

# SWITCHES, SENSORS & CONTROLS



For many years, Cherry products have been synonymous with quality and reliability. Cherry is a trademark of ZF Friedrichshafen AG. Whether in household applications, industrial applications, vehicles or input systems, electronic components ensure reliable performance as well as safety and comfort. Our integrated management system is based on the ISO 9001, ISO 14001 and TS 16949 standards. The high degree of automated production and our flexible work schedules are the basis for economical, on-demand production and thus for a competitive price level.

The quality of a total solution is determined by the quality of its components. But what makes the difference between a good and an excellent technical solution? Reliability, the power of innovation and advantage through technology are the foundations of success. Perfection down to the smallest detail is therefore the basis of our philosophy as a supplier of mechatronic components.

No matter where you use our products, our goal is that we can perfectly modulate our products for your application. We prefer personal contact with our partners working together to find the best solution for you. With shorter product cycles, the development time for new products is limited. To guarantee maximum quality, close cooperation among all partners is crucial.

Customer satisfaction grows with quality, and the quality with closeness to the customer. Growth and success across more than 50 years are no accident, but the result of a sustainable company strategy. A strategy

which is applied equally to customers, employees, our own products and the environment. This guarantees that our innovations will be successful in the short and long term- and it will ensure growth for us and our partners.

Higher, faster, further and smaller – the demands for technology are increasing. Our component engineers embrace this challenge every day, striving to meet the unique and precise requirements of our partners with a broad range of specialized technical products.

Decades of experience in developing and producing provide us with the basis to find the best solution for your application. Among switches and computer input-devices we offer the best technology in several other broad product lines, including electronic controls, mechatronic assemblies, sensors and rocker switches.

# Recommended use



Automotive



Industry



Appliances

<u>Company Concept</u>	<u>2</u>
<u>Overview</u>	<u>3</u>
<u>Switches</u>	<u>4</u>
<u>Switches – Part Number Builder &amp; Preferred Parts</u>	<u>10</u>
<u>Sensors</u>	<u>14</u>
<u>Rockers</u>	<u>19</u>
<u>Rockers – Part Number Builder &amp; Preferred Parts</u>	<u>24</u>
<u>Selector Switches</u>	<u>28</u>
<u>Keymodules</u>	<u>29</u>
<u>Controls</u>	<u>30</u>

The following product description is for information purposes only. For specific details and the interpretation of the data please always consult our Technical Specification and drawing. These can be found at [www.cherryswitches.com/downloads](http://www.cherryswitches.com/downloads) or are provided upon request.

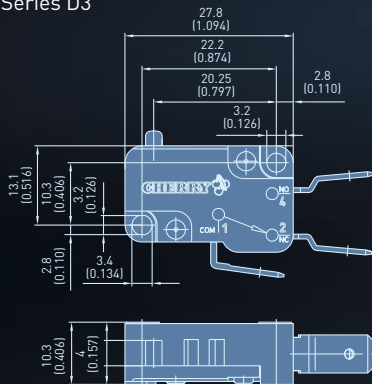


## Technical specifications \*

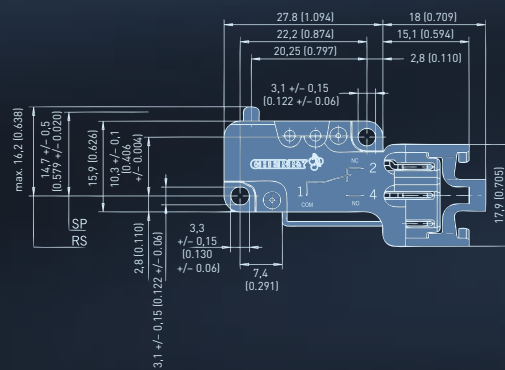
Series	D3	D4	D4 Rast 2.5	W4
Type	Miniature	Miniature	Miniature	Miniature
Description	Standard switch proven millions of times over, extremely frictional, self-cleaning contacts.	Available with 6 different current ratings and 18 terminal styles. UL, CUL and VDE approved.	Switch with integrated connector housing. For RAST 2.5 connector with R2,5/2-3adef keying	Wiping contact system, suitable for special requirements like capacitor loads. High contact stability
Max. Rating	16 A, 250 VAC	21 A, 250 VAC	6 A, 250 VAC	16 A, 250 VAC
Contact Configuration	S.P.D.T., S.P.S.T.	S.P.D.T., S.P.S.T.	S.P.D.T., S.P.S.T.	S.P.D.T., S.P.S.T.
Dimensions mm (inches)	27.8 x 10.3 x 17.6 (1.094 x 0.406 x 0.693)	27.8 x 10.3 x 15.9 (1.094 x 0.406 x 0.625)	45.8 x 10.3 x 22.1 (1.803 x 0.406 x 0.870)	27.8 x 10.3 x 15.9 (1.094 x 0.406 x 0.625)
Actuators	Button Straight Lever Simulated Roller Roller	Button Straight Lever Simulated Roller Roller	Button Straight Lever Simulated Roller Roller	Button Straight Lever Simulated Roller Roller
Common Terminal Options	Solder Quick Connect	Solder Quick Connect PCB	RAST 2.5 RAST 5	Solder Quick Connect PCB

## Dimensions in mm (inches)

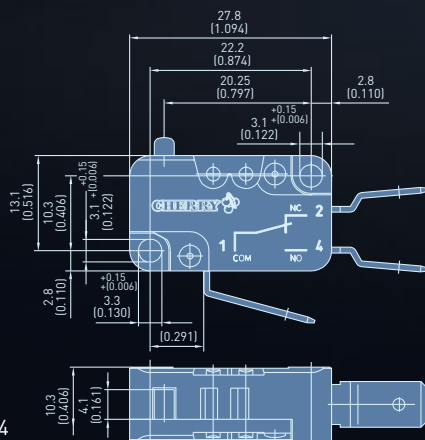
Series D3



Series D4 Rast 2.5



Series D4 & Series W4



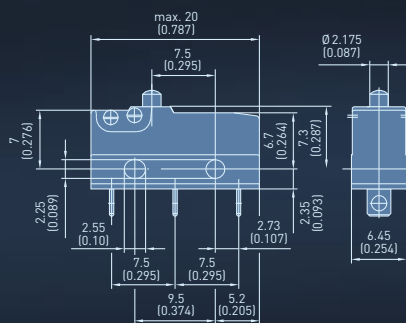


## Technical specifications \*

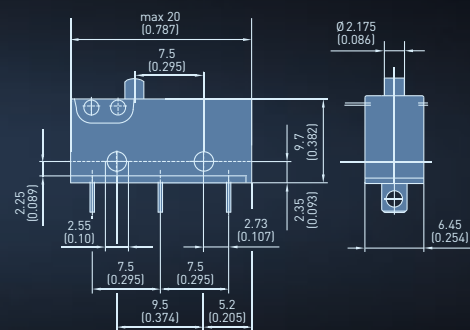
Series	DB	DC	DZ	DCJK
Type	Subminiature	Subminiature	Subminiature	Subminiature
Description	High precision switch with high repeat accuracy. International Approvals Standard	Sealed switch waterproof to IP67. UL, CUL and VDE approved. Wire lead versions available.	Positive break action on NC contact. Precision switch with high switch accuracy. Various terminal types available.	Special variant of DC switch for special applications. Sealed Switch. 4 different switching points can be selected. No UL/EN approval.
Max. Rating	10 A, 250 VAC	10 A, 250 VAC	3 A, 250 VAC	10 A, 250 VAC
Contact Configuration	S.P.D.T., S.P.S.T.	S.P.D.T., S.P.S.T.	S.P.D.T., S.P.S.T.	S.P.D.T., S.P.S.T.
Dimensions mm (inches)	20.0 x 6.45 x .6.66 (0.787 x 0.256 x 0.262)	20.0 x 6.45 x 9.27 (0.787 x 0.256. x 0.365)	20.0 x 6.45 x 9.7 (0.787 x 0.254 x 0.382)	20.0 x 6.4 x 10.2 (0.787 x 0.252 x 0.402)
Actuators	Button Straight Lever Simulated Roller Roller	Button Straight Lever Simulated Roller Roller	Button Straight Lever Simulated Roller Roller	Button Straight Lever Simulated Roller Roller
Common Terminal Options	Solder Quick Connect PCB	Solder Quick Connect PCB Leads	Solder Quick Connect PCB	Solder Quick Connect Leads

## Dimensions in mm (inches)

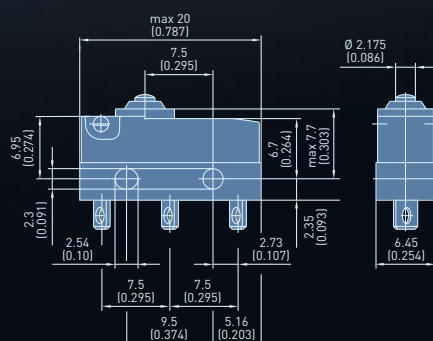
Series DB



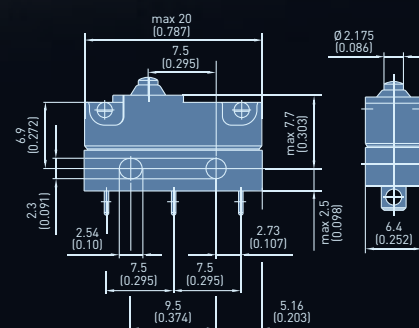
Series DZ



Series DC






Series DCJK



\* For further details please consult the Technical Specification provided on our website at [www.cherryswitches.com/downloads](http://www.cherryswitches.com/downloads)

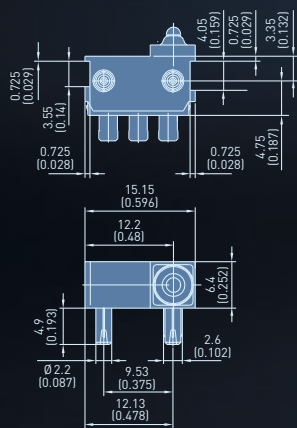


## Technical specifications \*

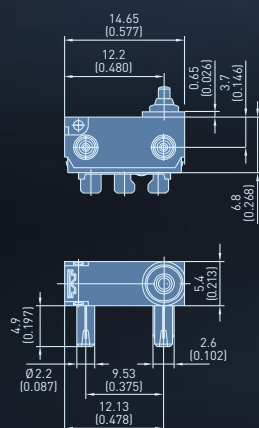
Series	DJ 	DK 	DR 
Type	Subminiature	Subminiature	Subminiature
Description	Sealed switch, which is suitable for actuation at angles of up to 40°. Easy installation and smallest dimensions.	Sealed switch with smallest dimensions. Models available up to 105°C operating temperature. High contact stability.	Dustproof switch with mushroom or pan-head actuator. Models available up to 105°C operating temperature. Various connection possibilities.
Max. Rating	2 A, 12 VDC	2 A, 12 VDC	2 A, 12 VDC
Contact Configuration	S.P.D.T.	S.P.D.T.	S.P.D.T.
Dimensions mm (inches)	15.2 x 6.4 x 8.15 (0.598 x 0.25 x 0.321)	14.7 x 5.4 x 6.8 (0.57 x 0.21 x 0.27)	13.7 x 5.4 x 6.8 (0.539 x 0.213 x 0.268)
Actuators	Button	Button Straight Lever Simulated Roller	Button
Common Terminal Options	Solder PCB	Solder PCB Leads	Solder PCB

## Dimensions in mm (inches)

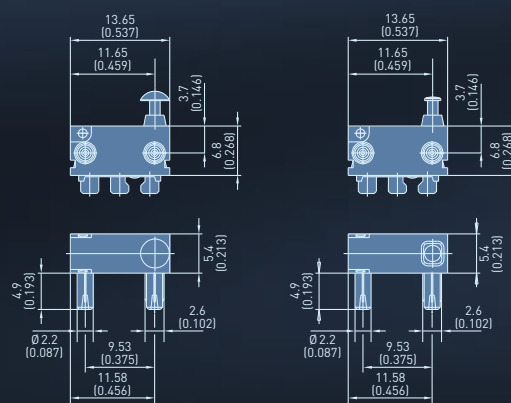
Series DJ



Series DK






Series DR (with mushroom actuator, with pan-head actuator)



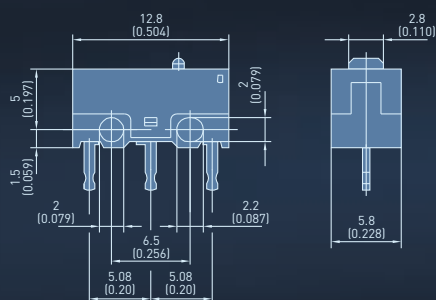


## Technical specifications \*

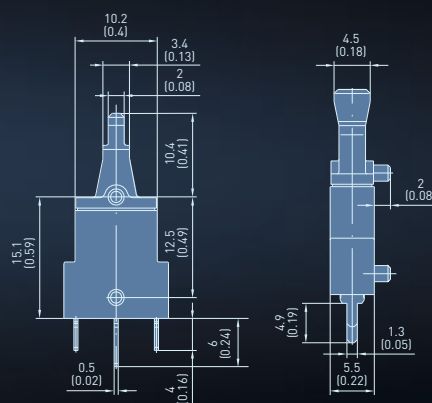
			
<b>Series</b>	DG	DH	NM02
<b>Type</b>	Subsubminiature	Ultraminiature	Centre off
<b>Description</b>	Compact Switch with insert-molded terminals. Gold or silver Alloy contacts. UL and CUL approved.	Ultra-compact switch for low current/voltage applications	Switch in miniature construction with neutral middle setting and large actuation angle ( $\pm 40^\circ$ ) to the left and right.
<b>Max. Rating</b>	3 A, 125 VAC	3 A, 30 VDC	0,1 A, 12 VDC
<b>Contact Configuration</b>	S.P.D.T.	S.P.D.T.	S.P.D.T.
<b>Dimensions mm (inches)</b>	12.8 x 5.8 x 6.5 (0.504 x 0.228 x 0.255)	8.2 x 2.69 x 6.58 (0.323 x 0.106 x 0.259)	13.0 x 5.5 x 25.5 (0.512 x 0.217 x 1.00)
<b>Actuators</b>	Button Straight Lever Roller	Button Simulated roller	Button
<b>Common Terminal Options</b>	PCB	Solder PCB	PCB

## Dimensions in mm (inches)

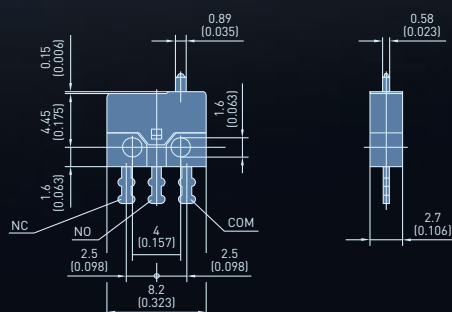
Series DG



Series NM02





Series DH



\* For further details please consult the Technical Specification provided on our website at [www.cherryswitches.com/downloads](http://www.cherryswitches.com/downloads)

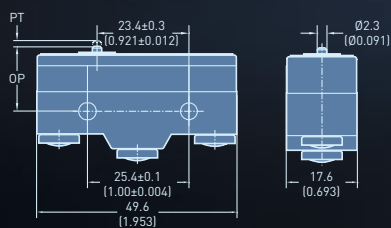


## Technical specifications \*

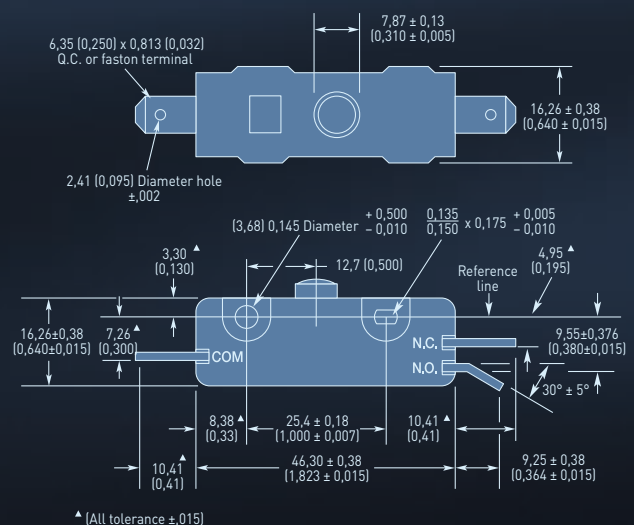
	 GP	 E General Purpose
<b>Series</b>	GP	E General Purpose
<b>Type</b>	General Purpose	General purpose
<b>Description</b>	Heavy-duty snap-action switch with ultra-small travel differential and current ratings to 20 amps. UL, CUL and VDE (on selected 15 amp models) approved.	5 current ratings. Choice of actuator styles and long life coil spring mechanism. High temperature 150°C and 200°C available.
<b>Max. Rating</b>	20 A, 250 VAC	30,1 A, 250 VAC
<b>Contact Configuration</b>	S.P.D.T.	S.P.D.T., D.P.D.T., S.P.S.T, D.P.S.T
<b>Dimensions mm (inches)</b>	49.2 x 17.58 x 23.7 (1.937 x 0.692 x 0.933)	46.3 x 16.26 x 16.26 (1.823 x 0.64 x 0.64)
<b>Actuators</b>	Button Straight Lever Roller	Button Straight Lever Roller
<b>Common Terminal Options</b>	Screw	Quick Connect

## Dimensions in mm (inches)

Series GP





Series E General Purpose (Single pole version)





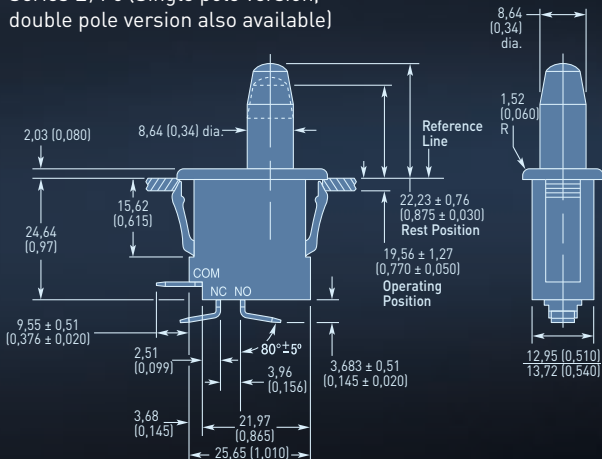


## Technical specifications \*

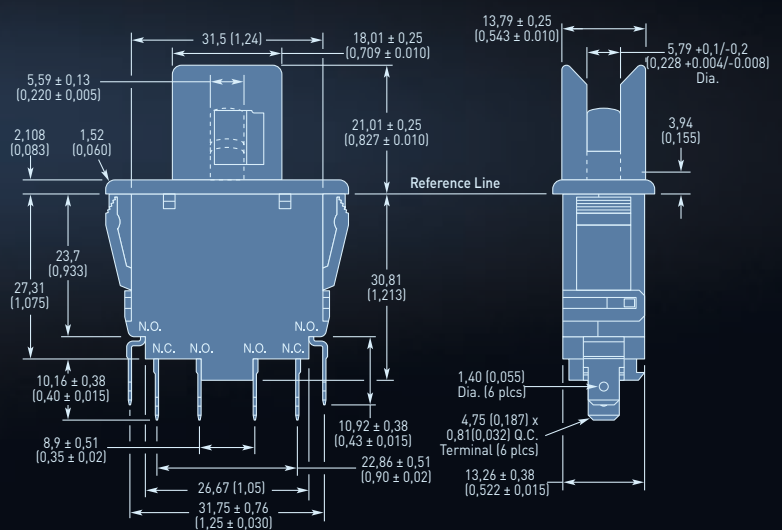
		
Series	E/F6, E/F7	F8
Switch Type	Panel Mount	Panel Mount
Description	Choice of momentary, push-pull, or cheat interlock switches. VDE approval available.	Snap-in panel mounting. Choice of button barrier or standard housing. High Overtravel. VDE approval.
Max. Rating	16 A, 125/250 VAC	16 A, 125/250 VAC
Contact Configuration	S.P.D.T., D.P.D.T., S.P.S.T, D.P.S.T	Line interrupt
Panel Cut Out mm (inches)	28.58 x 13.97 [1.125 x 0.55] for single pole 36,96 x 13,97 [1.455 x 0.55] for double pole	36,96 x 13,97 [1.455 x 0.55]
Actuators	Button	Button
Common Terminal Options	Quick Connect	Quick Connect

## Dimensions in mm (inches)

Series E/F6 (Single pole version, double pole version also available)



Series F8 (Button barrier housing, basic case housing also available)



\* For further details please consult the Technical Specification provided on our website at [www.cherryswitches.com/downloads](http://www.cherryswitches.com/downloads)

# Part Number Builder & Preferred Parts Overview

D3 miniature switch



D3

Switch Type

Electrical Rating
<b>6</b> EN: 4(3) A, 250 VAC UL: 4 A, 125-250 VAC
<b>B</b> EN: 8(8) A, 250 VAC UL: 10 A, 125-250 VAC
<b>F</b> EN: 10(10) A, 250 VAC UL: 10 A, 125-250 VAC
<b>8</b> EN: 16 (4) A, 250 VAC UL: 16 A, 125-250 VAC

Contact configuration
<b>1</b> S.P.S.T.-N.O.
<b>2</b> S.P.S.T.-N.C. < 3mm μ
<b>3</b> S.P.D.T.
<b>4</b> S.P.S.T.-N.O.
<b>5</b> S.P.S.T.-N.C. > 3mm
<b>6</b> S.P.D.T.

Terminals and fixation pins
<b>V3</b> Q.C. terminal 6.8x0.8mm, dog-leg
<b>V1</b> Q.C. terminal 6.8x0.8mm, straight
<b>Q3</b> Q.C. terminal 4.8x0.8mm, dog-leg
<b>Q1</b> Q.C. terminal 4.8x0.8mm, straight
<b>S8</b> Solder terminal with temperature-stop

Auxiliary actuator options
<b>AA</b> Without auxiliary actuator
<b>LD</b> Straight, RM rear, 35.6 mm, nickel-plated steel
<b>LL</b> Straight, RM rear, 69.9 mm, nickel-plated steel
<b>RD</b> Roller, RM rear, 34.1 mm
<b>RA</b> Roller, RM rear, 20.6 mm
<b>SA</b> Simulated roller, RM rear, 20.6 mm

D4 miniature switch



D4

Switch Type

Electrical Rating
<b>1</b> EN: 0,1(0,05) A, 250 VAC UL: 0,1 A, 125-250 VAC
<b>2</b> EN: 3(1) A, 250 VAC UL: 3 A, 125-250 VAC 1/10 HP 250 VAC
<b>3</b> EN: 6(2) A, 250 VAC UL: 5 A, 125-250 VAC, 1/4 HP 250 VAC
<b>4</b> EN: 10(3) A, 250 VAC UL: 10 A, 1/2 HP, 125-250 VAC
<b>5</b> EN: 16(4) A, 250 VAC UL: 15 A, 1/2 HP, 125-250 VAC
<b>8</b> EN: 21(8) A, 250 VAC UL: 21 A, 250 VAC 1 HP 125 VAC 2 HP 250 VAC

Contact configuration
<b>1</b> S.P.S.T.-N.O.
<b>2</b> S.P.S.T.-N.C. T85
<b>3</b> S.P.D.T.
<b>G</b> S.P.S.T.-N.O. Standard force
<b>H</b> S.P.S.T.-N.C. T125
<b>M</b> S.P.D.T.
<b>7</b> S.P.S.T.-N.O.
<b>8</b> S.P.S.T.-N.C. T85
<b>9</b> S.P.D.T.
<b>P</b> S.P.S.T.-N.C.
<b>N</b> S.P.S.T.-N.O. T125
<b>R</b> S.P.D.T. Light force
<b>S</b> S.P.S.T.-N.O.
<b>T</b> S.P.S.T.-N.C. T150
<b>U</b> S.P.D.T.*

Terminals and fixation pins
<b>V3</b> Q.C. terminal 6.3x0.8 mm, dog-leg
<b>V1</b> Q.C. terminal 6.3x0.8 mm, straight
<b>Q3</b> Q.C. terminal 4.8x0.8 mm, dog-leg**
<b>Q1</b> Q.C. terminal 4.8x0.8 mm, straight*
<b>B8</b> Solder terminal,short
<b>S1</b> Solder terminal with temperature stop
<b>PA</b> PCB terminal 1.3x0.8mm housing side*
<b>PB</b> PCB terminal 1.3x0.8mm cover side*
<b>P4</b> PCB terminal 1.3x0.5mm underside*
<b>P5</b> PCB terminal 1.3x0.8mm rear*
<b>R1***</b> Q.C. terminal 4.8x0.5mm, straight
<b>X5</b> Q.C. terminal, RAST 2,5

Auxiliary actuator options
<b>AA</b> Without auxiliary actuator
<b>LA</b> Straight RM rear 21,2mm nickel-plated steel
<b>LD</b> Straight RM rear 35,6mm nickel-plated steel
<b>LL</b> Straight RM rear 69,9 mm nickel-plated steel
<b>RA</b> Roller RM rear 20.6 mm nickelplated steel
<b>RD</b> Roller RM rear 34.1 mm nickelplated steel
<b>SA</b> Simulated roller rear 20,6mm nickel-plated steel

Note: \* not for D48  
\*\* not for D45 and D48  
\*\*\*US Version

DB subminiature switch



DB

Switch Type

Electrical Rating
<b>1</b> EN: 6 A 250 VAC UL: 5 A 125-250 VAC
<b>2</b> EN: 10(1,5) A 250 VAC UL: 10,1 A, 125-250 VAC, 1/4 HP,125 VAC
<b>3</b> EN: 0.1 A, 250 VAC UL: 0.1 A, 125-250 VAC
<b>4</b> EN: 4 A, 250 VAC UL: 4 A, 125-250 VAC
<b>5</b> EN: 1 A, 250 VAC UL: 1 A, 125-250 VAC only T85
<b>L</b> EN: 10 (3) A, 250 VAC UL: 10.1 A, 125-250 VAC 1/4 HP, 125 VAC
<b>M</b> EN: 3 A, 250 VAC UL: 3 A, 125-250 VAC
<b>O</b> EN: 6(2) A, 250 VAC UL: 5 A, 125-250 VAC

Contact configuration
<b>A</b> S.P.S.T.-N.O.
<b>B</b> S.P.S.T.-N.C. T120
<b>C</b> S.P.D.T.
<b>E</b> S.P.S.T.-N.O.
<b>F</b> S.P.S.T.-N.C. T85
<b>G</b> S.P.D.T.

Terminals and fixation pins
<b>A1</b> Solder terminal, short
<b>B1</b> Q.C. terminal 2.8x0.5mm, short
<b>C1</b> PCB terminal 1.3x0.5mm, straight
<b>D1</b> PCB terminal 0.6x0.5mm, straight
<b>D2</b> PCB terminal 0.6x0.5mm, RHS*
<b>D3</b> PCB terminal 0.6x0.5mm, LHS*
<b>D4</b> PCB terminal 0.6x0.5mm, RHS**
<b>D5</b> PCB terminal 0.6x0.5mm, LHS**

Auxiliary actuator options
<b>AA</b> Without lever, spherical head
<b>BA</b> Without lever, radius shape
<b>LB</b> Straight, RM rear, 4.8mm
<b>LC</b> Straight, RM rear, 7 mm
<b>LD</b> Straight, FM front 42mm
<b>MC</b> Straight, FM front, 9,4 mm
<b>RB</b> Roller, RM rear, 2,5 mm
<b>RC</b> Roller, RM rear, 4,7 mm
<b>RD</b> Roller, RM rear, 39,7 mm
<b>SC</b> Simulated roller, RM rear, 4,7 mm
<b>SD</b> Simulated roller, RM rear, 39,7 mm

Note: \* with location pins  
\*\* without location pins

DC subminiature switch



Switch Type	Electrical Rating	Contact configuration	Terminals and fixation pins	Auxiliary actuator options
DC		-		
1	EN: 6 A 250 VAC UL: 5 A 125-250 VAC	A S.P.S.T.-N.O. B S.P.S.T.-N.C. T120 C S.P.D.T. E S.P.S.T.-N.O. F S.P.S.T.-N.C. T85 G S.P.D.T.	A1 Solder terminal, short L1 Q.C. terminal 2.8x0.5mm straight H1 PCB terminal 1.3x0.5mm straight** K1 PCB terminal 0,6x0.5mm straight** K6 PCB terminal 0.6x0.5mm RHS*** K7 PCB terminal 0.6x0.5mm LHS*** K8 PCB terminal 0.6x0.5mm RHS**** K9 PCB terminal 0.6x0.5mm LHS**** B3 Leads 0,5mm <sup>2</sup> on actuator side***** B4 Leads 0,5mm <sup>2</sup> on opposite side from actuator***** B5 Leads 0,5mm <sup>2</sup> attached to underside***** C3 Leads 0.75 mm <sup>2</sup> on actuator side C4 Leads 0.75 mm <sup>2</sup> on op- posite side from actuator C5 Leads 0.75 mm <sup>2</sup> attached to underside	AA Without auxiliary actuator LB Straight 4.8mm LC Straight 8mm LD Straight 42mm RB Roller 2.5mm RC Roller 4.7mm SB Simulated roller 2,5mm SC Simulated roller 4,7mm SD Simulated roller 39,7mm

Note: \* (40T105 with leads)  
\*\* max. 30° twisted  
\*\*\* with location pins  
\*\*\*\* w/o location pins  
\*\*\*\*\* only for DC3 and DC4 versions available

DZ subminiature switch



Switch Type	Electrical Rating	Contact configuration	Terminals and fixation pins	Auxiliary actuator options
DZ		-		
1	EN: 3(3) A 250 VAC UL: 5 A 125-250 VAC	G S.P.D.T. F S.P.S.T. - N.C.	A1 Solder terminal, short C1 PCB terminal 1,3x0,5mm, straight B1 Q.C. terminal 2,8x0,5mm, straight	BA Without auxiliary actuator/ radius shape

DK sub-subminiature switch



Switch Type	Electrical Rating	Contact configuration	Terminals and fixation pins	Auxiliary actuator options
DK		-		
1	0,005-2 A, 12 VDC	G S.P.D.T. Version with leads: E S.P.S.T.-N.O. F S.P.S.T.-N.C.	RL Solder terminals 2.5x0.5 mm, straight with LH pins RN Solder terminals 2.5x0.5 mm, straight w/o pins RR Solder terminals 2.5x0.5 mm, straight with RH pins SN PCB terminals 0.6x0.5 mm, straight w/o pins SL PCB terminals 0.6x0.5 mm, straight with LH pins TR PCB terminals 0.6x0.5 mm, RH-s. with RH pins UL PCB terminals 0.6x0.5 mm, LH-s. with LH pins Z3 500 mm leads 0.35 mm <sup>2</sup> to underside without pins Z6 500 mm leads 0.35 mm <sup>2</sup> to underside with LH pins Z9 500 mm leads 0.35 mm <sup>2</sup> to underside with RH pins	A0 Without auxiliary actuator D1 Straight spring-loaded E1 Sim. roller, spring-loaded

## Part Number Builder & Preferred Parts Overview

DR sub-sub-miniature switch



DR					
Switch Type	Electrical Rating	Actuator shape	Terminals and fixation pins	Auxiliary actuator options	
1	0,005-2 ADC, 12 V	P Mushroom R Pan-head	AL Solder terminals 2.5x0.5mm straight with LH pins AN Solder terminal 2.5x0.5mm without pins BL PCB terminal, straight, 0.6x0.5mm w/o pins BN PCB terminal straight 0.6x0.5mm without pins BR PCB terminal straight, 0.6x0.5mm with RH pins CR PCB terminal, RH-side 0.6x0.5mm with RH pins DL PCB terminal, LH-side 0.6x0.5mm with LH pins	A0 without auxiliary actuator	

DG subminiature switch



DG				
Switch Type	Electrical Rating	Contact configuration	Terminals and fixation pins	Auxiliary actuator options
1	3 A, 125 VAC; 2 A, 30 VDC	3 S.P.D.T.	B1 PCB terminal, straight B2 PCB terminal, RH side B3 PCB terminal, LH side	AA without auxiliary actuator LA aux. actuator straight RA aux. actuator roller
2	0,05 A, 30 VDC			

DH ultraminiature switch



DH				
Switch Type	Electrical Rating	Contact configuration	Terminals and fixation pins	Auxiliary actuator options
2	5-500 mA 30 VDC	C S.P.D.T.	B1 Solder terminal, straight 1.3x3.1mm C4 PCB terminal, straight, 0.64x3.1mm C5 PCB terminal, RH-side, 0.64x3.1mm C6 PCB terminal, LH-side, 0.64x3.1mm	AA without auxiliary actuator PA Straight

GP Series



GP						
Switch Type	Terminal Code	Contact rating	Actuator Style	Button/Actuator Type	Sequential Option	Mounting Type
S	Solder terminals M2.6 x 0.45 TAP x 4 L	B 20 A 250 VAC C 15 A 250 VAC	L Lever N No actuator R Roller	S Straight leaf A Generic button M Plastic Roller R Ribbed leaf actuator H Capped	1 Standard	0 Metric (4.4 mm) 1 U.S. (0.140)
T	Screw terminal M4 x 0.7 Tap x 5.5 L					

E General Purpose Series

E General Purpose



Switch Type

Part Number	Configuration	UL1054 Rating	EN61058-1 Rating	Terminals	Actuator
E13-00E	S.P.D.T.	15A, 125/250 VAC; 3/4HP 125 VAC; 1.5HP 250 VAC; 2A 48 VDC	n.a.	Q.C. 6,3 x 0,8 mm	Button
E13-00H					Lever
E13-00J					Plastic button*
E13-00K					Roller
E13-00M					Metal cap button*
E13-50H					Lever
E14-00M	D.P.D.T.	15A, 125/250 VAC; 3/4HP 125 VAC; 1.5HP 250 VAC	n.a.	Q.C. 6,3 x 0,8 mm	Metal cap button*
E19-00H					Lever
E19-00J					Plastic button*
E19-00K					Roller
E19-00M					Metal cap button*
E19-50H					Lever

Note: \* Ferrule version

E/F6, E/F7 Series

E/F6, E/F7



Switch Type

Part Number	Configuration	UL1054 Rating	EN61058-1 Rating	Terminals	Actuator
E65-00A	Single Pole	16A, 125-250 VAC; 1/3HP, 125-250 VAC	n.a.	Q.C. 6,3 x 0,8 mm	Button
E68-00A					Button (cheat interlock)
E68-30A		0,1A, 125 VAC		Q.C. 4,8 x 0,5 mm	Button (short)
E68-40A		Button			
E69-00A		10A, 125-250 VAC; 1/3HP, 125-250 VAC		10(4)A, 250 VAC	Button (cheat interlock)
E69-30A					Button (short)
E69-40A	Button (cheat interlock)				
F69-30A	Button (short)				
E78-00A	Double-pole	0,1A, 125 VAC	n.a.	Q.C. 4,8 x 0,8 mm	Button
E78-30A					Button (cheat interlock)
E78-40A		10A, 125-250 VAC; 1/3HP, 125-250 VAC		10(4)A, 250 VAC	Button (short)
E79-00A					Button
E79-30A					Button (cheat interlock)
E79-40A					Button (short)
F79-00A	10(4)A, 250 VAC	Q.C. 4,8 x 0,8 mm	Button		
F79-30A			Button (cheat interlock)		

F8 Series

F8



Switch Type

Part Number	Configuration	UL1054 Rating	EN61058-1 Rating	Terminals	Actuator
F82A-B120	S.P.S.T.-N.O. double make	16A, 125-250 VAC; 3/4HP, 125 VAC; 1-1/2HP, 250 VAC; 6A, 30 VDC	16(6)A, 250 VAC	Q.C. 6,3 x 0,8 mm	Button (with barrier)
F82A-A120					Basic
F81A-A120					
F82X-A120	S.P.S.T.-N.C. double make	16A, 125-250 VAC; 3/4HP, 125 VAC; 1-1/2HP, 250 VAC; 6A, 30 VDC	16(6)A, 250 VAC	Q.C. 6,3 x 0,8 mm	Basic
F81X-A120					

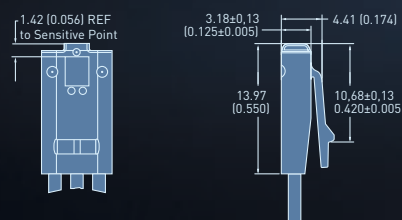


## Technical specifications \*

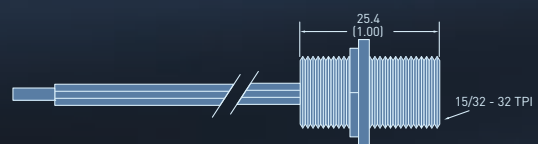
Series	MP 1013	MP 1014	MP 1005-1007	MP 1021
<b>Description</b>	Hall-effect position sensor with convenient snap-fit mounting. 24 AWG x 6'' (150mm) leads.	Digital Hall-effect position sensor in low-profile flange-mount housing. 24 AWG x 12'' (300mm) leads.	Solid state, magnetic position sensors in adjustable, threaded housing. 15/32'' - 32 (MP1007) resp. M12-1 (MP1005) threaded Barrel 20 AWGx39'' (1 m) leads.	Digital hall-effect position sensor in plastic flange-mounting. 24AWG x 6'' (150mm) leads.
<b>Operating Voltage</b>	3,8-24 VDC	4.5-18 VDC	3.8-24 VDC	4.5-24 VDC
<b>Max. supply Current</b>	7.5 mA	5.2 mA	7.5 mA	12mA
<b>Physical Dimensions mm (inches)</b>	14 x 7.75 x 4.5 (0.550 x 0.305 x 0.175)	17.3 x 21.72 x 3.3 (0.680 x 0.855 x 0.130)	Barrel Length MP 1005: 65.5 (2.58) MP 1007: 25.4 (1.0)	28.6 x 19.1 x 9.5 (1.125 x 0.750 x 0.375)

## Dimensions in mm (inches)

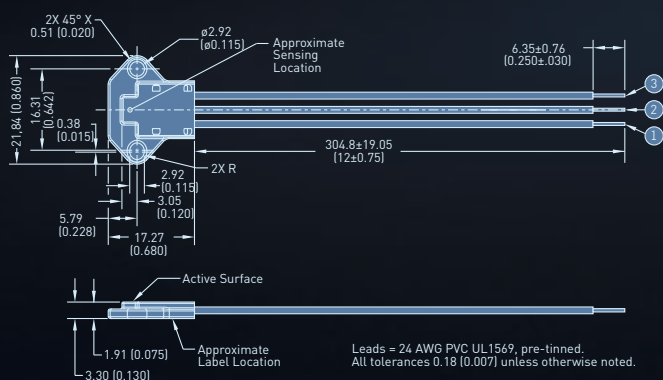
MP 1013



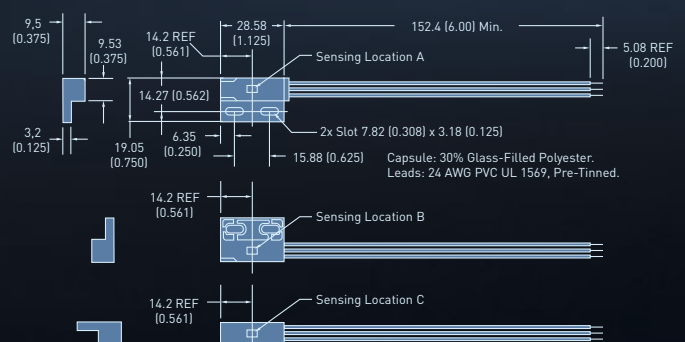
MP 1007 (for MP 1005 dimensions see GS 1005 on page 16)



MP 1014



MP 1021



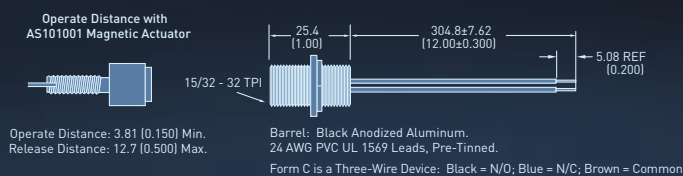


## Technical specifications \*

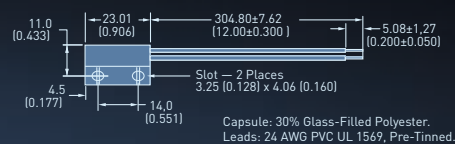
Series	MP2007	MP2017	MP2018	MP2019
<b>Description</b>	Reed-based magnetic position sensor in aluminium threaded housing. 15/32" - 32 Thread, 24 AWG 12" (300mm) leads.	Reed-based magnetic sensor in smooth plastic barrel. 24 AWG 12" (300mm) leads.	Reed-based magnetic sensor in plastic flange. mount package. 24 AWG 12" (300mm) leads.	Reed-based magnetic sensor in plastic flange-mount package. 24 AWG 12" (300mm) leads.
<b>Switching Voltage (max.)</b>	175 VAC, 175 VDC	175 VAC, 175 VDC	175 VAC, 175 VDC	175 VAC, 175 VDC
<b>Switching Current (max.)</b>	0,5 A	0,5 A	0,5 A	0,5 A
<b>Contact Form</b>	S.P.S.T.-N.O., S.P.S.T.-N.C., S.P.D.T.	S.P.S.T.-N.O., S.P.S.T.-N.C., S.P.D.T.	S.P.S.T.-N.O., S.P.S.T.-N.C.	S.P.S.T.-N.O., S.P.S.T.-N.C., S.P.D.T.
<b>Physical Dimensions mm (inches)</b>	25.4 x Ø 11.9 (1.00 x Ø 0.469)	25.4 x Ø 6.2 (1.00 x Ø 0.243)	13 x 14 x 6 (0.906 x 0.550 x 0.236)	28.6 x 19.0 x 6.35 (1.125 x 0.750 x 250)
<b>Min. Operate Distance mm (inches)</b>	3.8 (0.150)	3.8 (0.150)	6.3 (0.250)	10.2 (0.400)
<b>Max. release Distance mm (inches)</b>	12.7 (0.5)	12.7 (0.5)	17.8 (0.700)	22.9 (0.900)

## Dimensions in mm (inches)

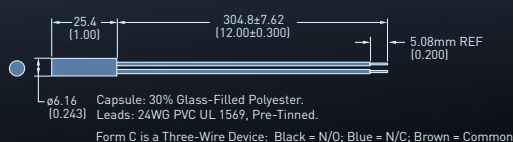
### MP2007



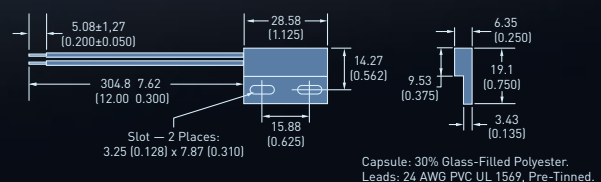
### MP2018



### MP2017



### MP2019



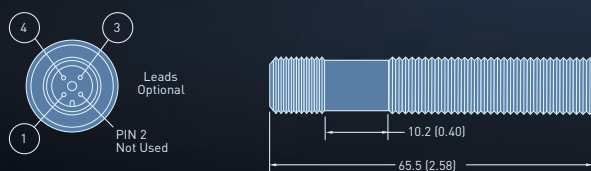


## Technical specifications \*

Series	GS 1001-1002	GS 1005	GS 1007	GS 1012
<b>Description</b>	Industrial grade M12-1 alt. M18-1 threaded stainless steel barrel, 12 mm circular connector or 22AWG x 39'' (1 m) leads.	Hall-effect geartooth speed sensor with adjustable aluminium housing. 12 mm circular connector or 20AWGx39'' (1 m) leads.	Hall-effect geartooth speed sensor with adjustable aluminium housing. 20AWGx39'' (1 m) leads.	Flange mount gear sensor rated to 140°C. Sealed design exceeds IEC 60529 IP67 standard. Optional straight connector and wire lead versions
<b>Operating Voltage</b>	5.0-24 VDC	5.0-24 VDC	5.0-24 VDC	5.0-24 VDC
<b>Max. supply Current</b>	6 mA	6 mA	6 mA	6 mA
<b>Physical Dimensions mm (inches)</b>	Barrel Length 65.5 (2.58)	Barrel Length 65.5 (2.58)	Barrel Length 25.4 (1.00)	36.3 x 60.5 x Ø 18.9 (1.43 x 2.38 x Ø 0.75)

## Dimensions in mm (inches)

GS 1001



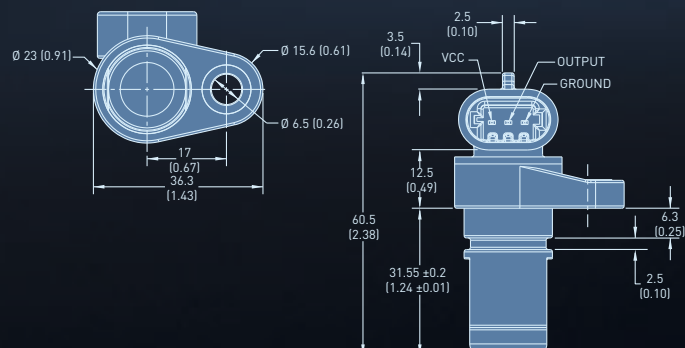
GS 1007



GS 1005



GS 1012





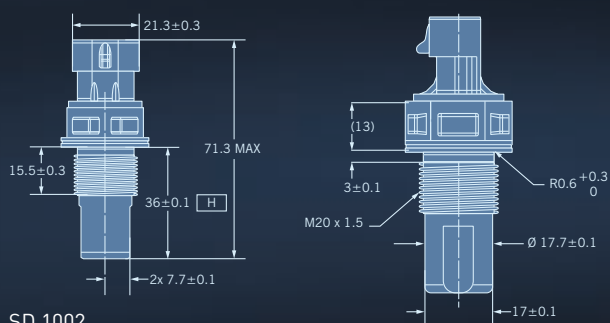


## Technical specifications \*

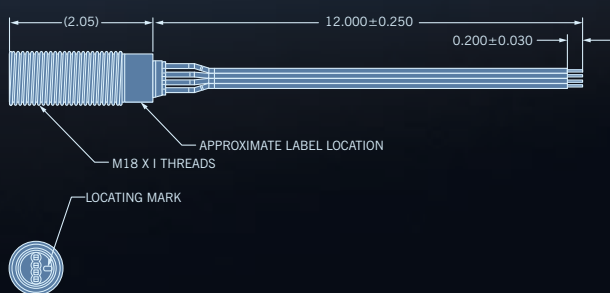
Series	GS1023	SD 1002	SD 1012	SD 5012
<b>Description</b>	Straight connector gear speed sensor in threaded plastic housing M20 x 1.5. Rated to 140°C, fullfills requirements according to IP68.	Hall-effect gear tooth speed and direction sensor in anodized aluminium housing M18-1	Hall-effect gear tooth speed and direction sensor with flange-mount plastic housing.	Dual output Hall effect sensor detecting speed and direction with flange-mount plastic housing
<b>Operating Voltage</b>	9.0-16 VDC	5.0-24 VDC	4.75-24 VDC	5.0-24 VDC
<b>Max. supply Current</b>	6mA	20mA	20mA	6mA
<b>Physical Dimensions mm (inches)</b>	Sensor Length 71,3 (2.807)	Barrel Length 52,1 (2.05)	76.2 x 24.8 x 41.1 (3.0 x 0.976 x 1.618)	75,9 x 18,92 Diameter (2.988 x 0.745)

## Dimensions in mm (inches)

GS1023

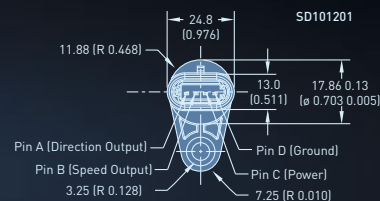
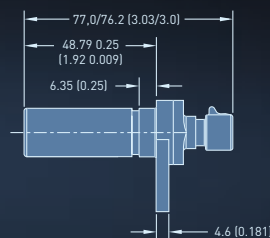


SD 1002

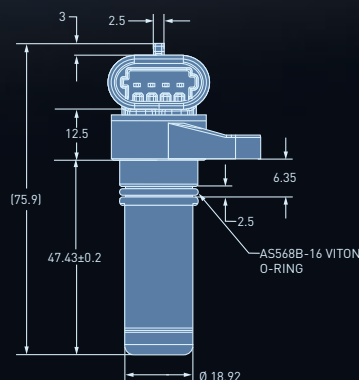


Sensor is orientation sensitive. Correct positioning of sensor when locating mark is parallel to the axis of rotation of target and pointing up.

SD 1012



SD 5012

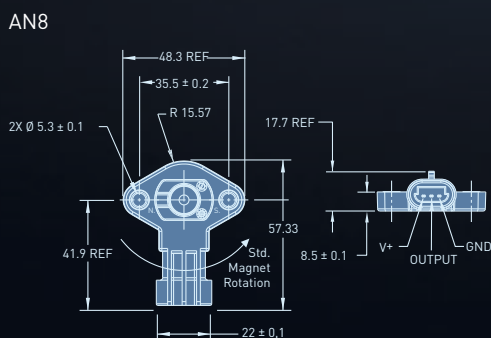
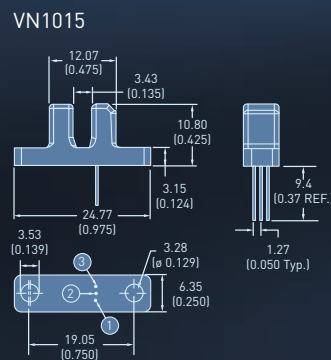
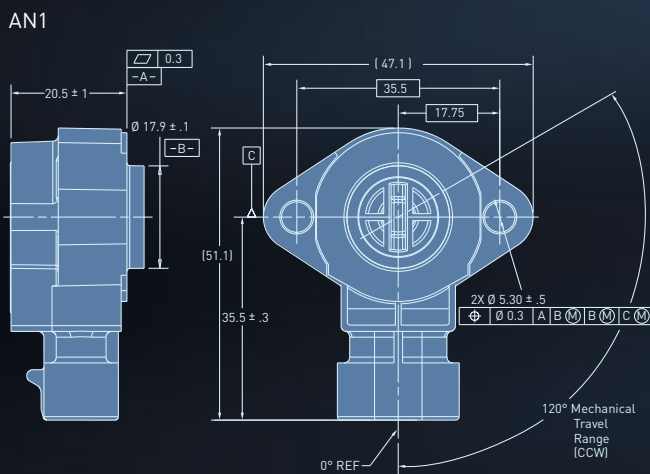




## Technical specifications \*

Series	AN1	AN8/AN9	VN1015
Description	Intrinsically linear angular position sensor (ILAPS).	Programmable, non-contact magnetic position sensors capable of continuous rotation. AN9 only available as wire lead version.	Digital vane switch with termination pins.
Operating Voltage	4.5-5.5 VDC	4.5-5.5 VDC	3.8-24 VDC
Max. supply Current	-	-	7.5 mA
Effectiv Rotational Sensing range	Max. 85°	0-360°	-
Physical Dimensions mm (inches)	47.1 x 51.1 x 23,5 (1.85 x 2.01 x 0.93)	48.3 x 57.3 x 17.7 (1.90 x 2.26 x 0.70)	24.8 x 6.35 x 10.8 (0.975 x 0.250 x 0.425)

## Dimensions in mm (inches)



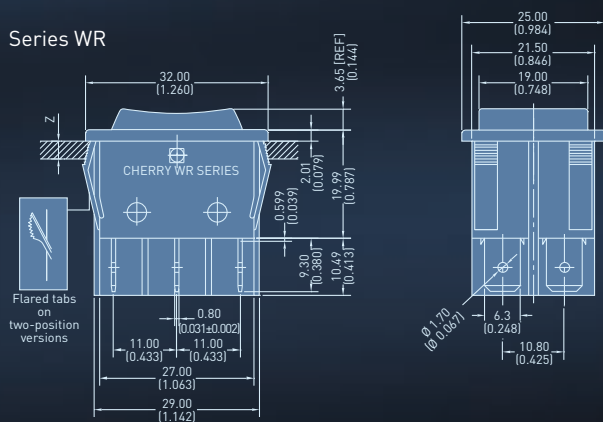


### Technical specifications \*

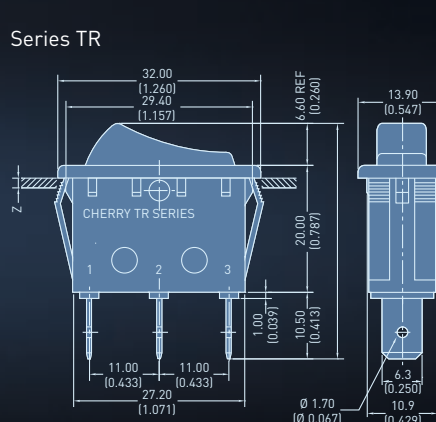
Series	WR	YR	TR	CR
Switch Type	Standard	Standard	Standard	Standard
Description	Rugged Construction for 2-pole high current applications. cULus and VDE approved.	New style with rounded corners, high current applications. cULus and VDE approved.	16A switching in a package just 11 mm wide. Double throw versions available. cULus and VDE approved.	Rugged, lighted or non lighted with 2-color molded button. cULus and VDE approved.
Max. Rating	16A, 250 VAC 16A, 125 VAC	16A, 250 VAC 20A, 125 VAC	16A, 250 VAC 16A, 125 VAC	16A, 250 VAC 20A, 125 VAC
Contact Configuration	S.P.S.T., S.P.D.T., D.P.S.T., D.P.D.T.	S.P.S.T., S.P.D.T., D.P.S.T., D.P.D.T.	S.P.S.T., S.P.D.T.	S.P.S.T., S.P.D.T.
Panel Cut Out mm (inches)	30.2 x 22.0 (1.189 x 0.866)	30.2 x 22.0 (1.189 x 0.866)	30.4 x 11.0 (1.197 x 0.433)	28.45 x 12.09 (1.12 x .476)
Functions	On-Off On-On (On)-Off (On)-(On)	On-Off On-On (On)-Off (On)-(On)	On-Off On-On (On)-Off (On)-(On)	On-Off On-Off-On On-On

### Dimensions in mm (inches)

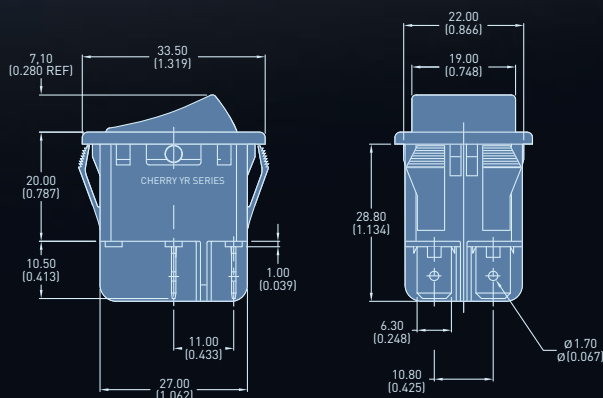
Series WR



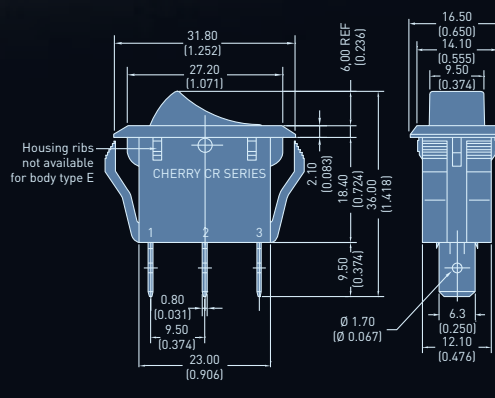
Series TR



Series YR



Series CR



\* For further details please consult the Technical Specification provided on our website at [www.cherryswitches.com/downloads](http://www.cherryswitches.com/downloads)

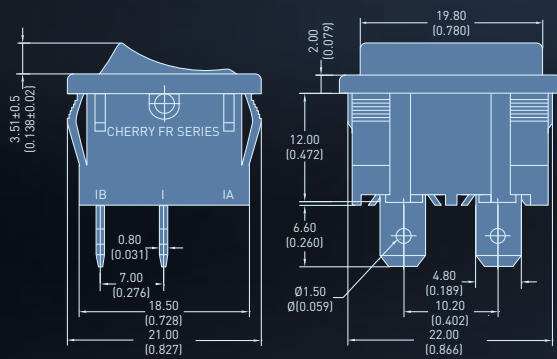


## Technical specifications \*

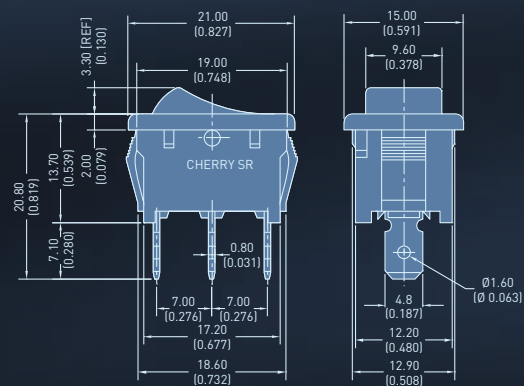
Series	FR	LR	SRB
Switch Type	Miniature	Miniature	Miniature
Description	Compact double pole. QC or solder tag terminals. cULus and VDE approved.	High current switching in a compact package. cULus and VDE approved.	Economical non-lighted rockers in a variety of colors and terminal options. cULus and VDE approved.
Max. Rating	16A, 250 VAC 12A, 125 VAC	10A, 250 VAC 10A, 125 VAC	10A, 250 VAC 10A, 125 VAC
Contact Configuration	S.P.S.T., S.P.D.T., D.P.S.T., D.P.D.T.	S.P.S.T., D.P.S.T.	S.P.S.T., S.P.D.T.
Panel Cut Out mm (inches)	19.15 x 21.90 (0.754 x 0.862)	19.2 x 12.9 (0.756 x 0.508)	19.2 x 12.9 (0.756 x 0.508)
Functions	On-Off On-On	On-Off	On-Off On-On

## Dimensions in mm (inches)

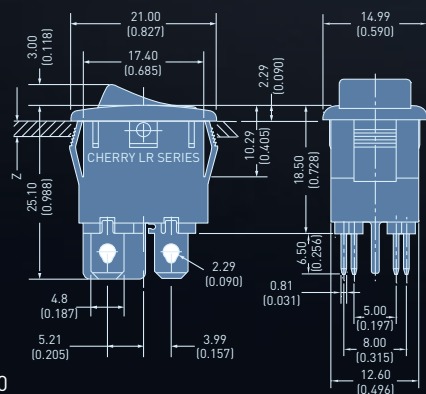
Series FR



Series SRB



Series LR



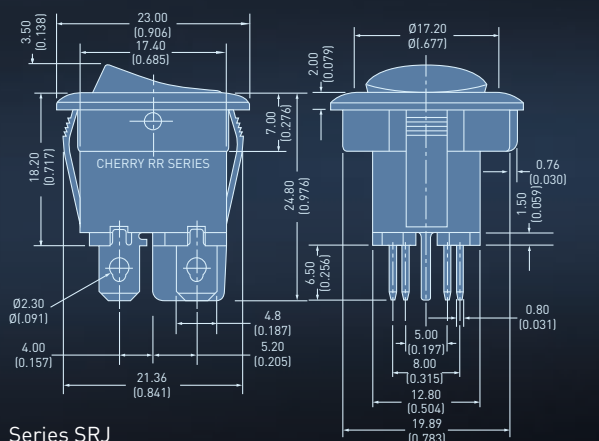


## Technical specifications \*

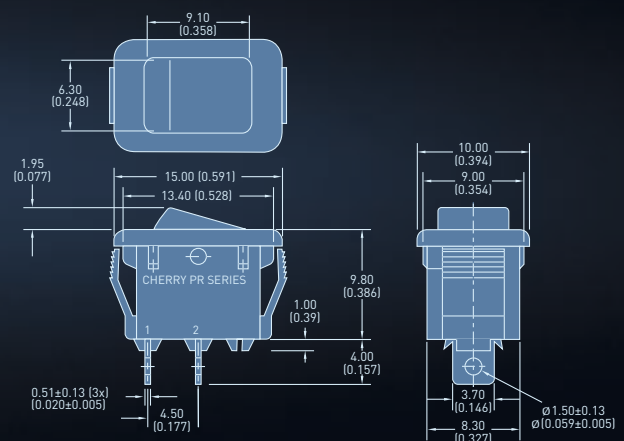
Series	RR	SRJ	PR
Switch Type	Miniature	Miniature	Ultraminiature
Description	High current switching in a compact round package. cULus and VDE approved.	Economical non-lighted rockers in a variety of colors and terminal options. cULus approved.	Panel Mount Power rocker. Low profile design. cULus and VDE approved.
Max. Rating	10A, 250 VAC 12A, 125 VAC	12A, 250 VAC 20A, 125 VAC	3A, 250 VAC 6A, 125 VAC
Contact Configuration	S.P.S.T., D.P.S.T.	S.P.S.T., S.P.D.T.	S.P.S.T.
Panel Cut Out mm (inches)	Ø 21.0 (Ø 0.827)	Ø 21.0 (Ø 0.827)	13.7 x 9.2 (0.535 x 0.362)
Functions	On-Off	On-Off On-On	On-Off

## Dimensions in mm (inches)

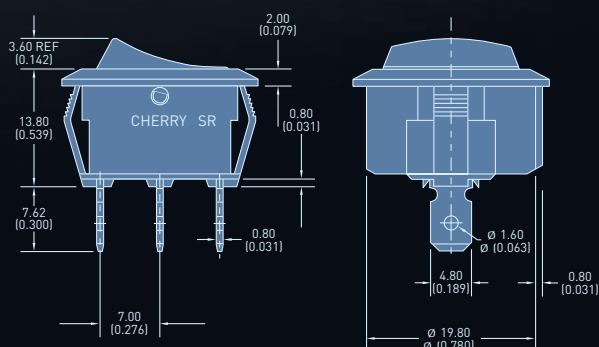
Series RR



Series PR



Series SRJ



\* For further details please consult the Technical Specification provided on our website at [www.cherryswitches.com/downloads](http://www.cherryswitches.com/downloads)

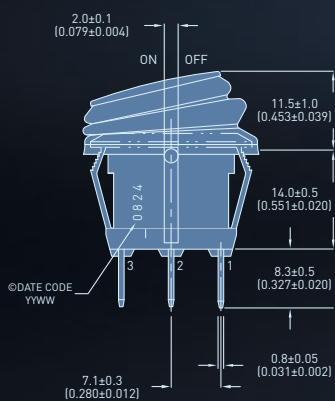


## Technical specifications \*

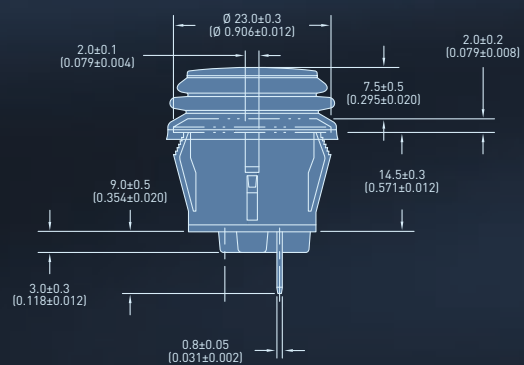
Series	KC	KD	KF	KG
Switch Type	Waterproof IP56	Waterproof IP56	Pushbutton, Waterproof IP65	Waterproof IP56
Max. Rating	10A, 250 VAC 16A, 125 VAC 20A, 14 VDC; 10A, 28 VDC	10A, 250 VAC 16A, 125 VAC 20A, 14 VDC; 10A, 28 VDC	6A, 250 VAC 10A, 125 VAC 20A, 14 VDC; 10A, 28 VDC	10A, 250 VAC 20A, 125 VAC 21A, 14 VDC
Panel Cut-Off Approx. (mm)	Round 0.795'' (Ø 20.2mm)	Round 0.795'' (Ø 20.2mm)	Round 0.795'' (Ø 20.2mm)	1.449'' x 0.835'' (36.0 x 21.2)
Switch Function	On-Off	On-Off On-On On-Off-On	On-Off (On)-Off	On-Off [On]-Off On-[On] On-Off-On On-Off-[On] [On]-Off-[On]
Terminals	4.8mm QC	4.8mm QC	4.8mm QC	6.3mm QC Solder Screw
Actuator	Flat	Flat	Flat	Curved

## Dimensions in mm (inches)

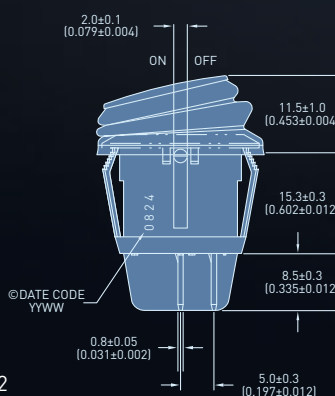
Series KC



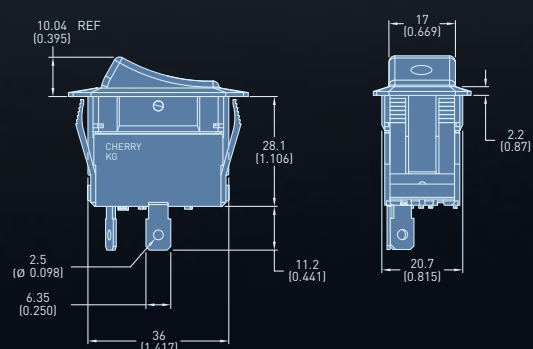
Series KF



Series KD



Series KG



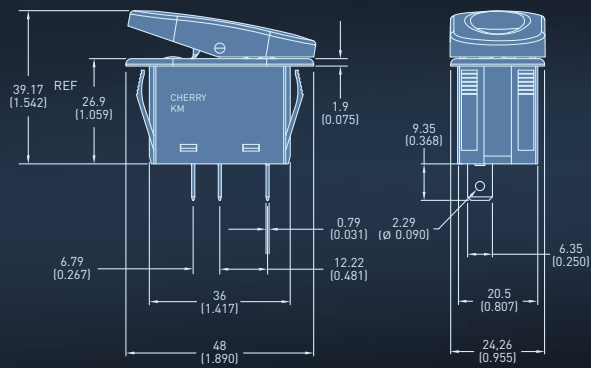


## Technical specifications \*

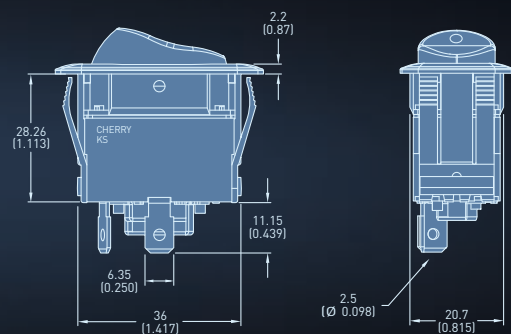
Series	KM	KR	KS	KT
Switch Type	Waterproof IP56	Waterproof IP65	Waterproof IP56	Waterproof IP56
Max. Rating	10A, 250 VAC 20A, 125 VAC 21A, 14 VDC	10A, 250 VAC 16A, 125 VAC 16A, 12 VDC; 6A, 28 VDC	10A, 277 VAC 16A, 125 VAC 21A, 14 VDC	10A, 250 VAC 20A, 125 VAC 21A, 14 VDC
Panel Cut-Off Approx. (mm)	1.449'' x 0.835'' (36.0 x 21.2)	0.780'' x 0.512'' 19.4 x 13.0	1.449'' x 0.835'' (36.0 x 21.2)	1.454'' x 0.602'' (36.8 x 15.2)
Switch Function	On-Off On-On {On}-Off On-{On} On-Off-On On-Off-{On} {On}-Off-{On}	On-Off On-On {On}-Off	On-Off On-On	On-Off On-On On-Off-On
Terminals	6.3mm QC	4.8mm QC	6.3mm QC	6.3mm QC
Actuator	Curved 2-Color-LED	Flat	Curved	Curved

## Dimensions in mm (inches)

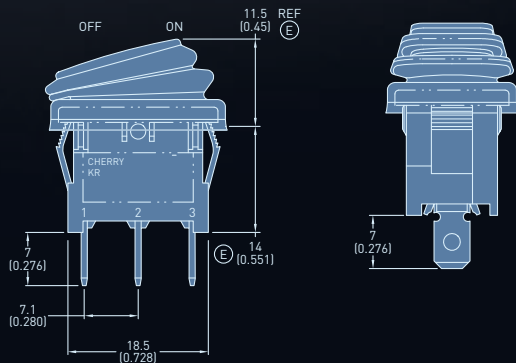
Series KM



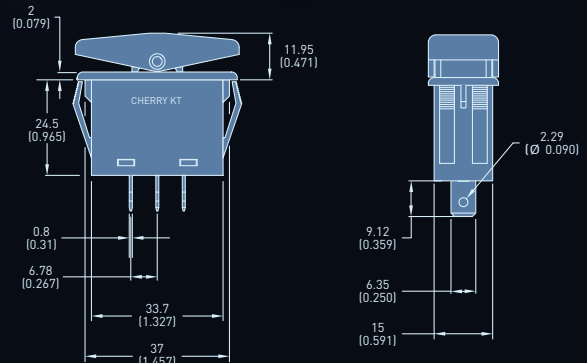
Series KS



Series KR



Series KT



\* For further details please consult the Technical Specification provided on our website at [www.cherryswitches.com/downloads](http://www.cherryswitches.com/downloads)

# Part Number Builder & Preferred Parts Overview

**CR Series**



<b>Series</b> CR	<b>Circuitry</b> 2 Single-Pole	<b>Switch Function</b> 2 On-Off 3 On-On 4 On-Off-On	<b>Actuator Type</b> 2 Curve - One Color 4 Curve - Two Color Red Mold	<b>Housing Color</b> B Black	<b>Lighted</b> N Non-lighted E Lighted (Bulb 250 VAC) L Lighted (Bulb 125 VAC)	<b>Rating</b> E 20A, 125 VAC; 16A, 250 VAC; 3/4HP 250 VAC (cULus) 16(4)A, 250V~, T125/55 (VDE)	<b>Terminal Type Inches (mm)</b> F 0.250 (6,3) QC	<b>Actuator Marking</b> B Blank D OFF NO F 0 - H I 0 II P OFF ON	<b>Actuator Color</b> G Green R Red B Black A Amber	<b>Body Type Inches (mm)</b> E 0.476 (12,10) Non-Washable
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\* μ only available on 3-position rocker.

**SR Series**



<b>Series</b> SR	<b>Circuitry</b> 2 Single-Pole	<b>Switch Function</b> 2 On-Off 3 On-On	<b>Actuator Type</b> 2 Curve	<b>Housing Color</b> B Black	<b>Lighted</b> N Non-lighted	<b>Rating</b> B 10A, 125 VAC 6A, 250 VAC (cULus) 10(4) A, 250V~, T125/55 (VDE)	<b>Terminal Type Inches (mm)</b> A 0.187 (4,8) QC	<b>Actuator Marking</b> B Blank F 0 - D OFF NO	<b>Actuator Color</b> B Black	<b>Splashproof</b> N No Rocker Boot
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**LR Series**



<b>Series</b> LR	<b>Circuitry</b> 2 Single-Pole 3 Double-Pole	<b>Switch Function</b> 2 On-Off	<b>Actuator Type</b> 2 Curve	<b>Housing Color</b> B Black	<b>Lighted</b> N Non-lighted E Lighted (Bulb 250 VAC) L Lighted (Bulb 125 VAC)	<b>Rating</b> A 10A, 125 VAC 1/4HP; 8A, 250 VAC 1/4HP (cULus) 10(4)A 250 V~, T125/55 (VDE)	<b>Terminal Type Inches (mm)</b> H 0.187 (4,8) QC	<b>Actuator Marking</b> B Blank D OFF NO E 0 I F 0 -	<b>Actuator Color</b> G Green R Red B Black	<b>Splashproof</b> N No Rocker Boot
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**TR Series**



<b>Series</b> TR	<b>Circuitry</b> 2 Single-Pole	<b>Switch Function</b> 2 On-Off	<b>Actuator Type</b> 2 Curve	<b>Housing Color</b> B Black	<b>Lighted</b> N Non-lighted E Lighted (Bulb 250 VAC) L Lighted (Bulb 125 VAC)	<b>Rating</b> G 16 A, 125/250 VAC; 1/4 HP; 3/4 HP 250 VAC (cULus) 16(4) A, 250 V~, T85/55 (VDE)	<b>Terminal Type Inches (mm)</b> F 0.250 (6,3) QC	<b>Actuator Marking</b> B Blank F 0 -	<b>Actuator Color</b> G Green R Red B Black	<b>Splashproof</b> N No Rocker Boot
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**FR Series**



<b>Series</b> FR	<b>Circuitry</b> 2 Single-Pole 3 Double Pole	<b>Switch Function</b> 2 On - Off 3 On - On	<b>Actuator Type</b> 2 Curve	<b>Housing Color</b> B Black W White	<b>Lighted</b> N Non-lighted	<b>Rating</b> H 12A 125/250 VAC (UL, cUL) 16(4)A 250V ~ T125/55 (VDE)	<b>Terminal Type Inches (mm)</b> A 0.187 (4,8) QC U 0.118 (3,0) Solder Tag	<b>Actuator Marking</b> B Blank D OFF NO E 0 I F 0 -	<b>Actuator Color</b> B Black W White	<b>Splashproof</b> N No Rocker Boot
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Please note that only common versions are mentioned above. For further information on the availability of other variants, or to discuss your specific application requirements, please contact your local Cherry sales representative



WR Series



WR Series	3		F				N		
	<b>Circuitry</b> 3 Double-Pole	<b>Switch Function</b> 2 On-Off 3 On-On 5 (On)-Off	<b>Actuator Type</b> 2 Curve 5 Flat Actuator 7 Curve-Dual Actuator	<b>Housing Color</b> B Black W White	<b>Lighted</b> N Non-lighted E Lighted (Bulb 250 VAC) L Lighted (Bulb 125 VAC)	<b>Rating</b> G 16A, 125/250 VAC 1/4HP, 3/4HP 250 VAC (cULus) 16(4)A, 250 V~, T125/55 (VDE)	<b>Terminal Type Inches (mm)</b> F 0.250 (6,3) QC	<b>Actuator Marking</b> B Blank F 0 -	<b>Actuator Color</b> W White B Black G Green R Red

YR Series



YR Series	M		F	B			N		
	<b>Circuitry</b> 3 Double-Pole	<b>Switch Function</b> 2 On-Off 3 On-On	<b>Actuator Type</b> 2 Curve	<b>Housing Color</b> B Black	<b>Lighted</b> N Non-lighted E Lighted (Bulb 250 VAC) L Lighted (Bulb 125 VAC)	<b>Rating</b> M 20A, 125 VAC; 16A, 125/250 VAC; 3/4 HP (cULus) 16(4)A, 250V~ T125/55 16(8)A, 250V~ T125/55 (VDE)	<b>Terminal Type Inches (mm)</b> F 0.250 (6,3) QC	<b>Actuator Marking</b> B Blank F 0 -	<b>Actuator Color</b> R Red B Black

RR Series



RR Series	A		H	B			N		
	<b>Circuitry</b> 2 Single-Pole 3 Double-Pole	<b>Switch Function</b> 2 On-Off	<b>Actuator Type</b> 3 Round	<b>Housing Color</b> B Black	<b>Lighted</b> N Non-lighted E Lighted (Bulb 250 VAC) H Lighted 12 VDC Incandescent L Lighted (Bulb 125 VAC)	<b>Rating</b> A 10A, 125 VAC 1/4HP; 8A, 250 VAC 1/4HP (cULus) 10(4)A, 250 V~ T125/55 (VDE)	<b>Terminal Type Inches (mm)</b> H 0.187 (4,8) QC	<b>Actuator Marking</b> B Blank E 0 I F 0 -	<b>Actuator Color</b> G Green R Red B Black A Amber

PR Series



PR Series	K		J	B	B	N	N		
	<b>Circuitry</b> 2 Single-Pole	<b>Switch Function</b> 2 On-Off	<b>Actuator Type</b> 5 Flat	<b>Housing Color</b> B Black	<b>Lighted</b> N Non-lighted	<b>Rating</b> K 6 A 125 VAC, 3 A 250 VAC cULus 3 A 250 V~ T100/55(VDE)	<b>Terminal Type Inches (mm)</b> J 0.146 (3,71) Solder Tag	<b>Actuator Marking</b> B Blank D 0 I E 0 -	<b>Actuator Color</b> B Black

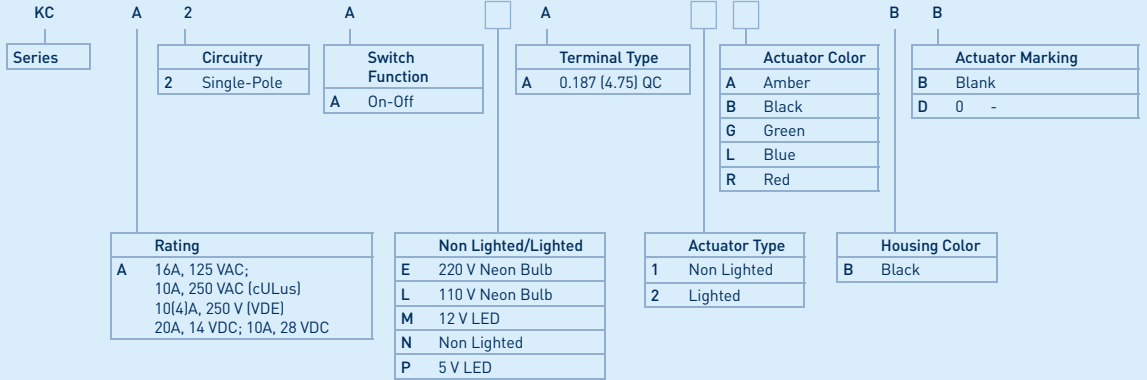
SR Series



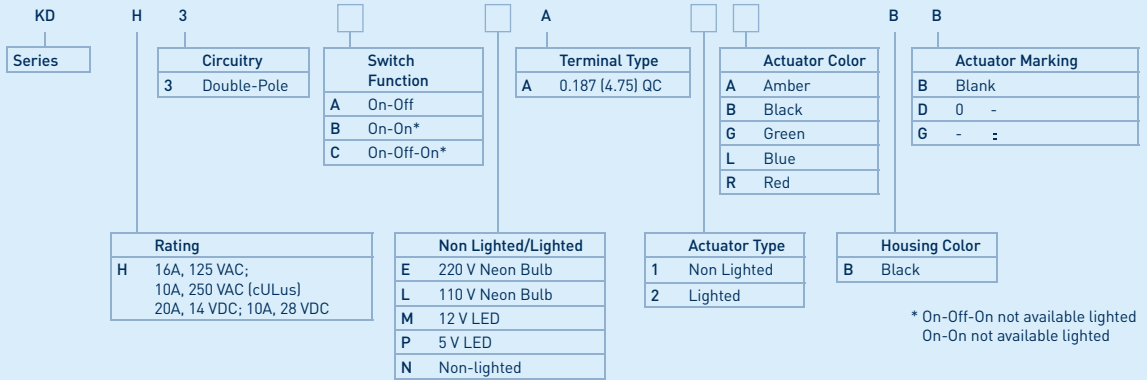
SR Series	J		A	F	B	B	N	N	
	<b>Circuitry</b> 2 Single-Pole	<b>Switch Function</b> 2 On-Off 3 On-On	<b>Actuator Type</b> 3 Round	<b>Housing Color</b> B Black W White	<b>Lighted</b> N Non-lighted	<b>Rating</b> J 20A, 125 VAC 12A, 250 VAC (cULus)	<b>Terminal Type Inches (mm)</b> A 0.187 (4.8) QC	<b>Actuator Marking</b> B Blank E 0 I F 0 -	<b>Actuator Color</b> B Black W White

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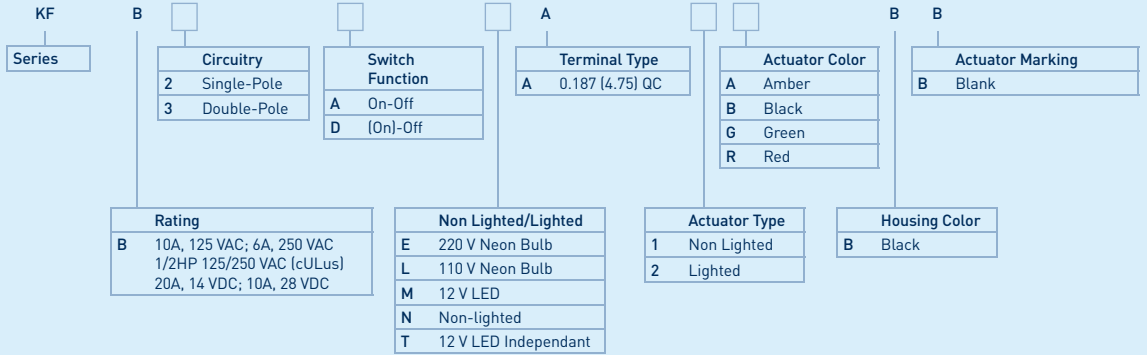
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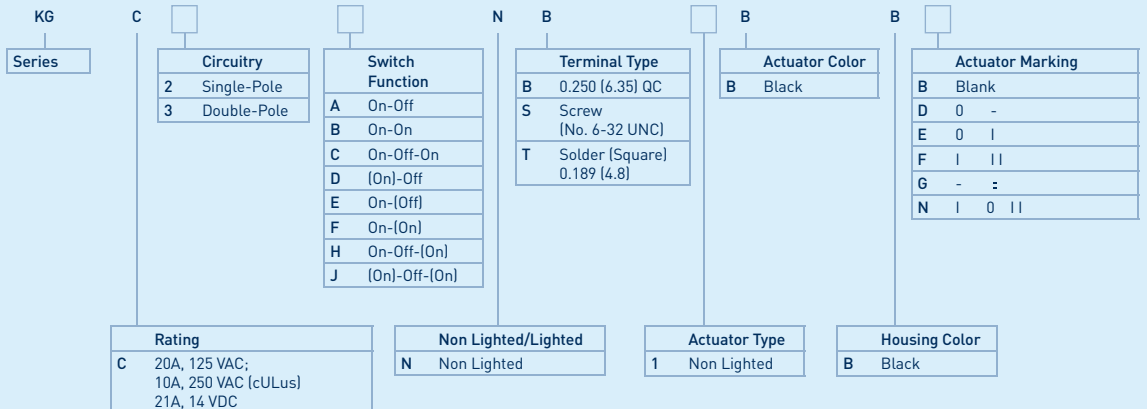
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KF Series

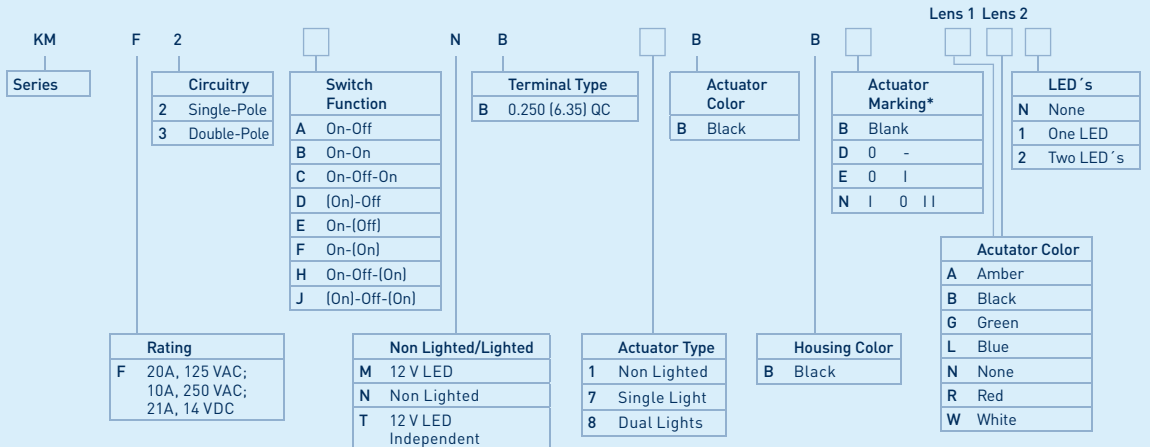


KG Series



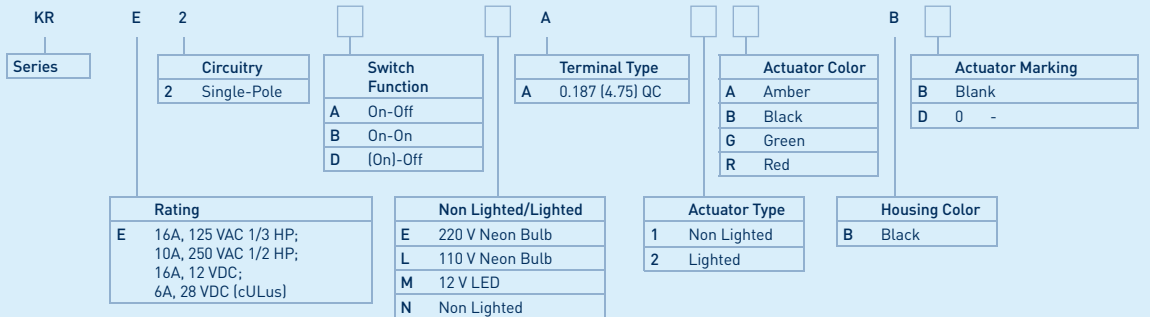
Please note that only common versions are mentioned above. For further information on the availability of other variants, or to discuss your specific application requirements, please contact your local Cherry sales representative

KM Series

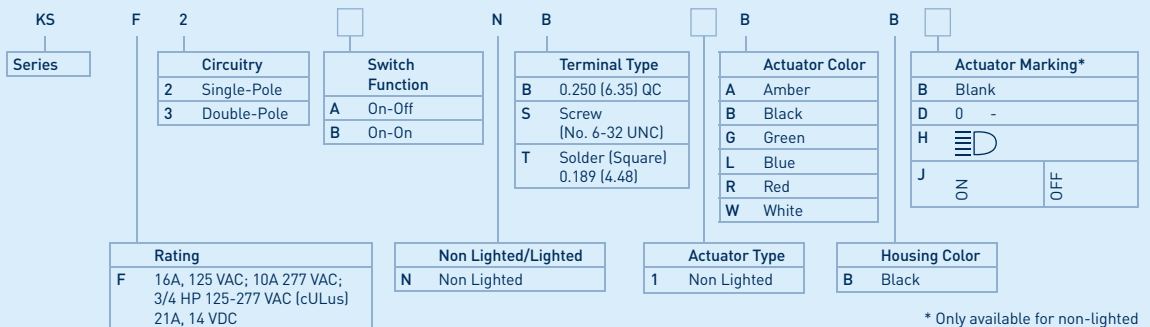


\* Only available for non-lighted

KR Series

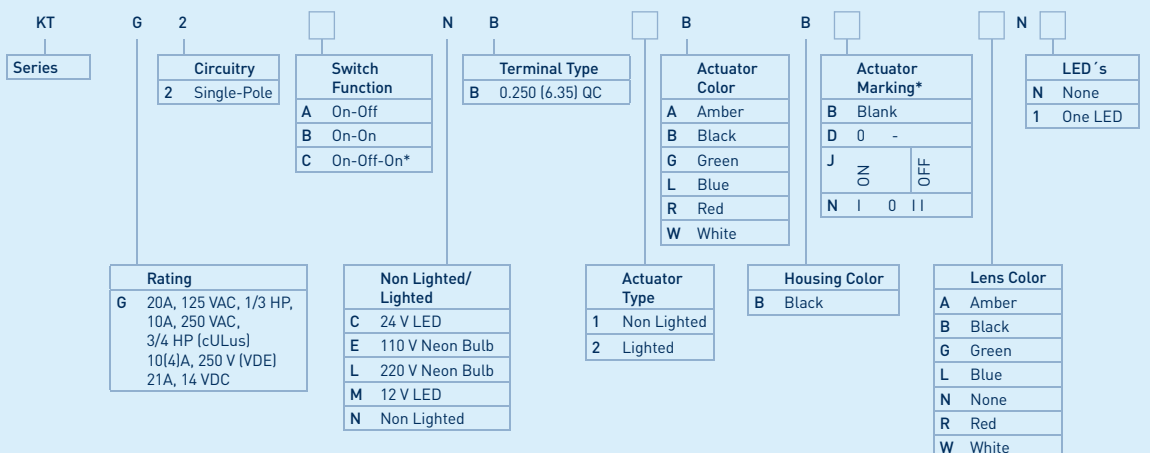


KS Series



\* Only available for non-lighted

KT Series



\* Only available for non-lighted

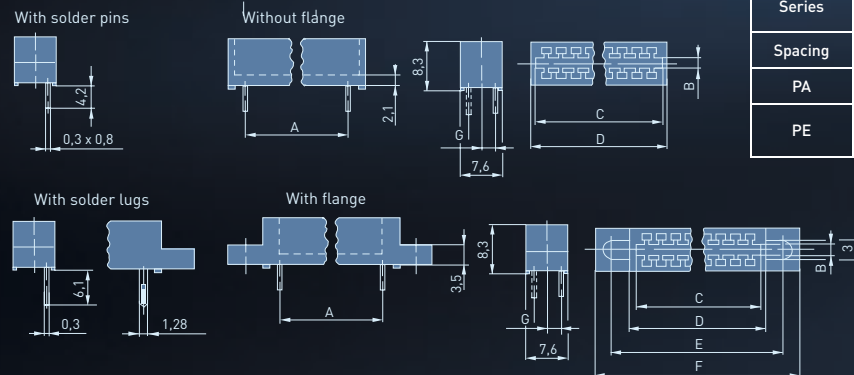


## Technical specifications \*

Connector	Series	PA	PB	PE
<b>Description</b> Connectors make the connection of the selector switches very easy. The female connectors are available with and without flange. Terminals of the connectors either solder pin or solder lugs.	<b>Description</b>	Selector switch with very small dimensions for front mounting	Slim selector switch, just 6 mm wide for compact construction multiple module rows	Standard selector switch for easy snap-in front mounting
	<b>Electrical rating (ohmic resistance)</b>	0.1 A / 50 V ~	0.1 A / 50 V ~	0.1 A / 50 V ~
	<b>Max. current</b>	0.5 A (not switchable)	0.5 A (not switchable)	1 A (not switchable)
<b>Available for</b> Selector switch series PA and PE	<b>Life cycle (mechanical)</b>	10 <sup>6</sup> operations	10 <sup>6</sup> operations	10 <sup>6</sup> operations
	<b>Switching positions</b>	10 or 16	10	10 or 16, 10 position version stops can be installed in the field
	<b>Terminals</b>	Q.C. terminals gold-plated	Connection via solder pins	Q.C. terminals gold-plated

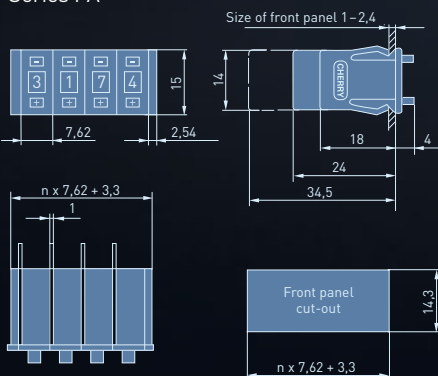
## Dimensions in mm (inches)

### Series Connector

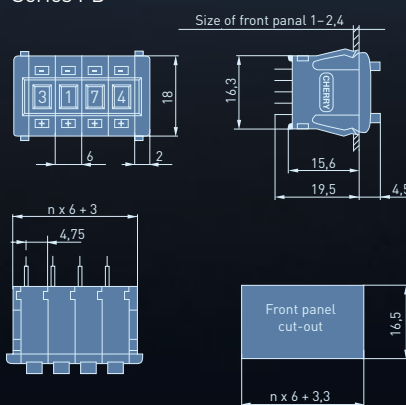


Series	with flange						G
	without flange						
Spacing	A	B	C	D	E	F	
PA	4 x 2.54	1.3	14.3	16	22	28	2.35
PE	10 x 2.0 8 x 2.54	1.3	22.3	24	30	36	2.35

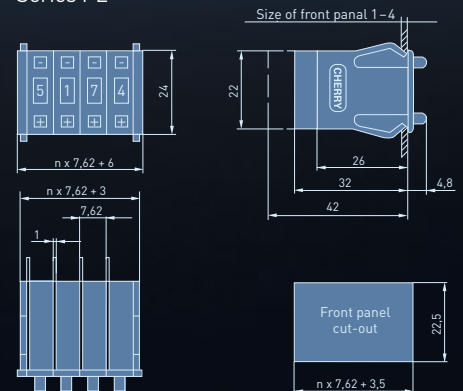
### Series PA



### Series PB



### Series PE



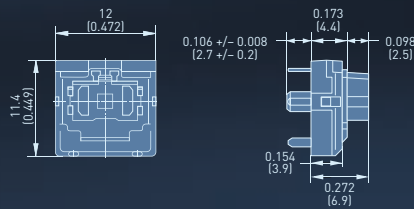


## Technical specifications \*

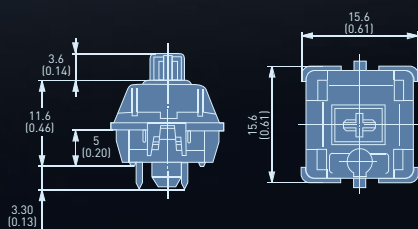
Series	ML	MX
Description	Gold-Crosspoint contact technology. Comfortable actuation, great diversity and very low height. Very short bounce time, reliable stroke, excellent tactile feeling	Long operating life with gold crosspoint contact and high reliability with quick actuation. Constructive design of key and associated keycaps fulfil the ergonomic requirements for data input workstations
Switching voltage	12 VAC/DC max.	12 VAC/DC max.
Switching current	10 mA AC/DC max.	10 mA AC/DC max.
Durability at 5V, 1mA tactile feel click	20 x 10 <sup>6</sup>	50 x 10 <sup>6</sup>
Actuation travel	3 mm	4 mm
Actuation force	45cN	60cN
Options	Wire bridge	Integrated color LED Decoupling diode Wire bridge

## Dimensions in mm (inches)

### Series ML



### Series MX



# Standard Controls



### Oven Controls

- Operated completely by sensors without any mechanical elements
- Individual adjustable heating elements with temperature display
- Additional air circulation and light switch
- Clock and timer function
- Safety features such as all-pole disconnect, key lock and an ambient temperature sensor controlling the fan

### Cooktop Controls

Series	SCM LC "Low cost"	MM4	SCM EL "Entry Level"
Configuration	Basic	Standard	Comfort
Features		same as basic level plus	same as standard level plus
	Residual heat display	Zone switch (2-zone)	Zone switch (2-/3-zone)
	Operating time limit	Keylock	One timer per heater
	Locking function (child proof feature)	Warming zone function	Slider operation
	Start-to-boil		
	Fully automatic sensor calibration		
	Buzzer		

The indicated features characterize only exemplarily the possible equipment levels of products in the indicated segments. The final selection and configuration of the best suited product, based on the individual requirements, will be only made after consultation with the customer.

## Cooktop control Mounting positions



Number of heaters	Configuration		
	Basic	Standard	Comfort
1-2	MM4		
3-4	SCM LC SCM EL	SCM EL	SCM EL



Radio remote control with temperature display for sink heater



Customer-specific cooktop control with combinatorial circuit part



Motor control for washing machine



Backlit input and display unit for tumble-dryer



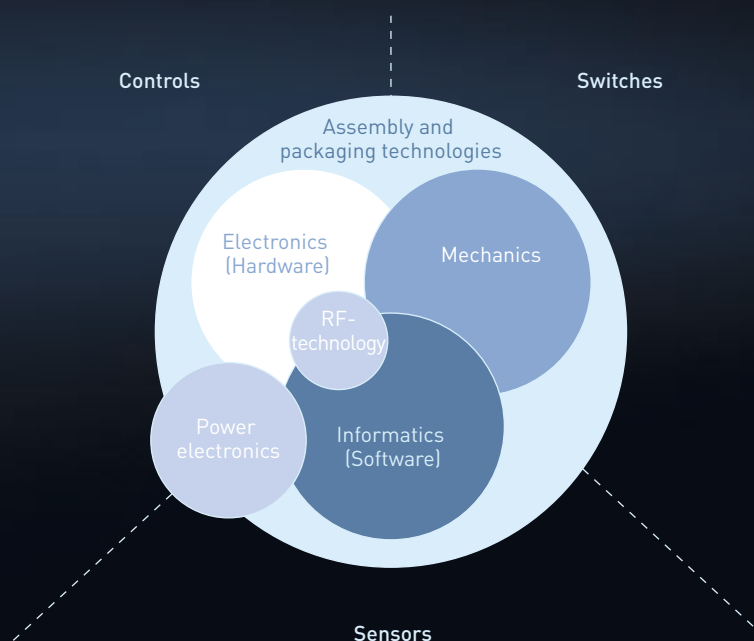
Radio switches, battery-operated or as energy-harvesting version

From high precision standard components to complex customer-specific mechatronic solutions or electronics controls – A lot of ideas for the future

One of the challenges, among others, is increasing the efficiency of products. Therefore we are working for example on the reduction of the power consumption in stand-by mode. In answer to the question for optimising functional costs, we integrated a connector housing to our existing switches and assemblies. Moreover we develop sensors which help to improve products by additional features and functions.

Furthermore we are introducing new product ideas and innovations to the market. Examples are a remote control switch to operate flap or a wireless remote control unit for instant water heaters. In short: We help to realize new ideas and to make existing concepts more economic and/or improve them.

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