

TG
Handheld Enclosures
Product Drawings
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In data acquisition and measuring applications, mobility and functionality are essential factors in making a system successful. The new TG enclosure series offers cost-effective, basic com-

TG Handheld Series

ponents for applications ranging from manual data input to electronic data acquisition using scanners or chip cards.

TG 130, the smaller enclosure system in the series, has been effectively used for magnetic card devices, as well as for positioning apparatus in laboratories and in medical applications. 4 versions are available: a flat design with or without a display cut-out; a deeper design with increased mounting height for additional boards or electromechanical components, with or without a display cut-out. This enclosure consists of a top and bottom part with a battery compartment and lid and is designed to accommodate membrane keypads. There are 2 cover plates in the head and shaft sections to facilitate customizing for interface modules or slots for card inserts.

The ergonomically shaped TG 180/230 enclosures consist of a top and bottom part with a keypad plate, head and shaft cover plate. Battery compartment must be ordered separately. They are available in a closed and an open version (with display cutout). The variable display attachment set allows for mounting different sized displays. The maximum display board dimensions for TG-180 are 66 x 46mm; TG 230, 78 x 56mm. For maximum mobility, a 4.8V Ni-Cd battery pack is available and can be replaced using a simple snap-on mechanism. Accessories for the TG180/230 include a charging station, silicone switching mat, wrist strap, and transparent head cover for use with scanners.



TECHNICAL DATA:

- Color: Enclosure body—green-blue, similar to RAL 5020; Models 180/230—keypad plate, battery compartment/pack—black-grey similar to RAL 7021
- Material: ABS
- Ingress protection: IP40 to EN60529
- Surface resistance: 4×10^{14} Ohm to DIN 53482
- Impact resistance: 24 KV/mm to DIN 53481
- Flammability: UL 94 HB
- Membrane keypad-ready
- Temperature range: -40°F up to +176°F

TG Handheld Enclosure Series						
Part Number	Type	Length (Inches/mm)	Width Top (Inches/mm)	Width Bot. (Inches/mm)	Drawing	
27010200	TG 130 FO	4.92 / 125	3.15 / 80	2.76 / 70	17-113	
27010201	TG 130 FG	4.92 / 125	3.15 / 80	2.76 / 70	17-113	
27010210	TG 130 TO	4.92 / 125	3.15 / 80	2.76 / 70	17-113	
27010211	TG 130 TG	4.92 / 125	3.15 / 80	2.76 / 70	17-113	
27010400	TG 180 O	7.09 / 180	3.31 / 84	2.76 / 70	17-114	
27010401	TG 180 G	7.09 / 180	3.31 / 84	2.76 / 70	17-114	
27010600	TG 230 O	9.02 / 229	3.82 / 97	2.76 / 70	17-114	
27010601	TG 230 G	9.02 / 229	3.82 / 97	2.76 / 70	17-114	

FO=flat open FG=flat closed TO=deep open TG=deep closed O=open G=closed
 Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.
 Accessories shown on drawing page.

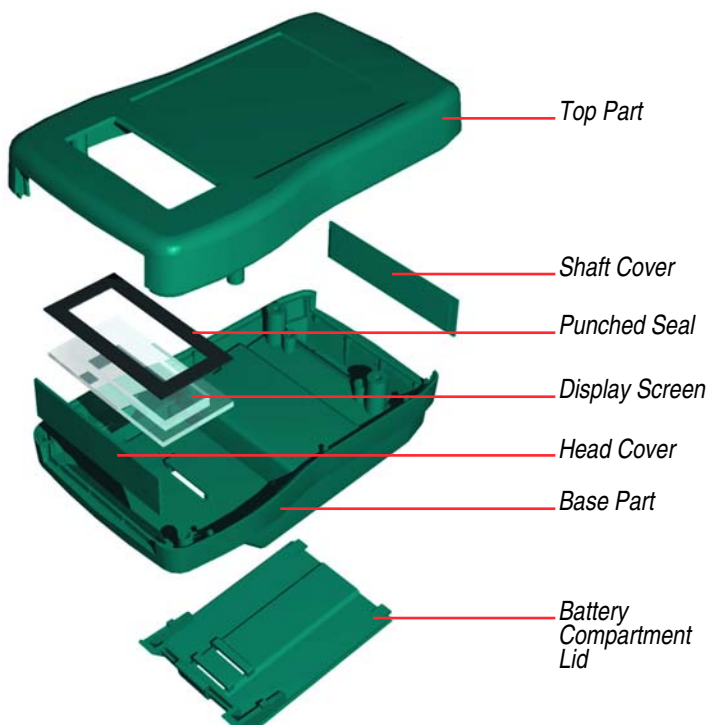


TG 130, left—Cover plates for interface modules or chip card scanners.
 TG 180, right—Large head covers for laser scanners.



TECHNICAL DATA:

- Color: green-blue, similar to RAL 5020
- Material: ABS
- Ingress protection: IP40 to EN60529
- Surface resistance: 4×10^{14} Ohm to DIN 53482
- Impact resistance: 24 KV/mm to DIN 53481
- Flammability: UL 94 HB
- Membrane keypad-ready
- Temperature resistance: -40°F up to +176°F



The TG 130 is a 5-part ABS enclosure consisting of: a top portion with or without a display opening; a base portion with mounting bosses and battery compartment in the rear; a battery compart-

TG 130 Handheld

ment lid; and cover plates for the head and shaft area. The top portion of the enclosure is recessed for membrane keypads and features internal mounting bosses for printed circuit boards. The versions with display cut-outs come complete with display screen and punch seal. The cut-out dimensions are 45 x 17.4mm. The TG 130 is available with the bottom portion, either in a flat or deep version. The deep version adds an additional 10mm space for components. The battery compartment lid is a snap-on mechanism that attaches without screws. The battery compartment lid is also designed to accept a metal clip.

The flat version and deep version include a top part, bottom part, battery compartment lid, each with one head and shaft cover, enclosure and board mounting screws. The open version includes a display screen and punched seal. The maximum display board dimensions are approximately 65 x 29mm.

Accessories include battery holder, infrared head and shaft covers, and metal clip.

TG 130 Handheld Enclosures					
Part Number	Type	Length (Inches/mm)	Width Top (Inches/mm)	Width Bot. (Inches/mm)	Drawing
27010200	TG 130 FO	4.92 / 125	3.15 / 80	2.76 / 70	17-113
27010201	TG 130 FG	4.92 / 125	3.15 / 80	2.76 / 70	17-113
27010210	TG 130 TO	4.92 / 125	3.15 / 80	2.76 / 70	17-113
27010211	TG 130 TG	4.92 / 125	3.15 / 80	2.76 / 70	17-113

FO=flat open FG=flat closed TO=deep open TG=deep closed

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories shown on drawing page.



TG hand-held enclosures are membrane-keypad ready.

The TG 180 and TG 230 are ABS enclosures consisting of several components: a top section with or without a display opening; a keypad plate; a base section; a battery storage

TG 180/230 Handheld

compartment with lid; and cover plates for head and shaft.

The top section features: a recessed area for the keypad plate with an opening for membrane cables; internal mounting bosses for PC boards in the shaft area; integrated PCB guide grooves for various display mounting options in the head area.

The base section with mounting bosses and integrated guide rails for PC boards or other components, features rubber feet and two openings in the shaft section for contacts or data transmission.

The battery storage pack or the empty battery compartment with lid are options and must be ordered separately. The storage pack comes complete with a 4.8V Ni-Cd battery. The empty battery compartment with lid is for storage only and holds four round AA batteries.

The basic difference between the two models is size. The TG 230 is close to 50mm longer and 15mm wider than the TG 180. The closed versions include a top part, bottom part, rubber feet, keypad plate, head and shaft covers, and PCB mounting screws. The open versions (with display cut-outs) come complete with display screen and punched seal. The cut-out dimensions are 56 x 33mm for TG 180 and 66 x 43mm for TG 230. Maximum display board mounting dimensions for TG 180 are approximately 66 x 46mm and 78 x 56mm for the TG 230.

Accessories include battery compartment with lid (for storage), battery storage pack, charging station, 2 pole spring contact, wrist strap, hand strap, and infrared head/shaft covers.



TECHNICAL DATA:

- Color:
 - Green-blue, similar to RAL 5020–enclosure body and head/shaft covers
 - Black-gray, similar to RAL 7021–keypad plate, battery compartment/battery pack
- Material: ABS
- Ingress protection: IP40 to EN 60529
- Surface resistance: 4×10^{14} Ohm to DIN 53482
- Impact resistance: 24 KV/mm to DIN 53481
- Flammability: UL 94 HB
- Membrane keypad-ready
- Temperature Resistance: -40°F up to +176°F

TG 180/230 Handheld Enclosures					
Part Number	Type	Length (Inches/mm)	Width Top (Inches/mm)	Width Bot. (Inches/mm)	Drawing
27010400	TG 180 O	7.09 / 180	3.31 / 84	2.76 / 70	17-114
27010401	TG 180 G	7.09 / 180	3.31 / 84	2.76 / 70	17-114
27010600	TG 230 O	9.02 / 229	3.82 / 97	2.76 / 70	17-114
27010601	TG 230 G	9.02 / 229	3.82 / 97	2.76 / 70	17-114

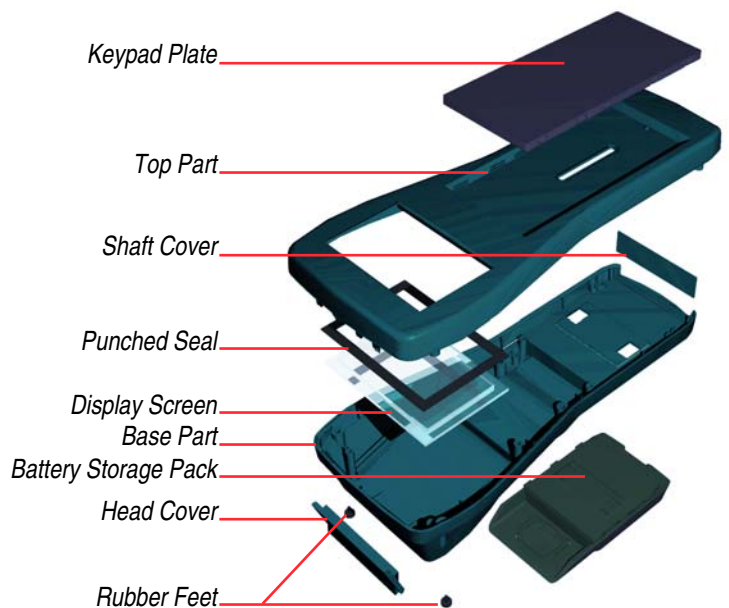
O=open G=closed

Note: Dimensions are external. Metric is the primary dimension. Inch conversions are for the user's convenience and are for reference only.

Accessories shown on drawing page.



TG hand-held enclosures are ideal for scanner applications.



Handheld Enclosures

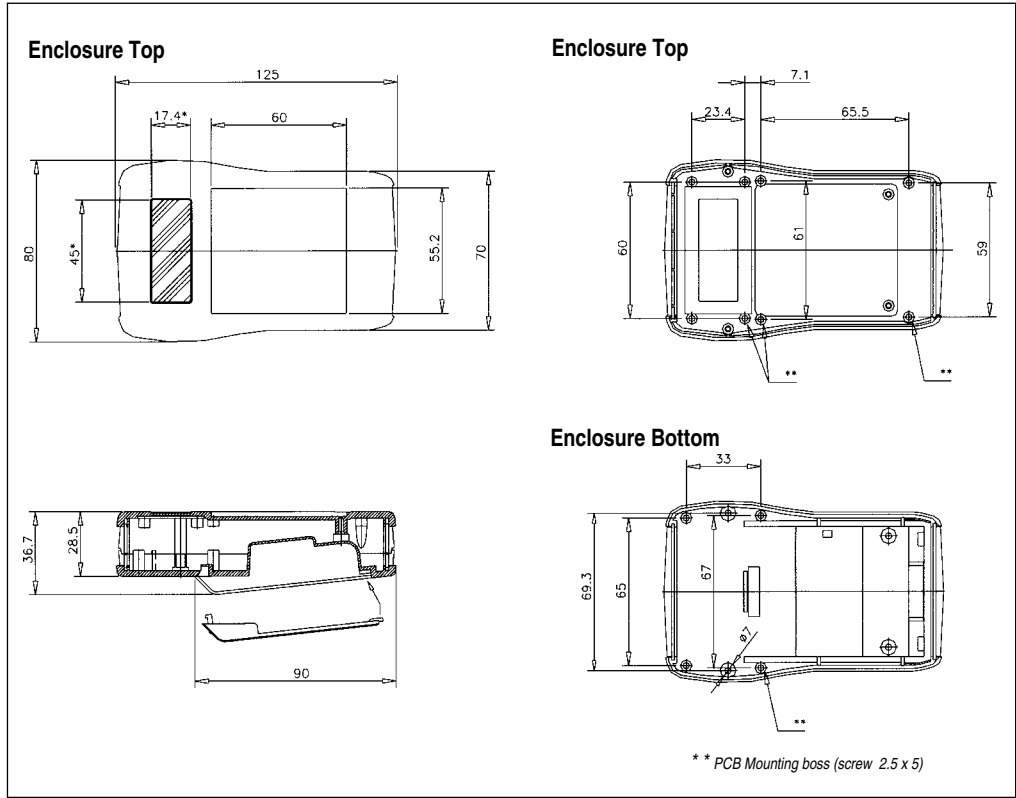


TG 130 Flat

External Dimensions: L125 x W80 x H37mm

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Standard Features
<ul style="list-style-type: none"> • 27010200 Flat Open Version: Top part, bottom part, battery compartment lid, each with one head and shaft screen, enclosure and board mounting screws. Includes display opening, screen and punched gasket (max. display board dimensions approximately 65 x 29mm). • 27010201 Flat Closed Version: Top part, bottom part, battery compartment lid, each with one head and shaft screen, enclosure and board mounting screws.
Accessories
<ul style="list-style-type: none"> • 27010285 Cover for head or shaft in enclosure color. • 27010286 Cover for head or shaft, transparent. • 27010287 Cover for head or shaft, for infrared. • 27010280 Empty battery holder for four AAA batteries. • 27010281 Battery contacts for one 9V battery. • 27010090 TG spare screw set (8 board mounting screws, 6 enclosure screws). • 27010282 Metal clip to snap onto battery compartment lid. (Belt clip) • 27010288 Spare display screen set (1 display screen, 1 punched gasket).

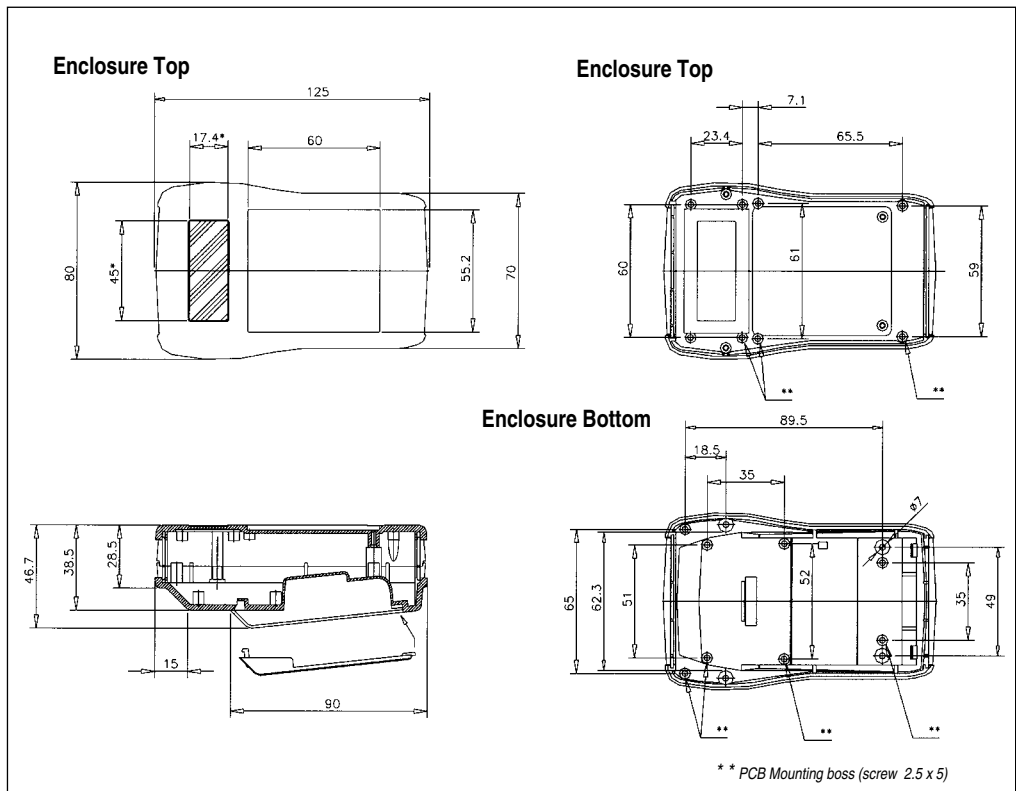


TG 130 Deep

External Dimensions: L125 x W80 x H47mm

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Standard Features
<ul style="list-style-type: none"> • 27010210 Deep Open Version: Top part, bottom part, battery compartment lid, each with one head and shaft cover plate, enclosure and board mounting screws. Includes display screen and punched gasket (max. display board dimensions approximately 65 x 29mm). • 27010211 Deep Closed Version: Top part, bottom part, battery compartment lid, each with one head and shaft cover plate, enclosure and board mounting screws.
Accessories
<ul style="list-style-type: none"> • 27010285 Cover for head or shaft in enclosure color. • 27010286 Cover for head or shaft, transparent. • 27010287 Empty cover for head or shaft, for infrared. • 27010280 Battery holder for four AAA batteries. • 27010281 Contacts for one 9V battery. • 27010090 TG spare screw set (8 board mounting screws, 6 enclosure screws). • 27010288 Spare display screen set (1 display screen, 1 punched gasket). • 27010282 Metal clip to snap onto battery compartment lid.



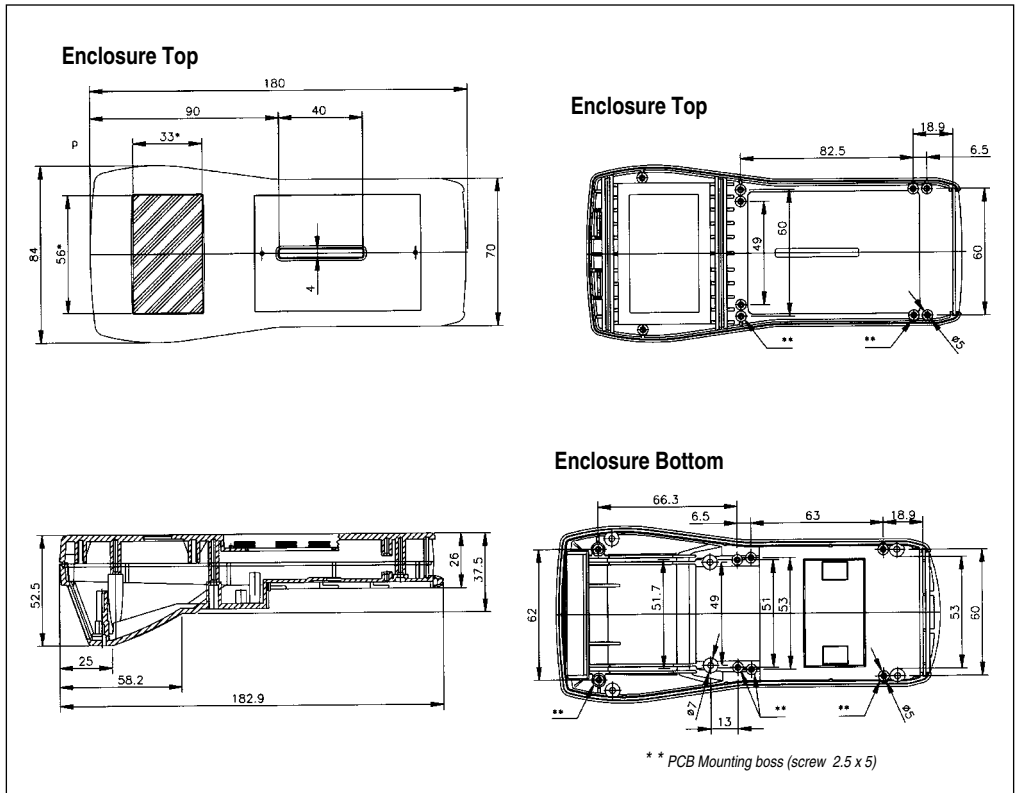
Dimensional Drawings

TG 180

External Dimensions: L180 x W84 x H53mm

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Standard Features
<ul style="list-style-type: none"> • 27010400 Open Version Top part, keypad plate (closed) bottom part, rubber feet, head cover, shaft cover, enclosure and PCB mounting screws. Includes display screen and punched gasket (max. display board approx. 66 x 46mm). • 27010401 Closed Version: Top part, keypad plate (closed) bottom part, rubber feet, head cover, shaft cover, enclosure and PCB mounting screws.
Accessories
<ul style="list-style-type: none"> • 27010080 Empty battery holder & lid, space for 4 AA batteries. • 27010081 Storage battery pack 1000 mAh Ni-Cd quick change storage battery. • 27010082 2-pole spring contact, for battery pack for mounting in enclosure body. • 27010083 Wrist strap. • 27010484 Hand Strap. • 27010085 Head cover, stepped, in enclosure color. • 27010087 Head cover, stepped, for infrared. • 27010089 Head cover, stepped, transparent clear. • 27010091 Head cover, flush, in enclosure color. • 27010092 Head cover, flush, in transparent clear. • 27010093 Head cover, flush, for infrared. • 27010285 Shaft cover, in enclosure color. • 27010286 Shaft cover, transparent. • 27010287 Shaft cover, for infrared. • 27010090 Spare screw set (8 board mounting screws, 6 enclosure screws). • 27010480 Display mounting set for variable display mounting. • 27010488 Spare display screen set (1 display screen, 1 punched gasket)



TG 230

External Dimensions: L229 x W97 x H53mm

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Standard Features
<ul style="list-style-type: none"> • 27010600 Open Version Top part, keypad plate (closed), bottom part, rubber feet, head cover, shaft cover, enclosure and PCB mounting screws. Includes display screen and punched gasket (max. display board approx. 78 x 56mm). • 27010601 Closed Version: Top part, keypad plate (closed), bottom part, rubber feet, head cover, shaft cover, enclosure and PCB mounting screws.
Accessories
<ul style="list-style-type: none"> • 27010080 Battery compartment & lid, space for 4 AA batteries. • 27010081 Storage battery pack, 1000 mAh, Ni-Cd quick change storage battery. • 27010082 2-pole spring contact for battery pack for mounting in enclosure bottom. • 27010083 Wrist strap. • 27010684 Hand Strap. • 27010085 Head cover, stepped, in enclosure color. • 27010087 Head cover, stepped, for infrared. • 27010089 Head cover, stepped, transparent clear. • 27010091 Head cover, flush, in enclosure color. • 27010092 Head cover, flush, in transparent clear. • 27010093 Head cover, flush, for infrared. • 27010285 Shaft cover, in enclosure color. • 27010286 Shaft cover, in transparent clear. • 27010287 Shaft cover, for infrared. • 27010680 Display mounting set for variable display mounting. • 27010688 Spare display screen (1 display screen, 1 punched gasket). • 27010090 Spare screw set (8 board mounting screws, 6 enclosure screws).

