

# 5/2-directional valve, Series 581, size 3

- ISO 5599-1
- ISO 3
- 5/2
- With spring return
- single solenoid
- $Q_n = 4800 \text{ l/min}$
- Compressed air connection output Base plate ISO 5599-1
- Electrical connection Plug, Form B, industry
- Manual override with detent



|                                  |                             |
|----------------------------------|-----------------------------|
| Type                             | Spool valve                 |
| Sealing principle                | Soft sealing                |
| Blocking principle               | Single base plate principle |
| Connection type                  | Plate connection            |
| Standards                        | ISO 5599-1, ISO 3           |
| Working pressure min./max.       | See table below             |
| Control pressure min./max.       | 3 ... 10 bar                |
| Ambient temperature min./max.    | -15 ... 50 °C               |
| Medium temperature min./max.     | -15 ... 50 °C               |
| Medium                           | Compressed air              |
| Max. particle size               | 50 µm                       |
| Oil content of compressed air    | 0 ... 5 mg/m <sup>3</sup>   |
| Nominal flow $Q_n$               | 4800 l/min                  |
| Flow conductance C               | 18,9 l/(s*bar)              |
| Protection class with connection | IP65                        |
| Duty cycle                       | 100 %                       |
| Typ. switch-on time              | 19 ms                       |
| Typ. switch-off time             | 71 ms                       |
| Mounting screw                   | with hexagon socket         |
| Mounting screw tightening torque | 10 Nm                       |
| Weight                           | 0,93 kg                     |

## Technical data

| Part No.   |                                                                                     | MO                                                                                  | Operational voltage DC | Operational voltage AC 50 Hz |
|------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------------------------------|
| 5813110500 |    |    | 12 V                   | -                            |
| 5813110200 |    |    | -                      | 24 V                         |
| 5813110100 |    |    | 24 V                   | -                            |
| 5813110600 |    |    | 48 V                   | -                            |
| 5813110300 |    |    | -                      | -                            |
| 5813110400 |    |    | -                      | 230 V                        |
| 5813110000 |    |    | -                      | -                            |
| 5813111500 |    |    | 12 V                   | -                            |
| 5813111200 |    |    | -                      | 24 V                         |
| 5813111100 |    |    | 24 V                   | -                            |
| 5813111600 |    |    | 48 V                   | -                            |
| 5813111300 |    |    | -                      | -                            |
| 5813111400 |    |    | -                      | 230 V                        |
| 5813111000 |   |   | -                      | -                            |
| 5813112500 |  |  | 12 V                   | -                            |
| 5813112200 |  |  | -                      | 24 V                         |
| 5813112100 |  |  | 24 V                   | -                            |
| 5813112600 |  |  | 48 V                   | -                            |
| 5813112300 |  |  | -                      | -                            |
| 5813112400 |  |  | -                      | 230 V                        |
| 5813112000 |  |  | -                      | -                            |
| 5813113500 |  |  | 12 V                   | -                            |
| 5813113200 |  |  | -                      | 24 V                         |
| 5813113100 |  |  | 24 V                   | -                            |
| 5813113600 |  |  | 48 V                   | -                            |
| 5813113300 |  |  | -                      | -                            |
| 5813113400 |  |  | -                      | 230 V                        |
| 5813113000 |  |  | -                      | -                            |

| Part No.   | Operational voltage AC 60 Hz | Voltage tolerance DC | Voltage tolerance AC 50 Hz | Voltage tolerance AC 60 Hz |
|------------|------------------------------|----------------------|----------------------------|----------------------------|
| 5813110500 | -                            | -10% / +10%          | -                          | -                          |
| 5813110200 | -                            | -                    | -10% / +10%                | -                          |
| 5813110100 | -                            | -10% / +10%          | -                          | -                          |
| 5813110600 | -                            | -10% / +10%          | -                          | -                          |
| 5813110300 | 110 V                        | -                    | -                          | -10% / +10%                |
| 5813110400 | -                            | -                    | -10% / +10%                | -                          |
| 5813110000 | -                            | -                    | -                          | -                          |
| 5813111500 | -                            | -10% / +10%          | -                          | -                          |
| 5813111200 | -                            | -                    | -10% / +10%                | -                          |
| 5813111100 | -                            | -10% / +10%          | -                          | -                          |
| 5813111600 | -                            | -10% / +10%          | -                          | -                          |
| 5813111300 | 110 V                        | -                    | -                          | -10% / +10%                |

| Part No.   | Operational voltage<br>AC 60 Hz | Voltage tolerance<br>DC | Voltage tolerance<br>AC 50 Hz | Voltage tolerance<br>AC 60 Hz |
|------------|---------------------------------|-------------------------|-------------------------------|-------------------------------|
| 5813111400 | -                               | -                       | -10% / +10%                   | -                             |
| 5813111000 | -                               | -                       | -10% / +10%                   | -                             |
| 5813112500 | -                               | -10% / +10%             | -                             | -                             |
| 5813112200 | -                               | -                       | -10% / +10%                   | -                             |
| 5813112100 | -                               | -10% / +10%             | -                             | -                             |
| 5813112600 | -                               | -10% / +10%             | -                             | -                             |
| 5813112300 | 110 V                           | -                       | -                             | -10% / +10%                   |
| 5813112400 | -                               | -                       | -10% / +10%                   | -                             |
| 5813112000 | -                               | -                       | -10% / +10%                   | -                             |
| 5813113500 | -                               | -10% / +10%             | -                             | -                             |
| 5813113200 | -                               | -                       | -10% / +10%                   | -                             |
| 5813113100 | -                               | -10% / +10%             | -                             | -                             |
| 5813113600 | -                               | -10% / +10%             | -                             | -                             |
| 5813113300 | 110 V                           | -                       | -                             | -10% / +10%                   |
| 5813113400 | -                               | -                       | -10% / +10%                   | -                             |
| 5813113000 | -                               | -                       | -10% / +10%                   | -                             |

| Part No.   | Power consumption<br>DC | Holding power<br>AC 50 Hz | Holding power<br>AC 60 Hz | Switch-on power<br>AC 50 Hz |
|------------|-------------------------|---------------------------|---------------------------|-----------------------------|
| 5813110500 | 5 W                     | -                         | -                         | -                           |
| 5813110200 | -                       | 8 VA                      | -                         | 10 VA                       |
| 5813110100 | 5 W                     | -                         | -                         | -                           |
| 5813110600 | 5 W                     | -                         | -                         | -                           |
| 5813110300 | -                       | -                         | 8 VA                      | -                           |
| 5813110400 | -                       | 8 VA                      | -                         | 10 VA                       |
| 5813110000 | -                       | -                         | -                         | -                           |
| 5813111500 | 5 W                     | -                         | -                         | -                           |
| 5813111200 | -                       | 8 VA                      | -                         | 10 VA                       |
| 5813111100 | 5 W                     | -                         | -                         | -                           |
| 5813111600 | 5 W                     | -                         | -                         | -                           |
| 5813111300 | -                       | -                         | 8 VA                      | -                           |
| 5813111400 | -                       | 8 VA                      | -                         | 10 VA                       |
| 5813111000 | -                       | -                         | -                         | -                           |
| 5813112500 | 5 W                     | -                         | -                         | -                           |
| 5813112200 | -                       | 8 VA                      | -                         | 10 VA                       |
| 5813112100 | 5 W                     | -                         | -                         | -                           |
| 5813112600 | 5 W                     | -                         | -                         | -                           |
| 5813112300 | -                       | -                         | 8 VA                      | -                           |
| 5813112400 | -                       | 8 VA                      | -                         | 10 VA                       |
| 5813112000 | -                       | -                         | -                         | -                           |
| 5813113500 | 5 W                     | -                         | -                         | -                           |
| 5813113200 | -                       | 8 VA                      | -                         | 10 VA                       |
| 5813113100 | 5 W                     | -                         | -                         | -                           |
| 5813113600 | 5 W                     | -                         | -                         | -                           |
| 5813113300 | -                       | -                         | 8 VA                      | -                           |
| 5813113400 | -                       | 8 VA                      | -                         | 10 VA                       |

| Part No.   | Power consumption<br>DC | Holding power<br>AC 50 Hz | Holding power<br>AC 60 Hz | Switch-on power<br>AC 50 Hz |
|------------|-------------------------|---------------------------|---------------------------|-----------------------------|
| 5813113000 | -                       | -                         | -                         | -                           |

| Part No.   | Switch-on power<br>AC 60 Hz | Pilot    | Working pressure min./max. | Electrical connection<br>Pilot valve |
|------------|-----------------------------|----------|----------------------------|--------------------------------------|
| 5813110500 | -                           | Internal | 3 ... 10 bar               | Plug Form B, industry                |
| 5813110200 | -                           | Internal | 3 ... 10 bar               | Plug Form B, industry                |
| 5813110100 | -                           | Internal | 3 ... 10 bar               | Plug Form B, industry                |
| 5813110600 | -                           | Internal | 3 ... 10 bar               | Plug Form B, industry                |
| 5813110300 | 10 VA                       | Internal | 3 ... 10 bar               | Plug Form B, industry                |
| 5813110400 | -                           | Internal | 3 ... 10 bar               | Plug Form B, industry                |
| 5813110000 | -                           | Internal | 3 ... 10 bar               | Plug Form B, industry                |
| 5813111500 | -                           | Internal | 3 ... 10 bar               | Plug Form B, industry                |
| 5813111200 | -                           | Internal | 3 ... 10 bar               | Plug Form B, industry                |
| 5813111100 | -                           | Internal | 3 ... 10 bar               | Plug Form B, industry                |
| 5813111600 | -                           | Internal | 3 ... 10 bar               | Plug Form B, industry                |
| 5813111300 | 10 VA                       | Internal | 3 ... 10 bar               | Plug Form B, industry                |
| 5813111400 | -                           | Internal | 3 ... 10 bar               | Plug Form B, industry                |
| 5813111000 | -                           | Internal | 3 ... 10 bar               | Plug Form B, industry                |
| 5813112500 | -                           | External | -0,95 ... 10 bar           | Plug Form B, industry                |
| 5813112200 | -                           | External | -0,95 ... 10 bar           | Plug Form B, industry                |
| 5813112100 | -                           | External | -0,95 ... 10 bar           | Plug Form B, industry                |
| 5813112600 | -                           | External | -0,95 ... 10 bar           | Plug Form B, industry                |
| 5813112300 | 10 VA                       | External | -0,95 ... 10 bar           | Plug Form B, industry                |
| 5813112400 | -                           | External | -0,95 ... 10 bar           | Plug Form B, industry                |
| 5813112000 | -                           | External | -0,95 ... 10 bar           | Plug Form B, industry                |
| 5813113500 | -                           | External | -0,95 ... 10 bar           | Plug Form B, industry                |
| 5813113200 | -                           | External | -0,95 ... 10 bar           | Plug Form B, industry                |
| 5813113100 | -                           | External | -0,95 ... 10 bar           | Plug Form B, industry                |
| 5813113600 | -                           | External | -0,95 ... 10 bar           | Plug Form B, industry                |
| 5813113300 | 10 VA                       | External | -0,95 ... 10 bar           | Plug Form B, industry                |
| 5813113400 | -                           | External | -0,95 ... 10 bar           | Plug Form B, industry                |
| 5813113000 | -                           | External | -0,95 ... 10 bar           | Plug Form B, industry                |

| Part No.   | basic valve with electrical connector | Throttle      |
|------------|---------------------------------------|---------------|
| 5813110500 | -                                     | -             |
| 5813110200 | -                                     | -             |
| 5813110100 | -                                     | -             |
| 5813110600 | -                                     | -             |
| 5813110300 | -                                     | -             |
| 5813110400 | -                                     | -             |
| 5813110000 | Basic valve without coil              | -             |
| 5813111500 | -                                     | with throttle |
| 5813111200 | -                                     | with throttle |
| 5813111100 | -                                     | with throttle |
| 5813111600 | -                                     | with throttle |
| 5813111300 | -                                     | with throttle |

| Part No.   | basic valve with electrical connector | Throttle      |
|------------|---------------------------------------|---------------|
| 5813111400 | -                                     | with throttle |
| 5813111000 | Basic valve without coil              | with throttle |
| 5813112500 | -                                     | -             |
| 5813112200 | -                                     | -             |
| 5813112100 | -                                     | -             |
| 5813112600 | -                                     | -             |
| 5813112300 | -                                     | -             |
| 5813112400 | -                                     | -             |
| 5813112000 | Basic valve without coil              | -             |
| 5813113500 | -                                     | with throttle |
| 5813113200 | -                                     | with throttle |
| 5813113100 | -                                     | with throttle |
| 5813113600 | -                                     | with throttle |
| 5813113300 | -                                     | with throttle |
| 5813113400 | -                                     | with throttle |
| 5813113000 | Basic valve without coil              | with throttle |

Connection 12 must be connected with atmospheres, Nominal flow Q<sub>n</sub> at 6 bar and  $\Delta p = 1$  bar, MO = Manual override

## Technical information

The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

The oil content of compressed air must remain constant during the life cycle.

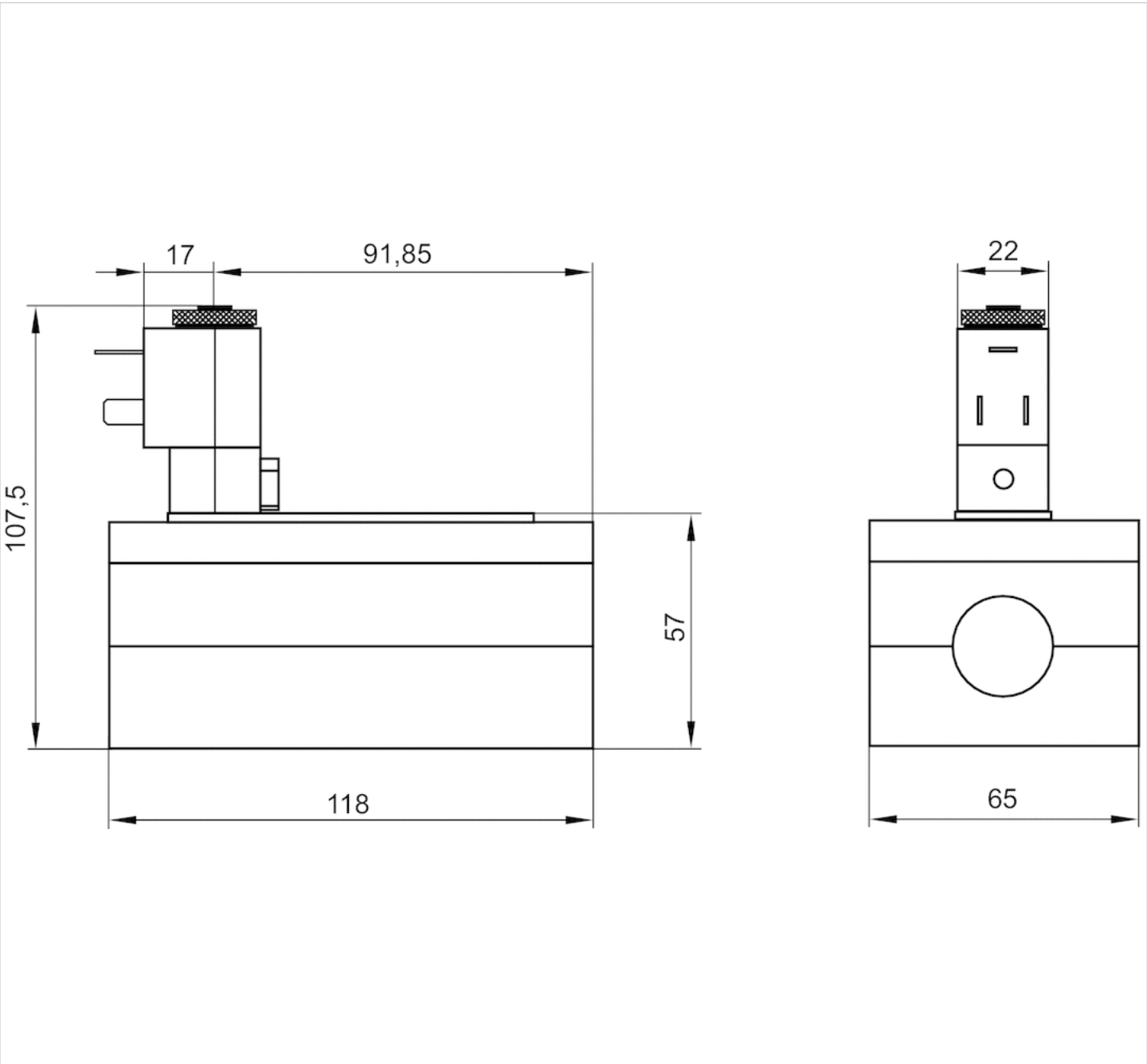
Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in the MediaCentre).

## Technical information

|         |                                |
|---------|--------------------------------|
| Housing | Aluminum                       |
| Seals   | Acrylonitrile butadiene rubber |

Dimensions

Dimensions



The pilot valves can be loosened and turned through 180°.

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