

Lever Switch S51



The S51 lever switch series, specially developed for the rail sector, offers a high degree of robustness as well as a long service life. Typically, this high-quality product is found in driver's cab consoles of rail traction units.

All current standards (EN 50155, UIC 612, EN 45545 ...) were observed in the course of development.

Technical data

Deflection angle	Total: $\pm 34^\circ$ ($-34^\circ / -17^\circ / 0^\circ / +17^\circ / +34^\circ$)
Mechanical life	3 million operating cycles
Ambient temperature range	-25°C til $+70^\circ\text{C}$ (OT3 acc. to EN50155)
Degree of protection	IP54 (above the mounting plate) IP20 (below the mounting plate)
Supply voltages	24 VDC, 72 VDC, 110 VDC with fluctuations acc. to EN 50155



Reference to relevant standards

Fire protection	EN 45545 part 2
Driver-machine interfaces for EMU/DMU, locomotives and control cars	UIC 612
Protection by housing	EN 60529
Railroad applications - Electronic equipment on railroad vehicles	EN 50155
Vibration and shock tests	EN 61373
Climatic tests	EN 60068

		S51	- 1	- 2	- 4G	Example					
						- MS20	- A 23	- A 24	- A 25	- A 26	- X
Basic unit							Grip shape B		Grip shape Z		
S 51	Lever switch S51										
S 51A	Lever switch S51 with rotation prevention										
Mountaging											
1	Nature eloxed										
2	Black eloxed										
3	Stainless steel (Siemens Sirius Act Design)										
Grip shape											
1	Grip shape B										
2	Grip shape W										
3	Grip shape K										
4	Grip shape K05										
5	Grip shape M										
6	Grip shape Z										
Contacts											
1	1 contact										
2	2 contacts										
3	3 contacts										
4	4 contacts										
5	5 contacts										
6	6 contacts										
S	Silver contacts										
G	Gold contacts										
ZS	Positively driven NC silver contacts										
ZG	Positively driven NC gold contacts										

S51 - 1 - 2 - 4G - MS20 - A 23 - A 24 - A 25 - A 26 - X

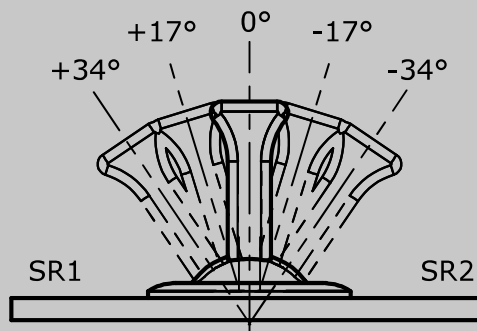
Detent

MS..

Detent	Switching direction 1 (SR1)		Centre 0 0°	Switching direction 2 (SR2)		Detent	Switching direction 1 (SR1)		Centre 0 0°	Switching direction 2 (SR2)	
	2 34°	1 17°		1 -17°	2 -34°		2 34°	1 17°		1 -17°	2 -34°
MS01	switch		Rest or basic position		switch	MS23	switch		without		switch
MS02	locked	locked			switch	MS24	locked	keys	Basic position	keys	locked
MS03	switch			locked	locked	MS25	switch	switch		keys	switch
MS04	switch	switch		switch	switch	MS26	keys	keys		keys	switch
MS05	locked	locked		switch	switch	MS27	switch	keys			keys
MS06	switch	switch		locked	locked	MS28	keys	switch		switch	switch
MS07	keys				keys	MS29	keys			keys	switch
MS08	locked	locked			keys	MS30	switch	keys		keys	keys
MS09	keys			locked	locked	MS31	locked	keys		switch	switch
MS10	locked	locked		keys	keys	MS32	switch			switch	switch
MS11	keys	keys		locked	locked	MS33	locked	switch		switch	locked
MS12	switch				keys	MS34	switch	← keys*			keys
MS13	keys				switch	MS35	switch	switch		switch	keys
MS14	switch	keys		keys	switch	MS36	switch	switch		switch	locked
MS15	locked	locked		keys	switch	MS37	locked	switch		keys	keys
MS16	switch	keys		locked	locked	MS38	locked	switch		switch	keys
MS17	locked	switch		switch	switch	MS39	switch	keys		switch	switch
MS18	switch	keys		keys	locked	MS40	switch	switch			keys
MS19	locked	keys		keys	switch	MS41	locked	keys		keys	keys
MS20	keys	keys		keys	keys	MS42	keys	keys			keys
MS21	locked	switch	without	switch	locked	keys	switch	switch		keys	
MS22	switch			keys	switch	keys		switch	switch		

*harder transition

Switching function:



S51 -1 -2 -4G -MS20 -A 23 -A 24 -A 25 -A 26 -X

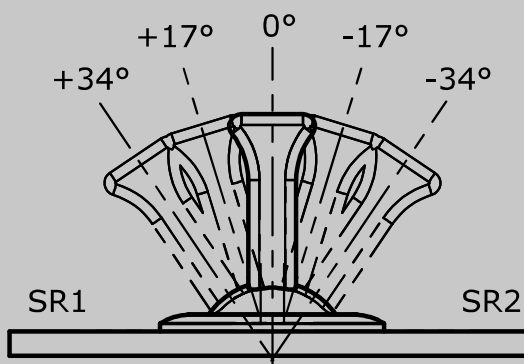
Contacts programming

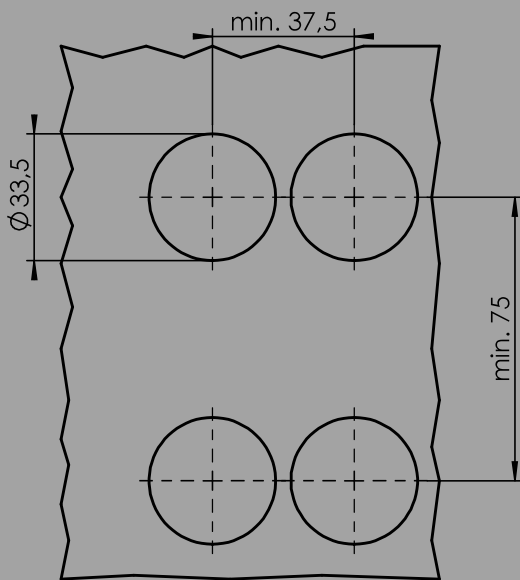
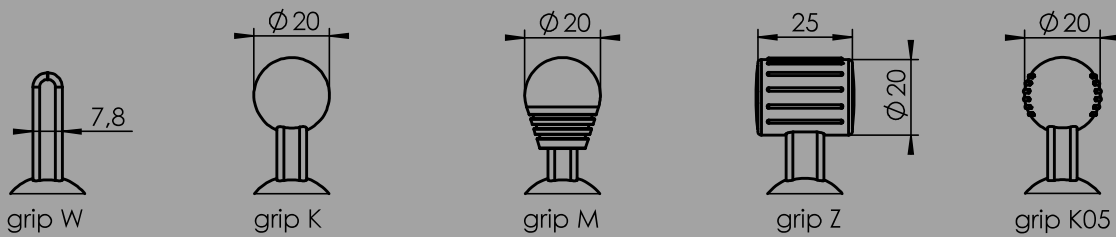
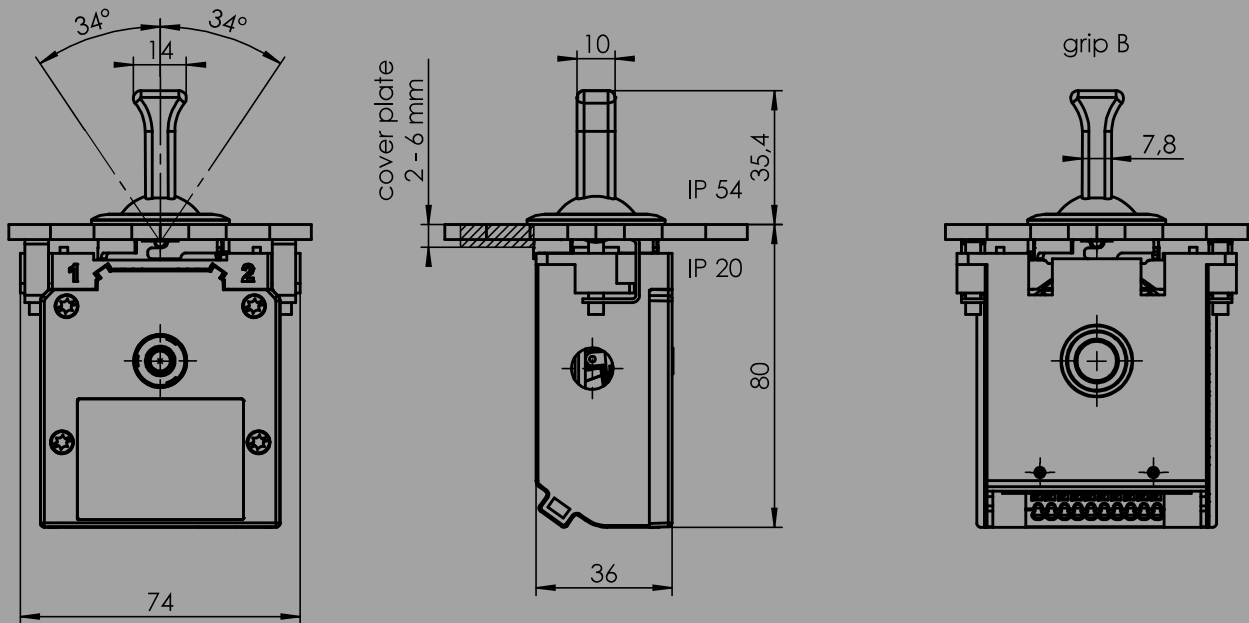
A..

Programmnummer	Control-handle position				
	Switching direction 1 (SR1)		Centre 0 0°	Switching direction 2 (SR2)	
	2 -34°	1 -17°		1 17°	2 34°
A01				X	X
A02			X		
A03					X
A04				X	
A05			X		X
A06			X	X	
A07	X	X			
A08			X		
A09	X				
A10		X			
A11	X		X		
A12		X	X		
A13	X	X		X	X
A14			X		
A15			X	X	X
A16	X	X	X		
A17				X	X
A18	X	X			
A19	X				X
A20		X		X	
A21	X		X		X
A22		X	X	X	

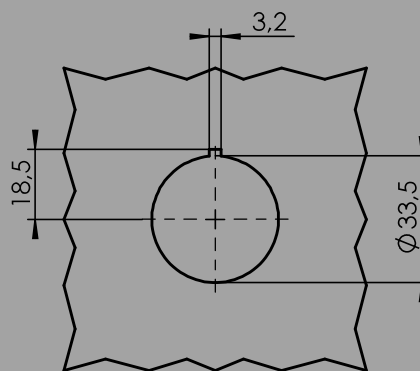
Programmnummer	Control-handle position				
	Switching direction 1 (SR1)		Centre 0 0°	Switching direction 2 (SR2)	
	2 -34°	1 -17°		1 17°	2 34°
A23					X
A24	X				
A25				X	
A26		X			
A27			X		X
A28	X		X		
A29			X	X	
A30		X	X		
A31		X			X
A32	X			X	
A33		X		X	X
A34	X	X		X	
A35		X	X		X
A36	X		X	X	
A37		X	X	X	X
A38	X	X	X	X	
A39	X			X	X
A40	X	X			X
A41	X		X	X	X
A42	X	X	X		X
A43	X	X		X	X

Programming of contacts:





hole pattern
without anti twist



hole pattern
with anti-twist