

CAM SWITCHES

T Series / G Series / R Series

T Series

12-40 A

Model **RY**/BY
Model **RK**/BK
Model **RM**/BM
Model **RT**/BT
Model **RP**/BP
Model **RQ**/BQ

G Series

12-630 A

Model **GL**
Model **DI**
Model **LK**
Model **IK**
Model **TL**
Model **LL1**
Model **KS**
Model **CO**

R Series

12-25 A

Model **RY**/BY
Model **RK**/BK
Model **GL**
Model **LL1**
Model **TL**
Model **LK**





We recommend you to follow these simple steps to choose the best cam switch that suits your needs.

STEP 1:

Choose Series (T,G,R)

According to the General features sections (Pages 20,31 & 47), and also your general requirements and economical considerations choose your desired series.

T Series

- Current Rating from 1
- IP65 degree protection
- Highest Technical Spe
- Attractive appearance
- High variety of functio

T Series: Page 20

G Series

- Complete current rati
- Conformity with Intern
- Wide range of switch
- Made of best material
- Fast and easy installa

G Series: Page 31

R Series

- Current rating from 12
- New rectangular design
- IP65 protection degree
- IP20 protection degree
- Fast and easy installa

R Series: Page 47

STEP 2:

Choose the 3 Digit Amp Code

Keeping into account the load nature (resistive, inductive or mixed) and the load value and in accordance with the technical data tables (Pages 22,35 & 48) you can choose the 3 digit Amp code of the suitable switch, for instance 063 stands for 63 Amperes.

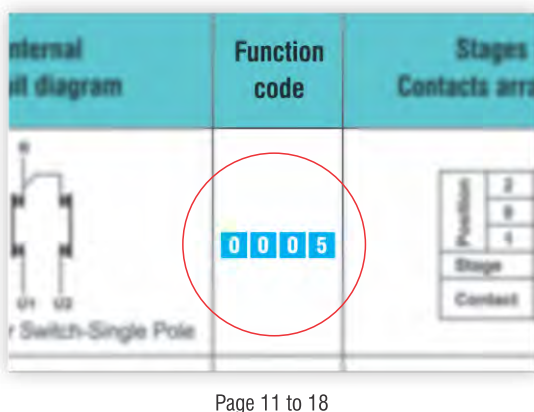


T Series: Page 22 G Series: Page 35 R Series: Page 50

STEP 3:

Choose the switch function code

Based on your requested function, number of poles and steps, external and internal connections of the cam switch, (according to pages 11 to 18) Choose the function code of your switch, which is a 4 character code. For instance 0010 stands for 3 pole Stardelta switch.

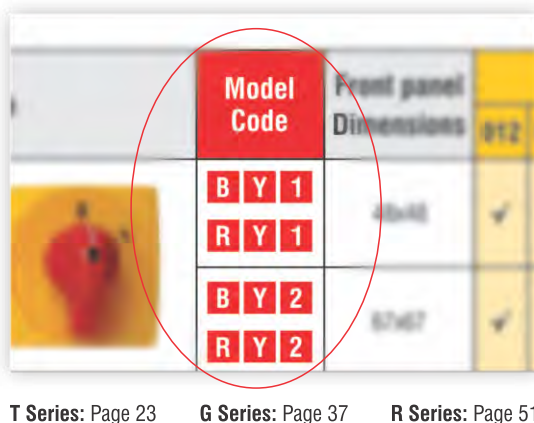


Page 11 to 18

STEP 4:

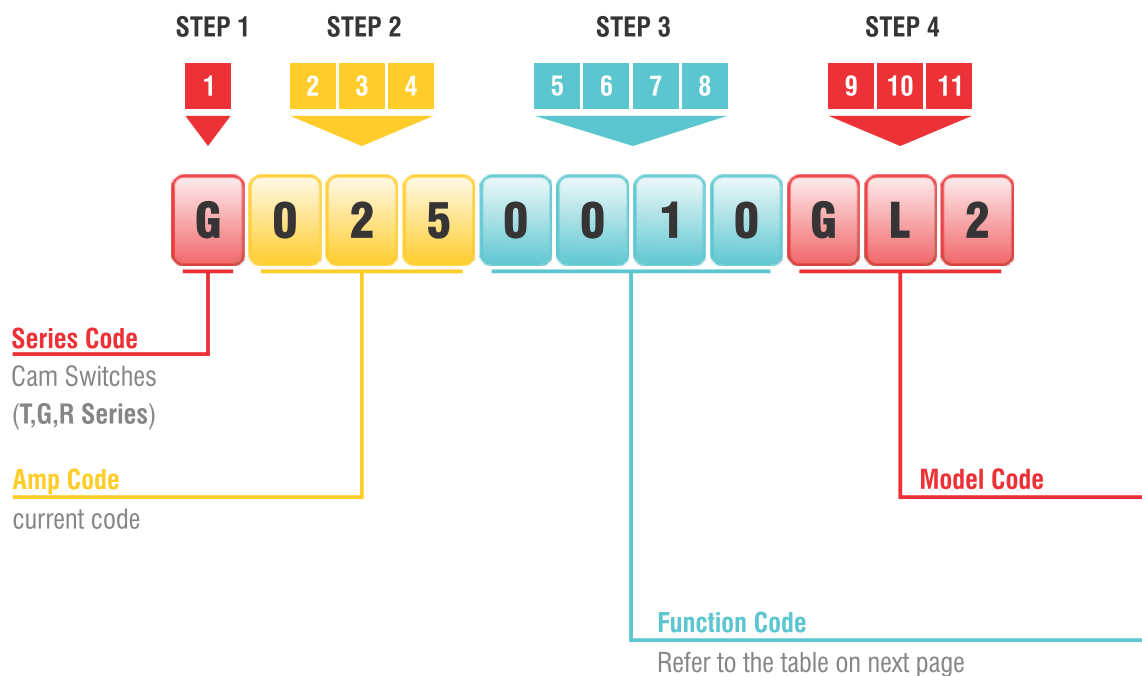
Choose the model code

Finally according to the mounting method of the switch (front mounting, surface mounting, interlocking with panel's door or enclosure), required degree of protection (IP), type and color of plate and knob, choose the appropriate version of the switch this is a 3 character code which is shown in Model selection tables and in the page of each model.



T Series: Page 23 G Series: Page 37 R Series: Page 51

Each Cam switch is defined using a unique 11 digit code:



Example:

part number **G.025.0010.GL2** stands for G series Three poles 25A star-delta switch with black plate & knob in 75x75 mm size.

Note:

If your requested switch function is not present on the common functions table on pages 11 to 18 or you would like to fully configure your cam switch, you may order a custom made cam switch using our special ordering forms designed for this purpose on pages 60 & 61. TRS Co. is always ready to manufacture your special orders. TRS Co. factory has over 5000 custom made cam switch designed in its archives.

Rotary Cam Switches can be offered in a wide variety of functions. The most commonly used functions are introduced in the following table.

On each row one function is described, rotation angle, internal circuit diagram, function code, number of stages and contacts, terminal symbols are illustrated.

If your desired function is not present on this list, please refer to the customized switch ordering forms on pages (60 & 61). Our tech dept. will always be ready to assist customers regarding their desired products.

Function code	Positions & Rotation Angles	Internal circuit diagram	Stages and Contacts arrangement	L1L2L3RST																							
0001	 60°	 ON/OFF Switch-Single Pole	<table><tr><td rowspan="2">Position</td><td>1</td><td>X</td><td></td></tr><tr><td>0</td><td></td><td></td></tr><tr><td>Stage</td><td colspan="2">1</td><td></td></tr><tr><td>Contact</td><td>1-2</td><td>3-4</td><td></td></tr></table>	Position	1	X		0			Stage	1			Contact	1-2	3-4										
Position	1	X																									
	0																										
Stage	1																										
Contact	1-2	3-4																									
0002	 60°	 ON/OFF Switch-2 Poles	<table><tr><td rowspan="2">Position</td><td>1</td><td>X</td><td>X</td></tr><tr><td>0</td><td></td><td></td></tr><tr><td>Stage</td><td colspan="2">1</td><td></td></tr><tr><td>Contact</td><td>1-2</td><td>3-4</td><td></td></tr></table>	Position	1	X	X	0			Stage	1			Contact	1-2	3-4										
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	0																										
Stage	1																										
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0003	 60°	 ON/OFF Switch-3 Poles	<table><tr><td rowspan="2">Position</td><td>1</td><td>X</td><td>X</td><td>X</td></tr><tr><td>0</td><td></td><td></td><td></td></tr><tr><td>Stage</td><td>1</td><td>2</td><td></td><td></td></tr><tr><td>Contact</td><td>1-2</td><td>3-4</td><td>5-6</td><td>7-8</td></tr></table>	Position	1	X	X	X	0				Stage	1	2			Contact	1-2	3-4	5-6	7-8					
Position	1	X	X		X																						
	0																										
Stage	1	2																									
Contact	1-2	3-4	5-6	7-8																							
0004	 60°	 ON/OFF Switch-4 Poles	<table><tr><td rowspan="2">Position</td><td>1</td><td>X</td><td>X</td><td>X</td><td>X</td></tr><tr><td>0</td><td></td><td></td><td></td><td></td></tr><tr><td>Stage</td><td>1</td><td>2</td><td></td><td></td><td></td></tr><tr><td>Contact</td><td>1-2</td><td>3-4</td><td>5-6</td><td>7-8</td><td></td></tr></table>	Position	1	X	X	X	X	0					Stage	1	2				Contact	1-2	3-4	5-6	7-8		
Position	1	X	X		X	X																					
	0																										
Stage	1	2																									
Contact	1-2	3-4	5-6	7-8																							

Cam Switch Functions Code Table



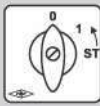
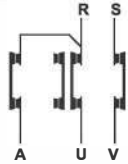
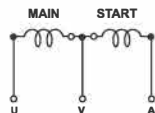
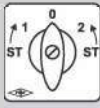
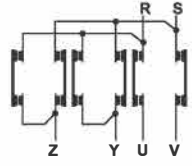
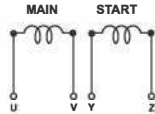
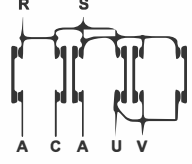
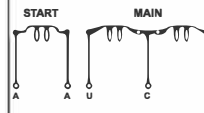
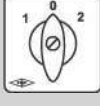
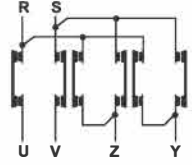
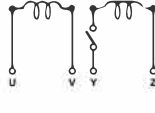
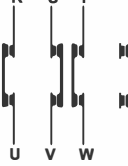
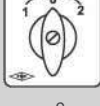
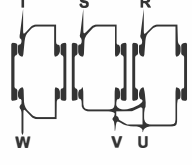
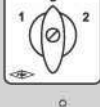
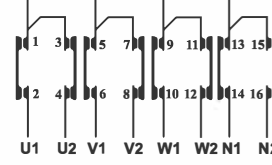
Function code	Positions & Rotation Angles	Internal circuit diagram	Stages and Contacts arrangement	L1 L2 L3 R S T																																	
0 0 0 5	 60°	 Change-Over Switch-Single Pole	<table><tr><td rowspan="3">Position</td><td>2</td><td></td><td>X</td></tr><tr><td>0</td><td></td><td></td></tr><tr><td>1</td><td>X</td><td></td></tr><tr><td>Stage</td><td>1</td><td></td><td></td></tr><tr><td>Contact</td><td>1-2</td><td>3-4</td><td></td></tr></table>	Position	2		X	0			1	X		Stage	1			Contact	1-2	3-4																	
Position	2		X																																		
	0																																				
	1	X																																			
Stage	1																																				
Contact	1-2	3-4																																			
0 0 0 6	 60°	 Change-Over Switch-2 Poles	<table><tr><td rowspan="3">Position</td><td>2</td><td></td><td>X</td><td>X</td></tr><tr><td>0</td><td></td><td></td><td></td></tr><tr><td>1</td><td>X</td><td></td><td>X</td></tr><tr><td>Stage</td><td>1</td><td>2</td><td></td><td></td></tr><tr><td>Contact</td><td>1-2</td><td>3-4</td><td>5-6</td><td>7-8</td></tr></table>	Position	2		X	X	0				1	X		X	Stage	1	2			Contact	1-2	3-4	5-6	7-8											
Position	2		X		X																																
	0																																				
	1	X		X																																	
Stage	1	2																																			
Contact	1-2	3-4	5-6	7-8																																	
0 0 0 7	 60°	 Change-Over Switch-3 Poles	<table><tr><td rowspan="3">Position</td><td>2</td><td></td><td>X</td><td>X</td><td>X</td></tr><tr><td>0</td><td></td><td></td><td></td><td></td></tr><tr><td>1</td><td>X</td><td></td><td>X</td><td>X</td></tr><tr><td>Stage</td><td>1</td><td>2</td><td>3</td><td></td><td></td></tr><tr><td>Contact</td><td>1-2</td><td>3-4</td><td>5-6</td><td>7-8</td><td>9-10</td></tr></table>	Position	2		X	X	X	0					1	X		X	X	Stage	1	2	3			Contact	1-2	3-4	5-6	7-8	9-10						
Position	2		X		X	X																															
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	1	X		X	X																																
Stage	1	2	3																																		
Contact	1-2	3-4	5-6	7-8	9-10																																
0 0 0 8	 60°	 Reversing Switch-3 Poles	<table><tr><td rowspan="3">Position</td><td>2</td><td></td><td>X</td><td>X</td><td>X</td></tr><tr><td>0</td><td></td><td></td><td></td><td></td></tr><tr><td>1</td><td>X</td><td></td><td>X</td><td>X</td></tr><tr><td>Stage</td><td>1</td><td>2</td><td>3</td><td></td><td></td></tr><tr><td>Contact</td><td>1-2</td><td>3-4</td><td>5-6</td><td>7-8</td><td>9-10</td></tr></table>	Position	2		X	X	X	0					1	X		X	X	Stage	1	2	3			Contact	1-2	3-4	5-6	7-8	9-10						
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	1	X		X	X																																
Stage	1	2	3																																		
Contact	1-2	3-4	5-6	7-8	9-10																																
0 0 0 9	 60°	 Pole Changing Switch (Dahlander)	<table><tr><td rowspan="3">Position</td><td>2</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td></tr><tr><td>0</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>1</td><td>X</td><td></td><td>X</td><td>X</td><td></td></tr><tr><td>Stage</td><td>1</td><td>2</td><td>3</td><td>4</td><td></td><td></td></tr><tr><td>Contact</td><td>1-2</td><td>3-4</td><td>5-6</td><td>7-8</td><td>9-10</td><td>11-12</td></tr></table>	Position	2	X	X	X	X	X	0						1	X		X	X		Stage	1	2	3	4			Contact	1-2	3-4	5-6	7-8	9-10	11-12	
Position	2	X	X		X	X	X																														
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	1	X		X	X																																
Stage	1	2	3	4																																	
Contact	1-2	3-4	5-6	7-8	9-10	11-12																															
0 0 1 0	 60°	 Δ-Δ Starter	<table><tr><td rowspan="3">Position</td><td>Δ</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td></tr><tr><td>Δ</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>0</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Stage</td><td>1</td><td>2</td><td>3</td><td>4</td><td></td><td></td></tr><tr><td>Contact</td><td>1-2</td><td>3-4</td><td>5-6</td><td>7-8</td><td>9-10</td><td>11-12</td></tr></table>	Position	Δ	X	X	X	X	X	Δ						0						Stage	1	2	3	4			Contact	1-2	3-4	5-6	7-8	9-10	11-12	
Position	Δ	X	X		X	X	X																														
	Δ																																				
	0																																				
Stage	1	2	3	4																																	
Contact	1-2	3-4	5-6	7-8	9-10	11-12																															
0 0 1 1	 45°	 Pole Change and Reversing Switch-3 Poles	<table><tr><td rowspan="3">Position</td><td>2</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td></tr><tr><td>0</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>1</td><td>X</td><td></td><td>X</td><td>X</td><td>X</td></tr><tr><td>Stage</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td></tr><tr><td>Contact</td><td>1-2</td><td>3-4</td><td>5-6</td><td>7-8</td><td>9-10</td><td>11-12</td></tr></table>	Position	2	X	X	X	X	X	0						1	X		X	X	X	Stage	1	2	3	4	5	6	Contact	1-2	3-4	5-6	7-8	9-10	11-12	
Position	2	X	X		X	X	X																														
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	1	X		X	X	X																															
Stage	1	2	3	4	5	6																															
Contact	1-2	3-4	5-6	7-8	9-10	11-12																															

Function code	Positions & Rotation Angles	Internal circuit diagram	Stages and Contacts arrangement	
0 0 1 2	 45°	 Reversing Switch with Δ - Δ Starter		
0 0 1 3	 45°	 Pole Changing with Δ - Δ Starter	 Rotation 45°	
0 0 1 4	 60°	 Ammeter Switch for direct measurement (Without CT)		
0 0 1 5	 45°	 Voltmeter Switch with 3 (Ph-N)+off position		
0 0 1 6	 45°	 Voltmeter Switch with 3 (Ph-Ph)+off position		
0 0 1 7	 45°	 Voltmeter Switch with 3 (Ph-Ph)+off position for 2 systems		
0 0 1 8	 45°	 Voltmeter Switch with 3 (Ph-N) and 3 (Ph-Ph)+off position		

Cam Switch Functions Code Table



Function code	Positions & Rotation Angles	Internal circuit diagram	Stages and Contacts arrangement	
0019	 45°	 Voltmeter Switch with 3 (Ph-Ph) and 1 (Ph-N) +off position		 U V
0020	 90°	 Single Pole Ammeter Switch-1CT		 1 3
0021	 90°	 Single Pole Ammeter Switch-2CT		 6 4
0022	 90°	 Single Pole Ammeter Switch-3CT		 11 9
0023	 90°	 Single Pole Ammeter Switch-4CT		 13 5
0029	 45°	 Change-Over Switch contactor with self return A to M		 L1/R START L2/S 1 2
0030	 45°	 Reversing Change-Over Switch contactor with self return A to M		 L1/R L2/S ST 1 2 3 4

Function code	Positions & Rotation Angles	Internal circuit diagram	Stages and Contacts arrangement	L1 L2 L3	R S T																																														
0 0 3 1	 45°	 A U V	<table><tr><td rowspan="3">Position</td><td>ST</td><td>X</td><td></td><td>X</td><td>X</td></tr><tr><td>1</td><td></td><td></td><td></td><td></td></tr><tr><td>0</td><td></td><td></td><td></td><td></td></tr><tr><td>Stage</td><td></td><td>1</td><td></td><td>2</td><td></td></tr><tr><td>Contact</td><td></td><td>1-2</td><td>3-4</td><td>5-6</td><td>7-8</td></tr></table>	Position	ST	X		X	X	1					0					Stage		1		2		Contact		1-2	3-4	5-6	7-8	 MAIN START U V A																			
Position	ST	X			X	X																																													
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Stage		1		2																																															
Contact		1-2	3-4	5-6	7-8																																														
0 0 3 2	 45°	 Z Y U V	<table><tr><td rowspan="4">Position</td><td>ST</td><td></td><td>X</td><td>X</td><td>X</td><td>X</td></tr><tr><td>2</td><td></td><td></td><td>X</td><td>X</td><td>X</td></tr><tr><td>0</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>1</td><td></td><td></td><td></td><td>X</td><td>X</td><td>X</td></tr><tr><td>ST</td><td>X</td><td></td><td></td><td></td><td>X</td><td>X</td></tr><tr><td>Stage</td><td></td><td>1</td><td></td><td>2</td><td></td><td>3</td></tr><tr><td>Contact</td><td></td><td>1-2</td><td>3-4</td><td>5-6</td><td>7-8</td><td>9-10</td></tr></table>	Position	ST		X	X	X	X	2			X	X	X	0						1				X	X	X	ST	X				X	X	Stage		1		2		3	Contact		1-2	3-4	5-6	7-8	9-10	 MAIN START U V Y Z
Position	ST		X		X	X	X																																												
	2				X	X	X																																												
	0																																																		
	1				X	X	X																																												
ST	X				X	X																																													
Stage		1		2		3																																													
Contact		1-2	3-4	5-6	7-8	9-10																																													
0 0 3 3	 45°	 A C A U V	<table><tr><td rowspan="4">Position</td><td>2</td><td>X</td><td>X</td><td></td><td>X</td><td>X</td></tr><tr><td>0</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>1</td><td>X</td><td></td><td></td><td>X</td><td>X</td></tr><tr><td>ST</td><td>X</td><td></td><td></td><td>X</td><td>X</td></tr><tr><td>Stage</td><td></td><td>1</td><td></td><td>2</td><td></td><td>3</td></tr><tr><td>Contact</td><td></td><td>1-2</td><td>3-4</td><td>5-6</td><td>7-8</td><td>9-10</td></tr></table>	Position	2	X	X		X	X	0						1	X			X	X	ST	X			X	X	Stage		1		2		3	Contact		1-2	3-4	5-6	7-8	9-10	 START MAIN A C U V								
Position	2	X	X			X	X																																												
	0																																																		
	1	X				X	X																																												
	ST	X			X	X																																													
Stage		1		2		3																																													
Contact		1-2	3-4	5-6	7-8	9-10																																													
0 0 3 4	 45°	 U V Z Y	<table><tr><td rowspan="4">Position</td><td>2</td><td>X</td><td>X</td><td></td><td>X</td><td>X</td></tr><tr><td>0</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>1</td><td>X</td><td>X</td><td>X</td><td></td><td>X</td></tr><tr><td>ST</td><td>X</td><td></td><td></td><td></td><td></td></tr><tr><td>Stage</td><td></td><td>1</td><td></td><td>2</td><td></td><td>3</td></tr><tr><td>Contact</td><td></td><td>1-2</td><td>3-4</td><td>5-6</td><td>7-8</td><td>9-10</td></tr></table>	Position	2	X	X		X	X	0						1	X	X	X		X	ST	X					Stage		1		2		3	Contact		1-2	3-4	5-6	7-8	9-10	 U V Z Y								
Position	2	X	X			X	X																																												
	0																																																		
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	ST	X																																																	
Stage		1		2		3																																													
Contact		1-2	3-4	5-6	7-8	9-10																																													
0 0 3 5	 45°	 U V W	<table><tr><td rowspan="3">Position</td><td>1</td><td>X</td><td>X</td><td>X</td><td>X</td></tr><tr><td>0</td><td></td><td></td><td></td><td></td></tr><tr><td>0</td><td></td><td></td><td></td><td></td></tr><tr><td>Stage</td><td></td><td>1</td><td></td><td>2</td><td></td></tr><tr><td>Contact</td><td></td><td>1-2</td><td>3-4</td><td>5-6</td><td>7-8</td></tr></table>	Position	1	X	X	X	X	0					0					Stage		1		2		Contact		1-2	3-4	5-6	7-8																				
Position	1	X	X		X	X																																													
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0 0 3 6	 45°	 T S R W V U	<table><tr><td rowspan="4">Position</td><td>2</td><td></td><td>X</td><td>X</td><td></td><td>X</td></tr><tr><td>0</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>1</td><td>X</td><td></td><td></td><td></td><td></td></tr><tr><td>ST</td><td>X</td><td></td><td></td><td></td><td></td></tr><tr><td>Stage</td><td></td><td>1</td><td></td><td>2</td><td></td><td>3</td></tr><tr><td>Contact</td><td></td><td>1-2</td><td>3-4</td><td>5-6</td><td>7-8</td><td>9-10</td></tr></table>	Position	2		X	X		X	0						1	X					ST	X					Stage		1		2		3	Contact		1-2	3-4	5-6	7-8	9-10	 U V W M								
Position	2		X		X		X																																												
	0																																																		
	1	X																																																	
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Stage		1		2		3																																													
Contact		1-2	3-4	5-6	7-8	9-10																																													
0 0 3 9	 60°	 U1 U2 V1 V2 W1 W2 N1 N2	<table><tr><td rowspan="4">Position</td><td>2</td><td></td><td>X</td><td>X</td><td></td><td>X</td><td>X</td></tr><tr><td>0</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>1</td><td>X</td><td></td><td>X</td><td></td><td>X</td><td>X</td></tr><tr><td>ST</td><td>X</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Stage</td><td></td><td>1</td><td></td><td>2</td><td></td><td>3</td><td>4</td></tr><tr><td>Contact</td><td></td><td>1-2</td><td>3-4</td><td>5-6</td><td>7-8</td><td>9-10</td><td>11-12</td></tr></table>	Position	2		X	X		X	X	0							1	X		X		X	X	ST	X						Stage		1		2		3	4	Contact		1-2	3-4	5-6	7-8	9-10	11-12			
Position	2		X		X		X	X																																											
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	1	X			X		X	X																																											
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Stage		1		2		3	4																																												
Contact		1-2	3-4	5-6	7-8	9-10	11-12																																												

Cam Switch Functions Code Table



Function code	Positions & Rotation Angles	Internal circuit diagram	Stages and Contacts arrangement	
0 0 6 0	 90°	 Ammeter Voltmeter		
M Z 1 2 *	 45°	 1 Pole-2 Ways Selector Switch With "0" position		
M Z 1 3	 45°	 1 Pole-3 Ways Selector Switch With "0" position		
M Z 1 4	 45°	 1 Pole-4 Ways Selector Switch With "0" position		
M Z 1 5	 45°	 1 Pole-5 Ways Selector Switch With "0" position		
M Z 1 6	 45°	 1 Pole-6 Ways Selector Switch With "0" position		
M Z 1 7	 45°	 1 Pole-7 Ways Selector Switch With "0" position		

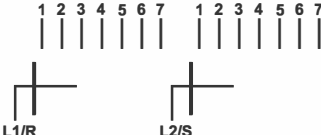
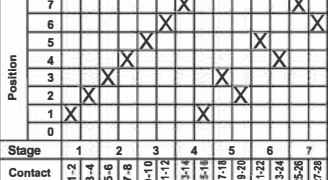
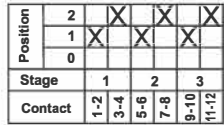
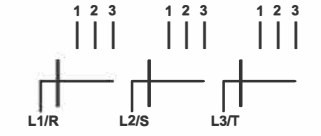
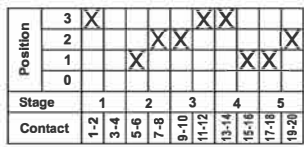
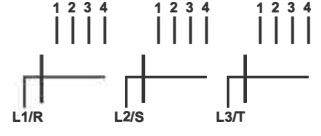
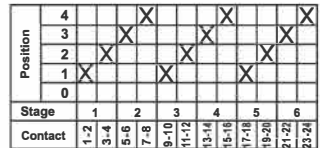
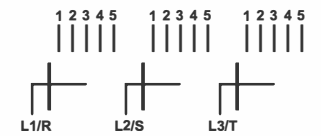
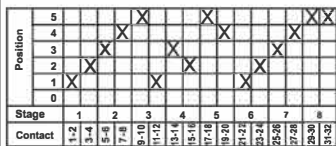
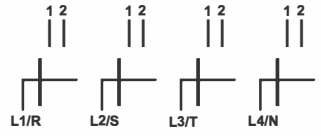
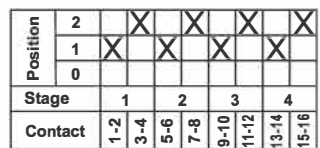
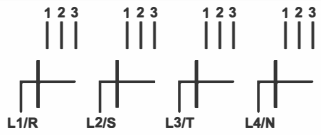
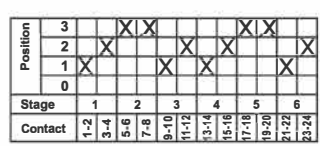
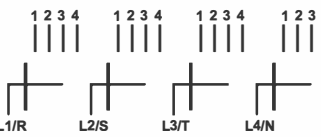
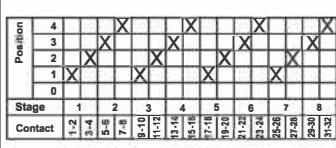
*. Function codes beginning with "MZ" start at "0" position. If you change "MZ" to "MN" The positions will start from "1"

Function code	Positions & Rotation Angles	Internal circuit diagram	Stages and Contacts arrangement	L1 L2 L3
M Z 1 8	 30°	 1 Pole-8 Ways Selector Switch With "0" position	 Position: 0, 1, 2, 3, 4, 5, 6, 7 Stage: 1, 2, 3, 4 Contact: 1-2, 3-4, 5-6, 7-8, 9-10, 11-12, 13-14, 15-16	
M Z 1 9	 30°	 1 Pole-9 Ways Selector Switch With "0" position	 Position: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 Stage: 1, 2, 3, 4, 5 Contact: 1-2, 3-4, 5-6, 7-8, 9-10, 11-12, 13-14, 15-16, 17-18, 19-20	
M Z 2 2	 45°	 2 Pole-2 Ways Selector Switch With "0" position	 Position: 0, 1, 2 Stage: 1, 2 Contact: 1-2, 3-4, 5-6, 7-8	
M Z 2 3	 45°	 2 Pole-3 Ways Selector Switch With "0" position	 Position: 0, 1, 2, 3 Stage: 1, 2, 3 Contact: 1-2, 3-4, 5-6, 7-8, 9-10, 11-12	
M Z 2 4	 45°	 2 Pole-4 Ways Selector Switch With "0" position	 Position: 0, 1, 2, 3, 4 Stage: 1, 2, 3, 4 Contact: 1-2, 3-4, 5-6, 7-8, 9-10, 11-12, 13-14, 15-16	
M Z 2 5	 45°	 2 Pole-5 Ways Selector Switch With "0" position	 Position: 0, 1, 2, 3, 4, 5 Stage: 1, 2, 3, 4, 5 Contact: 1-2, 3-4, 5-6, 7-8, 9-10, 11-12, 13-14, 15-16, 17-18, 19-20	
M Z 2 6	 45°	 2 Pole-6 Ways Selector Switch With "0" position	 Position: 0, 1, 2, 3, 4, 5, 6 Stage: 1, 2, 3, 4, 5, 6 Contact: 1-2, 3-4, 5-6, 7-8, 9-10, 11-12, 13-14, 15-16, 17-18, 19-20, 21-22, 23-24	

Cam Switch Functions Code Table



Cam Switches

Function code	Positions & Rotation Angles	Internal circuit diagram	Stages and Contacts arrangement	L1 L2 L3
M Z 2 7	 45°	 2 Pole-7 Ways Selector Switch With "0" position		
M Z 3 2	 45°	 3 Pole-2 Ways Selector Switch With "0" position		
M Z 3 3	 45°	 3 Pole-3 Ways Selector Switch With "0" position		
M Z 3 4	 45°	 3 Pole-4 Ways Selector Switch With "0" position		
M Z 3 5	 45°	 3 Pole-5 Ways Selector Switch With "0" position		
M Z 4 2	 45°	 4 Pole-2 Ways Selector Switch With "0" position		
M Z 4 3	 45°	 4 Pole-3 Ways Selector Switch With "0" position		
M Z 4 4	 45°	 4 Pole-4 Ways Selector Switch With "0" position		

G Series



Cam Switches
G Series

- ▶ Complete current rating range from 12A to 630A
- ▶ Conformity with International standards IEC60947-1,3 & ISIRI48350-1,3
- ▶ Wide range of switch functions for resistive, inductive or capacitive loads
- ▶ Made of best material, with high mechanical, electrical & thermal resistance
- ▶ Fast and easy installation

Model **GL**
Model **DI**
Model **LK**
Model **IK**
Model **TL**
Model **LL1**
Model **KS**
Model **CO**



DI Model



TL Models



GL Model



LL1 Model



IK Models



LK Models



CO Model



CO Model

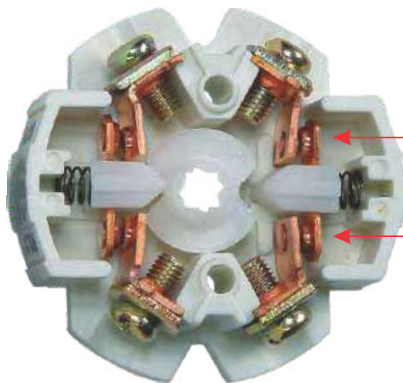


KS Model





Different Switching angles
30°, 45°, 60°, 90°



- Degree of protection for the operating handle is IP40 (*)
- Fixing the contact stages by means of long bolts and nuts.
- For 12A up to 100A Cam Switches, terminals are equipped with cable clamps
For 125A and above, terminals have proper connections for cable shoes
- Degree of protection for the terminal is IP00(*)

- Manufactured from heat resistant and self flame extinguishing materials, which have long mechanical and electrical life.
- Available in ratings from 12 to 630 A

- Double-break bimetal contacts made of silver alloy and copper.

Amper Code			012	016	025	032
Rated insulation voltage	Ui	V	690	690	690	690
Rated operating voltage	Ue	V	690	690	690	690
Rated impulse withstand voltage	Uimp	KV	6	6	6	6
Rated thermal current for open switch	Ith	A	16	20	32	32
Rated thermal current for enclosed switch	Ithe	A	16	20	32	32
Rated operating frequency		Hz	50	50	50	50
Rated dissipation for each pole		W	0.27	0.5	0.4	1
Rated operating current						
AC-21A Switching resistive loads, including moderate overloads	Ie	A	12	16	25	32
AC-22A Switching of mixed resistive and inductive loads, including moderate overloads	Ie	A	12	16	20	25
AC-20A Connecting and disconnecting under no load conditions			—	—	—	—
Rated operating power						
AC-23A Switching of motor loads or other highly inductive loads 3 phase-3pole	230V Kw(A)		3(9)	4(14)	7.5(24)	8.5(27)
	400V Kw(A)		4(9)	7.5(14)	11(20)	15(27)
	500V Kw(A)		—	—	11(15)	15(22)
	690V Kw(A)		—	—	11(11)	15(16)
AC-23A Switching of motor loads or other highly inductive loads 1 phase-2pole	110V Kw(A)		0.75(8.5)	1.1(12)	2.2(25)	2.2(25)
	230V Kw(A)		1.5(8.5)	2.2(14)	3.7(20)	3.7(20)
AC-3 Squirrel cage motors: Starting, switching off motors during running 3 phase-3 pole	230V Kw(A)		22(7)	3.7(12)	5.5(17)	5.5(17)
	400V Kw(A)		3.5(7)	5.5(10)	9.5(16)	10(17)
	500V Kw(A)		—	—	9.5(12.5)	10(14)
	690V Kw(A)		—	—	8.5(10)	10(10)
AC-3 Squirrel cage motors: Starting, switching off motors during running 1 phase-2 pole	110V Kw(A)		0.37(4)	0.75(9)	1.5(17)	1.5(17)
	230V Kw(A)		1.1(6)	1.5(8)	3(17)	3(17)
	400V Kw(A)		—	—	—	—
AC-4 Squirrel cage motors: Starting, plugging, inching	230V Kw(A)		—	—	22(7)	22(7)
	400V Kw(A)		—	—	3(5.5)	3(5.5)
AC-15 Control of AC electromagnetic loads	230V A		4	6	8	8
	400V A		3	4	6	6
Rated breaking capability in category in AC-23A ($\cos \Phi = 0.45$)	230V A		72	112	192	216
	400V A		72	112	160	216
Short circuit protection						
Rated short time withstand current	Icw	A	150	240	400	400
Rated short-circuit make capacity	Icm	A	—	—	2000	2000
Rated conditional short-circuit current		KA	4	4	10	10
With fuses class gG	500v	A	16	20	35	35
Protection against short circuit			NDZ	NDZ	NDZ	NDZ
Maximum current rapid and Time-delay fuses for open version		A	16	20	35	35
Maximum current for Time-delay fuses for version in box		A	—	16	25	25
Rated interruption power		A	96	128	260	260
		V _{ac}	418	418	660	660
		Cos(Φ)	0.65	0.65	0.35	0.35
Electrical life		Cyclesx10 ⁶	0.5	0.8	1	1
		Cyclesx10 ⁶	2	2	1.5	1.5
Mechanical life		Cycles/hour	120	120	120	120
Rated insulation voltage	Ui	UL/CSA V	600/ -	600/ -	600/600	600/600
Rated operating voltage	Ue	UL/CSA V	600/ -	600/ -	600/600	600/600
General Use Current	Ie	UL/CSA A	12	16	25/25	35/25
Short Circuit Rating@600Vac		Arms	5000	5000	—	—
Fuse size (Class RK5, 600Vac, 200kA A.I.C.)		A	60	25 (30)	—	—
Rated operating power						
1 phase - 2 pole	120V Hp (A)		0,5 (9,8)	1 (16)	2/ -	2/ -
	240V Hp (A)		1,5 (10)	2 (12)	3/ 6	5/ -
	200V Hp (A)		1,5 (6,9)	2 (7,8)	5/ -	7,5/5
	240V Hp (A)		2 (6,8)	3 (9,6)	7,5/ -	10/ -
3 phase - 3 pole	480V Hp (A)		3 (4,8)	7,5 (11)	10/ -	15/ -
	600V Hp (A)		5 (6,1)	7,5 (9)	10/15	15/ 17
Connections according to IEC 9471-1 AND EN 60947-1						
Connecting capability with flexible wires	Min-Max	mm ²	2x1.5-4	2x1.5-4	2x2.5-10	2x2.5-10
	Min-Max	AWG	16-10	16-10	16-8	16-8
Connecting capability with solid wires	Min-Max	mm ²	2x1.5-6	2x1.5-6	2x2.5-16	2x2.5-16
Connecting terminal screw dimensions		Type	M3.5x7	M3.5x7	M5x10	M5x10
Screw tightening torque		Nm	1.0	1.0	1.0	1.0
Protection degree IEC 529 EN 60529						
Terminal		IP				
Ambient conditions						
Operating ambient temperature		°C				
Storage ambient temperature		°C				
Withstand to constant humid according to IEC 60068						
Withstand to cyclic humid according to IEC 60068						
Altitude		m				
Humidity		Percent				
Pollution degree						
Installation Group						

Technical data table



Cam Switches
G Series

040	050	063	080	100	125	200	250	400	500	630
690	690	690	690	690	690	690	690	690	690	690
690	690	690	690	690	690	690	690	690	690	690
6	6	6	6	6	6	6	6	6	6	6
40	50	75	80	115	125	200	250	400	500	630
40	50	50	60	100	115	160	—	—	—	—
50	50	50	50	50	50	50	50	50	50	50
1.3	1.6	2.5	3	3.7	5	7	11	15	25	30
—	—	—	—	—	—	—	—	—	—	—
40	50	75	100	115	130	160	190	—	—	—
32	40	63	80	110	125	160	190	—	—	—
—	—	—	—	—	—	—	—	400	500	630
10(32)	15(48)	18.5(58)	22.3(74)	30(95)	35(113)	40(125)	—	—	—	—
18.5(30)	25(45)	30(54)	39(78)	40(85)	51(96)	59(106)	—	—	—	—
18.5(27)	32(48)	22(32)	27(38)	30(40)	54(81)	75(108)	—	—	—	—
18.5(19)	22(23)	—	—	—	—	—	—	—	—	—
3(34)	3.7(42)	5.5(63)	7.4(82)	9(102)	10(112)	11(125)	—	—	—	—
5.5(30)	7.5(40)	10(32)	13(55)	15(82)	18(103)	22(120)	—	—	—	—
7.5(24)	11(35)	15(47)	19(59)	22(70)	26(82)	30(95)	—	—	—	—
15(27)	18(33)	22(40)	31(53)	37(67)	40(72)	45(82)	—	—	—	—
15(22)	22(32)	22(32)	26(36)	30(40)	48(65)	59(85)	—	—	—	—
16(16)	20(20)	—	—	—	—	—	—	—	—	—
22(25)	3.7(42)	4(45)	6.2(65)	7.5(85)	8.3(94)	9(102)	—	—	—	—
4.5(25)	7.5(40)	7.5(40)	9.2(50)	11(60)	13(72)	15(82)	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
3(10)	3.7(12)	5.5(17)	6.5(52)	7.5(85)	—	—	—	—	—	—
5.5(10)	6(11)	7.5(14)	9.5(18)	11(20)	—	—	—	—	—	—
10	—	—	—	—	—	—	—	—	—	—
8	—	—	—	—	—	—	—	—	—	—
256	384	464	612	760	890	1000	—	—	—	—
240	360	432	580	680	720	848	—	—	—	—
500	600	800	1200	1500	1800	2000	2500	—	—	—
2000	2000	2500	2500	3000	3000	3000	3000	—	—	—
10	15	15	15	15	15	15	15	—	—	—
50	50	63	90	125	160	200	250	—	—	—
DZ	DZ	DZ	DZ	ZH	ZH	ZH	ZH	—	—	—
50	50	80	80	125	125	200	200	—	—	—
40	40	63	63	100	100	200	200	—	—	—
400	400	600	600	720	720	720	720	—	—	—
660	660	660	660	660	660	660	660	—	—	—
0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	—	—	—
0.3	0.3	0.3	0.3	0.05	0.05	0.05	0.05	0.05	0.05	0.05
1.5	1.5	1	1	0.3	0.3	0.1	0.1	0.2	0.2	0.2
120	120	120	120	30	30	30	30	30	30	30
600/600	600/600	600/600	600/600	600/600	600/600	600/-	600/-	600/-	600/-	600/-
600/600	600/600	600/600	600/600	600/600	600/600	600/-	600/-	600/-	600/-	600/-
40/32	60/40	85/63	125/100	180/150	240/-	320/-	320/-	400/-	500/-	630/-
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
3/ 2,5	5/ -	7,5/ -	10/5	12/5	—	—	—	—	—	—
7,5/ 4,5	10/ -	10/ -	15/12	15/12	—	—	—	—	—	—
10/ -	15/ -	20/ -	20/-	20/-	—	—	—	—	—	—
15/ 9,5	20/ -	20/ -	25/24	25/24	—	—	—	—	—	—
20/ 20	30/ -	30/ -	40/50	40/50	—	—	—	—	—	—
20/ 25	30/32,5	40/50	50/65	50/65	—	—	—	—	—	—
2x2.5-10	2x2.5-6	6-16	6-16	10-25	10-25	50-70	50-70	—	—	—
16-8	14-8	10-6	10-6	10-3	10-3	1/0-2/0	1/0-2/0	—	—	—
2x2.5-16	2x4-10	10-25	10-25	10-25	10-25	16-35	16-35	—	—	—
M5x12	M5x12	M5x14	M5x14	M8x20	M8x20	M10x16	M10x16	M12x20	M12x20	M16x25
2.8	2.8	2.8	2.8	2.8	2.8	23	23	40	40	98

00

-25 ~ +55

-30 ~ +70

2-78

2-30

Max:2000m

Max:90%

3

III

Picture	Model Code	Front panel Dimensions
	GL 1	52x52
	GL 2	75x75
	GL 3	105x105
	GL 4	130x130
	GL 5	130x130
	DI 2	75x75
	DI 3	105x105
	DI 4	130x130
	DI 5	130x130
	LK 2	75x75
	LK 3	105x105
	LK 4	130x130
	IK 2	75x75
	IK 3	105x105
	IK 4	130x130
	TL 1	52x52
	TL 2	75x75
	LL 1	52x70
	KS	75x75
	CO	

Model Selection Table



Cam Switches
G Series

Amp Code															Ref. to Page	Short Description
012	016	025	032	040	050	063	080	100	125	200	250	400	500	630		All models available with black or red knob and black or yellow legend plate color
✓	✓														39	IP 40 General application Full amp range Front & base mounting options
✓	✓	✓	✓	✓												
			✓	✓	✓	✓	✓									
								✓	✓	✓	✓					
												✓	✓	✓		
		✓	✓	✓											40	IP 40 General application Panel door interlocking mechanism
			✓	✓	✓	✓	✓									
								✓	✓	✓	✓					
												✓	✓	✓		
✓	✓	✓	✓	✓												
			✓	✓	✓	✓	✓								41	IP 54 General application Full amp range Lockable with a padlock
								✓	✓	✓	✓	✓	✓	✓		
		✓	✓	✓											42	IP 54 General application Lockable with a padlock Panel door interlocking mechanism
			✓	✓	✓	✓	✓									
								✓	✓	✓	✓					
✓	✓														43	Same as GL1 & GL2 with a different knob design
✓	✓	✓	✓	✓												
✓	✓														44	Same as GL1 with protected label area on front plate
✓	✓														45	Control switch panel mount Mountable on standard 22mm hole Key control switch can be taken out only at "0" position IP65 protection degree KS Model
Configuration based on request															46	A combination of co-axial cam switches with Power & Signal contacts together. Best economical & technical solution instead of two signal and power cam switches.

GL Model

Features

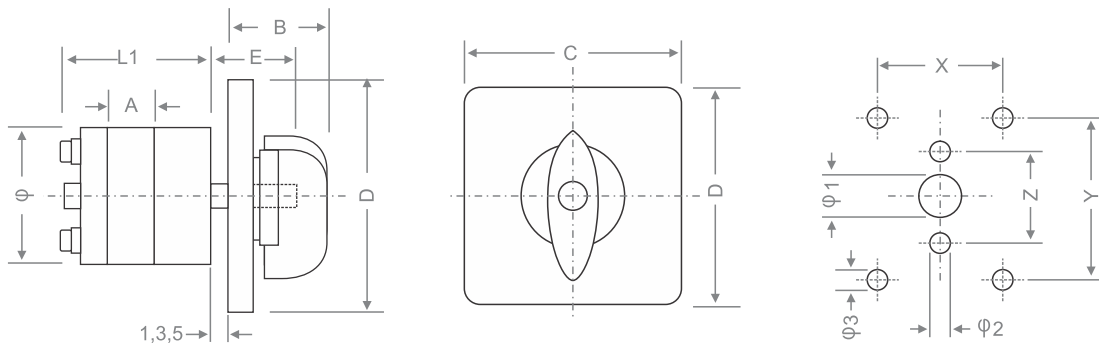
- ▶ General use and application
- ▶ Full amp range
- ▶ IP40 degree protection of front panel against dust and water
- ▶ Front & base mounting options
- ▶ DIN rail mounting option (optional adapter)



GL Model Selection Table

Picture	Model Code	Front panel Dimensions	Amp Code														
			012	016	025	032	040	050	063	080	100	125	200	250	400	500	630
 	G L 1	52x52	✓	✓													
	G L 2	75x75	✓	✓	✓	✓	✓										
	G L 3	105x105				✓	✓	✓	✓								
	G L 4	130x130									✓	✓	✓	✓			
	G L 5	130x130													✓	✓	✓

Technical drawings & drilling guide:



GL														
Model Code	Amp. Code	Φ	L1*	A	B	C	D	E	Φ ₁	Φ ₂	Φ ₃	X	Y	Z
GL 1	0 1 2	40	40	12	30	52.5	52.5	22	10	3.7	—	—	—	28
	0 1 6	40	40	12	30	52.5	52.5	22	10	3.7	—	—	—	28
GL 2	0 1 2	40	40	12	32	75	75	22	10	3.7	—	—	—	28
	0 1 6	40	40	12	32	75	75	22	10	3.7	—	—	—	28
	0 2 5	58	48	17	32	75	75	26	10	3.7	—	—	—	28
	0 3 2	58	48	17	32	75	75	26	10	3.7	—	—	—	28
GL 3	0 4 0	74	53	19	44	105.5	105.5	33	14	5.5	—	—	—	40
	0 5 0	74	53	19	44	105.5	105.5	33	14	5.5	—	—	—	40
	0 6 3	84	62	25	44	105.5	105.5	33	14	5.5	—	—	—	40
	0 8 0	84	62	25	44	105.5	105.5	33	14	5.5	—	—	—	40
GL 4	1 0 0	110	81	30	62	130	130	44	20	—	5.5	30	90	—
	1 2 5	110	81	30	62	130	130	44	20	—	5.5	30	90	—
	2 0 0	110	90	39	62	130	130	44	20	—	5.5	30	90	—
	2 5 0	110	90	39	62	130	130	44	20	—	5.5	30	90	—
GL 5	4 0 0	110	129	78	72	130	130	54	20	—	5.5	30	90	—
	5 0 0	110	129	78	72	130	130	54	20	—	5.5	30	90	—
	6 3 0	110	168	117	84	130	130	67	20	—	5.5	30	90	—

*. L1 is the length of a one stage cam switch. For more stages, please add one "A" for each stage, to the "L1" of the cam switch.
 LX=L1+(X-1)xA X=Number of Stages, LX=L of a cam switch with X stages.