



Braukmann V5004T

Kombi-QM

Pressure Independent Balancing and Control Valve

APPLICATION

The V5004T Kombi-QM is a Pressure Independent Control Valve (PICV). It combines a flow controller and a full stroke, full authority temperature controller in one valve.

Equipped with an actuator Kombi-QM provides a full stroke modulating temperature control.

It is suitable for use in variable and constant flow systems. They may be used as constant flow limiter in constant flow systems (without an actuator) or as a Pressure Independent Control Valve in variable flow systems.

V5004T Kombi-QM is typically used for balancing and temperature control of fan coil units, air handling units, chilled ceilings and one-pipe heating systems.

SPECIAL FEATURES

- Automatic balancing of differential pressure
 - Precise pressure independent flow performance
 - Highest energy saving potential due to efficient energy transfer and minimised pump speed
 - Integrated measuring possibility to find the optimal setpoint for the pump
 - Reduced movements of actuators as pressure fluctuation do not influence the required temperature
 - No complex calculation needed for selection
 - No balancing method needed for commissioning
- Wide range of application
 - Sizes DN15 up to DN250
 - Various versions to support standard flow rates as well as low flow and high flow needs
 - Covers two functions in one valve which reduces mounting costs
- Easy commissioning
 - Presetting with visual flow scale at the valve
 - Presetting by hand without the need of tools
 - Presetting possible even when the system is running and an actuator is already mounted
 - Can balance a system even if only some parts of a building are in operation
- Maintenance friendly
 - Emergency shut-off function with plastic cap – not for permanent use
 - Measuring possibility for problematic applications



Valve Efficiency

| | low | | | | high |
|-----------------------------|-----|---|---|---|------|
| Energy efficiency | ● | ● | ● | ● | ● |
| Commissioning effort | ● | ● | ○ | ○ | ○ |
| Calculation effort | ● | ● | ● | ○ | ○ |

TECHNICAL DATA

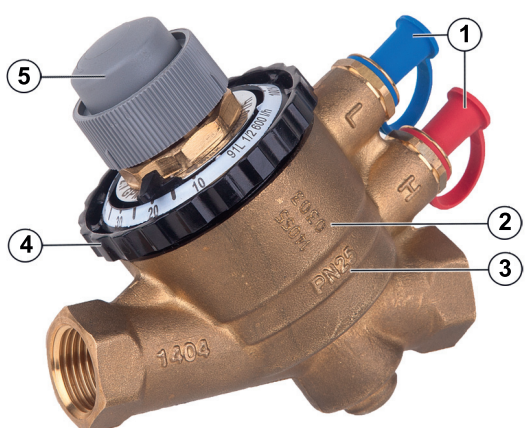
| Media | |
|------------------------------|--|
| Medium: | Water or water-glycol mixture, quality to VDI 2035 (up to 50 % Glycol) |
| pH-value: | 8 - 9.5 |
| Pressure values | |
| Max. operating pressure: | DN15-32: max. 25 bar (363 psi) DN32-250: max. 16 bar (232psi) |
| Differential pressure range: | see table on page 6 |
| Δp_{min} | 400 kPa (4 bar) - up to 600** |
| Δp_{max} | kPa for some valves, please check the ordering information |

| Operating temperatures | |
|------------------------------------|---|
| Max. operating temperature medium: | -10 - 120 °C (25 - 248°F)* |
| Connections/Sizes | |
| Nominal size: | DN15 - DN250 |
| Specifications | |
| Housing: | DN15- 32: Dezincification-resistant brass DN32-250: Ductile iron |
| Flow values: | see table on page 6 |
| Leakage: | According to Class IV IEC 60534-4 |

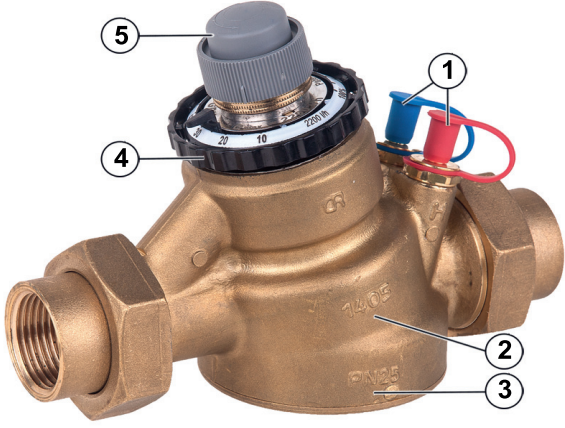
* For DN200 and DN250 Max. operating temperature -10°C to 105°C, water quality compliance to VDI 2035

CONSTRUCTION

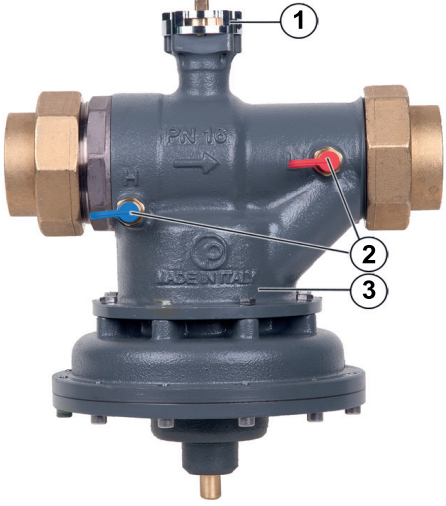
V5004TY, DN15 - DN25

| Overview | Components | Materials |
|---|--|----------------------------------|
|  | 1 SafeCon™ pressure test valves | Brass |
| | 2 Valve housing with internal threads to DIN EN 10226-1 for threaded pipe and two G ¹ / ₄ " equipped with SafeCon™ pressure test valves | Dezincification-resistant brass |
| | 3 Presetting parts | High resistant polymer and brass |
| | 4 Handwheel with scale for presetting the valve | Plastic |
| | 5 Cover cap to protect actuator connection. Can be used as emergency shut-off function (not permanent) | Plastic |
| Not depicted components: | | |
| Sealings | EPDM | |
| Installation and setup instructions | Paper | |
| Inner parts | Brass, stainless steel, high resistant polymer and EPDM | |


V5004TY, DN20 - DN32

| Overview | Components | Materials |
|---|---|---|
|  | 1 SafeCon™ pressure test valves | Brass |
| | 2 Valve housing with internal threaded connection sets to DIN EN 10226-1 for threaded pipe and two G ¹ / ₄ " equipped with SafeCon™ pressure test valves | Dezincification-resistant brass |
| | 3 Presetting parts | High resistant polymer and brass |
| | 4 Handwheel with scale for presetting the valve | Plastic |
| | 5 Cover cap to protect actuator connection. Can be used as emergency shut-off function (not permanent) | Plastic |
| Not depicted components: | | |
| | Sealings | EPDM |
| | Installation and setup instructions | Paper |
| | Inner parts | Brass, stainless steel, high resistant polymer and EPDM |

V5004TY, DN32 - DN50

| Overview | Components | Materials |
|---|---|---|
|  | 1 SafeCon™ pressure test valves | Brass |
| | 2 Threaded connection set | Dezincification-resistant brass |
| | 3 Valve housing with internal threaded connection sets to DIN EN 10226-1 for threaded pipe and two G ¹ / ₄ " equipped with SafeCon™ pressure test valves | Ductile iron |
| Not depicted components: | | |
| | Installation and setup instructions | Paper |
| | Sealings | EPDM |
| | Inner parts | Brass, stainless steel, high resistant polymer and EPDM |

V5004TF, DN50 - DN250

| Overview | Components | Materials |
|---|--|--------------|
|  | 1 Actuator included in the delivery <ul style="list-style-type: none"> • Presetting of the valve can be done at the actuator | |
| | 2 Valve housing with flanges to EN 1092-2 | Ductile iron |
| | Not depicted components: | |
| | Sealings | EPDM |
| Installation and setup instructions | Paper | |
| Inner parts | Brass, stainless steel, high resistant polymer and EPDM | |

METHOD OF OPERATION

The V5004T Kombi-QM combines the functionality of a dynamic balancing valve and a control valve in one product.

The dynamic balancing function maintains a constant differential pressure over the control valve.

The control valve regulates the flow by means of a variable orifice which is controlled by the actuator.

The constant differential pressure across the control valve ensures accurate control and full valve authority, independent of the pressure conditions in the system.

Valve Identification

Each valve is marked as follows:

- OS - Number
- DN size
- PN rating
- Flow arrows
- Serial number/date code

TRANSPORTATION AND STORAGE

Keep parts in their original packaging and unpack them shortly before use.

The following parameters apply during transportation and storage:

| Parameter | Value |
|--------------|--------------------------|
| Environment: | clean, dry and dust free |

TECHNICAL CHARACTERISTICS

Pressure values

Limits of flows and differential pressures

| OS-No. | Flow [l/h] | Valve stroke [mm] | Startup Pressure | | | | Δ [kPa] |
|-----------------|----------------|-------------------|----------------------------|----------------------------|----------------------------|-----------------------------|----------------|
| | | | Δ [kPa] at 30% flow | Δ [kPa] at 50% flow | Δ [kPa] at 80% flow | Δ [kPa] at 100% flow | |
| V5004TY10150150 | 45 - 150 | 2.9 | 8 | 11 | 16 | 20 | 400 |
| V5004TY10150600 | 60 - 600 | 2.9 | 17 | 18 | 21 | 25 | 400 |
| V5004TY10150780 | 78 - 780 | 2.9 | 23 | 25 | 30 | 35 | 400 |
| V5004TY10201000 | 100 - 1000 | 2.9 | 10 | 14 | 24 | 30 | 400 |
| V5004TY10201500 | 450 - 1500 | 2.9 | 14 | 17 | 25 | 35 | 400 |
| V5004TY10251500 | 450 - 1500 | 2.9 | 14 | 17 | 25 | 35 | 400 |
| V5004TY10202200 | 220 - 2200 | 6.0 | 16 | 17 | 22 | 25 | 400 |
| V5004TY10202700 | 270 - 2700 | 6.0 | 17 | 20 | 22 | 25 | 400 |
| V5004TY10252200 | 220 - 2200 | 6.0 | 16 | 17 | 22 | 25 | 400 |
| V5004TY10252700 | 270 - 2700 | 6.0 | 17 | 20 | 22 | 25 | 400 |
| V5004TY10322700 | 270 - 2700 | 6.0 | 17 | 20 | 22 | 25 | 400 |
| V5004TY10323000 | 300 - 3000 | 6.0 | 18 | 25 | 30 | 35 | 400 |
| V5004TY10326000 | 1800 - 6000 | 90° | 20 | 20 | 30 | 30 | 400 |
| V5004TY10409000 | 2700 - 9000 | 90° | 21 | 25 | 31 | 35 | 400 |
| V5004TY10501200 | 3300 - 11000 | 90° | 20 | 21 | 32 | 40 | 400 |
| V5004TY10501700 | 5400 - 18000 | 90° | 15 | 19 | 30 | 35 | 400 |
| V5004TF1050 | 2000 - 20000 | n.a. | 21 | 25 | 31 | 40 | 600 |
| V5004TF1065 | 3000 - 30000 | n.a. | 26 | 29 | 30 | 30 | 600 |
| V5004TF1080 | 3000 - 30000 | n.a. | 23 | 25 | 30 | 30 | 600 |
| V5004TF1100 | 5500 - 55000 | n.a. | 16 | 20 | 24 | 30 | 600 |
| V5004TF1125 | 9000 - 90000 | n.a. | 21 | 25 | 31 | 35 | 600 |
| V5004TF1150 | 15000 - 150000 | n.a. | 31 | 35 | 41 | 50 | 600 |
| V5004TF1200LF | 20000 - 200000 | n.a. | 31 | 35 | 36 | 40 | 400 |
| V5004TF1200HF | 30000 - 300000 | n.a. | 32 | 37 | 38 | 40 | 400 |
| V5004TF1250LF | 30000 - 300000 | n.a. | 30 | 30 | 33 | 40 | 400 |
| V5004TF1250HF | 50000 - 500000 | n.a. | 38 | 49 | 58 | 65 | 400 |

Flow Data

Example of valve's behaviour for different adjustment (30 %, 50 %, 80 %, 100 %)



Example for V5004TY10201000:

When the valve is set to 100 % of nominal flow, the curve begins to remain constant at 30 kPa, therefore the working range at 100 % setting is 30 - 400 kPa.

When the valve is set to 30 % of nominal flow, the curve begins to remain constant at 10 kPa, therefore the working range at 30 % setting is 10 - 400 kPa.

Flow Rate

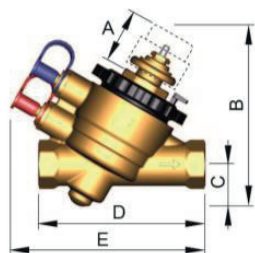
Limits of flows and differential pressures

| | Pre-setting | 100 % | 90 % | 80 % | 70 % | 60 % | 50 % | 40 % | 30 % | 20 % | 10 % |
|-----------------|--------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|
| OS -No. | Flow rate | | | | | | | | | | |
| V5004TY10150150 | [l/h] | 150 | 135 | 120 | 105 | 90 | 75 | 60 | 45 | - | - |
| V5004TY10150600 | [l/h] | 600 | 540 | 480 | 420 | 360 | 300 | 240 | 180 | 120 | 60 |
| V5004TY10150780 | [l/h] | 780 | 702 | 624 | 546 | 468 | 390 | 312 | 234 | 156 | 78 |
| V5004TY10201000 | [l/h] | 1000 | 900 | 800 | 700 | 600 | 500 | 400 | 300 | 200 | 100 |
| V5004TY10201500 | [l/h] | 1500 | 1350 | 1200 | 1050 | 900 | 750 | 600 | 450 | - | - |
| V5004TY10251500 | [l/h] | 1500 | 1350 | 1200 | 1050 | 900 | 750 | 600 | 450 | - | - |
| V5004TY10202200 | [l/h] | 2200 | 1980 | 1760 | 1540 | 1320 | 1100 | 880 | 660 | 440 | 220 |
| V5004TY10202700 | [l/h] | 2700 | 2430 | 2160 | 1890 | 1620 | 1350 | 1080 | 810 | 540 | 270 |
| V5004TY10252200 | [l/h] | 2200 | 1980 | 1760 | 1540 | 1320 | 1100 | 880 | 660 | 440 | 220 |
| V5004TY10252700 | [l/h] | 2700 | 2430 | 2160 | 1890 | 1620 | 1350 | 1080 | 810 | 540 | 270 |
| V5004TY10322700 | [l/h] | 2700 | 2430 | 2160 | 1890 | 1620 | 1350 | 1080 | 810 | 540 | 270 |
| V5004TY10323000 | [l/h] | 3000 | 2700 | 2400 | 2100 | 1800 | 1500 | 1200 | 900 | 600 | 300 |
| V5004TY10326000 | [l/h] | 6000 | 5400 | 4800 | 4200 | 3600 | 3000 | 2400 | 1800 | - | - |
| V5004TY10409000 | [l/h] | 9000 | 8100 | 7200 | 6300 | 5400 | 4500 | 3600 | 2700 | - | - |
| V5004TY10501200 | [l/h] | 11000 | 9900 | 8800 | 7700 | 6600 | 5500 | 4400 | 3300 | - | - |
| V5004TY10501700 | [l/h] | 18000 | 16200 | 14400 | 12600 | 10800 | 9000 | 7200 | 5400 | - | - |
| V5004TF1050 | [l/h] | 20000 | 18000 | 16000 | 14000 | 12000 | 10000 | 8000 | 6000 | 4000 | 2000 |
| V5004TF1065 | [l/h] | 30000 | 27000 | 24000 | 21000 | 18000 | 15000 | 12000 | 9000 | 6000 | 3000 |
| V5004TF1080 | [l/h] | 30000 | 27000 | 24000 | 21000 | 18000 | 15000 | 12000 | 9000 | 6000 | 3000 |
| V5004TF1100 | [l/h] | 55000 | 49500 | 44000 | 38500 | 33000 | 27500 | 22000 | 16500 | 11000 | 5500 |
| V5004TF1125 | [l/h] | 90000 | 81000 | 72000 | 63000 | 54000 | 45000 | 36000 | 27000 | 18000 | 9000 |
| V5004TF1150 | [l/h] | 150000 | 135000 | 120000 | 105000 | 90000 | 75000 | 60000 | 45000 | 30000 | 15000 |
| V5004TF1200LF | [l/h] | 200000 | 180000 | 160000 | 140000 | 120000 | 100000 | 80000 | 60000 | 40000 | 20000 |
| V5004TF1200HF | [l/h] | 300000 | 270000 | 240000 | 210000 | 180000 | 150000 | 120000 | 90000 | 60000 | 30000 |
| V5004TF1250LF | [l/h] | 300000 | 270000 | 240000 | 210000 | 180000 | 150000 | 120000 | 90000 | 60000 | 30000 |
| V5004TF1250HF | [l/h] | 500000 | 450000 | 400000 | 350000 | 300000 | 250000 | 200000 | 150000 | 100000 | 50000 |

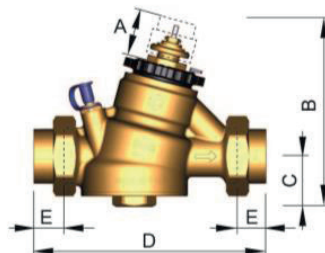
DIMENSIONS

V5004TY, DN15 - DN50

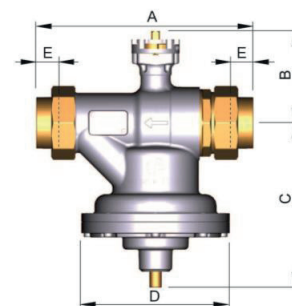
Overview



DN15 - DN25



DN20 - DN32



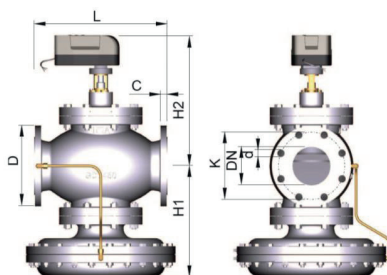
DN32 - DN50

| Parameter | Value | | | | | | | | | | |
|------------------------|-------|---------|---------|-------|------------------|-------|------------------|------------------|-----------|------------------|-------|
| Nominal size diameter: | DN | 15 | 20 | 25 | 20* ¹ | 25 | 32* ¹ | 32* ² | 40 | 50* ² | 50 |
| Dimensions: | A | 32 | 32 | 32 | 32 | 32 | 32 | 232 | 231 | 278 | 267 |
| | B | 98 | 98 | 98 | 138 | 138 | 138 | 85 | 85 | 85 | 93 |
| | C | 25 | 25 | 25 | 38 | 38 | 38 | 176 | 176 | 176 | 221 |
| | D | 99 | 108 | 130 | 176 | 184 | 209 | 158 | 158 | 158 | 198 |
| | E | 117 | 124 | 132 | 17 | 21.5 | 22 | 23.6 | 23.6 | 23.6 | 28 |
| Thread: | | Rp 1/2" | Rp 3/4" | Rp 1" | Rc 3/4" | Rc 1" | Rc 1 1/4" | Rc 1 1/4" | Rc 1 1/2" | Rc 2" | Rc 2" |

*¹ Valve with DN25 valve body*² Valve with DN40 valve body

V5004TF, DN50 - DN250

Overview



| Parameter | Values | | | | | | | | |
|------------------------|--------|-----|--------|-----|-----|-----|-----|-----|-----|
| Nominal size diameter: | DN | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 |
| Dimensions: | H1 | 190 | 183 | 183 | 247 | 264 | 348 | 393 | 421 |
| | H2 | 291 | 300 | 300 | 318 | 347 | 397 | 440 | 508 |
| | L | 254 | 272 | 272 | 352 | 400 | 451 | 543 | 730 |
| | D | 165 | 185 | 200 | 220 | 250 | 285 | 340 | 405 |
| | K | 125 | 145 | 160 | 180 | 210 | 240 | 295 | 355 |
| | d | 18 | 18 | 18 | 18 | 18 | 22 | 22 | 26 |
| | C | 16 | 18 | 18 | 18 | 20 | 22 | 22 | 24 |
| Flange size: | | 2" | 2 1/2" | 3" | 4" | 5" | 6" | 8" | 10" |

Note: All dimensions in mm unless stated otherwise.

ORDERING INFORMATION

The following tables contain all the information you need to make an order of an item of your choice. When ordering, please always state the type, the ordering or the part number.

Options

| Order text: | DN size: | Flow range: | | Differential pressure range: | | Weight: kg | OS-No.: |
|--|----------|-----------------|-------------------|------------------------------|------------------|------------|-----------------|
| | | Min. flow (l/h) | = Max. flow (l/h) | Δp (kPa) | Δp (kPa) | | |
| Linear valve V5004 Kombi-QM with internal threads to DIN EN 10226-1 (ISO 7)*1 | DN15 | 45 | 150 | 20 | 400 | 0.88 | V5004TY10150150 |
| | DN15 | 60 | 600 | 25 | | 0.88 | V5004TY10150600 |
| | DN15 | 78 | 780 | 35 | | 0.88 | V5004TY10150780 |
| | DN20 | 100 | 1000 | 30 | | 0.95 | V5004TY10201000 |
| | DN20 | 450 | 1500 | 35 | | 0.95 | V5004TY10201500 |
| | DN25 | 450 | 1500 | 35 | | 0.95 | V5004TY10251500 |
| Linear valve V5004 Kombi-QM with internal threads to DIN EN 10226-1 (ISO 7)*1 | DN20 | 220 | 2200 | 25 | 400 | 2.3 | V5004TY10202200 |
| | DN20 | 270 | 2700 | 25 | | 2.3 | V5004TY10202700 |
| | DN25 | 220 | 2200 | 25 | | 2.4 | V5004TY10252200 |
| | DN25 | 270 | 2700 | 25 | | 2.4 | V5004TY10252700 |
| | DN32 | 270 | 2700 | 25 | | 2.6 | V5004TY10322700 |
| | DN32 | 300 | 3000 | 35 | | 2.6 | V5004TY10323000 |
| Rotating valve V5004 Kombi-QM with internal threads to DIN EN 10226-1 (ISO 7) | DN32 | 1800 | 6000 | 30 | 400 | 8.5 | V5004TY10326000 |
| | DN40 | 2700 | 9000 | 35 | | 8.6 | V5004TY10409000 |
| | DN50 | 3300 | 11000 | 40 | | 8.7 | V5004TY10501200 |
| | DN50 | 5400 | 18000 | 35 | | 15.5 | V5004TY10501700 |
| Flanged valves V5004TF... DN50 to DN250, come together with an actuator as one unit. | DN50 | 2000 | 20000 | 40 | 600*2 | 33.0 | V5004TF1050 |
| | DN65 | 3000 | 30000 | 30 | | 40.0 | V5004TF1065 |
| | DN80 | 3000 | 30000 | 30 | | 43.0 | V5004TF1080 |
| | DN100 | 5500 | 55000 | 30 | | 74.0 | V5004TF1100 |
| | DN125 | 9000 | 90000 | 35 | | 93.0 | V5004TF1125 |
| | DN150 | 15000 | 150000 | 50 | | 140.0 | V5004TF1150 |
| | DN200 | 20000 | 200000 | 40 | 400 | 280 | V5004TF1200LF |
| | DN200 | 30000 | 300000 | 40 | | 280 | V5004TF1200HF |
| | DN250 | 30000 | 300000 | 40 | | 385 | V5004TF1250LF |
| | DN250 | 50000 | 500000 | 65 | | 385 | V5004TF1250HF |

Note: *₁ Valve is fully open / without actuator
 Flanged valves V5004TF... DN50 to DN250 come together with an actuator as one unit.
 Check the actuator section below referring to Kombi-QM (DN50-DN250) actuator.

Note: *₂ 400 for normal operation, 600 only to be used as max shut-off pressure

Accessories



For valves with 2.9 mm stroke, DN15-25

| | Description | Dimension | Part No. | | | |
|---|--|-----------|--|--|-----------------------------|--|
|  | MT4 Actuator thermoelectric | | MT4-024-NO MT4-024-NO-2.5M MT4-024S-NO MT4-024-NC MT4-024-NC-2.5M MT4-024S-NC MT4-230-NO MT4-230-NO-2.5M MT4-230S-NO MT4-230-NC MT4-230-NC-2.5M MT4-230S-NC | | | |
| | 4.0 mm effective stroke, 90N, on/off | | | | | |
| | M100 Actuator thermoelectric | | | M100-BO M100-BG M100-AO M100-AG | | |
| | 4.0 mm effective stroke, 90N, on/off | | | | | |
| | M7410A Actuator 3-point | | | | M7410A1001 M7410A1001-3M | |
| | Note: By use of this actuator series the max. flow of the valve is reduced by 15 % 4.0 mm effective stroke, 90N, on/off | | | | | |
| |  | | | M4410 Actuator thermoelectric 0 - 10 V | | M4410E1510 M4410K1515 M44-MOD-1M |
| | | | | Note: Closes when power fails 4.0 mm effective stroke, 100N, modulating | | |
| | | | | Cable for M4410 actuator, 1 m, 10 pcs | | |
| | | | | M7410E Actuator 0/2 - 10 V | | |
| | 2.9 mm effective stroke, 90N, modulating | | | | | |
|  | T750120 Radiator Thermostat Thera-2080WL | | T750120 | | | |
| | With remote sensor for water and air | | | | | |


For valves with 6.0 mm stroke, DN20-32

| | | | |
|---|---------------|--|--|
|  | MT8 | Actuator thermoelectric 6.0 mm effective stroke, 90N, on/off | MT8-024-NO MT8-024-NO-2.5M MT8-024S-NO MT8-024-NC MT8-024-NC-2.5M MT8-024S-NC MT8-230-NO MT8-230-NO-2.5M MT8-230S-NO MT8-230-NC MT8-230-NC-2.5M MT8-230S-NC |
|  | M5410 | Actuator fast motorized Note: Closes when power fails 6.5 mm effective stroke, 100N, on/off | M5410C1001 M5410L1001 |
|  | M7410C | Actuator 3-point 6.5 mm effective stroke, 180N, floating | M7410C1007 M7410C1007-10M M6410C2023 M6410C4029 M6410L2023 M6410L4029 |
|  | M7410E | Actuator 0/2 - 10 V 6.5 mm effective stroke, 180N, modulating | M7410E1002 M7410E2026 M7410E4022 |

For valves with 90° rotation, DN32-50

| | | | |
|---|---------------|--|--------------------------|
|  | M7061E | Actuator 0/2 - 10 V 90°, 10 Nm, rotating, modulating | M7061E1012 |
|  | M6061 | Actuator 3-point 90°, 10 Nm, rotating, floating | M6061A1013 M6061L1019 |

Spare Parts

| Overview | Description | Dimension | Part No. |
|---|----------------------------|-----------|----------------|
|  | 1 Actuator | | |
| | Actuator for V5004TF1050 | | M5004F1050 |
| | Actuator for V5004TF1065 | | M5004F1065 |
| | Actuator for V5004TF1080 | | M5004F1080 |
| | Actuator for V5004TF1100 | | M5004F1100 |
| | Actuator for V5004TF1125 | | M5004F1125 |
| | Actuator for V5004TF1150 | | M5004F1150 |
| | Actuator for V5004TF1200LF | | M5004F1200 LF |
| | Actuator for V5004TF1200HF | | M5004TF1200 HF |
| | Actuator for V5004TF1250LF | | M5004F1250 LF |
| | Actuator for V5004TF1250HF | | M5004F1250 HF |

M5004

Application

Electromotive actuators M5004 - 24V are used with many kind of control systems used for HVAC applications, including ON/OFF, floating, proportional managed by thermostat or BMS handling analogue signals or PWM digital, of HVAC installations where V5004TF PICV balancing valves are used; in order to properly set the presetting, see the specific section devoted to actuator setting.

For further information about electrical connections, see the specific section.

APPROVALS

- CE

TECHNICAL DATA

| Operating temperatures | |
|-------------------------------|---|
| Ambient temperature range: | -20°C...+60 °C*1 |
| Storage temperature range: | -20°C...+80 °C*1 |
| Specifications | |
| Weight: | 0.975 kg |
| Power supply: | 24 VAC/DC – 50/60 Hz |
| Connecting cable: | 18 AWG |
| Connection to valve: | 8 mm square. Easy fitting gear |
| Operating life: | 50.000 cycles |
| Control signal: | 0(2)-10 V 0(4)-20 mA (with 500 resistor*)ON/OFF3 points floatingPWM |
| Power consumption: | 5 W; 2.5 W stand-by |
| Nominal torque: | 10 Nm Max, self-limited at 7 Nm |
| Current absorption: | 80 mA, Load max 380 mA |
| Feedback: | 0(4) - 20 mA and 0(2) – 10 V |
| Manual Override: | Through release button and 6 mm Allen key |
| Protection class / IP Rating: | II / IP54 |
| Motor: | Brushless DC motor |
| Running speed: | Selectable: 1 RPM or 1.5 RPM |
| Fail safe: | Through additional battery |

Note: *1no condensation

METHOD OF OPERATION

24V electromotive actuator to drive Pressure Independent Control Valve V5004TF series.

Managed control signals: analogue (voltage and current), PWM, 3 point floating and ON/OFF.

It can be completely configurable through the on board display and controlling buttons.

Manual override, after actuator removal.

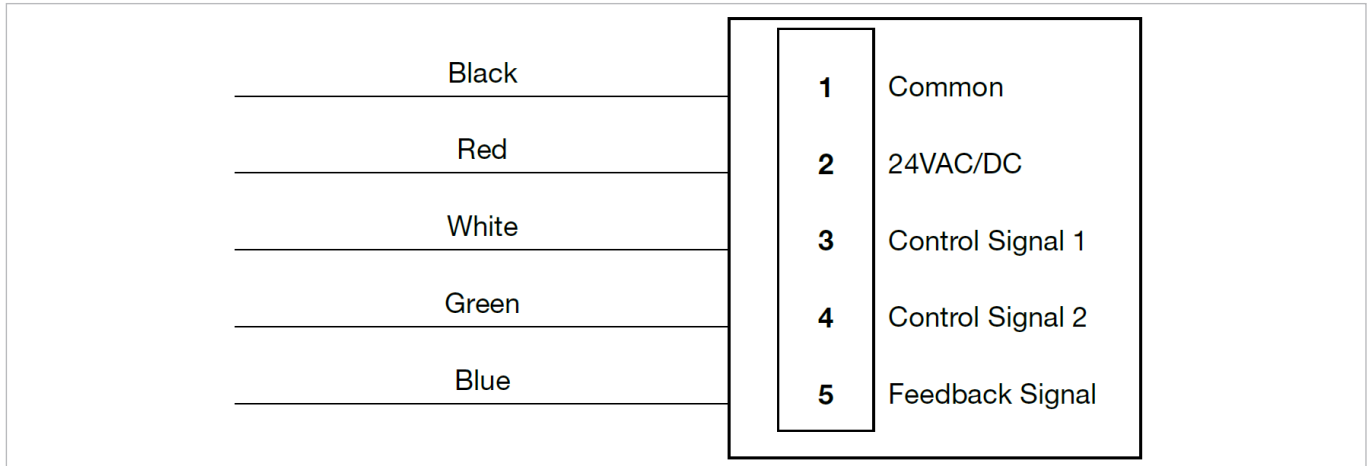
Actuator supplied with valve V5004TF as standard or available as spare part (in this case, please tell the valve reference that the actuator is going to be installed on to allow technicians its configuration).

Fail safe functionality available on demand (additional battery pack VA5004TF0001).

INSTALLATION GUIDELINES

Connection schemes

Wires indication

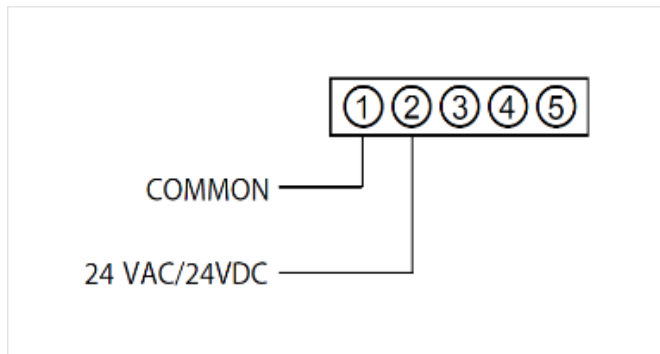


Wire guidelines

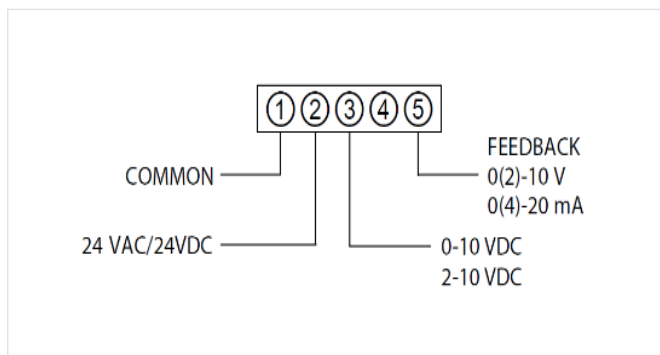
| Input | Number | 1 | 2 | 3 | 4 | 5 | Remarks |
|-------------------|--------|----------|-------------------------------|--------------------|-------|--|--|
| | Colour | Black | Red | White | Green | Blue | |
| Internal control | Common | 24 AC/DC | | | | Feedback: 0(2) - 10 V 0(4) - 20 mA | Power: cable 1 - 2 |
| Voltage signal | Common | 24 AC/DC | 0 - 10V DC 2 - 10 V DC | | | Feedback: 0(2) - 10 V 0(4) - 20 mA | Power: cable 1 - 2 Voltage signal: cable 1 - 3 |
| Current signal | Common | 24 AC/DC | 0 - 20 mA 4 - 20 mA | | | Feedback: 0(2) - 10 V 0(4) - 20 mA | Power: cable 1 - 2 Current signal: cable 1 - 3 |
| ON/OFF signal | Common | 24 AC/DC | 24 V DC (open) 0 V (close) | | | Feedback: 0(2) - 10 V 0(4) - 20 mA | Power: cable 1 - 2 ON/OFF signal: cable 1 - 3 |
| 3 points floating | Common | 24 AC/DC | Opening 24 V AC/DC | Closing 24 V AC/DC | | Feedback: 0(2) - 10 V 0(4) - 20 mA | Power: cable 1 - 2 Floating 3 points: cable 3 - 4 |
| PWM control | Common | 24 AC/DC | PWM signal | | | Feedback: 0(2) - 10 V 0(4) - 20 mA | Power: cable 1 - 2 PWM control: cable 1 - 3 |

Connections

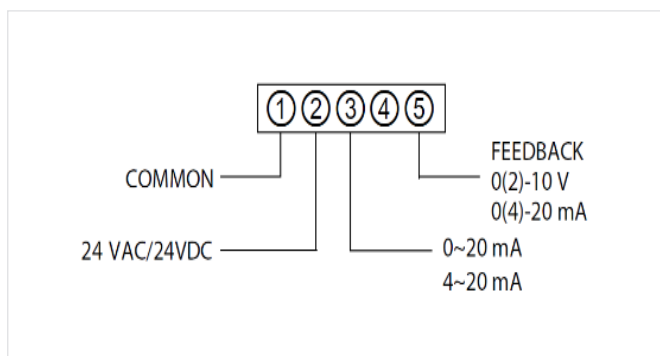
1) Internal control*



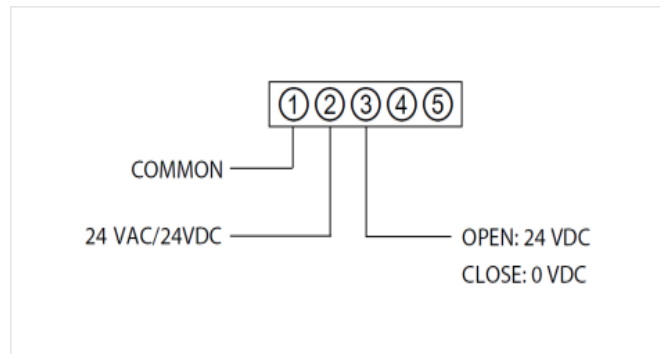
2) Voltage signal



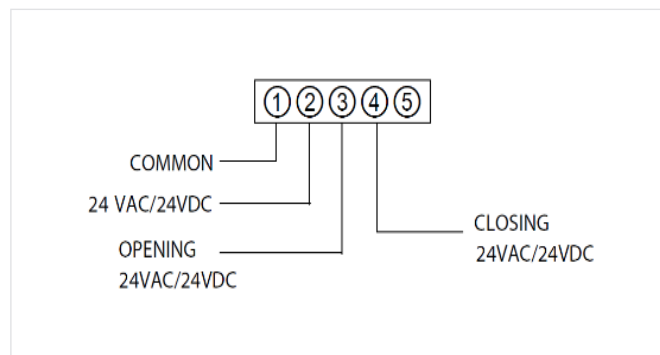
3) Current signal



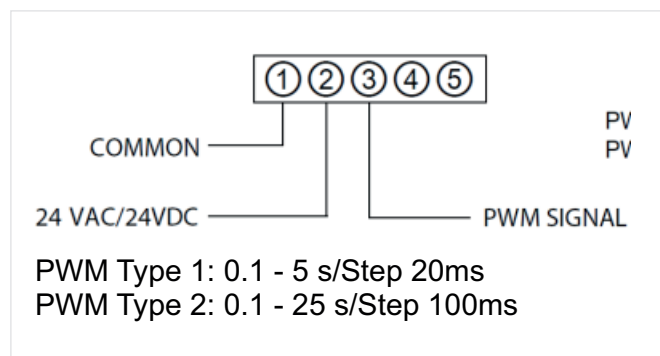
4) ON/OFF



5) 3 points signal



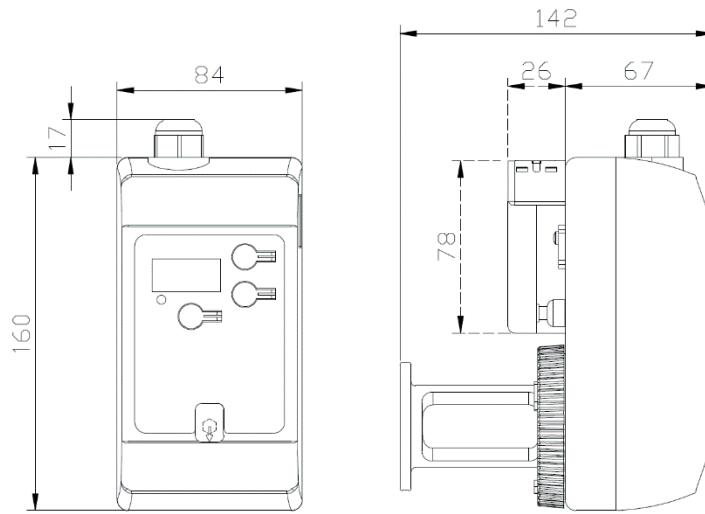
6) PWM signal



Note: * Flow rate can be set by buttons on the actuator and read on the 4 digits display.

DIMENSIONS

Overview



Note: Dimensions in mm



Manufactured for
and on behalf of
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