to try out
- High transparency of over 80%

Technical data for analogue resistive touch screens

Input	Finger/ glove
Material/ construction	Foil membrane-glass Foil membrane-foil membrane-glass
Diagonal size	4.7“ up to 18.1“ (standard sizes) Customer-specific formats available on request
Total thickness	1.4 mm/ 2.1 mm
Surface	Anti-reflective / clear
Light translucency	>= 80% (Foil membrane-glass)
Operating conditions	-20 °C to 70 °C < 90% RH
Storage conditions	-40°C to 80°C < 95% RH
Actuating force	0.5N +/- 0.3 N
Life cycle	> 1 Mio. Million contacts / Actuation point
Surface hardness	> 2 H

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Range of standard touch screens available

Article number	Diag. Size	Cable length & Position	External Dimensions (E), Viewing Dimensions (V), Active Dimensions (A)	Thickness
ATP-047	4.7 inch	50 mm Vertikal	E: 113.0 x 90.0 mm, V: 104.0 x 80.5 mm A: 100.0 x 76.0 mm	1.4 mm
ATP-057	5.7 inch	50 mm Vertikal	E: 138.0 x 109.0 mm, V: 124.0 x 95.0 mm A: 116.0 x 87.0 mm	1.4 mm
ATP-072	7.2 inch	60 mm Vertikal	E: 170.0 x 133.0 mm, V: 156.0 x 119.0 mm A: 148.0 x 111.0 mm	2.1 mm
ATP-094	9.4 inch	60 mm Vertikal	E: 215.0 x 167.0 mm, V: 201.0 x 153.0 mm A: 193.0 x 145.0 mm	2.1 mm
ATP-104	10.4 inch	60 mm Vertikal	E: 235.0 x 182.0 mm, V: 221.0 x 168.0 mm A: 213.0 x 110.0 mm	2.1 mm
AST-065	6.5 inch	80 mm Horizontal	E: 155.0 x 117.0 mm, V: 139.0 x 104.0 mm A: 133.0 x 100.0 mm	1.4 mm
AST-085	8.4 inch	80 mm Horizontal	E: 194.0 x 146.0 mm, V: 177.0 x 136.0 mm A: 171.5 x 130.0 mm	2.1 mm
AST-104	10.4 inch	80 mm Horizontal	E: 227.0 x 173.0 mm, V: 216.0 x 163.0 mm A: 212.0 x 159.0 mm	2.1 mm
AST-113	11.3 inch	80 mm Horizontal	E: 246.0 x 188.0 mm, V: 235.0 x 178.0 mm A: 231.0 x 174.0 mm	2.1 mm
AST-121	12.1 inch	80 mm Horizontal	E: 262.0 x 199.0 mm, V: 251.0 x 189.0 mm A: 247.0 x 185.5 mm	2.1 mm
AST-140	14.0 inch	80 mm Horizontal	E: 308.0 x 235.0 mm, V: 288.0 x 216.0 mm A: 280.0 x 210.0 mm	2.1 mm (Glass, chemically tempered)
AST-150	15.0 inch	80 mm Horizontal	E: 328.0 x 252.0 mm, V: 309.0 x 233.0 mm A: 305.0 x 229.0 mm	2.1 mm (Glass, chemically tempered)
AST-181	18.1 inch	80 mm Horizontal	E: 384.0 x 317.0 mm, V: 365.0 x 293.0 mm A: 360.0 x 288.0 mm	2.1 mm (Glass, chemically tempered)

Overview of accessories for touch screens

Touch standard controllers and suitable driver software organize the adaptation to your computer system.
For self-made constructions, the controller chip with wiring diagram and descriptions can also be delivered individually.
You can download updated drivers and complete data sheets for the touch screens and touch controller from the Internet at www.dmccoltd.com.
Drivers are available for Windows 95/98, NT (3.51/4.0), 2000, XP / XP embedded and CE, as well as for Linux.

Options

Article number	Description
FIT-10/IC	Analogue touch screen controller IC
FIT-10/IF	Analogue touch screen controller interface board
FIT-10/IF-E	Analogue touch screen controller interface board with calibration data security EEPROM
FIT-10/SC	RS-232C Extension cable (1.6 m)
FIT-10/EXT	Touch screen extension cable from controller to touch screen (0.35 m)

Technical data for controller

	FIT-10/IC	FIT-10/IF, IF-E	TSC-10/USB
Supply voltage	2.7 to 6.0 VDC	4.5 to 5.5 VDC	4.1 to 5.5 V
Interface	16.4 mA (VCC=5.0 V)	18 mA	(Bus supply)
Resolution	10 Bit (1024 x 1024)		
Speed	Point mode/ 30/ 50/ 80/ 130/ 150 p/s		
Operating temperature	-40° C to +85° C	-10°C to +60°C	-20°C to +85°C
Storage temperature	-55°C to +150°C	-25°C to +80°C	-20°C to +85°C
Construction form	IC TQFP 64	Circuit board 60 x 40 mm²	Circuit board 30 x 40 mm²

None of the features in any technical data are guaranteed, but may deviate dependent on customer-specific design.

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