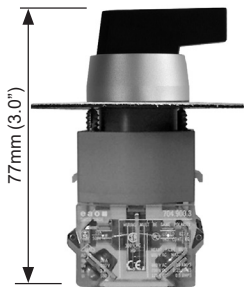


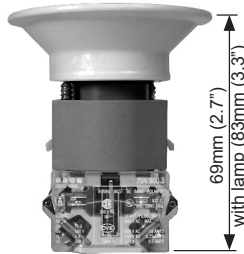
Push-button Switches and Morse Key



Morse Key

TL-70 for panel or box mounting.
 Box mounted size (including box):
 height 124mm/130mm
 (4.9/5.1")

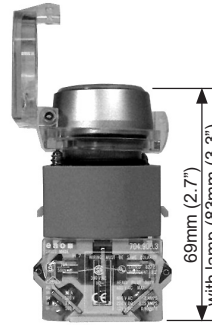
TL-70 ref.no: 24500282
 Box ref.no: 24500007



Push-button Switch

TL-80 or TL-85 with lamp
 for panel or box mounting.
 Box mounted size (including
 box): height 107mm (4.2")
 (fig. shows TL-80)

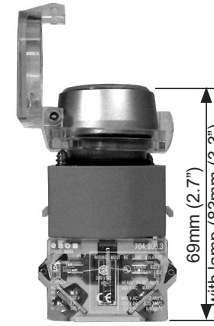
TL-80 ref.no: 24500009
 Box ref.no: 24500007



GEA Switch

TL-80GEA or TL-85GEA with
 lamp for panel or box mounting.
 Box mounted size (including
 box): height 107mm (4.2")
 (fig. shows TL-80GEA)

TL-80GEA ref.no: 24500101
 Box ref.no: 24500007



"Abandon Ship" Switch

TL-80AS or TL-85AS with lamp
 for panel or box mounting.
 Box mounted size (including box):
 height 107mm (4.2")
 (fig. shows TL-80AS)

TL-80AS ref.no: 24500100
 Box ref.no: 24500007

General Information

Kockum Sonics' new range of push-button switches comprises TL-80, TL-85, TL-80GEA, TL-85GEA, TL-80AS and TL-85AS together with Morse Key TL-70. Switches TL-85, TL-85GEA and TL-85AS are fitted with a lamp.

Push-button Switches

For box mounting, switches TL-80/TL-85, TL-80GEA/TL-85GEA and TL-80AS/TL-85AS are supplied with one complete cable gland as standard. If an additional cable gland is required, an extra hole in the box can be made (see sketch overleaf).

Protection class (box mounted) : IP 66

For panel mounting, switches TL-80/TL-85, TL-80GEA/TL-85GEA and TL-80AS/TL-85AS are adaptable for panel thickness 1-5 mm (0.039 - 0.197").

Protection class : IP 67

Both switches TL-80/TL-85, TL-80GEA/TL-85GEA and TL-80AS/TL-85AS are approved for 500V/4A AC.

Morse Key

For panel mounting, Morse Key TL-70 are adaptable for panel thickness 1-5 mm (0.039 - 0.197").

Morse Key TL-70 are approved for 500V/4A AC.
 Protection class: IP 67

Box

The mounting box is supplied with one cable gland as standard. If an additional cable gland is required, an extra hole in the box can be made (see sketch overleaf).
 Protection class : IP 66

Approximate Weights

Switches TL-80/TL-85,
 TL-80GEA/TL-85GEA,
 TL-80AS/TL-85AS
 in box (thermoplastic): 0,3 kg (0.7 lbs)

Switches TL-80/TL-85,
 TL-80GEA/TL-85GEA,
 TL-80AS/TL-85AS: 0,1kg (0.2 lbs)
 Morse Key TL-70

Selection of types			
Switch type	Mounting	No. of Outlets	Contact Scheme
TL -80	Box	1 or 2	
TL -85 + lamp	Box	1 or 2	
TL -80	Panel	-	
TL -85 + lamp	Panel	-	
TL 70	Box	1 or 2	
TL -70	Panel	-	

Notes for morse key TL-70:

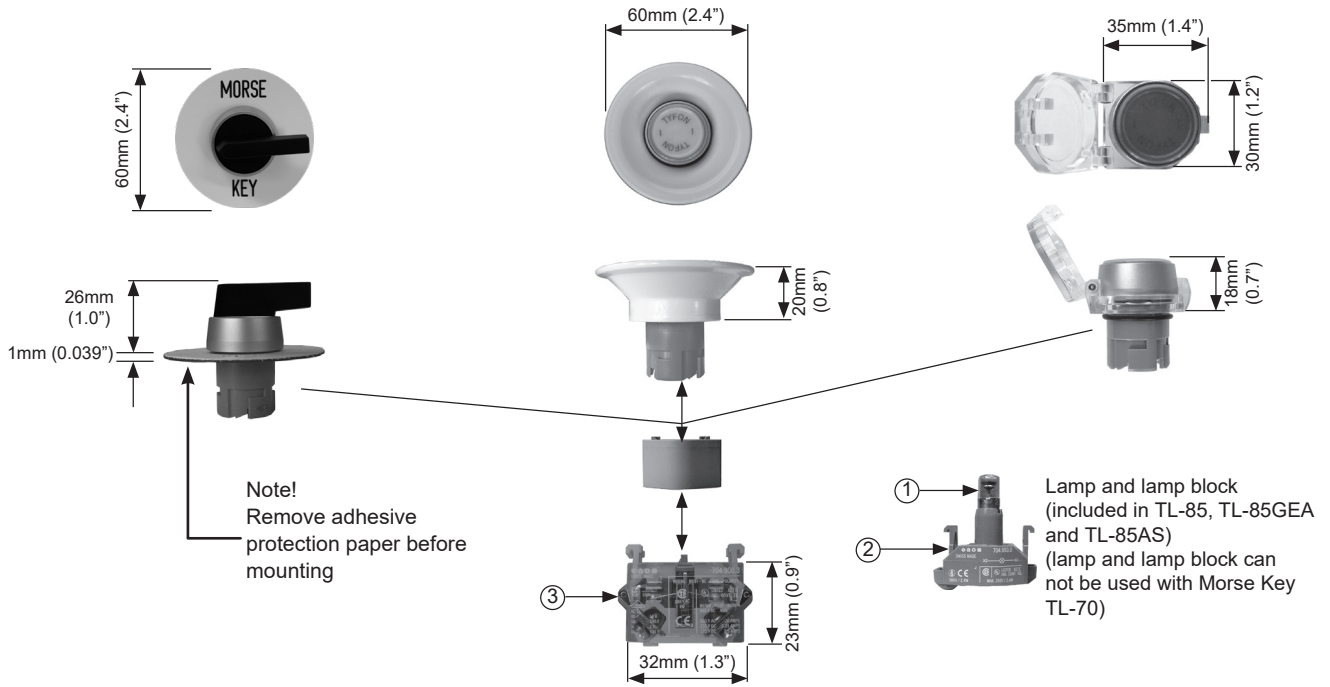
If both contacts should be activated no matter of direction of the lever, connect term 13 to 23 and term 14 to 24.

Dimensions and Parts numbers

TL-70 Ref. nr: 24500282

TL-80 Ref. nr: 24500009
TL-80 Morse (option)

TL-80GEA Ref. nr: 24500101
TL-80AS Ref. 24500100

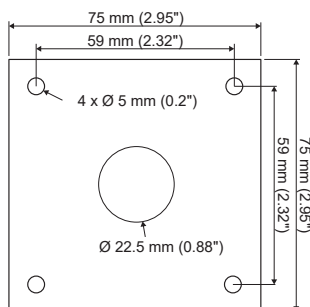
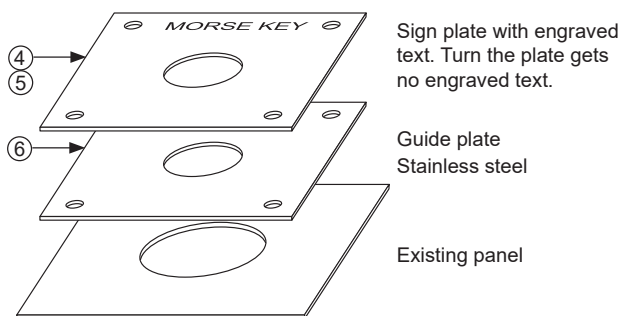


Panel mounting

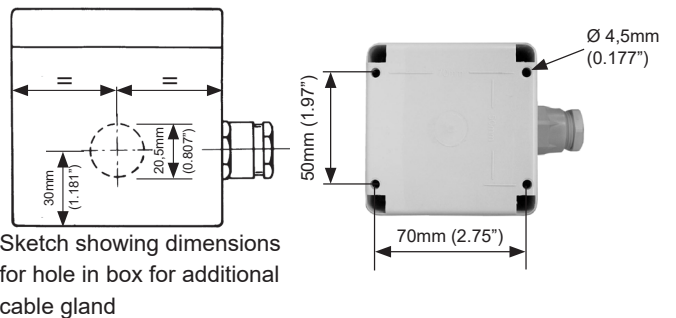
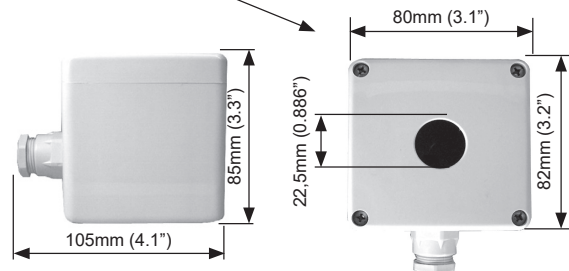
For panel mounting, a hole of $\varnothing 22,5\text{mm}$ (+0.5/-0 mm) (0.886") is to be made. The switch is adjustable to a panel thickness of 1 - 5mm (0.039 - 0.197")

If push-button is to be mounted in an existing hole on the ships panel of a diameter more than $\varnothing 22.5$ (+0.5/-0 mm) this hole has to be extended to $\varnothing 36$ mm so that the Guide & Sign plate, part 4 or part 5 and part 6, can be used.

The Guide & Sign plate consist of 2 parts and has to be ordered separately.



BOX Ref. nr: 24500007



Part numbers

No.	Part name	Ref. no.
1	Lamp 230 V	20560124
	Lamp 24 V	20560127
2	Lamp block	20570033
3	Switch	20502007
Sign plates & Guide plate		
4	Sign plate "Morse key"	21771155
5	Sign plate "Whistle push button"	21771156
6	Guide plate	21776027

Parts can be obtained from Kockum Sonics or their agents. When ordering, please give reference number and part name