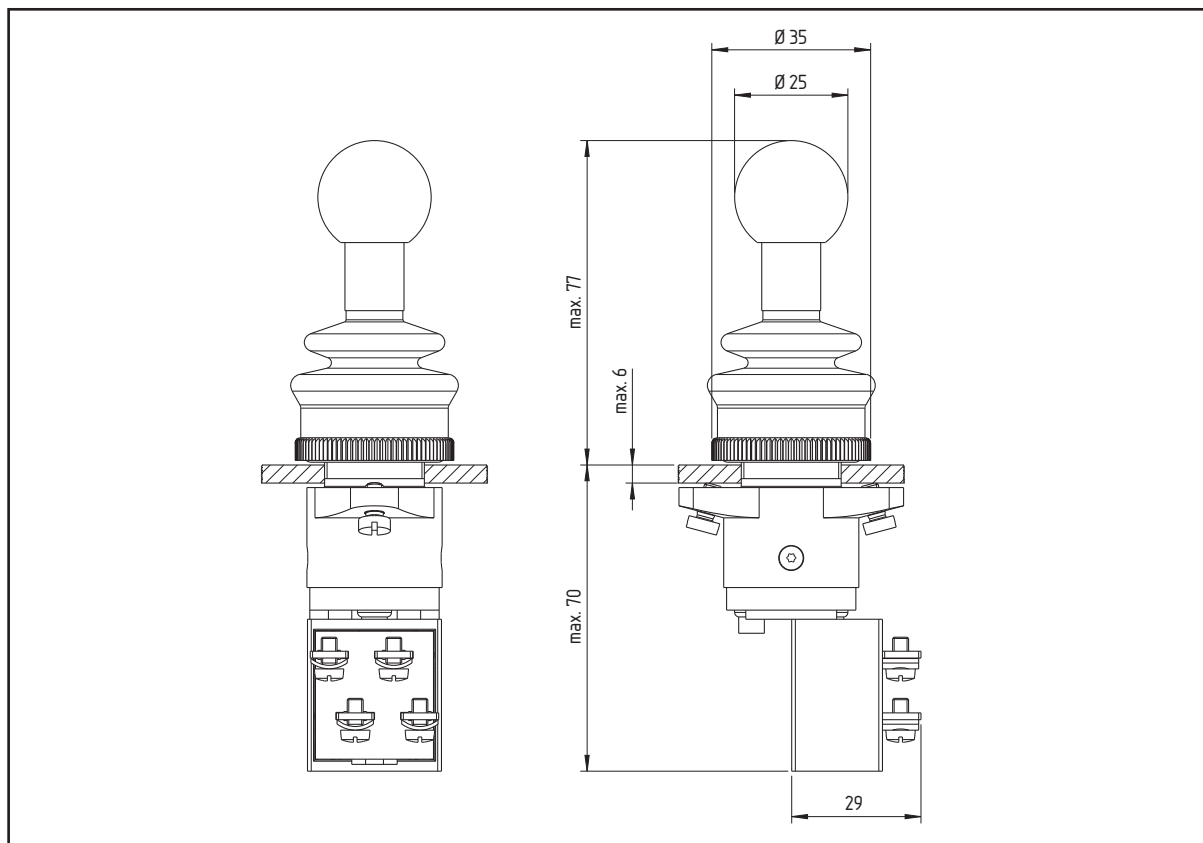


Spring-return joystick switches, Maintained joystick switches*

- For installation diameter 22.3 mm
- Design without blocking ring to protect against unintentional actuation
- 2 directions of actuation/1 switching signal for each



Not illustrated: designs with flat-pin plug connections (see page 7, installed width 29 + 1 mm)

Cross references:

- Functional description: see pages 2 and 4 and following pages
- Sealing bellows: see page 3
- Specifications: see page 64
- Terminal markings: see page 7
- Assembly information: see page 9
- Spare parts: see page 62

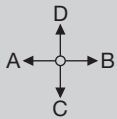




Additional information:

- Thick-walled silicone bellows: protection class IP 69K

Options (on request):

- Other actuator (instead of the ball)
- Shorter actuating levers

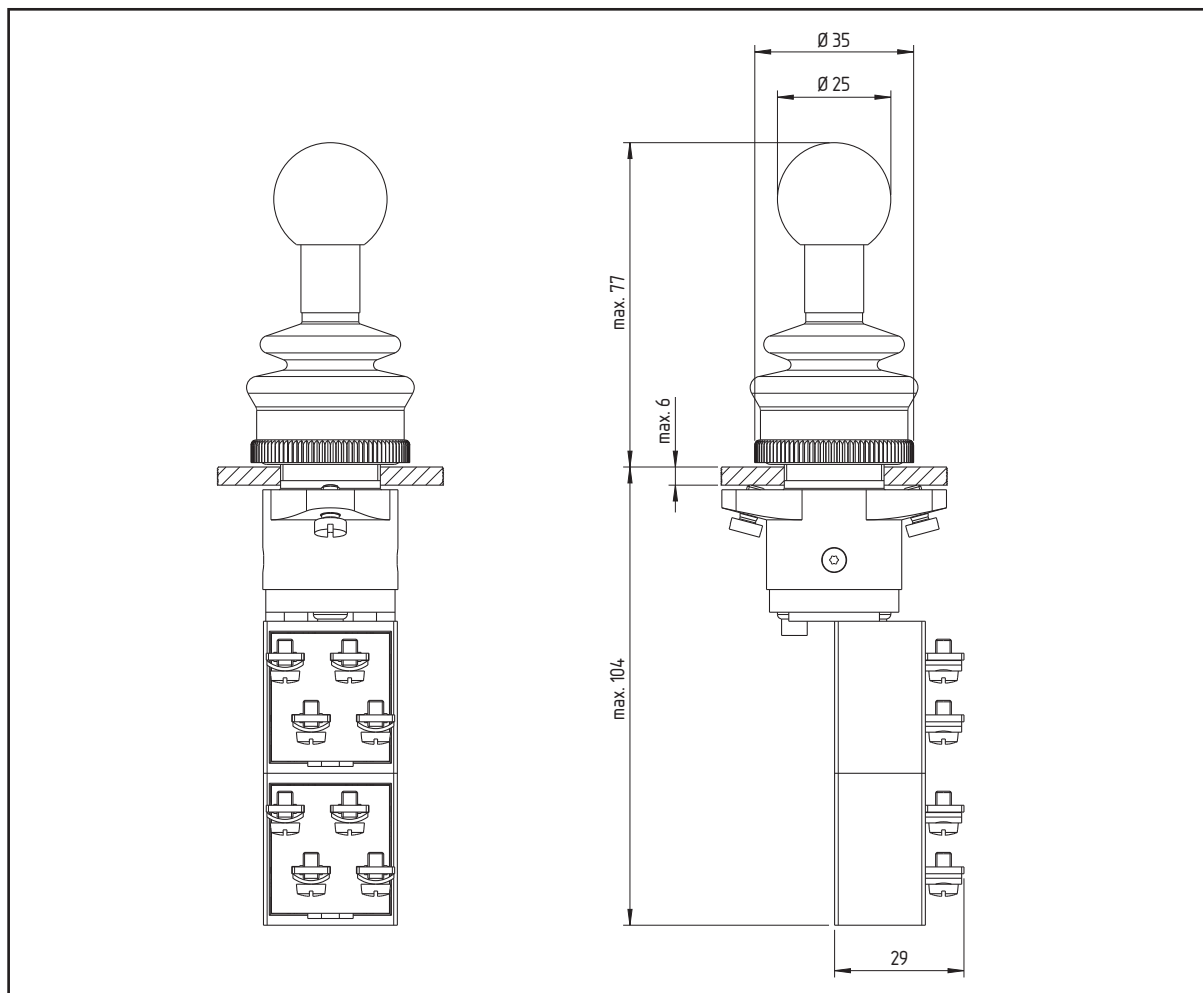
* Spring-return joystick switches with analog switching signal: see pages 30/31

Switching position, quantity, contacts		Sealing bellows	Connection technology		Flat-pin plugs	
			Screw terminals			
			Form designation	Order number	Form designation	Order number
Spring-return joystick switches						
1 NO  1 NO		Standard	MKTA32	0215048	MKTAF32	0216125
		dto., UV/ozone-resistant	MKTA32/WKT-19.4	0216026	MKTAF32/WKT-19.4	0216126
		Silicone	MKTA32/WKT-19.3	0216027	MKTAF32/WKT-19.3	0216127
		dto., thick-walled	MKTA32/WKT-26	0216028	MKTAF32/WKT-26	0216128
1 NC  1 NC		Standard	MKTA32/401	0216030	MKTAF32/401	0216130
		dto., UV/ozone-resistant	MKTA32/401/WKT-19.4	0216031	MKTAF32/401/WKT-19.4	0216131
		Silicone	MKTA32/401/WKT-19.3	0216032	MKTAF32/401/WKT-19.3	0216132
		dto., thick-walled	MKTA32/401/WKT-26	0216033	MKTAF32/401/WKT-26	0216133
Maintained joystick switches						
1 NO  1 NO		Standard	MKSA32	0215000	MKSAF32	0215001
		dto., UV/ozone-resistant	MKSA32/WKT-19.4	0216270	MKSAF32/WKT-19.4	0216370
		Silicone	MKSA32/WKT-19.3	0216271	MKSAF32/WKT-19.3	0216371
1 NC  1 NC		Standard	MKSA32/401	0216272	MKSAF32/401	0216372
		dto., UV/ozone-resistant	MKSA32/401/WKT-19.4	0216273	MKSAF32/401/WKT-19.4	0216373
		Silicone	MKSA32/401/WKT-19.3	0216274	MKSAF32/401/WKT-19.3	0216374

○ Position of reset; ◀●/▶ momentary action position; ● latching position; NO = normally open contact; NC = normally closed contact

Spring-return joystick switches, Maintained joystick switches*

- For installation diameter 22.3 mm
- Design without blocking ring to protect against unintentional actuation
- 2 directions of actuation/2 switching signals for each



Not illustrated: designs with flat-pin plug connections (see page 7, installed width $29 + 1$ mm)

Cross references:

- Functional description: see pages 2 and 4 and following pages
- Sealing bellows: see page 3
- Specifications: see page 64
- Terminal markings: see page 7
- Assembly information: see page 9
- Spare parts: see page 62

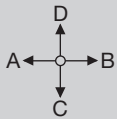
Additional information:

- Thick-walled silicone bellows: protection class IP 69K

Options (on request):

- Other actuator (instead of the ball)
- Shorter actuating levers
- Other contact configuration

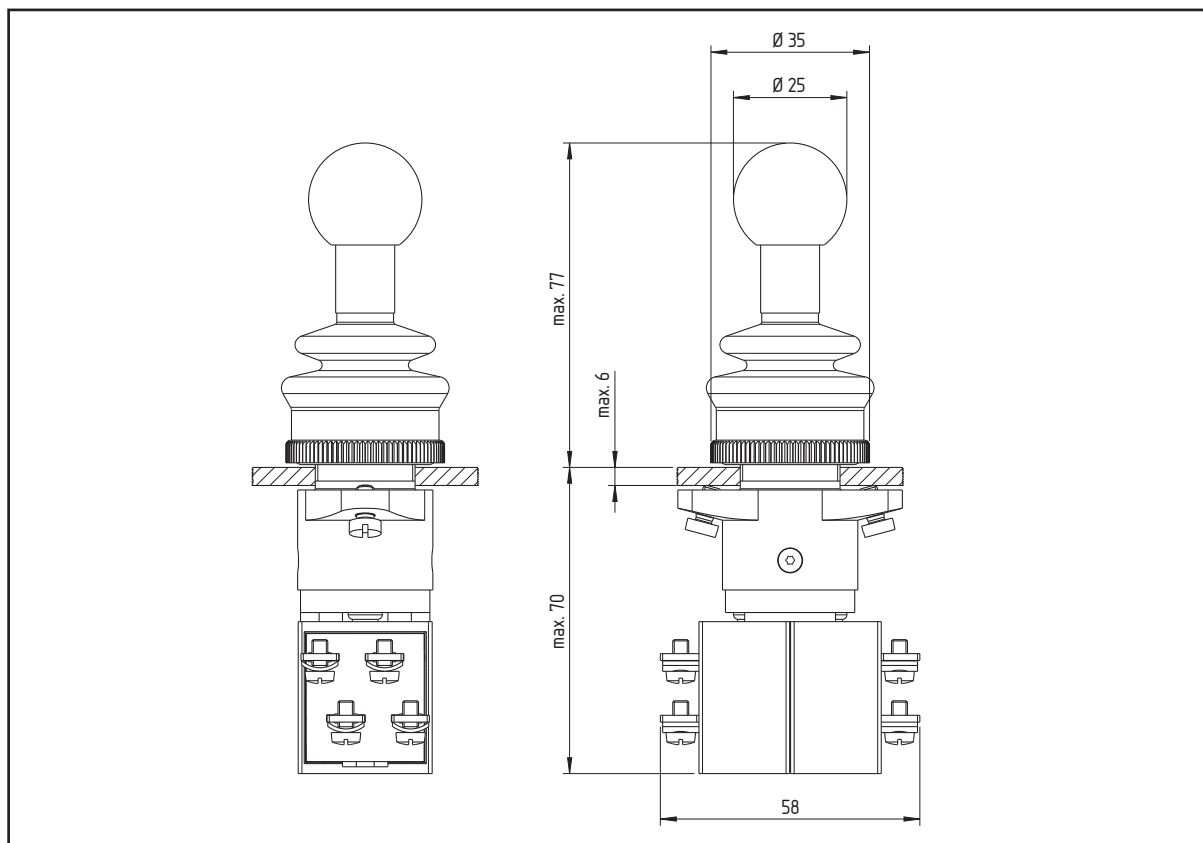
* Spring-return joystick switches with analog switching signal: see pages 30/31

Switching position, quantity, contacts		Sealing bellows	Connection technology		Flat-pin plugs	
			Screw terminals			
			Form designation	Order number	Form designation	Order number
Spring-return joystick switches						
2 NC ●→○←● 2 NO		Standard	MKTB32	021 5049	MKTBF32	021 6145
		dto., UV/ozone-resistant	MKTB32/WKT-19.4	021 6046	MKTBF32/WKT-19.4	021 6146
		Silicone	MKTB32/WKT-19.3	021 6047	MKTBF32/WKT-19.3	021 6147
		dto., thick-walled	MKTB32/WKT-26	021 6048	MKTBF32/WKT-26	021 6148
1 NC/1 NO ●→○←● 1 NC/1 NO		Standard	MKTB32/1x401	021 5051	MKTBF32/1x401	021 6150
		dto., UV/ozone-resistant	MKTB32/1x401/WKT-19.4	021 6051	MKTBF32/1x401/WKT-19.4	021 6151
		Silicone	MKTB32/1x401/WKT-19.3	021 6052	MKTBF32/1x401/WKT-19.3	021 6152
		dto., thick-walled	MKTB32/1x401/WKT-26	021 6053	MKTBF32/1x401/WKT-26	021 6153
Maintained joystick switches						
2 NC ●—○—● 2 NO		Standard	MKSB32	021 6280	MKSBF32	021 6380
		dto., UV/ozone-resistant	MKSB32/WKT-19.4	021 6281	MKSBF32/WKT-19.4	021 6381
		Silicone	MKSB32/WKT-19.3	021 6282	MKSBF32/WKT-19.3	021 6382
1 NC/1 NO ●—○—● 1 NC/1 NO		Standard	MKSB32/1x401	021 6285	MKSBF32/1x401	021 6385
		dto., UV/ozone-resistant	MKSB32/1x401/WKT-19.4	021 6286	MKSBF32/1x401/WKT-19.4	021 6386
		Silicone	MKSB32/1x401/WKT-19.3	021 6287	MKSBF32/1x401/WKT-19.3	021 6387

○ Position of reset; ◀●/▶ momentary action position; ● latching position; NO = normally open contact; NC = normally closed contact

Spring-return joystick switches, Maintained joystick switches*

- For installation diameter 22.3 mm
- Design without blocking ring to protect against unintentional actuation
- 2 (3, 4) directions of actuation/2 (1) switching signal(s) for each



Not illustrated: designs with flat-pin plug connections (see page 7, installed width 29 + 1 mm)

Cross references:

- Functional description: see pages 2 and 4 and following pages
- Sealing bellows: see page 3
- Specifications: see page 64
- Terminal markings: see page 7
- Assembly information: see page 9
- Spare parts: see page 62

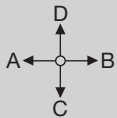
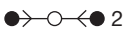
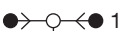


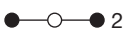
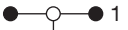


Additional information:

- Thick-walled silicone bellows: protection class IP 69K

Options (on request):

- Other actuator (instead of the ball)
- Shorter actuating levers
- Other contact configuration

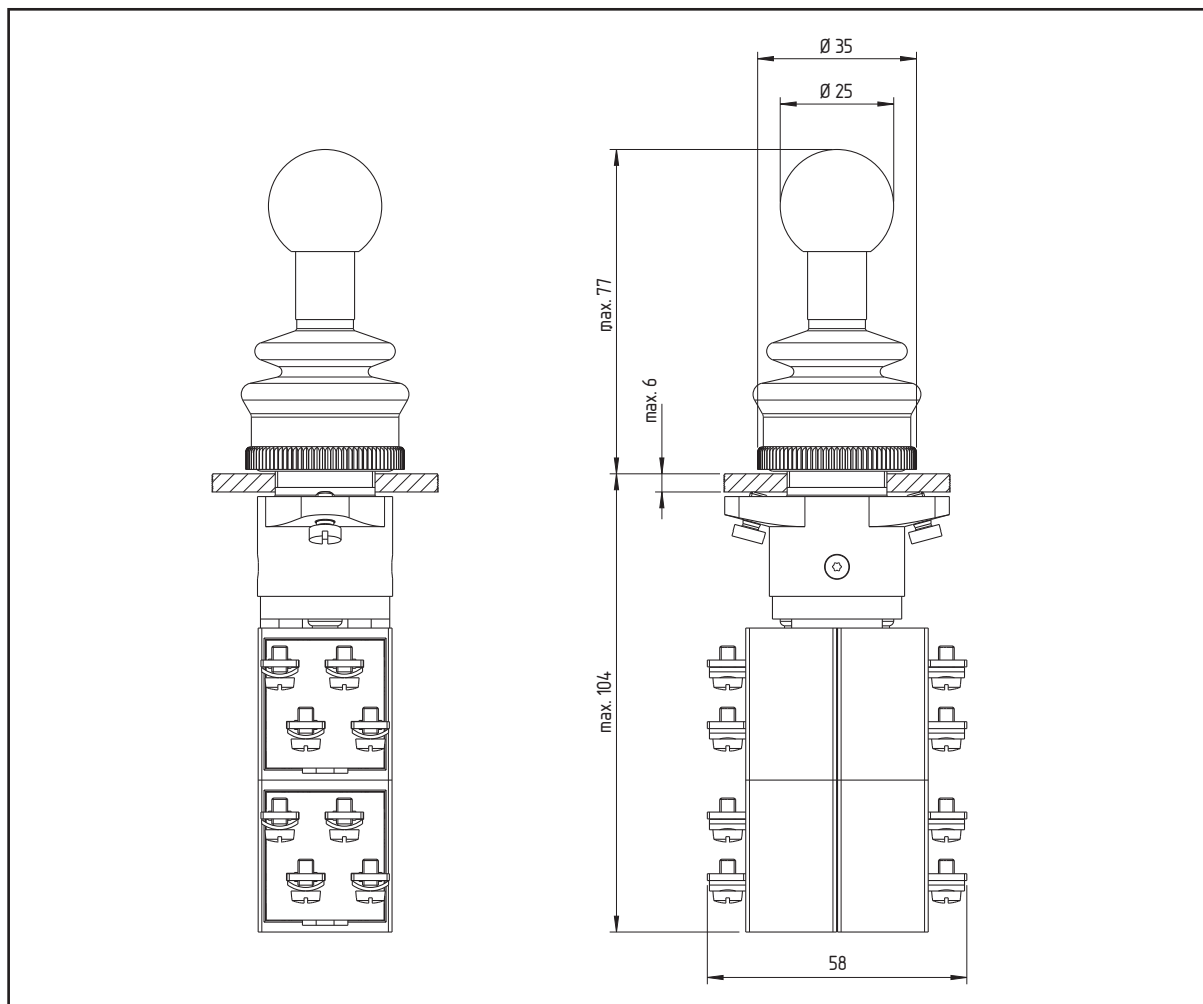
* Spring-return joystick switches with analog switching signal: see pages 32/33

Switching position, quantity, contacts		Sealing bellows	Connection technology		Flat-pin plugs	
			Screw terminals			
			Form designation	Order number	Form designation	Order number
Spring-return joystick switches						
2 NO 		Standard	MKTC32	021 5055	MKTCF32	021 5058
		dto., UV/ozone-resistant	MKTC32/WKT-19.4	021 6066	MKTCF32/WKT-19.4	021 6166
		Silicone	MKTC32/WKT-19.3	021 6067	MKTCF32/WKT-19.3	021 6167
		dto., thick-walled	MKTC32/WKT-26	021 6068	MKTCF32/WKT-26	021 6168
1 NO 		Standard	MKTC42	021 6070	MKTCF42	021 6170
		dto., UV/ozone-resistant	MKTC42/WKT-19.4	021 6071	MKTCF42/WKT-19.4	021 6171
		Silicone	MKTC42/WKT-19.3	021 6072	MKTCF42/WKT-19.3	021 6172
		dto., thick-walled	MKTC42/WKT-26	021 6073	MKTCF42/WKT-26	021 6173
1 NO 		Standard	MKTC52	021 5062	MKTCF52	021 6175
		dto., UV/ozone-resistant	MKTC52/WKT-19.4	021 6076	MKTCF52/WKT-19.4	021 6176
		Silicone	MKTC52/WKT-19.3	021 6077	MKTCF52/WKT-19.3	021 6177
		dto., thick-walled	MKTC52/WKT-26	021 6078	MKTCF52/WKT-26	021 6178
1 NC 		Standard	MKTC52/2x401	021 6080	MKTCF52/2x401	021 6180
		dto., UV/ozone-resistant	MKTC52/2x401/WKT-19.4	021 6081	MKTCF52/2x401/WKT-19.4	021 6181
		Silicone	MKTC52/2x401/WKT-19.3	021 6082	MKTCF52/2x401/WKT-19.3	021 6182
		dto., thick-walled	MKTC52/2x401/WKT-26	021 6083	MKTCF52/2x401/WKT-26	021 6183
Maintained joystick switches						
2 NO 		Standard	MKSC32	021 5008	MKSCF32	021 6500
		dto., UV/ozone-resistant	MKSC32/WKT-19.4	021 6401	MKSCF32/WKT-19.4	021 6501
		Silicone	MKSC32/WKT-19.3	021 6402	MKSCF32/WKT-19.3	021 6502
1 NO 		Standard	MKSC42	021 5017	MKSCF42	021 5019
		dto., UV/ozone-resistant	MKSC42/WKT-19.4	021 6405	MKSCF42/WKT-19.4	021 6505
		Silicone	MKSC42/WKT-19.3	021 6406	MKSCF42/WKT-19.3	021 6506
1 NO 		Standard	MKSC52	021 5012	MKSCF52	021 5013
		dto., UV/ozone-resistant	MKSC52/WKT-19.4	021 6407	MKSCF52/WKT-19.4	021 6507
		Silicone	MKSC52/WKT-19.3	021 6408	MKSCF52/WKT-19.3	021 6508
1 NC 		Standard	MKSC52/2x401	021 6410	MKSCF52/2x401	021 6510
		dto., UV/ozone-resistant	MKSC52/2x401/WKT-19.4	021 6411	MKSCF52/2x401/WKT-19.4	021 6511
		Silicone	MKSC52/2x401/WKT-19.3	021 6412	MKSCF52/2x401/WKT-19.3	021 6512

○ Position of reset; ◀●/▶ momentary action position; ● latching position; NO = normally open contact; NC = normally closed contact

Spring-return joystick switches, Maintained joystick switches*

- For installation diameter 22.3 mm
- Design without blocking ring to protect against unintentional actuation
- 2 (4) directions of actuation/4 (2) switching signals for each



Not illustrated: designs with flat-pin plug connections (see page 7, installed width 29 + 1 mm)

Cross references:

- Functional description: see pages 2 and 4 and following pages
- Sealing bellows: see page 3
- Specifications: see page 64
- Terminal markings: see page 7
- Assembly information: see page 9
- Spare parts: see page 62

Additional information:

- Thick-walled silicone bellows: protection class IP 69K

Options (on request):

- Other actuator (instead of the ball)
- Shorter actuating levers
- Devices with 3 directions of actuation
- Other contact configuration

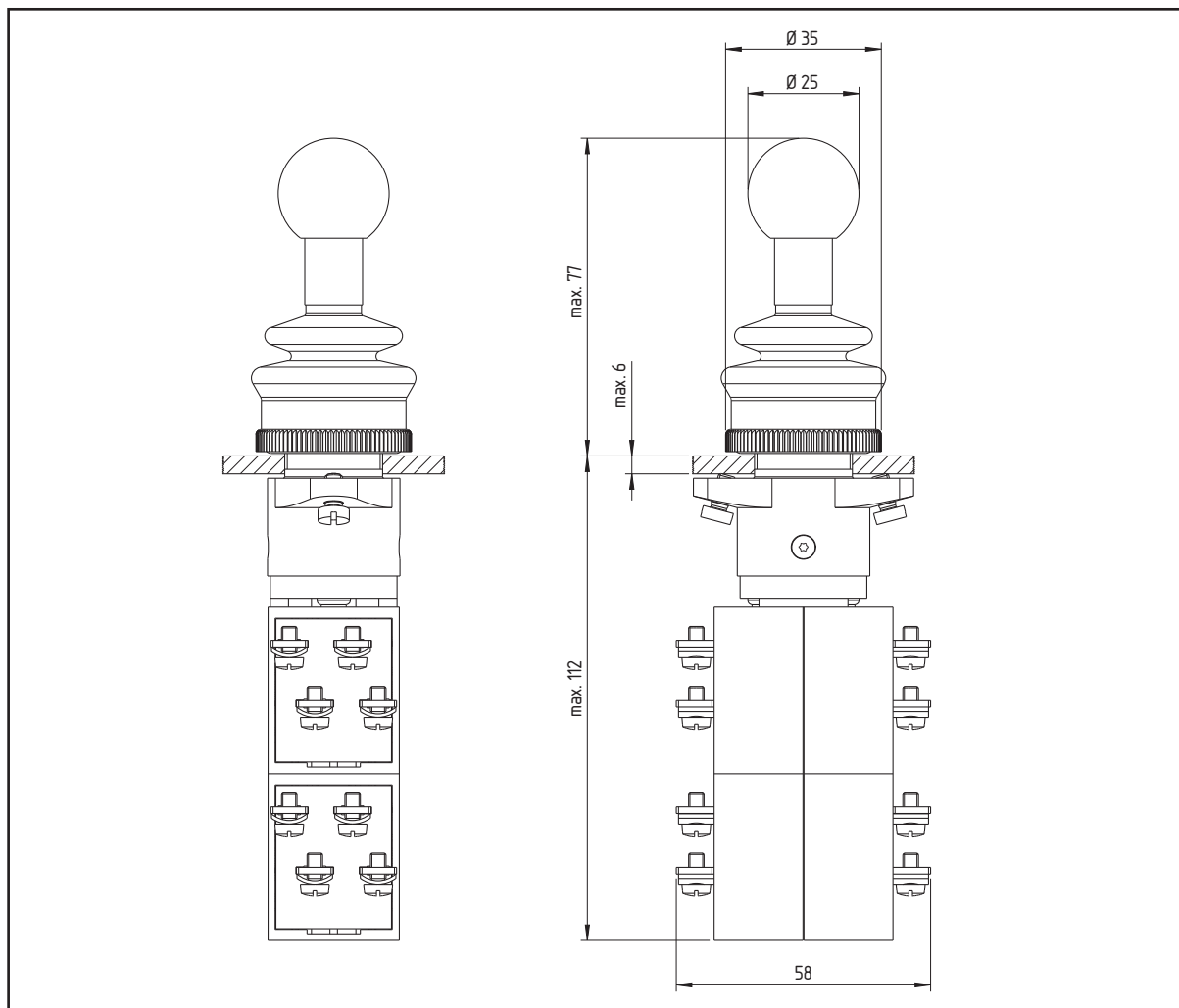
* Spring-return joystick switches with analog switching signal: see pages 32/33

Switching position, quantity, contacts		Sealing bellows	Connection technology		Flat-pin plugs	
			Screw terminals			
			Form designation	Order number	Form designation	Order number
Spring-return joystick switches						
4 NO		Standard	MKTE32	021 5059	MKTEF32	021 6300
		dto., UV/ozone-resistant	MKTE32/WKT-19.4	021 6201	MKTEF32/WKT-19.4	021 6301
		Silicone	MKTE32/WKT-19.3	021 6202	MKTEF32/WKT-19.3	021 6302
		dto., thick-walled	MKTE32/WKT-26	021 6203	MKTEF32/WKT-26	021 6303
2 NO		Standard	MKTE52	021 5070	MKTEF52	021 5063
		dto., UV/ozone-resistant	MKTE52/WKT-19.4	021 6205	MKTEF52/WKT-19.4	021 6305
		Silicone	MKTE52/WKT-19.3	021 6206	MKTEF52/WKT-19.3	021 6306
		dto., thick-walled	MKTE52/WKT-26	021 6207	MKTEF52/WKT-26	021 6307
1 NC/1 NO		Standard	MKTE52/206	021 6210	MKTEF52/206	021 6310
		dto., UV/ozone-resistant	MKTE52/206/WKT-19.4	021 6211	MKTEF52/206/WKT-19.4	021 6311
		Silicone	MKTE52/206/WKT-19.3	021 6212	MKTEF52/206/WKT-19.3	021 6312
		dto., thick-walled	MKTE52/206/WKT-26	021 6213	MKTEF52/206/WKT-26	021 6313
1 NC/1 NO		Standard	MKTE52/2x401	021 5072	MKTEF52/2x401	021 6315
		dto., UV/ozone-resistant	MKTE52/2x401/WKT-19.4	021 6216	MKTEF52/2x401/WKT-19.4	021 6316
		Silicone	MKTE52/2x401/WKT-19.3	021 6217	MKTEF52/2x401/WKT-19.3	021 6317
		dto., thick-walled	MKTE52/2x401/WKT-26	021 6218	MKTEF52/2x401/WKT-26	021 6318
Maintained joystick switches						
4 NO		Standard	MKSE32	021 6435	MKSEF32	021 6535
		dto., UV/ozone-resistant	MKSE32/WKT-19.4	021 6436	MKSEF32/WKT-19.4	021 6536
		Silicone	MKSE32/WKT-19.3	021 6437	MKSEF32/WKT-19.3	021 6537
2 NO		Standard	MKSE52	021 6440	MKSEF52	021 6540
		dto., UV/ozone-resistant	MKSE52/WKT-19.4	021 6441	MKSEF52/WKT-19.4	021 6541
		Silicone	MKSE52/WKT-19.3	021 6442	MKSEF52/WKT-19.3	021 6542
1 NC/1 NO		Standard	MKSE52/206	021 6445	MKSEF52/206	021 6545
		dto., UV/ozone-resistant	MKSE52/206/WKT-19.4	021 6446	MKSEF52/206/WKT-19.4	021 6546
		Silicone	MKSE52/206/WKT-19.3	021 6447	MKSEF52/206/WKT-19.3	021 6547
1 NC/1 NO		Standard	MKSE52/2x401	021 6450	MKSEF52/2x401	021 6550
		dto., UV/ozone-resistant	MKSE52/2x401/WKT-19.4	021 6451	MKSEF52/2x401/WKT-19.4	021 6551
		Silicone	MKSE52/2x401/WKT-19.3	021 6452	MKSEF52/2x401/WKT-19.3	021 6552

○ Position of reset; ◀●▶ momentary action position; ● latching position; NO = normally open contact; NC = normally closed contact

Spring-return joystick switches, Maintained joystick switches*

- For installation diameter 22.3 mm
- Design without blocking ring to protect against unintentional actuation
- 2 (4) directions of actuation/4 (2) switching signals for each



Cross references:

- Functional description: see pages 2 and 4 and following pages
- Sealing bellows: see page 3
- Specifications: see page 64
- Terminal markings: see page 7
- Assembly information: see page 9
- Spare parts: see page 62

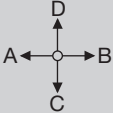


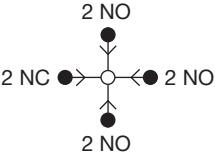


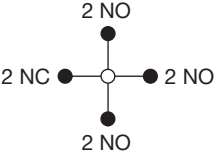
Additional information:

- Thick-walled silicone bellows: protection class IP 69K
- Option of flat plug connections

Options (on request):

- Other actuator (instead of the ball)
- Shorter actuating levers
- Devices with 3 directions of actuation
- Other contact configuration

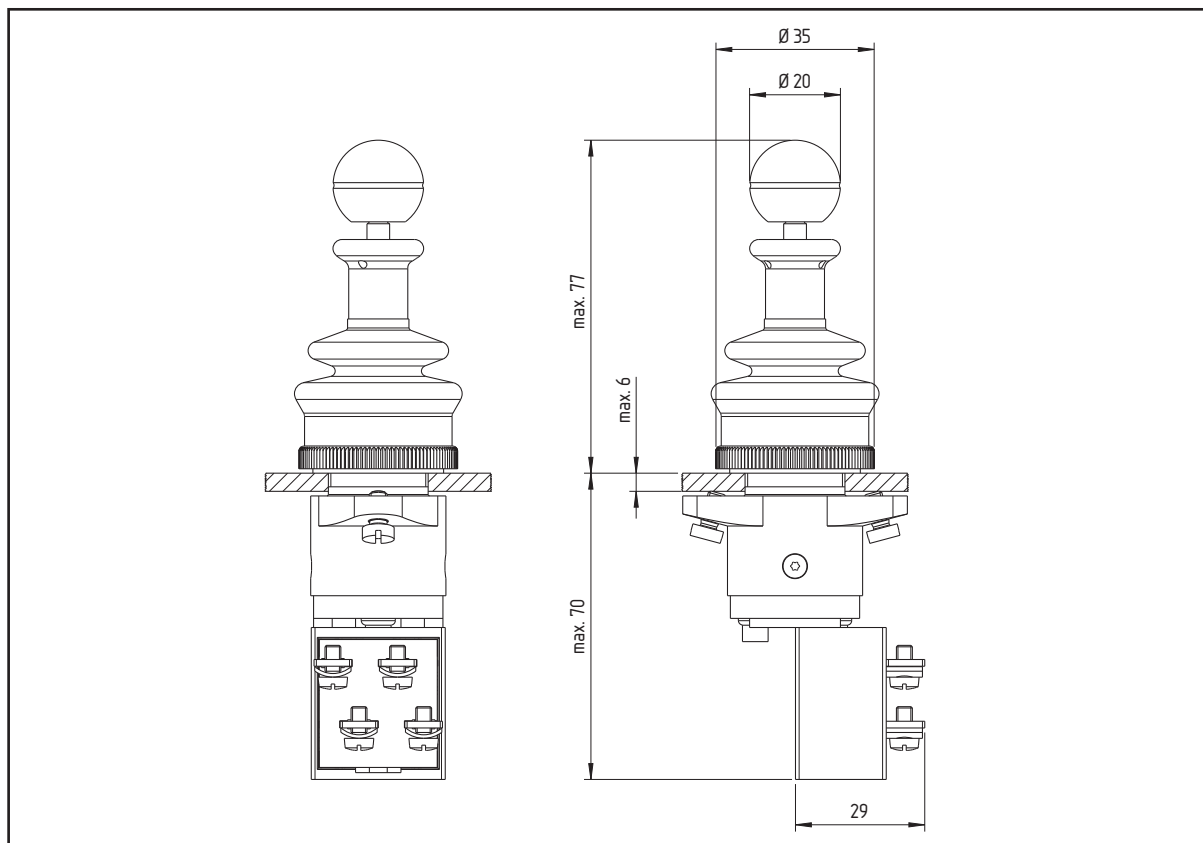
* Spring-return joystick switches with analog switching signal: see pages 32/33

Switching position, quantity, contacts		Sealing bellows	Connection technology	
			Screw terminals	
Spring-return joystick switches			Form designation	Order number
4 NC  4 NO		Standard	MKTE32/404	021 6240
		dto., UV/ozone-resistant	MKTE32/404/WKT-19.4	021 6241
		Silicone	MKTE32/404/WKT-19.3	021 6242
		dto., thick-walled	MKTE32/404/WKT-26	021 6243
4 NC  4 NC		Standard	MKTE32/800	021 6245
		dto., UV/ozone-resistant	MKTE32/800/WKT-19.4	021 6246
		Silicone	MKTE32/800/WKT-19.3	021 6247
		dto., thick-walled	MKTE32/800/WKT-26	021 6248
		Standard	MKTE52/206.1	021 6250
		dto., UV/ozone-resistant	MKTE52/206.1/WKT-19.4	021 6251
		Silicone	MKTE52/206.1/WKT-19.3	021 6252
		dto., thick-walled	MKTE52/206.1/WKT-26	021 6253
Maintained joystick switches				
4 NC  4 NO		Standard	MKTE321/404	021 6255
		dto., UV/ozone-resistant	MKTE321/404/WKT-19.4	021 6256
		Silicone	MKTE321/404/WKT-19.3	021 6257
4 NC  4 NC		Standard	MKTE321/800	021 6260
		dto., UV/ozone-resistant	MKTE321/800/WKT-19.4	021 6261
		Silicone	MKTE321/800/WKT-19.3	021 6262
		Standard	MKTE521/206.1	021 6265
		dto., UV/ozone-resistant	MKTE521/206.1/WKT-19.4	021 6266
		Silicone	MKTE521/206.1/WKT-19.3	021 6267

○ Position of reset; ◀/▶ momentary action position; ● latching position; NO = normally open contact; NC = normally closed contact

Spring-return joystick switches, Maintained joystick switches*

- For installation diameter 22.3 mm
- Design with blocking ring to protect against unintentional actuation
- 2 directions of actuation/1 switching signal for each



Not illustrated: designs with flat-pin plug connections (see page 7, installed width 29 + 1 mm)

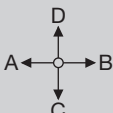




Cross references:

- Functional description: see pages 2 and 4 and following pages
- Sealing bellows: see page 3
- Specifications: see page 64
- Terminal markings: see page 7
- Assembly information: see page 9
- Spare parts: see page 62

Options (on request):

- Other actuator (instead of the ball)

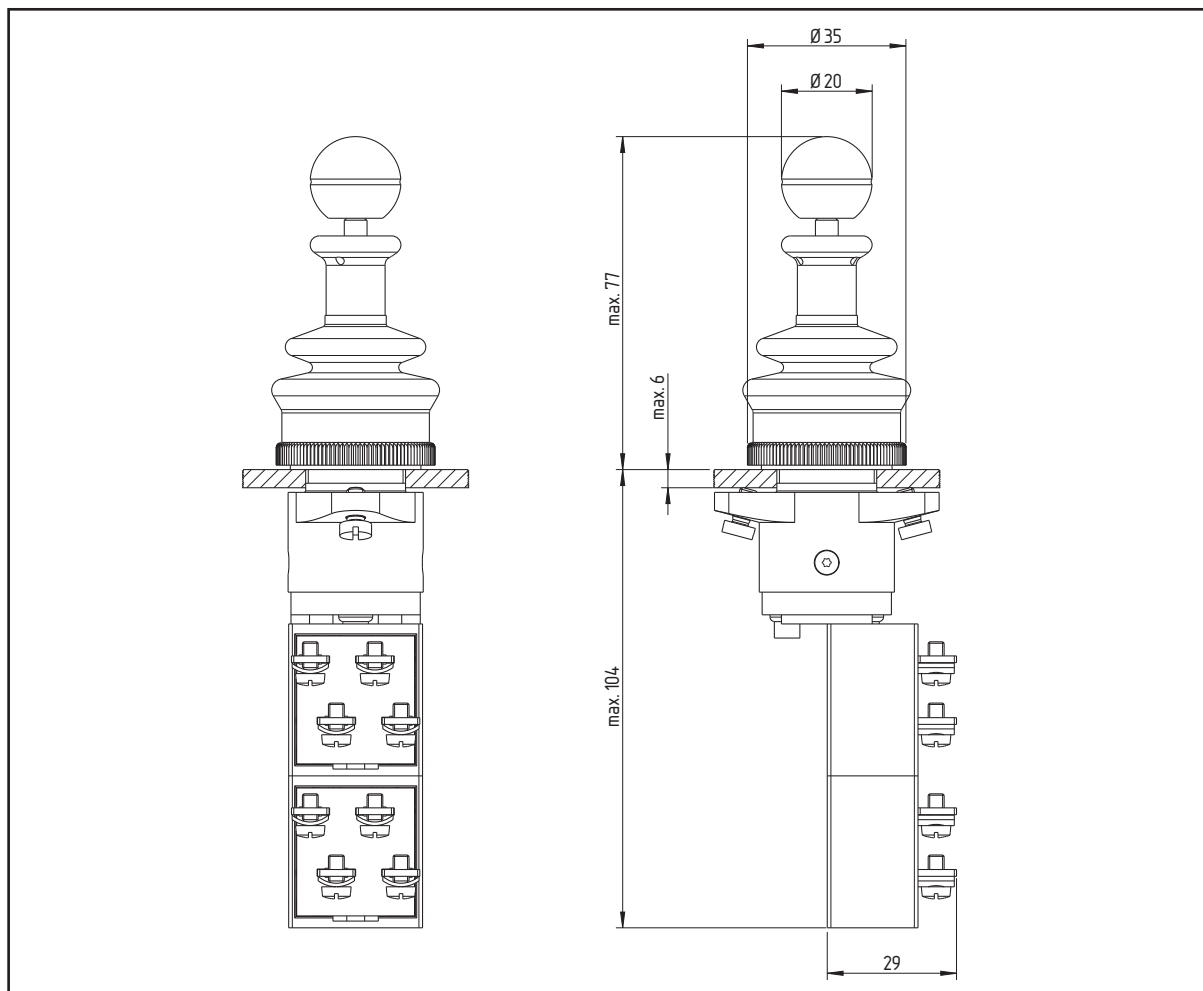
* Spring-return joystick switches with analog switching signal: see pages 32/33

Switching position, quantity, contacts		Sealing bellows	Connection technology		Flat-pin plugs	
			Screw terminals			
			Form designation	Order number	Form designation	Order number
Spring-return joystick switches						
1 NO  1 NO		Standard	MKTA321	021 5050	MKTAF321	021 5052
		dto., UV/ozone-resistant	MKTA321/WKT-19.4	021 5047	MKTAF321/WKT-19.4	021 6135
		Silicone	MKTA321/WKT-19.3	021 6036	MKTAF321/WKT-19.3	021 6136
1 NC  1 NC		Standard	MKTA321/401	021 6040	MKTAF321/401	021 6140
		dto., UV/ozone-resistant	MKTA321/401/WKT-19.4	021 6041	MKTAF321/401/WKT-19.4	021 6141
		Silicone	MKTA321/401/WKT-19.3	021 6042	MKTAF321/401/WKT-19.3	021 6142
Maintained joystick switches						
1 NO  1 NO		Standard	MKSA321	021 5007	MKSAF321	021 5006
		dto., UV/ozone-resistant	MKSA321/WKT-19.4	021 6275	MKSAF321/WKT-19.4	021 6375
		Silicone	MKSA321/WKT-19.3	021 6276	MKSAF321/WKT-19.3	021 6376
1 NC  1 NC		Standard	MKSA321/401	021 6277	MKSAF321/401	021 6377
		dto., UV/ozone-resistant	MKSA321/401/WKT-19.4	021 6278	MKSAF321/401/WKT-19.4	021 6378
		Silicone	MKSA321/401/WKT-19.3	021 6279	MKSAF321/401/WKT-19.3	021 6379

○ Position of reset; ◀●/●▶ momentary action position; ● latching position; NO = normally open contact; NC = normally closed contact

Spring-return joystick switches, Maintained joystick switches*

- For installation diameter 22.3 mm
- Design with blocking ring to protect against unintentional actuation
- 2 directions of actuation/2 switching signals for each



Not illustrated: designs with flat-pin plug connections (see page 7, installed width 29 + 1 mm)

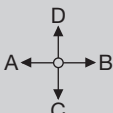
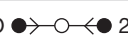
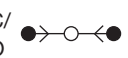
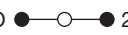
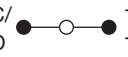
Cross references:

- Functional description: see pages 2 and 4 and following pages
- Sealing bellows: see page 3
- Specifications: see page 64
- Terminal markings: see page 7
- Assembly information: see page 9
- Spare parts: see page 62

Options (on request):

- Other actuator (instead of the ball)
- Other contact configuration

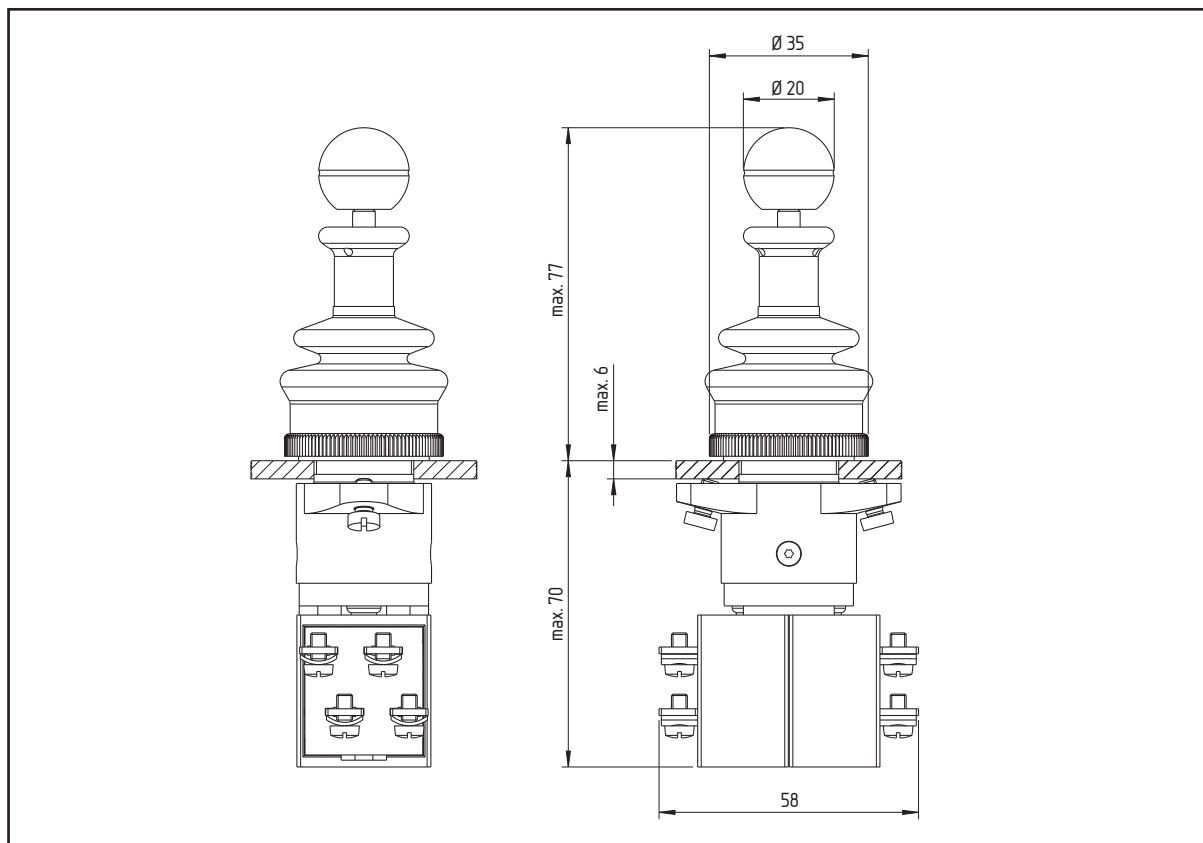
* Spring-return joystick switches with analog switching signal: see pages 32/33

Switching position, quantity, contacts		Sealing bellows	Connection technology		Flat-pin plugs	
			Screw terminals			
			Form designation	Order number	Form designation	Order number
Spring-return joystick switches						
2 NO 		Standard	MKTB321	021 6055	MKTBF321	021 6155
		dto., UV/ozone-resistant	MKTB321/WKT-19.4	021 6056	MKTBF321/WKT-19.4	021 6156
		Silicone	MKTB321/WKT-19.3	021 6057	MKTBF321/WKT-19.3	021 6157
1 NC/ 1 NO 		Standard	MKTB321/1x401	021 6060	MKTBF321/1x401	021 6160
		dto., UV/ozone-resistant	MKTB321/1x401/WKT-19.4	021 6061	MKTBF321/1x401/WKT-19.4	021 6161
		Silicone	MKTB321/1x401/WKT-19.3	021 6062	MKTBF321/1x401/WKT-19.3	021 6162
Maintained joystick switches						
2 NO 		Standard	MKSB321	021 6290	MKSBF321	021 6390
		dto., UV/ozone-resistant	MKSB321/WKT-19.4	021 6291	MKSBF321/WKT-19.4	021 6391
		Silicone	MKSB321/WKT-19.3	021 6292	MKSBF321/WKT-19.3	021 6392
1 NC/ 1 NO 		Standard	MKSB321/1x401	021 6295	MKSBF321/1x401	021 6395
		dto., UV/ozone-resistant	MKSB321/1x401/WKT-19.4	021 6296	MKSBF321/1x401/WKT-19.4	021 6396
		Silicone	MKSB321/1x401/WKT-19.3	021 6297	MKSBF321/1x401/WKT-19.3	021 6397

○ Position of reset; ◀●/●▶ momentary action position; ● latching position; NO = normally open contact; NC = normally closed contact

Spring-return joystick switches, Maintained joystick switches*

- For installation diameter 22.3 mm
- Design with blocking ring to protect against unintentional actuation
- 2 (3, 4) directions of actuation/2 (1) switching signal(s) for each



Not illustrated: designs with flat-pin plug connections (see page 7, installed width 29 + 1 mm)

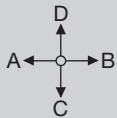


















Cross references:

- Functional description: see pages 2 and 4 and following pages
- Sealing bellows: see page 3
- Specifications: see page 64
- Terminal markings: see page 7
- Assembly information: see page 9
- Spare parts: see page 62

Options (on request):

- Other actuator (instead of the ball)
- Other contact configuration

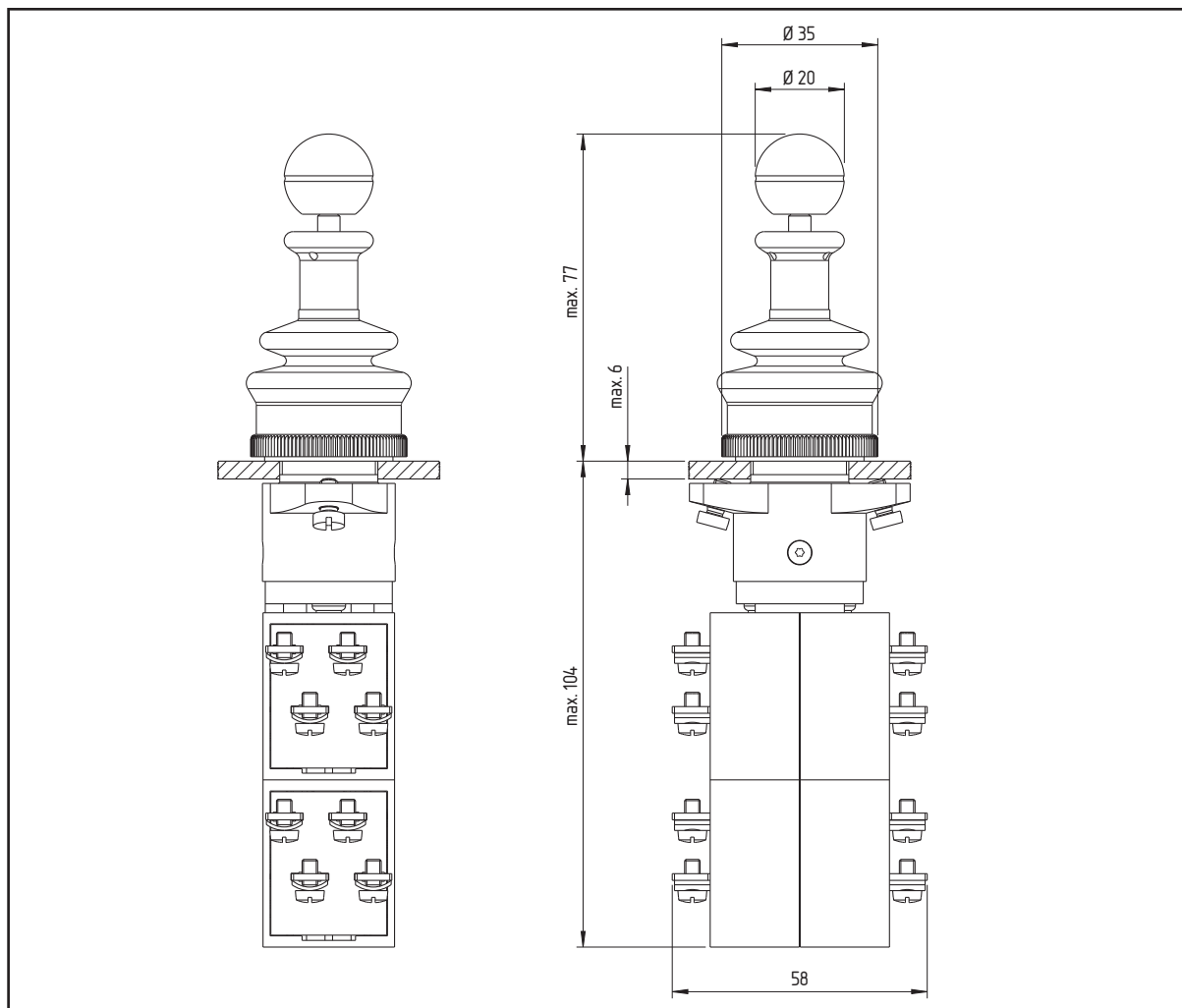
* Spring-return joystick switches with analog switching signal: see pages 32/33

Switching position, quantity, contacts		Sealing bellows	Connection technology		Flat-pin plugs	
			Screw terminals			
			Form designation	Order number	Form designation	Order number
Spring-return joystick switches						
2 NO 		Standard	MKTC321	021 5060	MKTCF321	021 5061
		dto., UV/ozone-resistant	MKTC321/WKT-19.4	021 5099	MKTCF321/WKT-19.4	021 6185
		Silicone	MKTC321/WKT-19.3	021 6086	MKTCF321/WKT-19.3	021 6186
1 NO  1 NO 		Standard	MKTC421	021 5091	MKTCF421	021 5085
		dto., UV/ozone-resistant	MKTC421/WKT-19.4	021 6090	MKTCF421/WKT-19.4	021 6190
		Silicone	MKTC421/WKT-19.3	021 6091	MKTCF421/WKT-19.3	021 6191
1 NO  1 NO  1 NO 		Standard	MKTC521	021 5074	MKTCF521	021 5079
		dto., UV/ozone-resistant	MKTC521/WKT-19.4	021 6000	MKTCF521/WKT-19.4	021 6193
		Silicone	MKTC521/WKT-19.3	021 6094	MKTCF521/WKT-19.3	021 6194
1 NC  1 NC  1 NC 		Standard	MKTC521/2x401	021 6096	MKTCF521/2x401	021 6196
		dto., UV/ozone-resistant	MKTC521/2x401/WKT-19.4	021 6097	MKTCF521/2x401/WKT-19.4	021 6197
		Silicone	MKTC521/2x401/WKT-19.3	021 6098	MKTCF521/2x401/WKT-19.3	021 6198
Maintained joystick switches						
2 NO 		Standard	MKSC321	021 5009	MKSCF321	021 6516
		dto., UV/ozone-resistant	MKSC321/WKT-19.4	021 6001	MKSCF321/WKT-19.4	021 6516
		Silicone	MKSC321/WKT-19.3	021 6417	MKSCF321/WKT-19.3	021 6517
1 NO  1 NO 		Standard	MKSC421	021 5010	MKSCF421	021 6520
		dto., UV/ozone-resistant	MKSC421/WKT-19.4	021 6421	MKSCF421/WKT-19.4	021 6521
		Silicone	MKSC421/WKT-19.3	021 6422	MKSCF421/WKT-19.3	021 6522
1 NO  1 NO  1 NO 		Standard	MKSC521	021 5015	MKSCF521	021 5018
		dto., UV/ozone-resistant	MKSC521/WKT-19.4	021 6425	MKSCF521/WKT-19.4	021 6525
		Silicone	MKSC521/WKT-19.3	021 6426	MKSCF521/WKT-19.3	021 6526
1 NC  1 NC  1 NC 		Standard	MKSC521/2x401	021 6430	MKSCF521/2x401	021 6530
		dto., UV/ozone-resistant	MKSC521/2x401/WKT-19.4	021 6431	MKSCF521/2x401/WKT-19.4	021 6531
		Silicone	MKSC521/2x401/WKT-19.3	021 6432	MKSCF521/2x401/WKT-19.3	021 6532

○ Position of reset; ◀●/▶ momentary action position; ● latching position; NO = normally open contact; NC = normally closed contact

Spring-return joystick switches, Maintained joystick switches*

- For installation diameter 22.3 mm
- Design with blocking ring to protect against unintentional actuation
- 2 (4) directions of actuation/4 (2) switching signals for each



Not illustrated: designs with flat-pin plug connections (see page 7, installed width 29 + 1 mm)

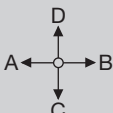








Cross references:

- Functional description: see pages 2 and 4 and following pages
- Sealing bellows: see page 3
- Specifications: see page 64
- Terminal markings: see page 7
- Assembly information: see page 9
- Spare parts: see page 62

Options (on request):

- Other actuator (instead of the ball)
- Devices with 3 directions of actuation
- Other contact configuration

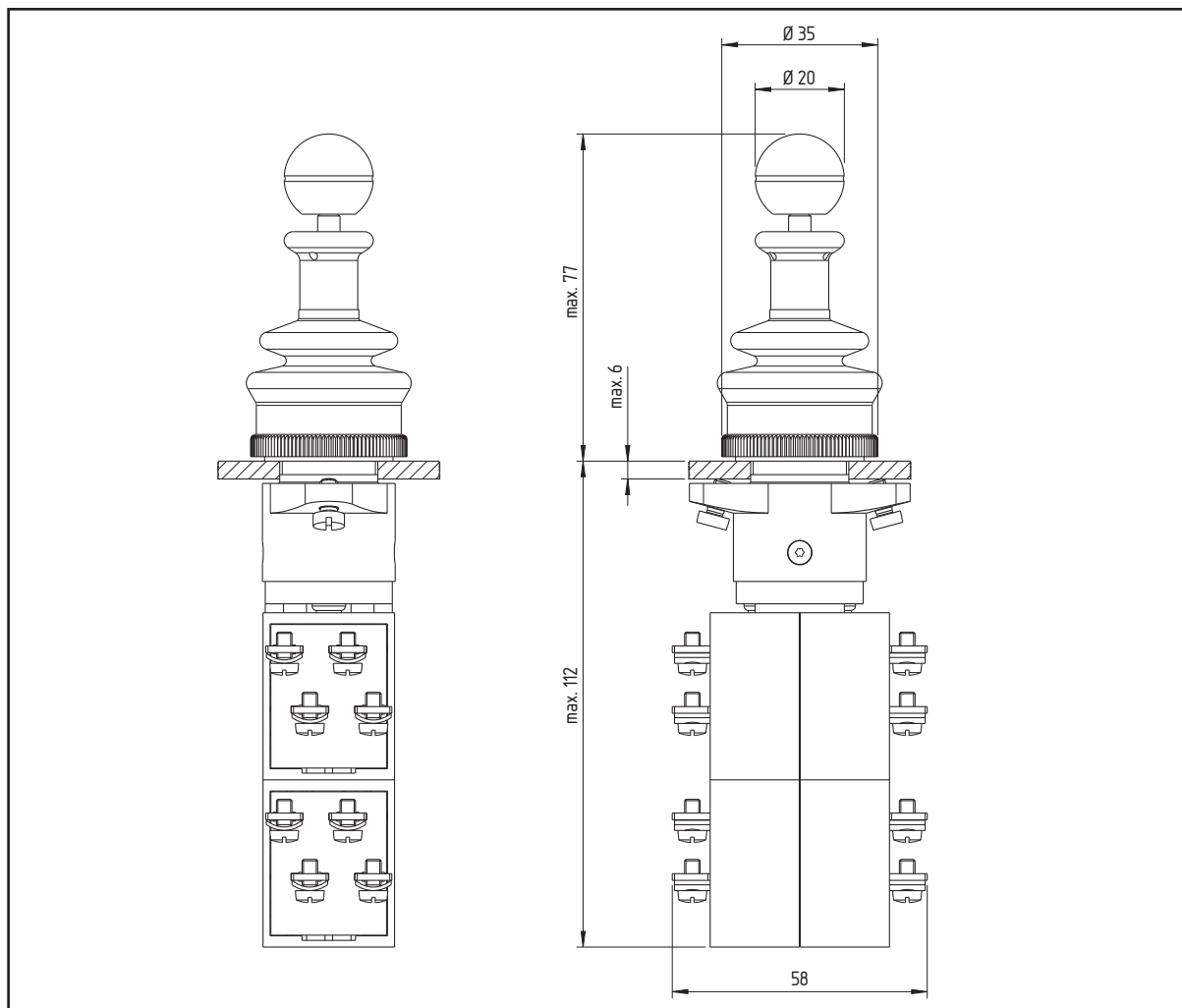
* Spring-return joystick switches with analog switching signal: see pages 32/33

Switching position, quantity, contacts		Sealing bellows	Connection technology		Flat-pin plugs	
			Screw terminals			
			Form designation	Order number	Form designation	Order number
Spring-return joystick switches						
4 NO 		Standard	MKTE321	021 6220	MKTEF321	021 6320
		dto., UV/ozone-resistant	MKTE321/WKT-19.4	021 6221	MKTEF321/WKT-19.4	021 6321
		Silicone	MKTE321/WKT-19.3	021 6222	MKTEF321/WKT-19.3	021 6322
2 NO 		Standard	MKTE521	021 5075	MKTEF521	021 6325
		dto., UV/ozone-resistant	MKTE521/WKT-19.4	021 6226	MKTEF521/WKT-19.4	021 6326
		Silicone	MKTE521/WKT-19.3	021 6227	MKTEF521/WKT-19.3	021 6327
1 NC/1 NO 		Standard	MKTE521/206	021 6230	MKTEF521/206	021 6330
		dto., UV/ozone-resistant	MKTE521/206/WKT-19.4	021 6231	MKTEF521/206/WKT-19.4	021 6331
		Silicone	MKTE521/206/WKT-19.3	021 6232	MKTEF521/206/WKT-19.3	021 6332
1 NC/1 NO 		Standard	MKTE521/2x401	021 6235	MKTEF521/2x401	021 6335
		dto., UV/ozone-resistant	MKTE521/2x401/WKT-19.4	021 6236	MKTEF521/2x401/WKT-19.4	021 6336
		Silicone	MKTE521/2x401/WKT-19.3	021 6237	MKTEF521/2x401/WKT-19.3	021 6337
Maintained joystick switches						
4 NO 		Standard	MKSE321	021 6455	MKSEF321	021 6555
		dto., UV/ozone-resistant	MKSE321/WKT-19.4	021 6456	MKSEF321/WKT-19.4	021 6556
		Silicone	MKSE321/WKT-19.3	021 6457	MKSEF321/WKT-19.3	021 6557
2 NO 		Standard	MKSE521	021 5024	MKSEF521	021 6560
		dto., UV/ozone-resistant	MKSE521/WKT-19.4	021 6461	MKSEF521/WKT-19.4	021 6561
		Silicone	MKSE521/WKT-19.3	021 6462	MKSEF521/WKT-19.3	021 6562
1 NC/1 NO 		Standard	MKSE521/206	021 6465	MKSEF521/206	021 6565
		dto., UV/ozone-resistant	MKSE521/206/WKT-19.4	021 6466	MKSEF521/206/WKT-19.4	021 6566
		Silicone	MKSE521/206/WKT-19.3	021 6467	MKSEF521/206/WKT-19.3	021 6567
1 NC/1 NO 		Standard	MKSE521/2x401	021 6470	MKSEF521/2x401	021 6570
		dto., UV/ozone-resistant	MKSE521/2x401/WKT-19.4	021 6471	MKSEF521/2x401/WKT-19.4	021 6571
		Silicone	MKSE521/2x401/WKT-19.3	021 6472	MKSEF521/2x401/WKT-19.3	021 6572

○ Position of reset; ◀●▶ momentary action position; ● latching position; NO = normally open contact; NC = normally closed contact

Spring-return joystick switches, Maintained joystick switches*

- For installation diameter 22.3 mm
- Design with blocking ring to protect against unintentional actuation
- 2 (4) directions of actuation/4 (2) switching signals for each



Cross references:

- Functional description: see pages 2 and 4 and following pages
- Sealing bellows: see page 3
- Specifications: see page 64
- Terminal markings: see page 7
- Assembly information: see page 9
- Spare parts: see page 62

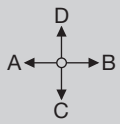
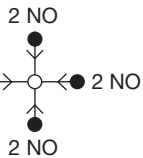
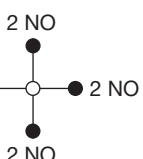
Additional information:

- Flat plug connections not possible

Options (on request):

- Other actuator (instead of the ball)
- Devices with 3 directions of actuation
- Other contact configuration

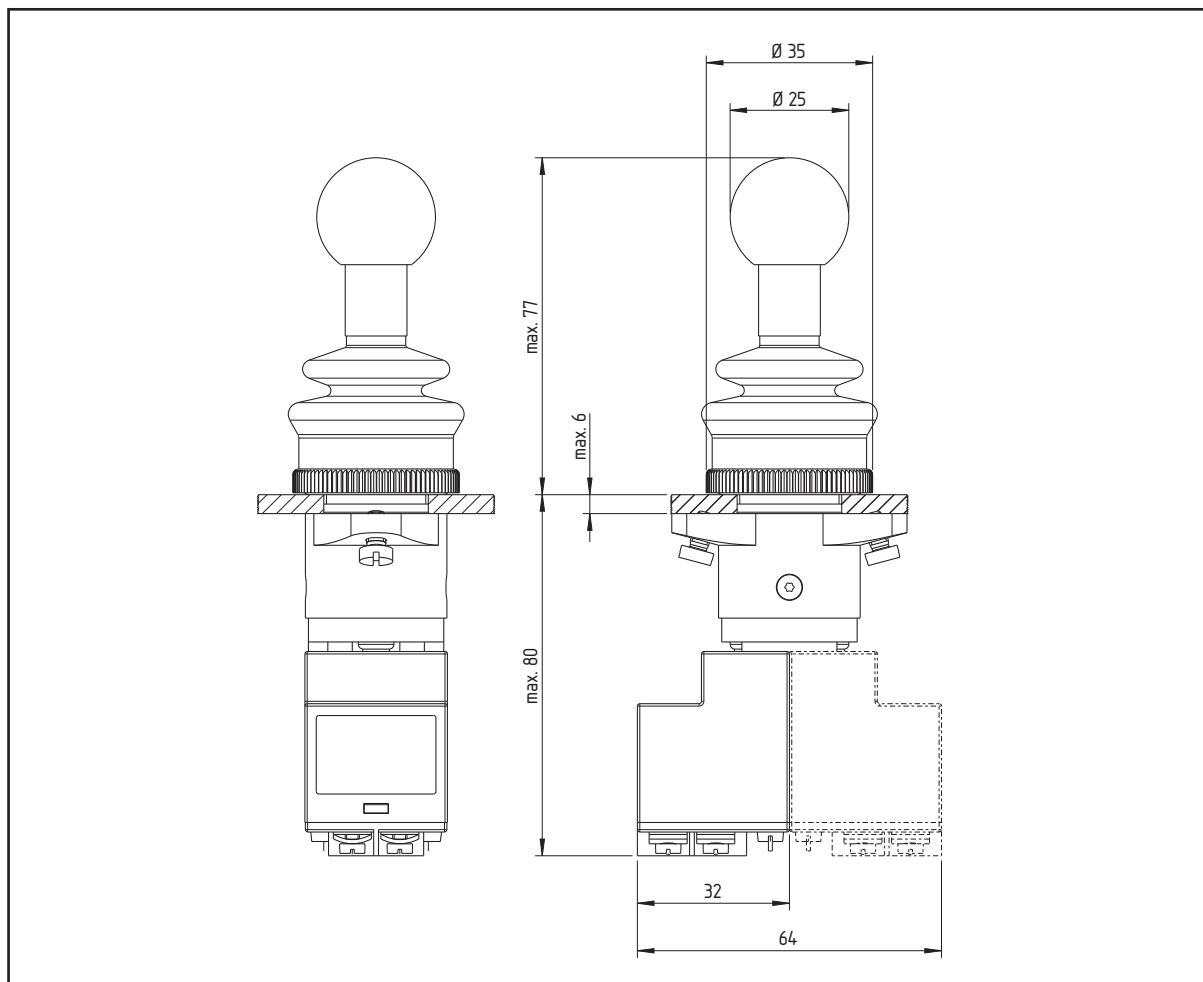
* Spring-return joystick switches with analog switching signal: see pages 32/33

Switching position, quantity, contacts		Sealing bellows	Connection technology	
			Screw terminals	
			Form designation	Order number
Spring-return joystick switches				
4 NC ●→○←● 4 NO		Standard	MKTE321/404	021 6255
		dto., UV/ozone-resistant	MKTE321/404/WKT-19.4	021 6256
		Silicone	MKTE321/404/WKT-19.3	021 6257
4 NC ●→○←● 4 NC		Standard	MKTE321/800	021 6260
		dto., UV/ozone-resistant	MKTE321/800/WKT-19.4	021 6261
		Silicone	MKTE321/800/WKT-19.3	021 6262
		Standard	MKTE521/206.1	021 6265
		dto., UV/ozone-resistant	MKTE521/206.1/WKT-19.4	021 6266
		Silicone	MKTE521/206.1/WKT-19.3	021 6267
Maintained joystick switches				
4 NC ●—○—● 4 NO		Standard	MKSE321/404	021 6490
		dto., UV/ozone-resistant	MKSE321/404/WKT-19.4	021 6491
		Silicone	MKSE321/404/WKT-19.3	021 6492
4 NC ●—○—● 4 NC		Standard	MKSE321/800	021 6495
		dto., UV/ozone-resistant	MKSE321/800/WKT-19.4	021 6496
		Silicone	MKSE321/800/WKT-19.3	021 6497
		Standard	MKSE521/206.1	021 6600
		dto., UV/ozone-resistant	MKSE521/206.1/WKT-19.4	021 6601
		Silicone	MKSE521/206.1/WKT-19.3	021 6602

○ Position of reset; ◀/▶ momentary action position; ● latching position; NO = normally open contact; NC = normally closed contact

Spring-return joystick switches with analog output

- For installation diameter 22.3 mm
- Design without blocking ring to protect against unintentional actuation
- Devices with analog output



Cross references:

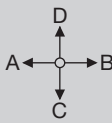

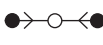
- Functional description: see pages 2 and 4 and following pages
- Sealing bellows: see page 3
- Specifications: see page 64
- Terminal markings: see page 7
- Assembly information: see page 9
- Spare parts: see page 62

Additional information:

- Flat plug connections not possible

Options (on request):

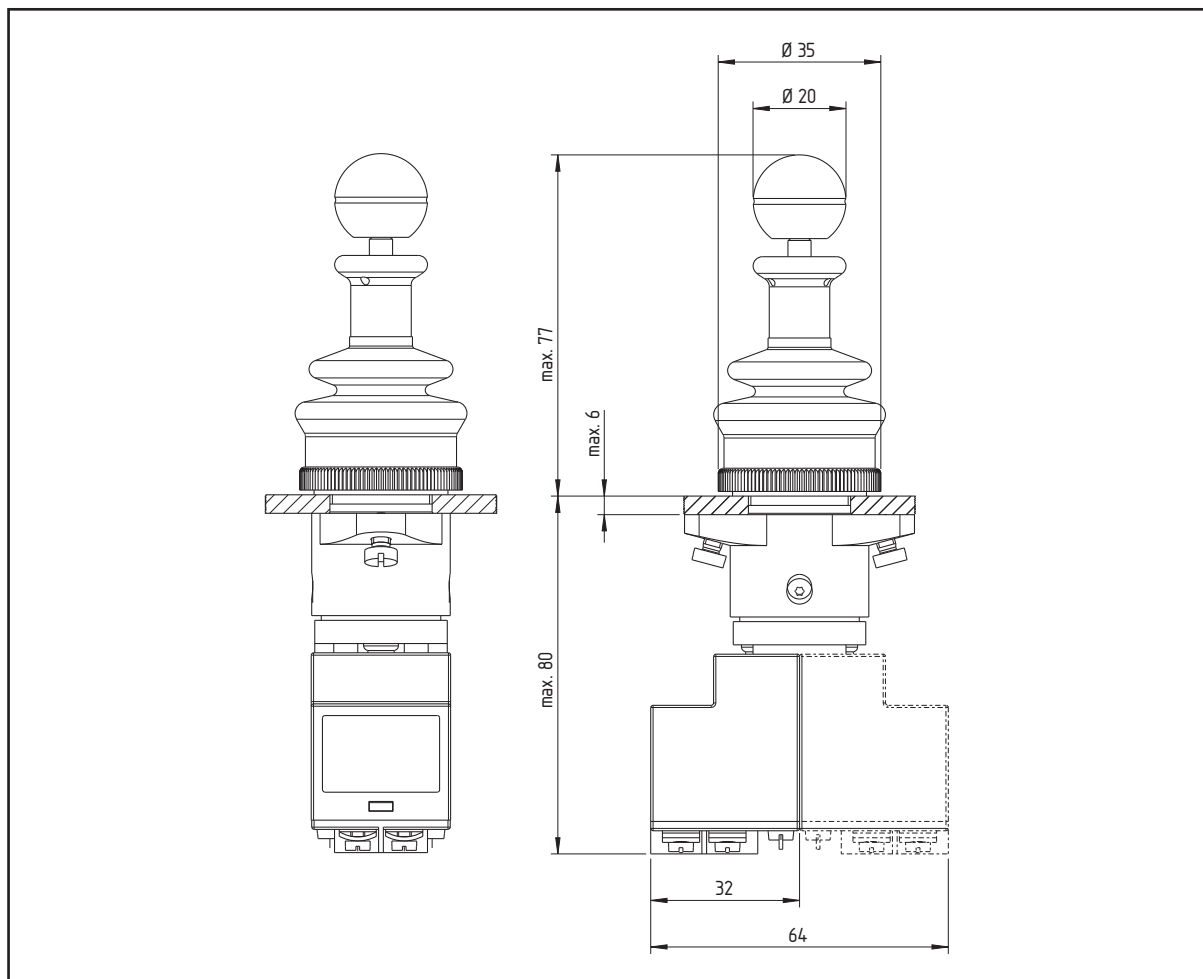
- Other actuator (instead of the ball)
- Other sealing bellows
- 1 x switching signal (instead of 1 x analog signal)

Switching position, quantity, contacts		Sealing bellows	Connection technology Screw terminals	
			Form designation	Order number
Spring-return joystick switches				
1 x 0.7-10 VDC		UV/ozone-resistant (WKT-19.4)	MKTA22/EO24AK	021 6810
1 x 0.7-10 VDC		UV/ozone-resistant (WKT-19.4)	MKTC32/EO24AK	021 6815

○ Position of reset; <●/●> momentary action position; ● latching position

Spring-return joystick switches with analog output

- For installation diameter 22.3 mm
- Design with blocking ring to protect against unintentional actuation
- Devices with analog output



Cross references:

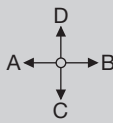

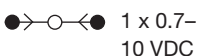
- Functional description: see pages 2 and 4 and following pages
- Sealing bellows: see page 3
- Specifications: see page 64
- Terminal markings: see page 7
- Assembly information: see page 9
- Spare parts: see page 62

Additional information:

- Flat plug connections not possible

Options (on request):

- Other actuator (instead of the ball)
- Sealing bellows made of NBR and silicone (thin-walled)
- 1 x switching signal (instead of 1 x analog signal)

Switching position, quantity, contacts		Sealing bellows	Connection technology Screw terminals	
			Form designation	Order number
Spring-return joystick switches				
1 x 0.7-10 VDC		UV/ozone-resistant (WKT-19.4)	MKTA221/EO24AK	021 6820
1 x 0.7-10 VDC		UV/ozone-resistant (WKT-19.4)	MKTC321/EO24AK	021 6825

○ Position of reset; <●/●> momentary action position; ● latching position