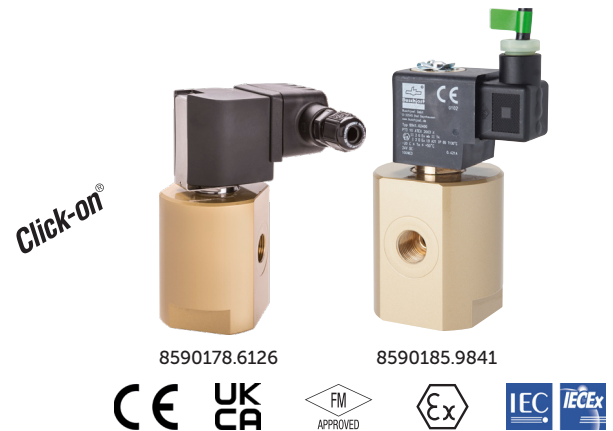


## 83770 2/2-way piston valves

- Port size:  
DN 8, G1/4 ... 1/2
- High pressure solenoid valves
- Solenoid interchangeable without tools (Click-on®)
- Further customized solutions available upon request, e.g. valve with integrated check valve
- International approvals



### Technical features

**Medium:**  
For compressed natural gas (CNG), on request also for water

**Switching function:**  
Normally closed

**Operation:**  
Indirectly solenoid actuated

**Mounting position:**  
Optional, preferably solenoid vertical on top

**Flow direction:**  
Determined

**Port size:**  
G1/4, G3/8, G1/2

**Operating pressure:**  
10 ... 320 bar (145 ... 4641 psi)

**Leakage:**  
Internal Leakage acc. to DIN EN 12266-1 Leakage "C"  
External Leakage acc. to DIN EN 12266-1 Leakage "A"

**Fluid temperature:**  
Solenoid 984x: –20 ... +60°C (–4 ... +140°F)  
Solenoid 6126: –20 ... +60°C (–4 ... +140°F)  
Solenoid 428x: –40 ... +50°C (–40 ... +122°F)  
Solenoid 468x: –40 ... +50°C (–40 ... +122°F)  
Solenoid 382x: –20 ... +60°C (–4 ... +140°F)

**Ambient temperature:**  
Solenoid 984x: –20 ... +50°C (–4 ... +122°F)  
Solenoid 6126: –20 ... +40°C (–4 ... +104°F)  
Solenoid 428x: –40 ... +50°C (–40 ... +122°F) T4; T5 see page 2  
Solenoid 468x: –40 ... +50°C (–40 ... +122°F) T4; T5 see page 2  
Solenoid 382x: –20 ... +60°C (–4 ... +140°F)

**Material:**  
Body: Brass  
Seat seal: Polymer  
Internal parts: Brass, Stainless steel, Polymer

Installation of a 40 µm filter in front of the valve is required!

### Technical data – standard models

| Port size | Orifice<br>(mm) | Flow kv value *1)<br>(m³/h) | Operating pressure *2) *3)<br>(bar) (psi) |              | Weight<br>(kg)              | Model<br>Solenoid in V d.c./a.c.                                                                           |
|-----------|-----------------|-----------------------------|-------------------------------------------|--------------|-----------------------------|------------------------------------------------------------------------------------------------------------|
| G1/4      | 8               | 1,2                         | 10 ... 320                                | 145 ... 4641 | 2,2<br>2,3<br>-<br>-<br>-   | 8590371.984x.xxxxx<br>8590371.6126.xxxxx<br>8590371.428x.xxxxx<br>8590371.468x.xxxxx<br>8590371.382x.xxxxx |
| G3/8      | 8               | 1,2                         | 10 ... 320                                | 145 ... 4641 | 2,2                         | 8590185.984x.xxxxx                                                                                         |
| G3/8      | 8               | 1,2                         | 10 ... 320                                | 145 ... 4641 | 2,3<br>2,3<br>2,5<br>2,2    | 8590178.6126.xxxxx<br>8590178.428x.xxxxx<br>8590178.468x.xxxxx<br>8590178.382x.xxxxx                       |
| G1/2      | 8               | 1,2                         | 10 ... 320                                | 145 ... 4641 | 2,2<br>2,3<br>2,5<br>-<br>- | 8590337.984x.xxxxx<br>8590337.6126.xxxxx<br>8590337.428x.xxxxx<br>8590337.468x.xxxxx<br>8590337.382x.xxxxx |

xxxxx Please insert voltage and frequency codes

\*1) Cv-value (US) ≈ kv value x 1.2

\*2) Static test pressure PT = 480 bar

\*3) Max. Operating pressure = 320 bar

According to PED 2014/68/EU and ATEX 2014/34/EU!

## Option selector

| Port size | Substitute |
|-----------|------------|
| 1/4       | 371        |
| 3/8       | 185 *4)    |
| 1/2       | 337        |

\*4) Only with Solenoid 9841.xxxxx

8590\*\*\*.\*\*\*.\*\*\*.\*\*\*

| Frequency                                                                                                                                                                                                                                                                                                                                                                                                                                      | Substitute |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| See table frequency codes                                                                                                                                                                                                                                                                                                                                                                                                                      | xx         |
| Voltage                                                                                                                                                                                                                                                                                                                                                                                                                                        | Substitute |
| See voltage codes                                                                                                                                                                                                                                                                                                                                                                                                                              | xxx        |
| Solenoid options                                                                                                                                                                                                                                                                                                                                                                                                                               | Substitute |
| Solenoid with 10 m cable ends<br>Protection class according to<br>- II 2 G Ex mb IIC T4 Gb<br>- II 2 D Ex mb tb IIIC T130°C Db                                                                                                                                                                                                                                                                                                                 | 9845       |
| For d.c. with 1/2 - 14 NPT female thread and 460 mm flying leads<br>Protection class acc. to ANSI/NEMA<br>USA: FM approved (File-No. 2Z2A6.AE)<br>Canada: CSA certified (File-No. LR 57643-6)<br>Solenoids in temperature class T3C (160°C) are useable in Ex-areas (see table Ex-areas)                                                                                                                                                       | 3826       |
| For a.c. with integrated rectifier with 1/2 - 14 NPT female thread and 460 mm flying leads<br>Protection class acc. to ANSI/NEMA<br>USA: FM approved (File-No. 2Z2A6.AE)<br>Canada: CSA certified (File-No. LR 57643-6)<br>Solenoids in temperature class T3C (160°C) are useable in Ex-areas (see table Ex-areas)                                                                                                                             | 3827       |
| Solenoid with terminal box cable<br>Protection class according to<br>- II 2 G Ex eb mb IIC T4/T5 Gb<br>- II 2 D Ex tb IIIC T 130°C Db IP66<br>Ambient temperature:<br>T4 -40 ... +50°C (-40 ... +122°F)<br>T5 -40 ... +40°C (-40 ... +104°F)<br>No screwed cable gland included in scope of delivery! Explosion protection ensured only with Ex screwed cable gland made of plastic! Cable gland limits maximum & minimum ambient temperature. | 428x       |
| Solenoid with terminal box cable gland M20 x 1,5 (cable clamp ø 10 ... 14 mm) 1/2 ... 1/4 NPT (cable clamp ø 7,5 ... 11,9 mm)<br>Protection class according to<br>- II 2 G Ex db mb IIC T4/T5 Gb<br>- II 2 D Ex tb IIIC T 130°C<br>Ambient temperature:<br>T4 -40 ... +50°C (-40 ... +122°F)<br>T5 -40 ... +40°C (-40 ... +104°F)                                                                                                              | 468x       |

## Acc. to ATEX 2014/34/EU

### Actuation solenoids – Technical data and connection type

| Solenoid | Code Voltage | Code Frequency | Voltage    | Frequency    | Power consumption |         | Connection                                                                                  |
|----------|--------------|----------------|------------|--------------|-------------------|---------|---------------------------------------------------------------------------------------------|
|          |              |                |            |              | Inrush            | Holding |                                                                                             |
| 3826     | 024          | 00             | 24 V d.c.  | -            | 13,6 VA           | 13,6 VA | 1/2" Conduit<br>3 connection strands, length 460 mm<br>cable gland 1/2-14 NPT               |
| 3827     | 230          | 49             | 230 V a.c. | 40 ... 60 Hz | 15,4 VA           | 15,4 VA | 1/2" Conduit<br>3 connection strands, length 460 mm<br>cable gland 1/2-14 NPT               |
| 4280     | 024          | 00             | 24 V d.c.  | -            | 11,4 W            | 11,4 W  | cable gland M20 x 1,5<br>Note: A cable gland made from plastic must be chosen during order. |
| 4281     | 230          | 49             | 230 V a.c. | 40 ... 60 Hz | 15,2 VA           | 15,2 VA | cable gland M20 x 1,5<br>Note: A cable gland made from plastic must be chosen during order. |
| 4680     | 024          | 00             | 24 V d.c.  | -            | 11,4 W            | 11,4 W  | connection housing for cables 7,5-11,9 mm<br>cable gland 1/2-14 NPT                         |
| 4681     | 230          | 49             | 230 V a.c. | 40 ... 60 Hz | 15,2 VA           | 15,2 VA | connection housing for cables 7,5-11,9 mm<br>cable gland 1/2-14 NPT                         |
| 4682     | 024          | 00             | 24 V d.c.  | -            | 11,4 W            | 11,4 W  | connection housing for cables 10-14 mm<br>cable gland M20 x 1,5                             |
| 4683     | 230          | 49             | 230 V a.c. | 40 ... 60 Hz | 15,2 VA           | 15,2 VA | connection housing for cables 10-14 mm<br>cable gland M20 x 1,5                             |
| 6126     | 024          | 00             | 24 V d.c.  | -            | 14 W              | 14 W    | connection housing for cables 7-9 mm<br>cable gland M16 x 1,5                               |
| 6126     | 230          | 49             | 230 V a.c. | 40 ... 60 Hz | 16 VA             | 16 VA   | connection housing for cables 7-9 mm<br>cable gland M16 x 1,5                               |
| 9841     | 024          | 00             | 24 V d.c.  | -            | 10,1 W            | 10,1 W  | with 3 m connection cable                                                                   |
| 9844     | 024          | 00             | 24 V d.c.  | -            | 10,1 W            | 10,1 W  | with 5 m connection cable                                                                   |
| 9845     | 024          | 00             | 24 V d.c.  | -            | 10,1 W            | 10,1 W  | with 10 m connection cable                                                                  |
| 9845     | 230          | 59             | 230 V a.c. | 50 ... 60 Hz | 9,2 VA            | 9,2 VA  | with 10 m connection cable                                                                  |

### Electrical details for all solenoid systems

|                  |               |
|------------------|---------------|
| Voltage range    | ±10%          |
| Duty cycle       | 100% ED       |
| Protection class | EN 60529 IP65 |

According to DIN VDE 0580 at a solenoid temperature of +20°C.

At operating state temperature the input power of a coil decreases by up to ca. 30% due to physical reasons.

### ATEX-Identification for solenoid systems

| Solenoid | ATEX category  | EX-protection class                                 |
|----------|----------------|-----------------------------------------------------|
| 428x     | II 2G<br>II 2D | Ex eb mb IIC T4/T5 Gb<br>Ex tb IIIC T 130°C D IP66  |
| 468x     | II 2G<br>II 2D | Ex db mb IIC T4/T5 Gb<br>Ex tb IIIC T130°C/T95°C Db |
| 984x     | II 2G<br>II 2D | Ex mb IIC T4 Gb<br>Ex mb tb IIIC T130°C Db          |
| 6126     | II 2G<br>II 2D | Ex eb mb IIC T4 Gb<br>Ex mb tb IIIB T125°C Db IP66  |

### Solenoid systems with FM approval (USA)

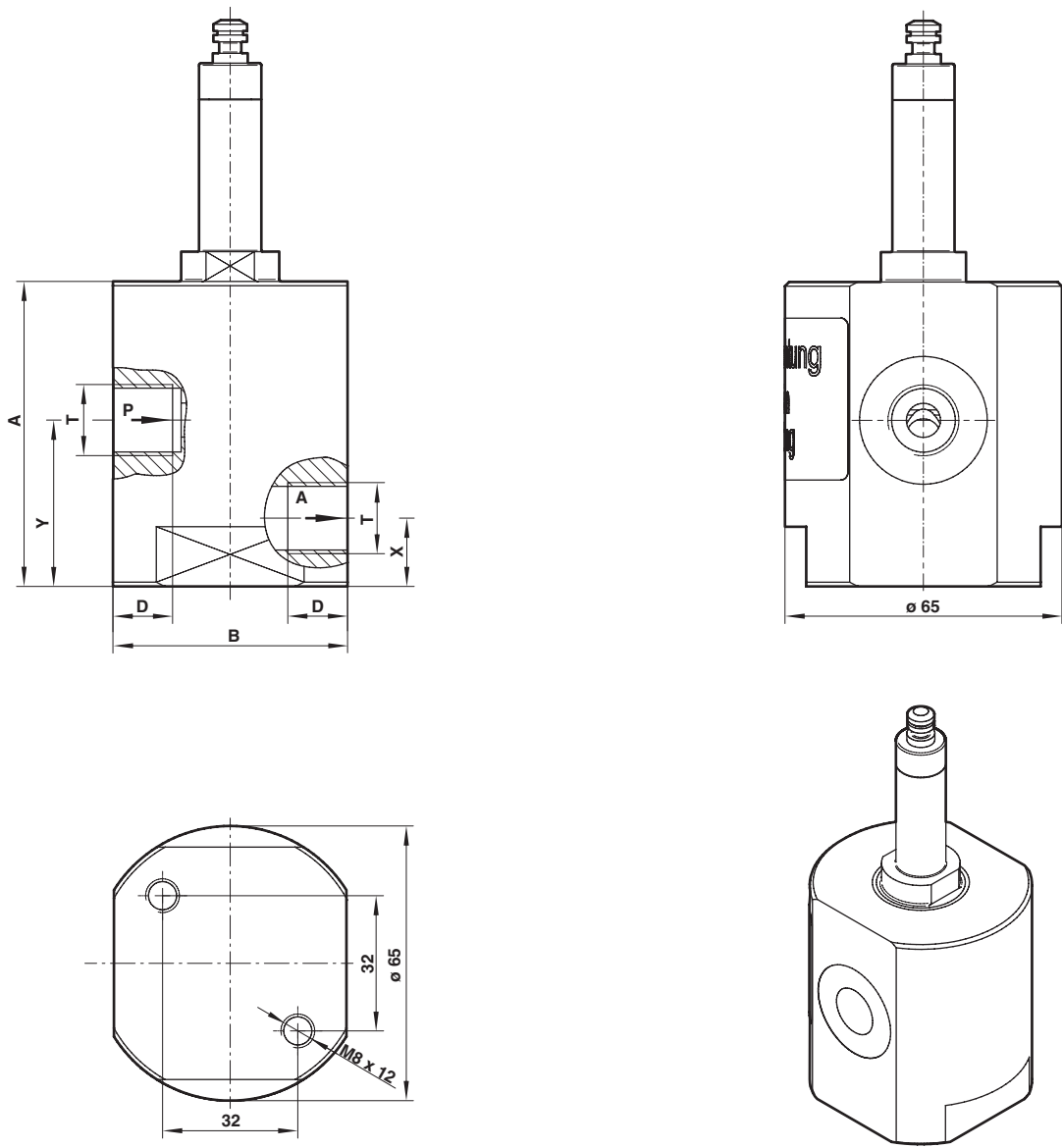
| Magnet | ANSI/NEMA             | FM-Zulassung                    |
|--------|-----------------------|---------------------------------|
| 382x   | 1,3,4,4X,6,6P,7 und 9 | FM approved (File Nr. 2Z2A6.AE) |

### Admissible Ex areas (USA)

| Solenoid 382x   | Class | Divison | Groups  |
|-----------------|-------|---------|---------|
| Gases + fumes   | I     | 1 and 2 | A ... D |
| Dusts           | II    | 1 and 2 | E ... G |
| Fibres + fluffs | III   | 1 and 2 | -       |

Dimensions

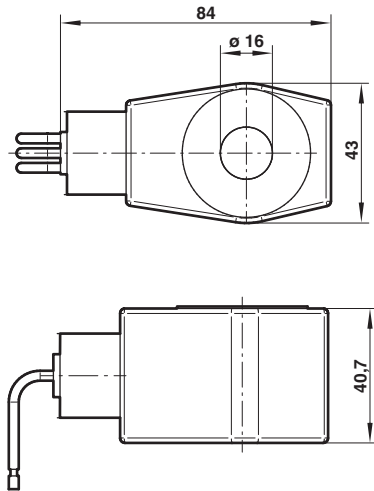
Dimensions in mm  
Projection/first angle



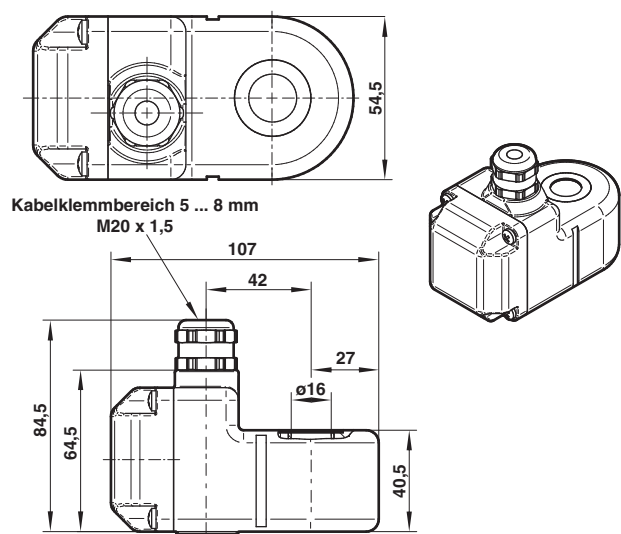
| Port size T | A<br>(Block size) | B<br>(Footage) | D<br>(Depth of thread) | X<br>(Distance from the<br>bottom port A) | Y<br>(Distance from the<br>bottom port P) | Model              |
|-------------|-------------------|----------------|------------------------|-------------------------------------------|-------------------------------------------|--------------------|
| G1/4        | 74,5              | 55             | 13                     | 16                                        | 42                                        | 8590371.xxxx.xxxxx |
| G3/8        | 71,5              | 55             | 14                     | 16                                        | 39                                        | 8590178.6126.xxxxx |
| G3/8        | 71,5              | 55             | 14                     | 16                                        | 39                                        | 8590185.9841.xxxxx |
| G1/2        | 74,5              | 57             | 15                     | 16                                        | 42                                        | 8590337.xxxx.xxxxx |

## Dimensions Solenoids

38xx



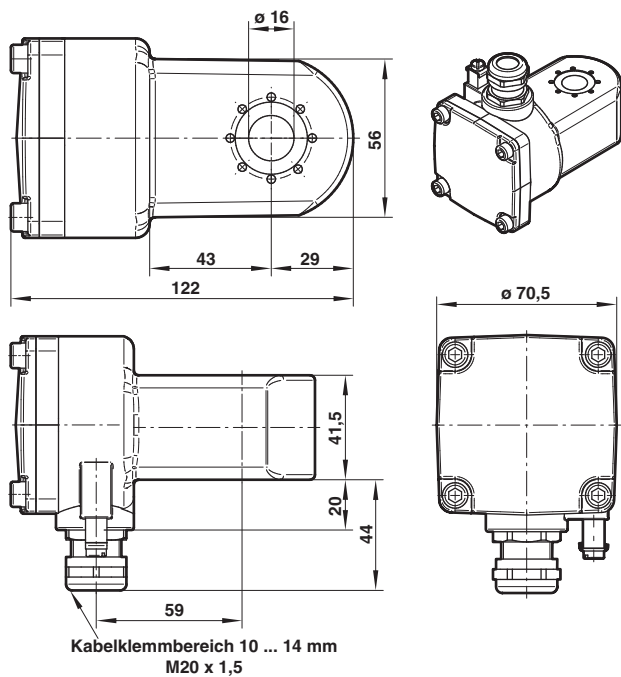
42xx



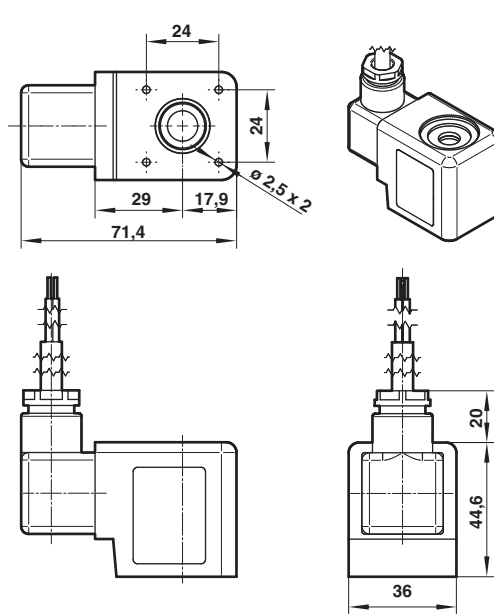
Dimensions in mm  
Projection/first angle



46xx



98xx



6126

