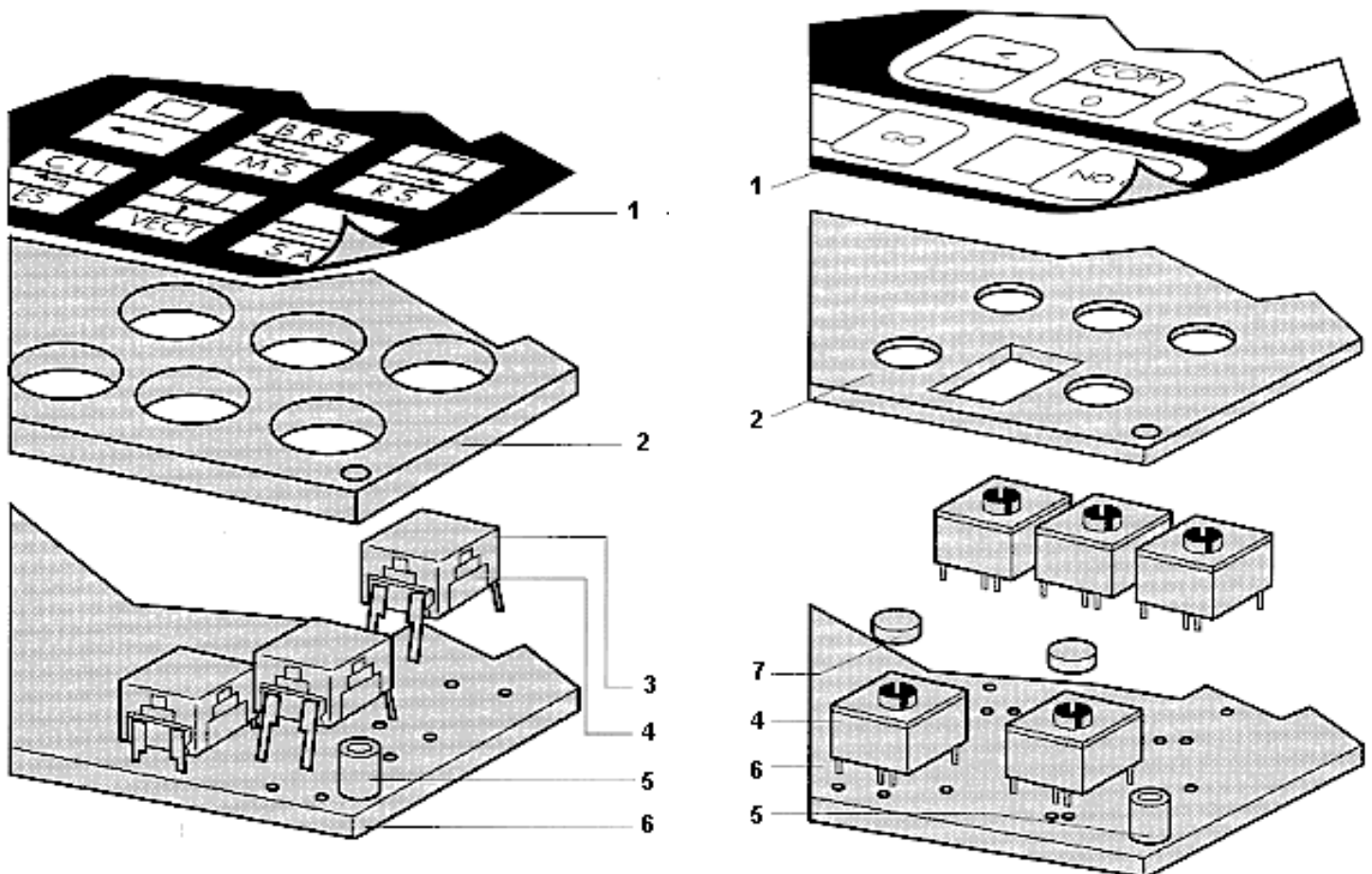


EAO SECME Division

Custom building keypads with COSMOS & MICRO-COSMOS KEYPADS

Customers can build their own keypads and keyboards using MICRO-COSMOS and COSMOS modular key switches. By combining the switch elements of choice with other components such as LEDs, termination hardware, semiconductors, and passive components on your own printed circuit board, a complete drop-in custom keypad can be constructed. The resulting assembly offers flexibility, graphic appearance, and front panel sealing found in membrane systems, combined with the rugged dependability of high quality precision tactile key switches. LED- equipped switch modules provide bright, even illumination. The illustrations below show some possible mounting arrangements. See the MICRO-COSMOS and COSMOS sections in this catalog for technical specifications. Consider custom assembling your own devices when you need a special keypad or switching panel.



1. **Front panel overlay**

Manufactured to specifications in polycarbonate or polyester with silk screening on back. Thickness: 0.175 to 0.250mm. With or without embossing.

2. **Device front panel**

Front panel holes to accommodate module and other components (LED, switch, etc.). Maximum thickness: 4mm for MICRO-COSMOS, 3.5 mm for COSMOS.

3. **Protective Button**

4. **Key switch module** - either illuminated or non-illuminated

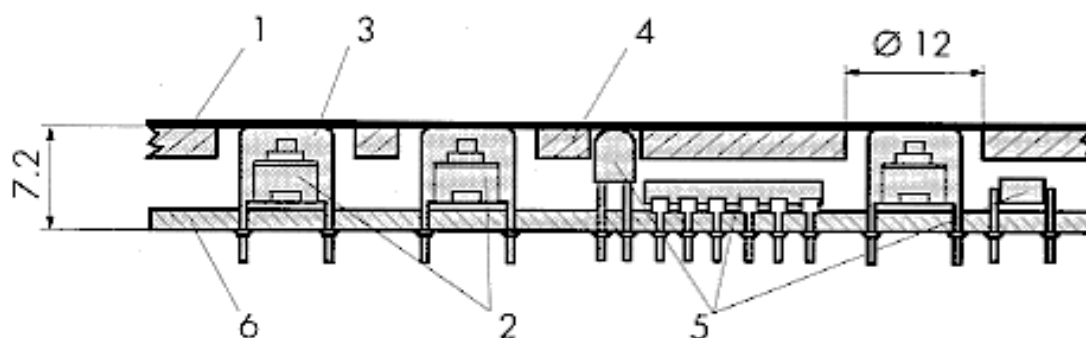
5. **Spacer**

6. **PCB**

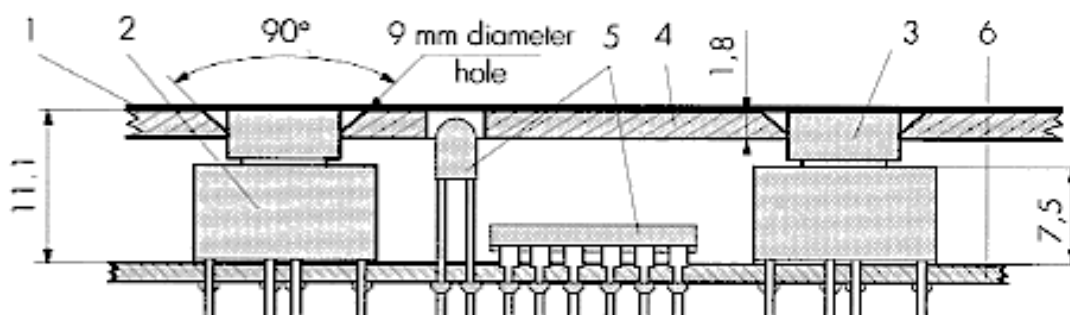
7. **Protective lens**

For better flexibility, it is recommended that modules be countersunk on top surface.

MICRO-COSMOS under film overlay



COSMOS under film overlay



1. Front panel overlay, silk screen printing
2. MICRO-COSMOS or COSMOS module
3. Protective button
4. Device front panel
5. Components: (LED, resistors, IC's, etc.)
6. PCB

Technical drawings of Micro-Cosmos modules showing dimensions in mm.

Modules without buttons: Dimensions include 7.62, 2.54, 7.62, 5.08, 2.54, 5.08, 10.16, and 7.62.

Modules fitted with 8 x 8 mm square buttons: Dimensions include 7.62, 2.54, 7.62, 5.08, 3.81, 5.08, 10.16, 8.89, 8, and 10.16.

Micro-Cosmos fitted with 8 x 8 mm square button: Dimensions include 8, 0.25x0.50, and 5.08.

Four 0.8 mm fixing holes per module

Technical drawing of a three-core cable cross-section. The drawing shows three insulated conductors arranged in a triangular pattern within a central insulation layer. The overall diameter is 11.4 mm. The conductor diameter is 7 x 10.6 mm. The insulation thickness is 7.5 mm.

ACCESSORIES Buttons, covers, lenses, and marking for key switches

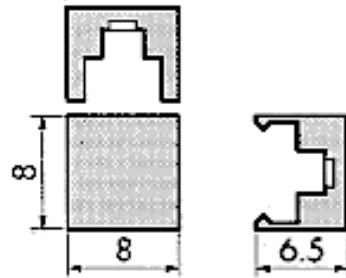
Accessories for MICRO-COSMOS

Module buttons with and without legends

Description

Part Number

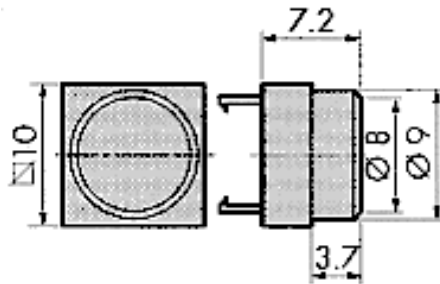
Button for use under polycarbonate or polyester film overlay, no legend



light grey

80 55000 09

Button for thru-hole front panel mounting, no legend



red

80 57000 02

green

80 57000 03

yellow

80 57000 04

blue

80 57000 05

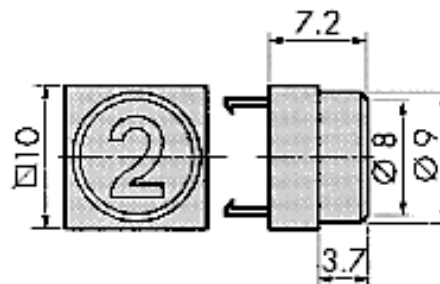
dark grey

80 57000 07

light grey

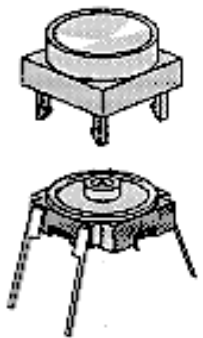
80 57000 09

Button for thru-hole front panel mounting, with legend



light grey, black
legend

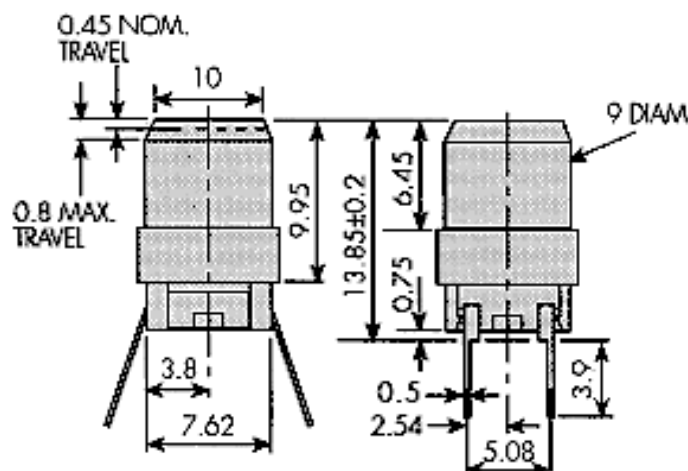
80 57... 19



Snap button
assembled on the
MICRO-COSMOS
switch module

... Select 3-digit legend code from table below and insert in part number.

Extended button for use under polycarbonate or polyester film overlay, no legend.
Increased length allows for installation with additional components between
printed circuit board and front panel

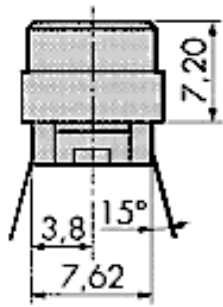


dark grey

80 57000 97

Other colors available on request

Standard MICRO-COSMOS Legends



Hot stamping legends in black.

Characters: Helvetica medium, 5.5 mm high.

On request, legends can be rotated 90° from standard.

These legends are stocking items.

Consult Beckwith Electronics for red, yellow, green and blue button legends, other colors, custom legends.

CAUTION:

Legend position corresponds to button fastening legs.

1	027	A 001
2	028	B 002
3	029	C 003
4	030	D 004
5	031	E 005
6	032	F 006
7	033	+ 071
8	034	- 072
9	035	* 074
0	036	# 075
→	077	. 076

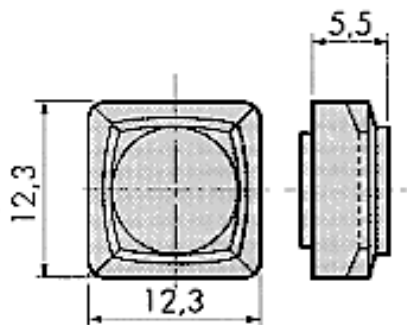
Accessories for COSMOS

Module buttons and covers

Description

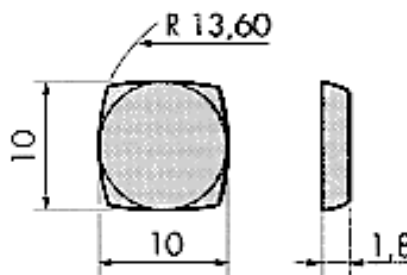
Part Number

Square button 12.3 x 12.3 mm



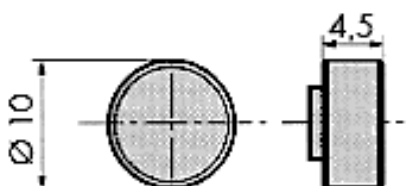
red	80 11011 02
green	80 11011 03
yellow	80 11011 04
blue	80 11011 05
dark grey	80 11011 07
light grey	80 11011 09

Square cover, no legend



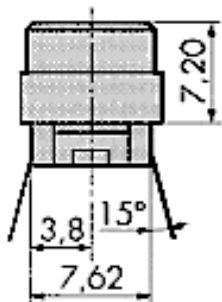
red	80 00000 02
green	80 00000 03
yellow	80 00000 04
blue	80 00000 05
dark grey	80 00000 07
light grey	80 00000 09
transparent without diffuser	80 00000 00
transparent with diffuser	80 00000 11

Round button, Ø10 mm

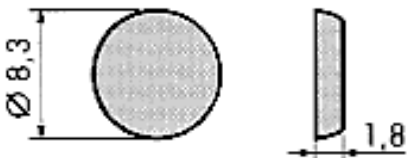

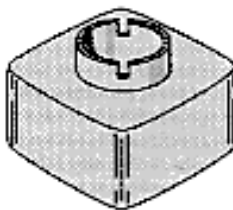
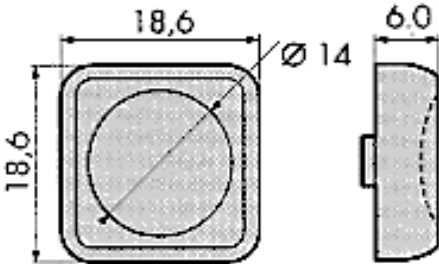
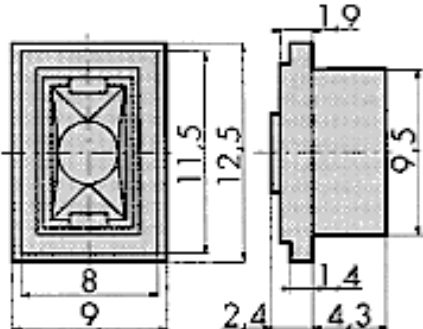

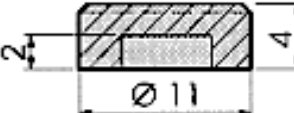

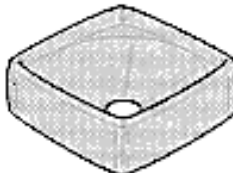
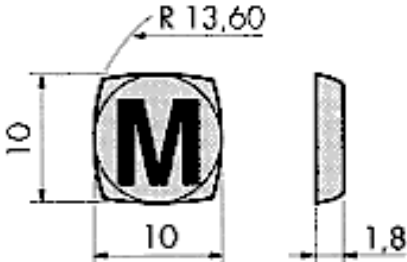


dark grey	80 33033 07
light grey	80 33033 09

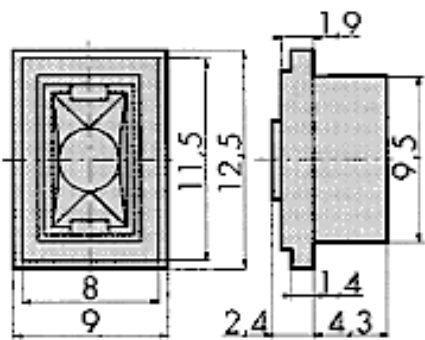
Round cover, no legend



Snap cover in button,
then snap button on
COSMOS
switch module

		dark grey	80 33000 07	
		light grey	80 33000 09	
One-piece module buttons and protective lenses		Description	Part Number	
  Snap button or lens on COSMOS switch module	One-piece button, 18.6 x 18.6 mm, without legend*			
		light grey	80 00098 09	
		*Contact Beckwith Electronics for legends		
	One-piece button, 9 x 12.5 mm, without legend* (Illuminated/non-illuminated)			
		black/transparent cover	82 09000 98	
		*Contact Beckwith Electronics for legends		
	Protective lens, Ø7.8 mm, for use under film overlay			
		transparent	80 00000 11	
	Protective lens, Ø11 mm, for use under film overlay			
		translucent	80 00006 97	
Module buttons and covers		Description	Part Number	
  Snap cover in button, then snap	Cover with legend, non-illuminated			
		light grey, black legend	82 01... 09	
		legend on opaque cover		
	Cover with legend, illuminated			
		transparent black, white legend	83 11... 01	

button on
COSMOS
switch module



legend under transparent cover using white silk
screening "day/night" lighting

... Select 3-digit legend code from table below and
insert in part number.

Standard COSMOS Legends

A	B	C	D	E	F				
001	002	003	004	005	006				
1	2	3	4	5	6	7	8	9	0
027	028	029	030	031	032	033	034	035	036
+	=	X	÷	-	*	#	.	→	
055	069	070	071	072	074	075	076	077	

Hot stamping legends in black or white.
Characters: Helvetica medium, 5.5 mm high.
These legends are stocking items.