

# ESM and DSM Single and Double Switch Modules



The single switch module ESM and the double switch module DSM are ready-to-be-installed units, consisting of:

- Switch: K12, K12G or PVA1H4; the K12G switch has two snap-points and can only be used in DSM. PVA1H4 only to be used in ESM.
- PC board
- Rubber cap
- Optional cable or connector

The rubber cap offers the possibility to use the switch modules, ESM and DSM, under severe ambient conditions where dust, water, oil, solvents can effect or destroy the function of switches. With the rubber cap, the two modules are sealed: IP 60 (dust tight) to IP 65 (dust tight and protected against water jets) according to DIN/IEC 529. This is the reason these single or double modules are used in panels and control grips.

ITT Cannon Switch Products offers the single and double switch modules as well as complete panels and Multi-Function Grips equipped with these switch modules.

## Applications

- Tractors
- Harvesting equipment
- Industrial controls

Technical data	
Material of caps	Silicone rubber
Density	IP 60 (dust tight) to IP 65 (dust tight and protected against water jets) acc. to IEC 529 due to design
Sealed against	Dust, water, drinks (Cola), oils, solvents, etc.
Cable	FLK-R/FLY 0.5 mm <sup>2</sup> further connections upon request
Graphics	Arrows: see drawing; other upon request
Switches	K12A, K12G or PVA1H4 further details of these switches: see the K12 section in this catalog

## Standard features are:

	Travel	Operating force
K12	1 mm (0.039 inch)	5N (500 grams)
K12G with two snap point: only for DSM	1.5 mm (0.0591 inch)	3.5N and 7N (350 grams and 700 grams)
PVA1H4: only for ESM	2.2 mm (0.087 inch)	3N (300 grams)

Ordering code: see next page

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## Dimensional Drawings

**ESM Single Switch Module with K12**

optionally stripped

edge for sealing at the front panel

optionally flat plugs or plug-in sleeves according to DIN 46 343

Protection

optionally for graphics

circuit diagram

**ESM Single Switch Module with PVA1H4**

optionally stripped

optionally flat plugs or plug-in sleeves according to DIN 46 343

edge for sealing at the front panel

Protection

circuit diagram

**DSM Double Switch Module: with K12A**

optionally stripped

optionally flat plugs or plug-in sleeves according to DIN 46 343

edge for sealing at the front panel

Protection

circuit diagram

WH (white) RAL 9001 standard graphics

Code for graphics on DSM	Symbol
1	B A
2	A B
3	C D

Ordering code		1	2	3	4	5	6	7	8	9	10
	<b>Example:</b>	ESM	K12A	1	5N	1M	C	GN	L130	WH	POPU
1	<b>Designation:</b> ESM = Single module DSM = Double module	→	→	→	→	→	→	→	→	→	→
2	<b>Switch:</b> K12, only for DSM: K12G, only for ESM: PVA1H4	→	→	→	→	→	→	→	→	→	→
3	<b>Travel of K12:</b> 1 mm (0.039 inch), of K12G: 1.5 mm (0.059 inch), of PVA1H4: 2.2 mm (0.087 inch)	→	→	→	→	→	→	→	→	→	→
4	<b>Operating force of K12:</b> 5N (500 grams), of K12G (with 2 snap points): 3.5N/7N (350 and 700 grams), of PVA1H4: 3N (300 grams)	→	→	→	→	→	→	→	→	→	→
5	<b>Module type:</b> Single module 1M double module: 2M: double module: 2M (1), only one K12 in position 1 assembled double module: 2M (2), only one K12 in position 2 assembled	→	→	→	→	→	→	→	→	→	→
6	<b>Cap:</b> blank: without, C: with cap	→	→	→	→	→	→	→	→	→	→
7	<b>Cap color blank:</b> Standard (black), RD: red, GN: Green	→	→	→	→	→	→	→	→	→	→
8	<b>Cable length:</b> = cm e.g. 130	→	→	→	→	→	→	→	→	→	→
9	<b>Cable color blank:</b> Standard (ESM: BK, YE, DSM: BK, YE, BU)	→	→	→	→	→	→	→	→	→	→
10	<b>Standard graphics:</b> ESM: upon request DSM: see code in table above	→	→	→	→	→	→	→	→	→	→