



3 Rotary switches



ROTARY SWITCH – COM

Rotary switches are available in all different models already existing for the potentiometers: 6, 9 and 14mm in carbon and cermet technology. Please, refer to those sections to choose the external configuration of your switch.

ACP's Rotary switches are based on the design of the potentiometers: they have one input and two possible outputs. The commuting angle between outputs can be customized.

Through-hole and SMD configurations are available. Terminals and collector are normally manufactured in tinned brass, although versions with steel terminals are also available under request. Terminals for through-hole models can be provided straight or crimped, which helps hold the component to the PCB during soldering. The switch has Ingress Protection rating type IP 54 (high level of protection against dust and also against water splashing), according to IEC 60529. Plastic materials can be self-extinguishable according to UL 94 V-0 under request.

Thumbwheels and shafts can be provided either separately or already inserted in the switch.

Our switches can be manufactured in a wide range of possibilities regarding:

- Switching angle.
- Positioning of the wiper (the standard is at 50%).
- Housing and rotor color.
- Mechanical life.
- Pause effect (recommended for each possible circuit position).
- Self-extinguishable plastic parts, according to UL 94 V-0.

Applications

- Dimmers.
- Telecommunications (antenna control).

COM HOW TO ORDER

ACP's switches (COM) follow the same configuration as the potentiometers, as shown in previous sections of this catalogue. The word COM needs to be added to the description. The cells 5, 6 and 7 (value, taper and tol) are left blank. If the switching angle is different from our standard, then it should be indicated.

Examples:

From CA9: COMCA9MH2,5 2DT SNP PI WT-9005-BA (switch in configuration CA9MH2,5 with 2 detents, terminals with snap in, wiper at CCW position, and white shaft reference 9005 already inserted).

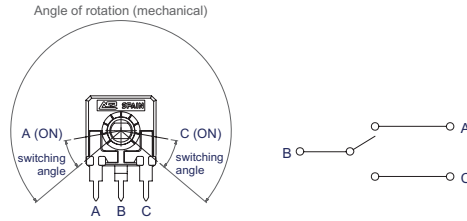
Standard features								Extra features							Assembled accessory			
Series	Rotor	Model	Packg.	Ohm value	Taper	Tol.	Life	Track	Collector	Terminals	Housing	Rotor	Wiper position	Lin	Assembly	Ref #	Color	Flam.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17		
COM CA9	M	H2,5		-	-	-			2DT	SNP			PI		WT	-9005	-BA	

From CA14: COMCA14PV15 AC45°±15° (switch in configuration CA14V15, switching angle at 45°).

Standard features								Extra features							Assembled accessory			
Series	Rotor	Model	Packg.	Ohm value	Taper	Tol.	Life	Track	Collector	Terminals	Housing	Rotor	Wiper position	Lin	Assembly	Ref #	Color	Flam.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17		
COM CA14	P	V15		-	-	-		AC45°±15°										

Electric Function

The three terminals of the potentiometer are equivalent to one input (B) and two outputs (A and C), as shown in the figure. The middle terminal (B) corresponds to the internal wiper, which switches between positions. The switching angle can be customized. Unless otherwise requested, the housing will be neutral color, with the marking in black.



Electric Specifications

	COM CA6	COM CA9 / MCA9 COM CA14 / MCA14	COM CE9 / MCE9 COM CE14 / MCE14
Resistive element	Carbon	Carbon	Cermet
Power ratio	15V / 12mA	24V / 12mA	24V / 12mA
Resistance at ON position	$\leq 5\Omega$	$\leq 5\Omega$	$\leq 5\Omega$
Dielectric Strength	600V	1500V	1500V
Insulation resistance	100M Ω	100G Ω	100G Ω
Switching angle at ON position	$20^\circ \pm 15^\circ$	$30^\circ \pm 15^\circ$	$30^\circ \pm 15^\circ$
Operating temperature	-25°C... +70°C (+85°C)		-40°C... +90°C (+125°C)

Please, note that these are standard features; other specifications are available on request.

Mechanical Specifications

	6mm	9mm	14mm
Angle of rotation	$235^\circ \pm 10^\circ$	$240^\circ \pm 5^\circ$	$265^\circ \pm 5^\circ$
Mechanical life	1.000	1.000	1.000
Wiper torque	< 2 Ncm	< 2 Ncm	< 2.5 Ncm
Max. stop torque	4 Ncm	5 Ncm (CA9, CE9) 25 Ncm (MCA9, MCE9)	10 Ncm (CA14, CE14) 15 Ncm (MCA14, MCE14)
Max. push/pull on rotor	9.8 N	40 N / 50 N	40 N / 50 N