

# Miniature Slide Switches



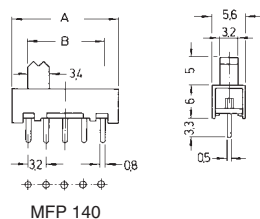
## Specifications:

|                        |                                                 |
|------------------------|-------------------------------------------------|
| Contact rating:        | 30 V DC, 350 mA                                 |
| Contact resistance:    | < 20 mΩ                                         |
| Insulation resistance: | > 100 MΩ at 500 V DC                            |
| Dielectric strength:   | 500 V, 50 Hz for the duration of 1 minute       |
| Operating temperature: | – 20° to + 85° C                                |
| Mechanical life:       | minimum 10 000 operations                       |
| Contacts:              | copper alloy, silver-plated over nickel barrier |
| Contact timing:        | non-shorting                                    |
| Slide colour:          | black, further colours on request               |
| Soldering conditions:  | auto-soldering – max.: 3 sec, 260° C ± 5° C     |

| Models: | Operating positions | Length (mm) |   |
|---------|---------------------|-------------|---|
|         |                     | A           | B |

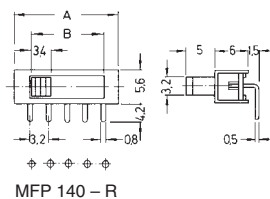
|         |   |      |      |
|---------|---|------|------|
| MFP 120 | 2 | 11,0 | 6,6  |
| MFP 130 | 3 | 15,0 | 10,0 |
| MFP 140 | 4 | 18,2 | 13,2 |
| MFP 150 | 5 | 21,4 | 16,4 |

1 2 3 4 5



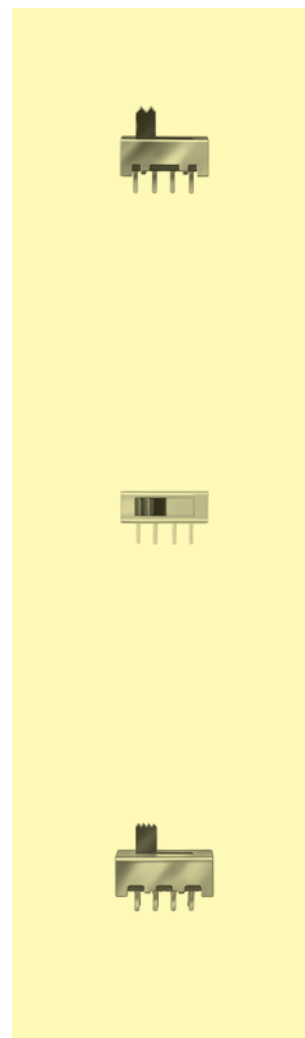
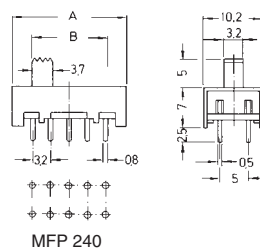
|             |   |      |      |
|-------------|---|------|------|
| MFP 120 – R | 2 | 11,0 | 6,6  |
| MFP 130 – R | 3 | 15,0 | 10,0 |
| MFP 140 – R | 4 | 18,2 | 13,2 |
| MFP 150 – R | 5 | 21,4 | 16,4 |

1 2 3 4 5



|         |   |      |      |
|---------|---|------|------|
| MFP 220 | 2 | 13,6 | 6,9  |
| MFP 230 | 3 | 16,8 | 10,1 |
| MFP 240 | 4 | 20,0 | 13,3 |
| MFP 250 | 5 | 23,2 | 16,5 |
| MFP 260 | 6 | 26,4 | 19,7 |

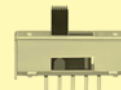
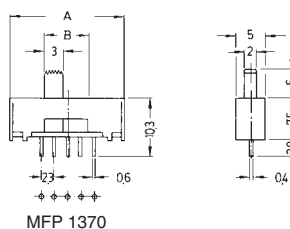
1 2 3 4 5 6



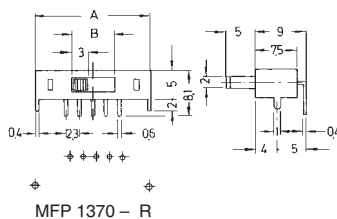


|                        |                                                 |
|------------------------|-------------------------------------------------|
| Contact rating:        | 30 V DC, 350 mA                                 |
| Contact resistance:    | < 25 mΩ                                         |
| Insulation resistance: | > 100 MΩ at 500 V DC                            |
| Dielectric strength:   | 500 V, 50 Hz for the duration of 1 minute       |
| Operating temperature: | – 20° to + 85° C                                |
| Mechanical life:       | minimum 10 000 operations                       |
| Contacts:              | copper alloy, silver-plated over nickel barrier |
| Contact timing:        | non-shorting                                    |
| Slide colour:          | black, further colours on request               |
| Soldering conditions:  | auto-soldering – max.: 10 sec, 260° C           |

|          |   |                                                                                     |      |      |
|----------|---|-------------------------------------------------------------------------------------|------|------|
| MFP 1370 | 3 |  | 20,0 | 7,6  |
| MFP 1470 | 4 |  | 20,0 | 9,9  |
| MFP 1570 | 5 |  | 22,0 | 12,2 |



|              |   |                                                                                     |      |      |
|--------------|---|-------------------------------------------------------------------------------------|------|------|
| MFP 1370 – R | 3 |  | 20,0 | 7,6  |
| MFP 1470 – R | 4 |  | 20,0 | 9,9  |
| MFP 1570 – R | 5 |  | 22,0 | 12,2 |



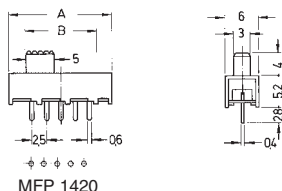
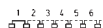
# Miniature Slide Switches

## Specifications:

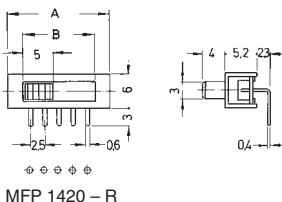
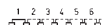
|                        |                                                 |
|------------------------|-------------------------------------------------|
| Contact rating:        | 30 V DC, 350 mA                                 |
| Contact resistance:    | < 20 mΩ                                         |
| Insulation resistance: | > 100 MΩ at 500 V DC                            |
| Dielectric strength:   | 500 V, 50 Hz for the duration of 1 minute       |
| Operating temperature: | – 20° to + 85° C                                |
| Mechanical life:       | minimum 10 000 operations                       |
| Contacts:              | copper alloy, silver-plated over nickel barrier |
| Contact timing:        | shorting (non-shorting only if specified)       |
| Slide colour:          | black, further colours on request               |
| Soldering conditions:  | auto-soldering – max.: 5 sec, 260° C ± 5° C     |

| Models: | Operating positions | Length (mm) |   |
|---------|---------------------|-------------|---|
|         |                     | A           | B |

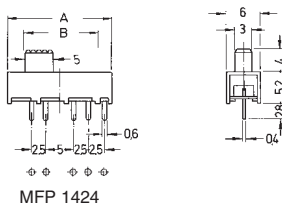
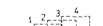
|          |   |      |      |
|----------|---|------|------|
| MFP 1220 | 2 | 13,0 | 7,5  |
| MFP 1320 | 3 | 15,5 | 10,0 |
| MFP 1420 | 4 | 18,0 | 12,5 |
| MFP 1520 | 5 | 20,5 | 15,0 |
| MFP 1620 | 6 | 23,0 | 17,5 |



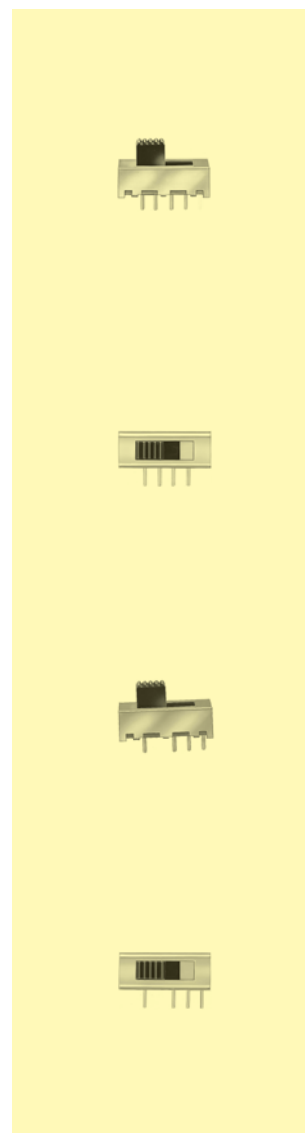
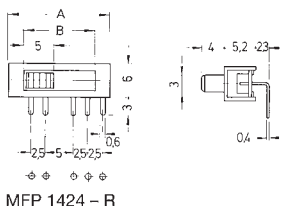
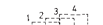
|              |   |      |      |
|--------------|---|------|------|
| MFP 1220 – R | 2 | 13,0 | 7,5  |
| MFP 1320 – R | 3 | 15,5 | 10,0 |
| MFP 1420 – R | 4 | 18,0 | 12,5 |
| MFP 1520 – R | 5 | 20,5 | 15,0 |
| MFP 1620 – R | 6 | 23,0 | 17,5 |



|          |   |      |      |
|----------|---|------|------|
| MFP 1323 | 3 | 15,5 | 10,0 |
| MFP 1424 | 4 | 18,0 | 12,5 |



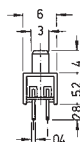
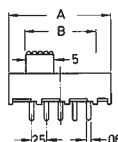
|              |   |      |      |
|--------------|---|------|------|
| MFP 1323 – R | 3 | 15,5 | 10,0 |
| MFP 1424 – R | 4 | 18,0 | 12,5 |



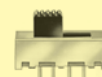


| Models: | Operating positions | Length (mm) |   |
|---------|---------------------|-------------|---|
|         |                     | A           | B |

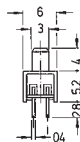
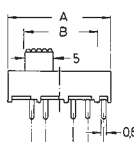
|          |   |                         |      |      |
|----------|---|-------------------------|------|------|
| MFP 2220 | 2 |                         | 13,0 | 7,5  |
| MFP 2320 | 3 |                         | 15,5 | 10,0 |
| MFP 2420 | 4 | 1 2 3 4 5 6<br>♣♠♣♠♣♠♣♠ | 18,0 | 12,5 |
| MFP 2520 | 5 | ♣♣♣♣♣♣♣♣                | 20,5 | 15,0 |
| MFP 2620 | 6 |                         | 23,0 | 17,5 |



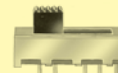
MFP 2420



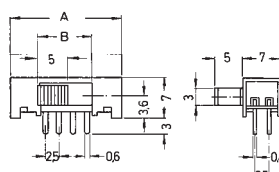
|          |   |                                                                                   |      |      |
|----------|---|-----------------------------------------------------------------------------------|------|------|
| MFP 2323 | 3 |  | 16,0 | 10,0 |
| MFP 2424 | 4 |  | 18,0 | 12,5 |



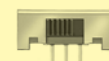
MFP 2424



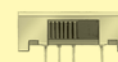
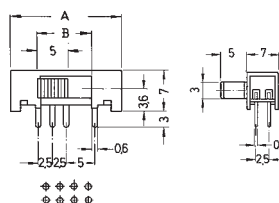
|              |   |                                                                                     |      |     |
|--------------|---|-------------------------------------------------------------------------------------|------|-----|
| MFP 2220 – R | 2 |  | 17,0 | 6,5 |
| MFP 2320 – R | 3 |  | 19,5 | 9,0 |



MFP 2320 – R



|              |   |                                                                                     |      |     |
|--------------|---|-------------------------------------------------------------------------------------|------|-----|
| MFP 2323 – R | 3 |  | 19,5 | 9,0 |
|--------------|---|-------------------------------------------------------------------------------------|------|-----|



# Miniature Slide Switches

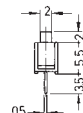
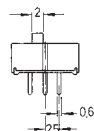
**Specifications:** see page 102

**Material:** plastic housing, terminals sealed

**Models:** Switching functions

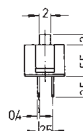
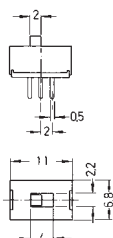
MFP 161 D

on on



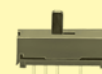
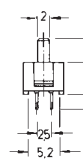
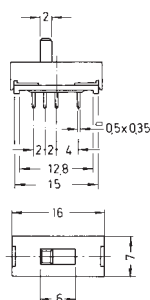
MFP 261 N

on on



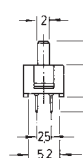
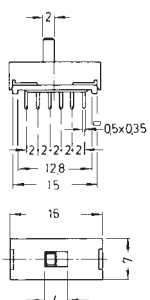
MFP 263 P

on on on



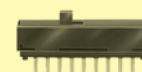
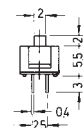
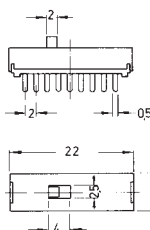
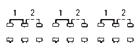
MFP 461 N  
non-shorting

on on



MFP 661 N

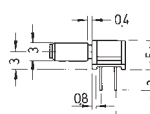
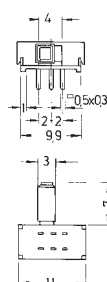
on on



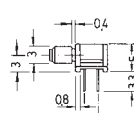
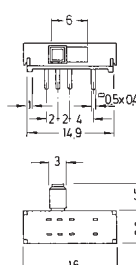


Material: plastic housing, terminals sealed

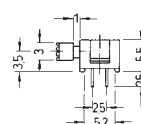
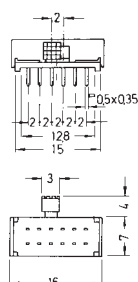
MFP 261 N – RA      on      on



MFP 263 P – RA      on on on



MFP 461 N – RA      on      on  
non-shorting



# Miniature Slide Switches

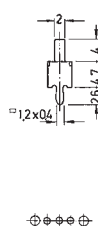
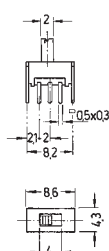
## Specifications:

|                        |                                                 |
|------------------------|-------------------------------------------------|
| Contact rating:        | 12 V DC, 100 mA                                 |
| Contact resistance:    | < 20 mΩ                                         |
| Insulation resistance: | > 100 MΩ at 500 V DC                            |
| Dielectric strength:   | 500 V, 50 Hz for the duration of 1 minute       |
| Operating temperature: | – 20° to + 85° C                                |
| Mechanical life:       | minimum 10 000 operations                       |
| Contacts:              | copper alloy, silver-plated over nickel barrier |
| Slide colour:          | black, further colours on request               |
| Soldering conditions:  | auto-soldering – max.: 5 sec, 260° C ± 5° C     |

## Models: Switching functions

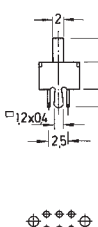
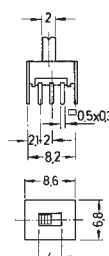
MFP 113 D  
non-shorting

on on



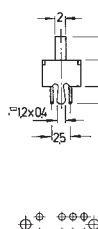
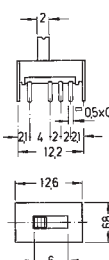
MFP 213 N  
non-shorting

on on



MFP 213 P  
shorting

on on on





|                        |                                                 |
|------------------------|-------------------------------------------------|
| Contact rating:        | 12 V DC, 100 mA                                 |
| Contact resistance:    | < 20 mΩ                                         |
| Insulation resistance: | > 100 MΩ at 500 V DC                            |
| Dielectric strength:   | 500 V, 50 Hz for the duration of 1 minute       |
| Operating temperature: | – 20° to + 85° C                                |
| Mechanical life:       | minimum 10 000 operations                       |
| Contacts:              | copper alloy, silver-plated over nickel barrier |
| Slide colour:          | black, further colours on request               |
| Soldering conditions:  | auto-soldering – max.: 5 sec, 260° C ± 5° C     |

MFP 113 D – RA on on  
non-shorting

[illegible]

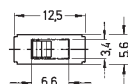
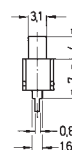
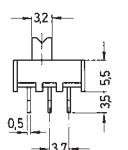
# Miniature Slide Switches

## Specifications:

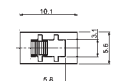
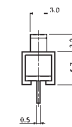
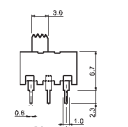
|                        |                                                 |
|------------------------|-------------------------------------------------|
| Contact rating:        | 30 V DC, 350 mA                                 |
| Contact resistance:    | < 20 mΩ                                         |
| Insulation resistance: | > 100 MΩ at 500 V DC                            |
| Dielectric strength:   | 500 V, 50 Hz for the duration of 1 minute       |
| Operating temperature: | – 20° to + 85° C                                |
| Mechanical life:       | minimum 10 000 operations                       |
| Contacts:              | copper alloy, silver-plated over nickel barrier |
| Contact timing:        | non-shorting                                    |
| Slide colour:          | black, further colours on request               |
| Soldering conditions:  | auto-soldering – max.: 5 sec, 260° C ± 5° C     |

## Models: Switching functions

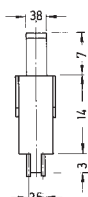
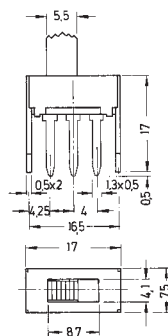
MFP 102 D on on



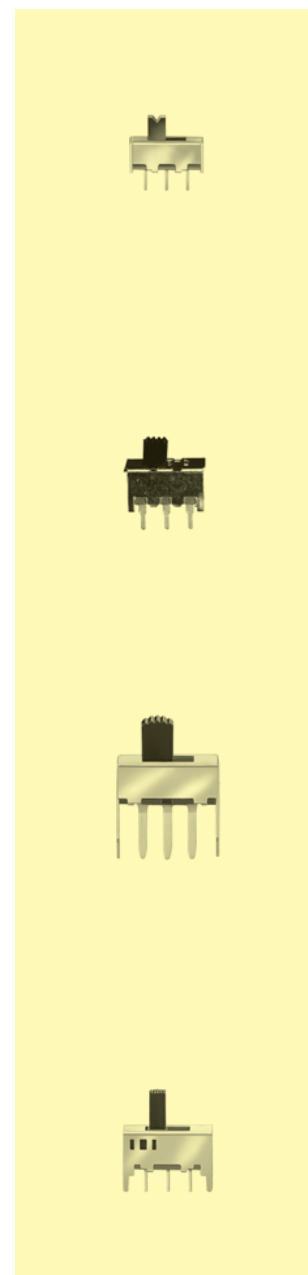
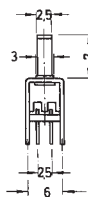
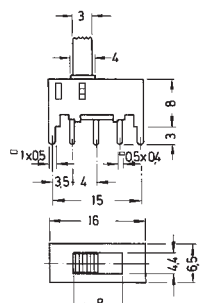
MFP 191 D on on



MFP 201 N on on



MFP 211 N on on





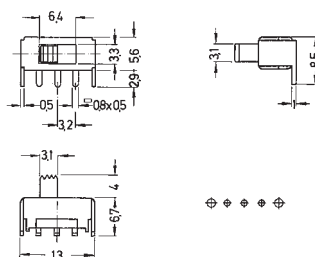
# Miniature Slide Switches

## Specifications:

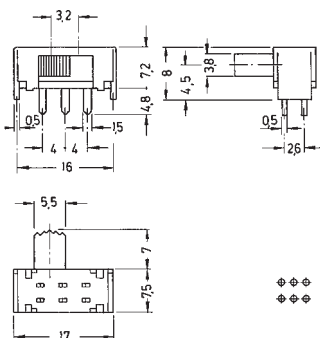
|                        |                                                    |
|------------------------|----------------------------------------------------|
| Contact rating:        | 30 V DC, 350 mA                                    |
| Contact resistance:    | < 20 mΩ                                            |
| Insulation resistance: | > 100 MΩ at 500 V DC; MFPP 130 – RA: 250 V DC      |
| Dielectric strength:   | 500 V, 50 Hz for the duration of 1 minute          |
| Operating temperature: | – 20° to + 85° C                                   |
| Mechanical life:       | minimum 10 000 operations; MFPP 130 – RA > 100 000 |
| Contacts:              | copper alloy, silver-plated over nickel barrier    |
| Slide colour:          | black, further colours on request                  |
| Soldering conditions:  | auto-soldering – max.: 5 sec, 260° C ± 5° C        |

## Models: Switching functions

MFP 121 D – RA on on non-shorting

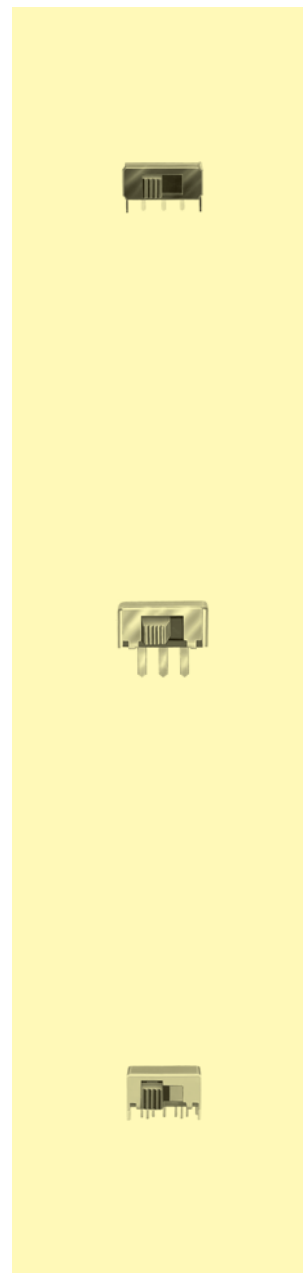
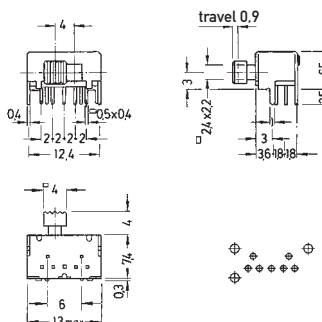


MFP 201 N – RA on on non-shorting



## Miniature Slide Switches/ Pushbutton Switches

MFPP 130 – RA on on on



# Miniature Slide Switches

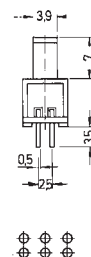
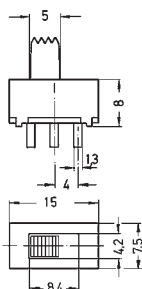
## Specifications:

|                        |                                                 |
|------------------------|-------------------------------------------------|
| Contact rating:        | 30 V DC, 350 mA                                 |
| Contact resistance:    | < 20 mΩ                                         |
| Insulation resistance: | > 100 MΩ at 500 V DC                            |
| Dielectric strength:   | 500 V, 50 Hz for the duration of 1 minute       |
| Operating temperature: | – 20° to + 85° C                                |
| Mechanical life:       | minimum 10 000 operations                       |
| Contacts:              | copper alloy, silver-plated over nickel barrier |
| Slide colour:          | black, further colours on request               |
| Soldering conditions:  | auto-soldering – max.: 5 sec, 260° C ± 5° C     |

## Models: Switching functions

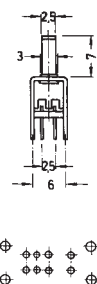
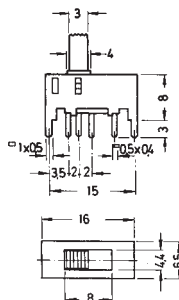
MFP 221 N  
non-shorting

on on



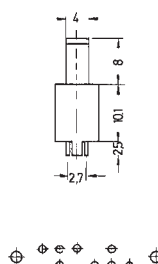
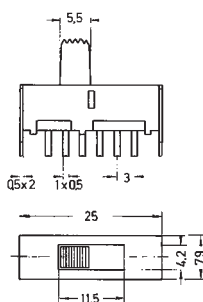
MFP 223 P  
shorting

on on on



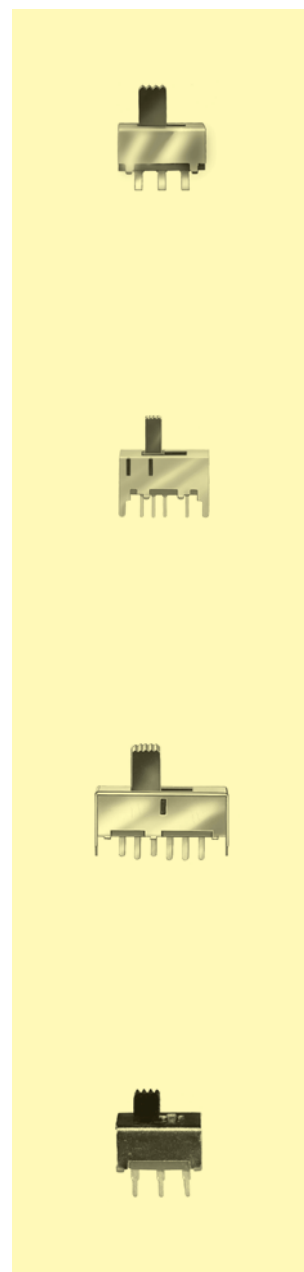
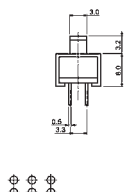
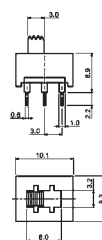
MFP 231 P  
shorting

on on on



MFP 291 N  
non-shorting

on on



## Specifications:

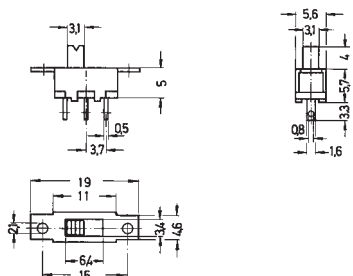
|                        |                                                 |
|------------------------|-------------------------------------------------|
| Contact rating:        | 30 V DC, 350 mA                                 |
| Contact resistance:    | < 20 mΩ                                         |
| Insulation resistance: | > 100 MΩ at 500 V DC                            |
| Dielectric strength:   | 500 V, 50 Hz for the duration of 1 minute       |
| Operating temperature: | – 20° to + 85° C                                |
| Mechanical life:       | minimum 10 000 operations                       |
| Contacts:              | copper alloy, silver-plated over nickel barrier |
| Slide colour:          | black, further colours on request               |
| Soldering conditions:  | hand-soldering – max.: 5 sec, 270° C            |

## Models:

Switching  
functions

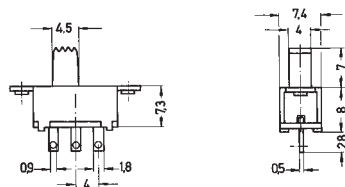
MFS 121 D  
non-shorting

on on



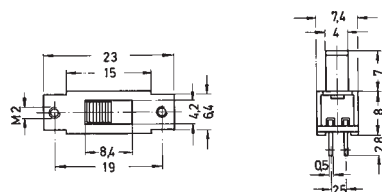
MFS 131 D  
non-shorting

on on



MFS 201 N  
non-shorting

on on



MFS 231 P  
shorting

on on on

