

DESCRIPTION

Valves series "MEV" have been designed to satisfy the need of integration between pneumatics and electronics. Their main feature is the possibility to offer valve islands complete with the electrical connection. This series, realized in the 5/2 and 5/3 pneumatic functions, is composed of two types of valves: "MEV 8", body ported G 1/8, prearranged for both single use and for mounting on multiple base with fixed stations; "MEV 18" (size 02), to VDMA 24563 (UNI 10528) standards, prearranged for mounting on both single and manifold bases. Both the multiple bases (that convey the exhaust port of the solenoid actuated electropilots) and the manifold ones are fit for mounting onto rails according to DIN 46277/3. For the 24 V AC/DC solenoid actuated valves with coils toward the bottom (versions "MEVX"), are available modules with two or four stations to carry out a multi-pin connection through a 25-pin plug with protection class "IP 65" (see technical information on page 0.4).



TECHNICAL DATA

| | |
|------------------------------|--|
| Operating pressure | Monostable 1,8 ÷ 8 bar Bistable 1 ÷ 8 bar |
| Working temperature | 0 ÷ +60 °C (-10 °C with dry air) |
| Fluid | Filtered, unlubricated or continuous lubricated compressed air |
| Port size | G 1/8 Size 02 = Interface to VDMA 24563 standard |
| Pneumatic piloting port size | G 1/8 = M5 Size 02 = Interface to VDMA 24563 standard |
| Nominal diameter | 5 mm |
| Piloting solenoid valve | UMCSV - see chapter Direct acting solenoid valves page 2.3 |
| Electric connectors | MEK 192/N - see chapter Connectors on page 2.15 See Multi-pin connection on page 2.28 |

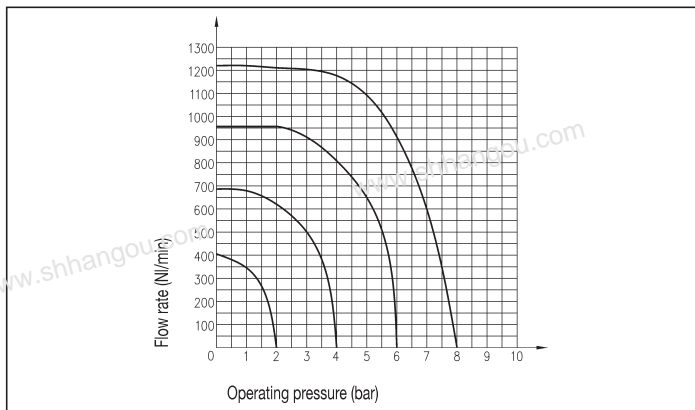
MATERIALS

| | |
|---------|--|
| Bottoms | Plastic |
| Body | Anodized aluminium alloy treated with PTFE |
| Springs | Stainless steel |
| Seals | NBR rubber |
| Spool | Anodized aluminium alloy |
| Piston | Anodized aluminium alloy |

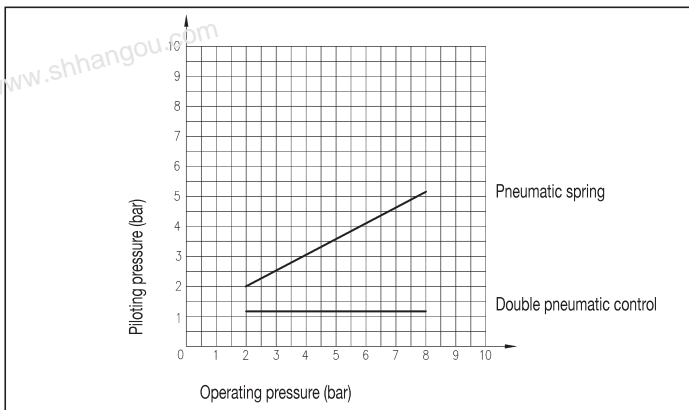
SPARE PARTS

| SEALS KIT | |
|-----------------------------|-----------|
| 5/2 monostable and bistable | MEV/SG |
| 5/3 closed centre | MEV/CC/SG |
| 5/3 open centre | MEV/CA/SG |
| 5/3 pressure centre | MEV/CP/SG |

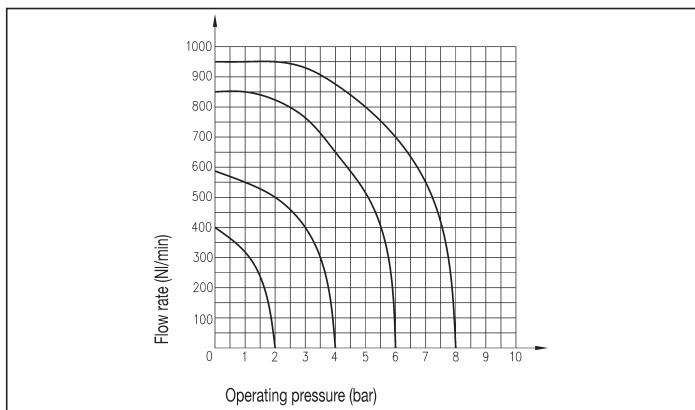
FLOW CHART - MEV/8



PILOTING CHART - MEV/8 - M5 1/8



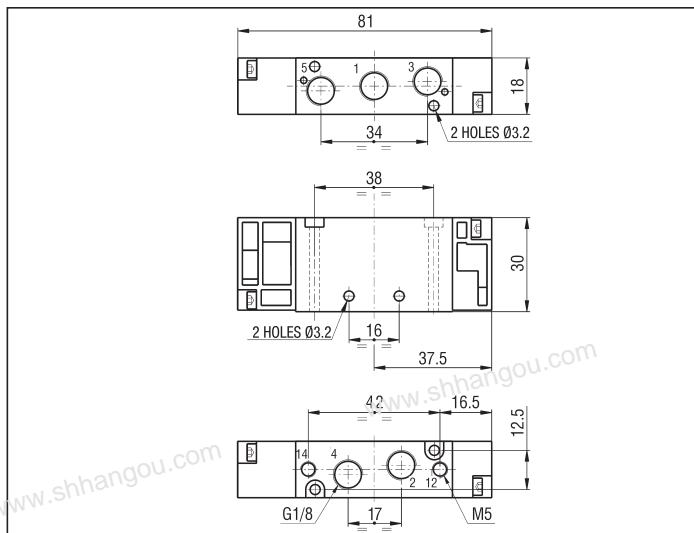
FLOW CHART - MEV/18



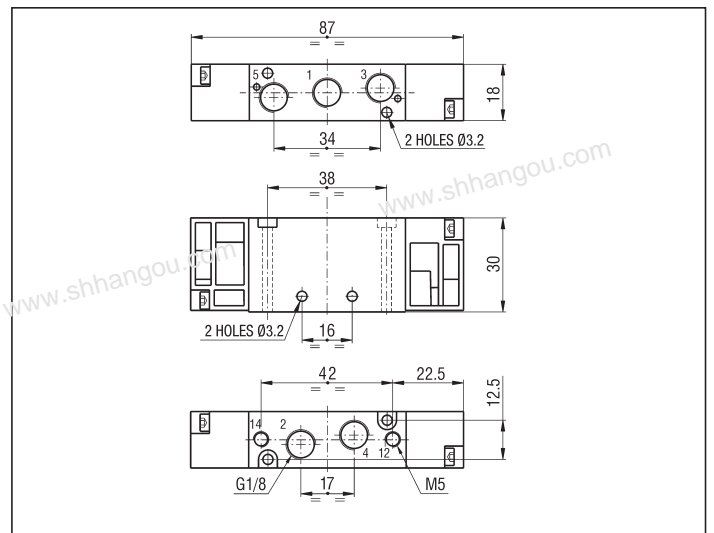
PILOT ACTUATED VALVES G 1/8 - MEV 8

| Symbol | Function | Controls | | Response time at 6 bar (ms) | | Flow rate at 6 bar $\Delta P = 1$ bar (Nl/min) | Weight (g) | TYPE |
|--------|---------------------|----------|-------------------|-----------------------------|--------------|--|------------|------------|
| | | Pilot | Return | Energized | De-energized | | | |
| | 5/2 monostable | Solenoid | Mechanical spring | 10 | 10 | 650 | 100 | MEV8 KR/ZR |
| | | Solenoid | Pneumatic spring | 12 | 20 | | | MEV8 KR/TQ |
| | 5/2 bistable | Solenoid | Pneumatic spring | 10 | 10 | 650 | 100 | MEV8 KR/KR |
| | 5/3 closed center | Solenoid | Mechanical spring | 10 | 10 | 510 | 100 | MEV8 SR/SR |
| | 5/3 open center | Solenoid | Mechanical spring | 10 | 10 | 510 | 100 | MEV8 AR/AR |
| | 5/3 pressure center | Solenoid | Mechanical spring | 10 | 10 | 650 | 100 | MEV8 PR/PR |

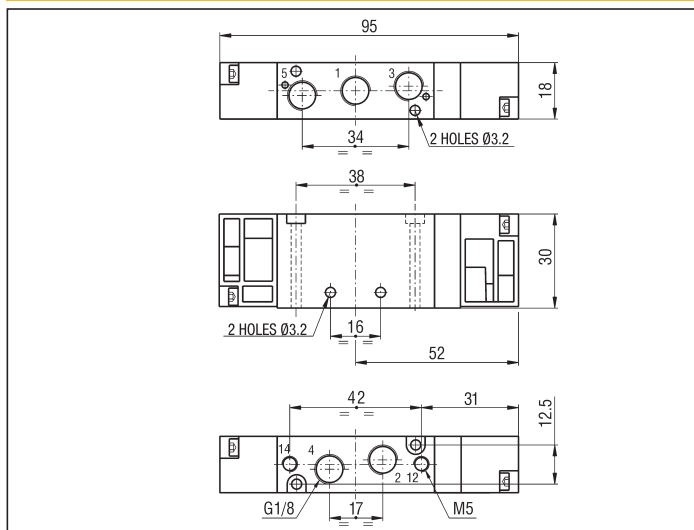
5 PORT - MONOSTABLE



5 PORT - BISTABLE



5 PORT - 3 POSITIONS



SOLENOID ACTUATED VALVES G 1/8 - MEV 8

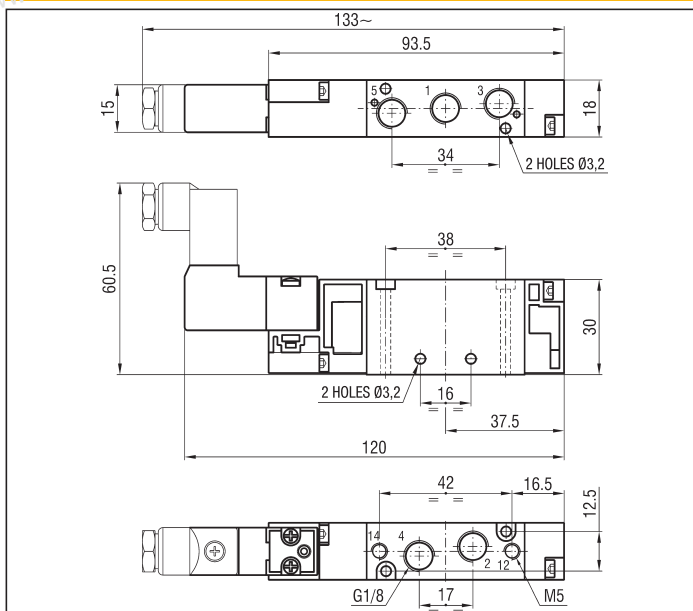
| Symbol | Function | Controls | | Response time at 6 bar (ms) | | Flow rate at 6 bar $\Delta P = 1$ bar (l/min) | Weight (g) | TYPE* |
|--------|---------------------|-------------------------|-------------------------|-----------------------------|--------------|---|------------|--------------|
| | | Pilot | Return | Energized | De-energized | | | |
| | 5/2 monostable | Solenoid | Mechanical spring | 10 | 30 | 650 | 130 | MEV8 KUC/ZR |
| | | Solenoid | Pneumatic spring | 10 | 20 | | | MEV8 KUC/TQ |
| | | Solenoid pilot assisted | Mechanical spring | 10 | 30 | | | MEV8 KUR/ZR |
| | 5/2 bistable | Solenoid | Solenoid | 10 | 10 | 650 | 160 | MEV8 KUC/KUC |
| | | Solenoid pilot assisted | Solenoid pilot assisted | | | | | MEV8 KUR/KUR |
| | 5/3 closed centre | Solenoid | Mechanical spring | 10 | 25 | 510 | 160 | MEV8 SUC/SUC |
| | | Solenoid pilot assisted | Mechanical spring | | | | | MEV8 SUR/SUR |
| | 5/3 open centre | Solenoid | Mechanical spring | 10 | 25 | 510 | 160 | MEV8 AUC/AUC |
| | | Solenoid pilot assisted | Mechanical spring | | | | | MEV8 AUR/AUR |
| | 5/3 pressure centre | Solenoid | Mechanical spring | 10 | 25 | 650 | 160 | MEV8 PUC/PUC |
| | | Solenoid pilot assisted | Mechanical spring | | | | | MEV8 PUR/PUR |

* SPECIFY THE VOLTAGE IN THE ORDER - E.G.: MEV8 KUC/ZR 02400
 TYPES OF THE SOLENOID VALVES INCLUDE THE PILOTING SOLENOID VALVES "UMCSV" - SEE ON PAGE 2.3)

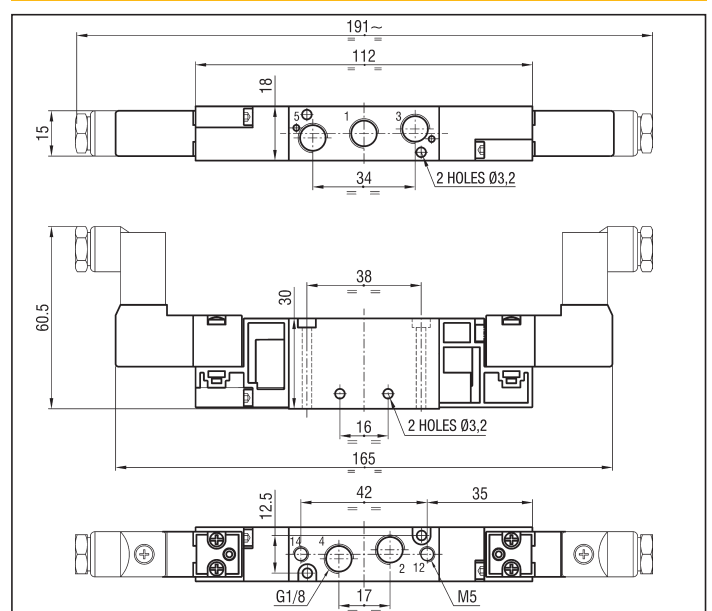
02400 = 24 V DC
 02450-60 = 24 V AC

11050-60 = 110 V AC
 22050-60 = 220 V AC

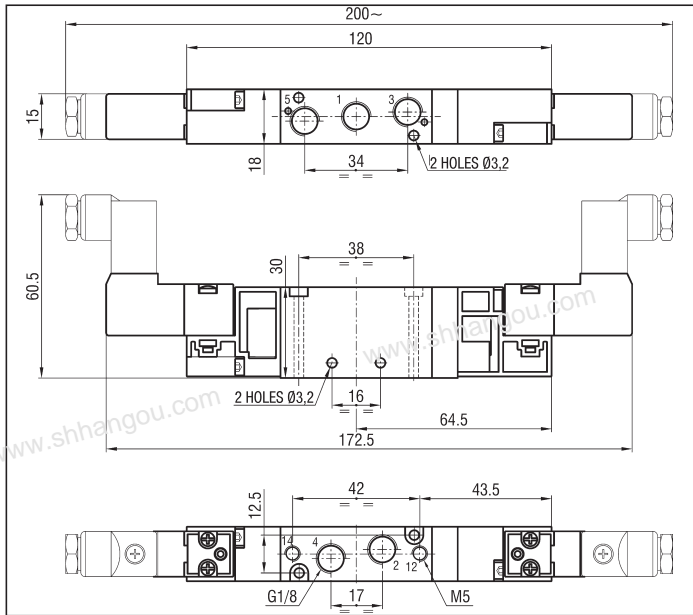
5 PORT - MONOSTABLE



5 PORT - BISTABLE



5 PORT - 3 POSITIONS



SOLENOID ACTUATED VALVES WITH COILS TOWARD THE BOTTOM G 1/8 - MEVX 8
SUITABLE FOR SINGLE USE OR MULTI-PIN PLUG CONNECTOR

| Symbol | Function | Controls | | Response time at 6 bar (ms) | | Flow rate at 6 bar $\Delta P = 1$ bar (Nl/min) | Weight (g) | TYPE* |
|--------|---------------------|-------------------------|-------------------------|-----------------------------|--------------|--|------------|---------------|
| | | Pilot | Return | Energized | De-energized | | | |
| | 5/2 monostable | Solenoid | Mechanical spring | 10 | 30 | 650 | 130 | MEVX8 KUC/ZR |
| | | Solenoid | Pneumatic spring | 10 | 20 | | | MEVX8 KUC/TQ |
| | | Solenoid pilot assisted | Mechanical spring | 10 | 30 | | | MEVX8 KUR/ZR |
| | 5/2 bistable | Solenoid | Solenoid | 10 | 10 | 650 | 175 | MEVX8 KUC/KUC |
| | | Solenoid pilot assisted | Solenoid pilot assisted | | | | | MEVX8 KUR/KUR |
| | 5/3 closed centre | Solenoid | Mechanical spring | 10 | 25 | 510 | 175 | MEVX8 SUC/SUC |
| | | Solenoid pilot assisted | Mechanical spring | | | | | MEVX8 SUR/SUR |
| | 5/3 open centre | Solenoid | Mechanical spring | 10 | 25 | 510 | 175 | MEVX8 AUC/AUC |
| | | Solenoid pilot assisted | Mechanical spring | | | | | MEVX8 AUR/AUR |
| | 5/3 pressure centre | Solenoid | Mechanical spring | 10 | 25 | 650 | 175 | MEVX8 PUC/PUC |
| | | Solenoid pilot assisted | Mechanical spring | | | | | MEVX8 PUR/PUR |

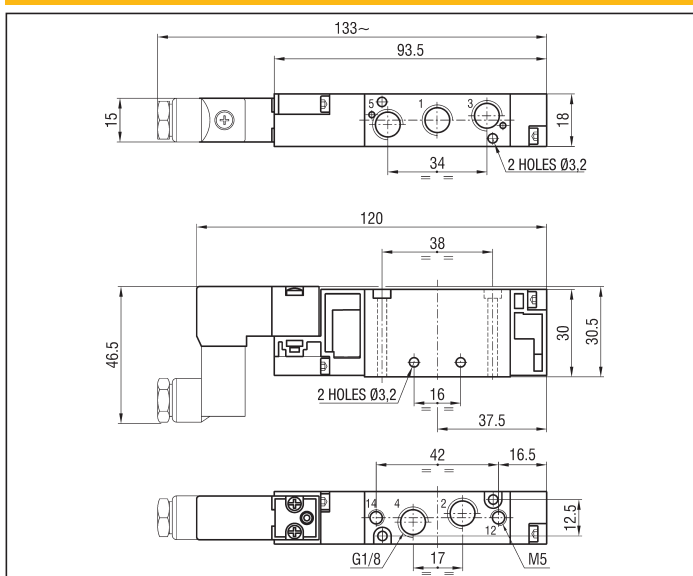
* SPECIFY THE VOLTAGE IN THE ORDER - E.G.: MEVX8 KUC/ZR 02400

(TYPES OF THE SOLENOID VALVES INCLUDE THE PILOTING SOLENOID VALVES "UMCSV" - SEE ON PAGE 2.3)

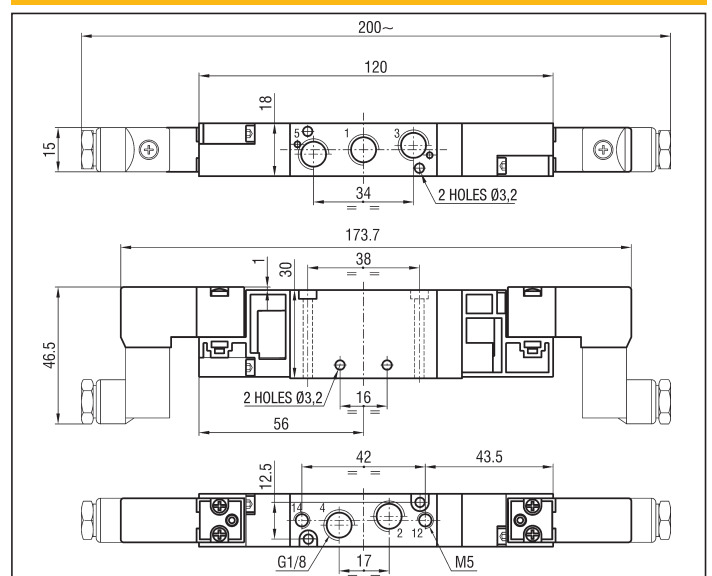
02400 = 24 V DC

02450-60 = 24 V AC

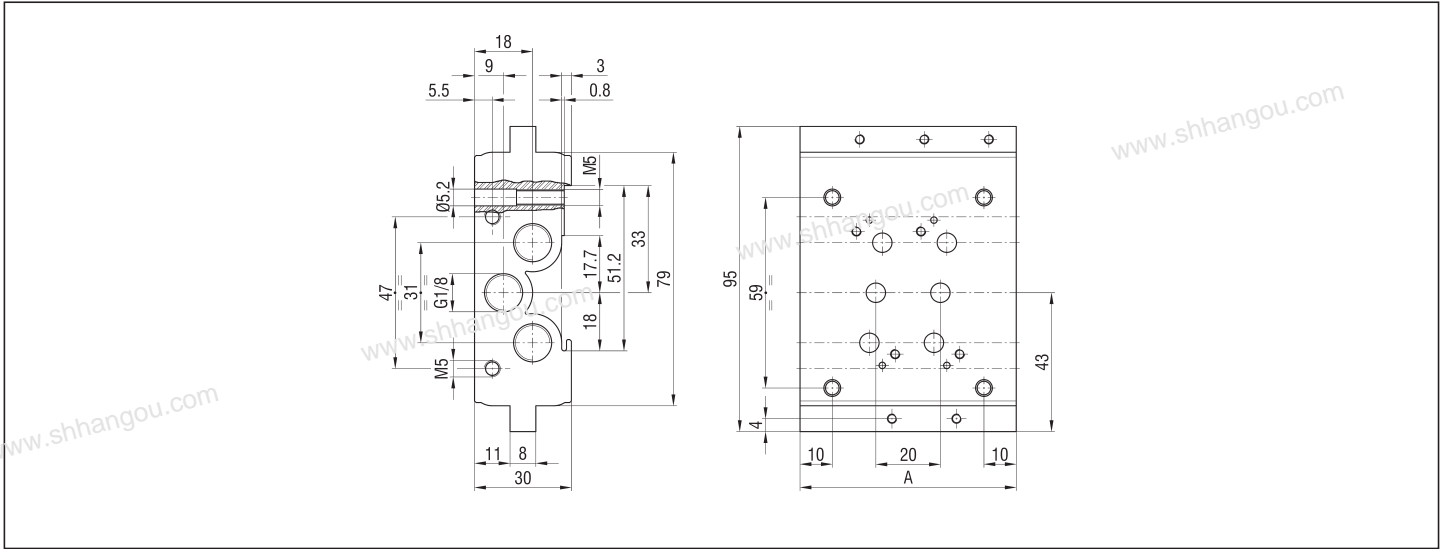
5 PORT - MONOSTABLE



5 PORT - BISTABLE AND 5 PORT - 3 POSITIONS



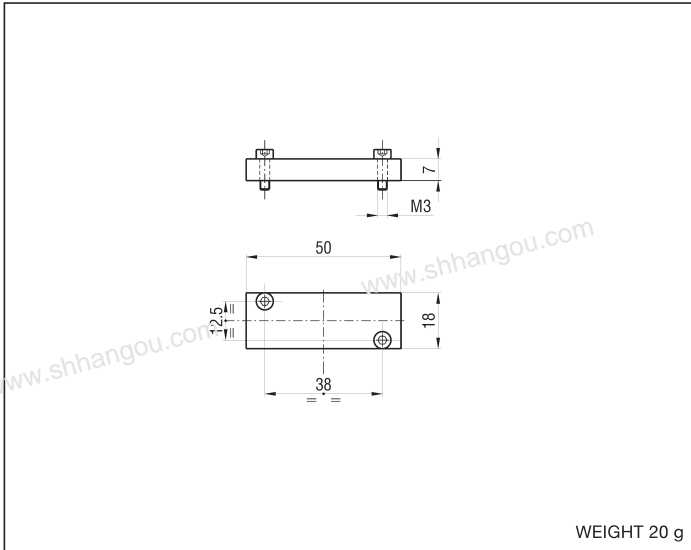
BASE FOR MANIFOLD MOUNTING OF VALVES G 1/8 - KB/MEV8 - Fit for mounting onto DIN 46277/3 rail



| No. of stations | 2 | 3 | 4 | 5 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 |
|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|
| A | 67 | 87 | 107 | 127 | 147 | 187 | 227 | 267 | 307 | 347 | 387 | 427 |
| Weight (g) | 324 | 421 | 518 | 615 | 712 | 905 | 1098 | 1292 | 1486 | 1680 | 1873 | 2067 |
| TYPE* | KB/MEV8/2 | KB/MEV8/3 | KB/MEV8/4 | KB/MEV8/5 | KB/MEV8/6 | KB/MEV8/8 | KB/MEV8/10 | KB/MEV8/12 | KB/MEV8/14 | KB/MEV8/16 | KB/MEV8/18 | KB/MEV8/20 |

* BASES ARE SUPPLIED COMPLETE WITH SCREWS AND SEALS

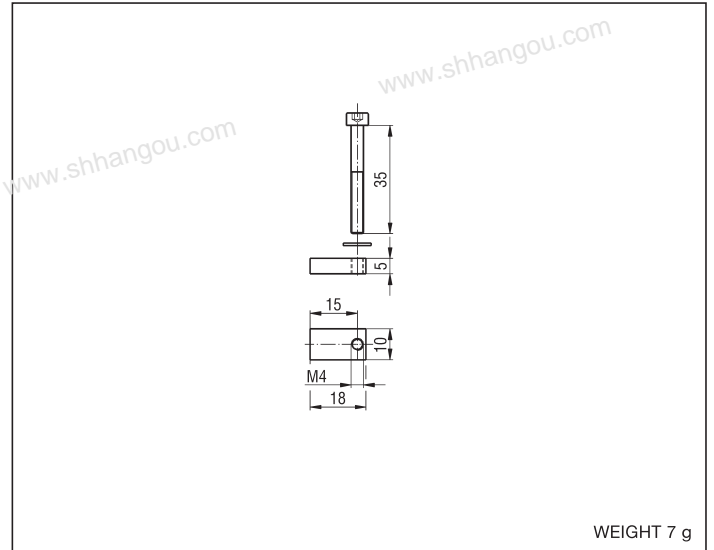
BLANKING PLATE - MEV8/PC



WEIGHT 20 g

BLANKING PLATE IS SUPPLIED COMPLETE WITH SCREWS AND SEALS

FIXING PLATE FOR DIN 46277/3 RAIL - MEV8/PF



WEIGHT 7 g

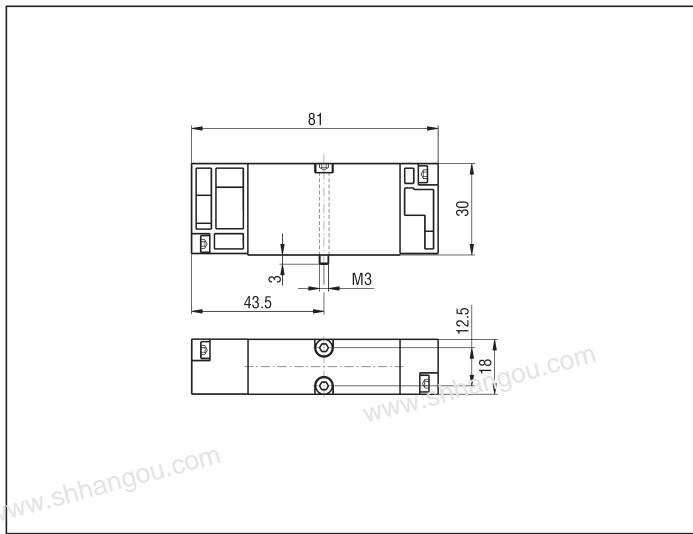
FIXING PLATE IS SUPPLIED COMPLETE WITH SCREWS

2

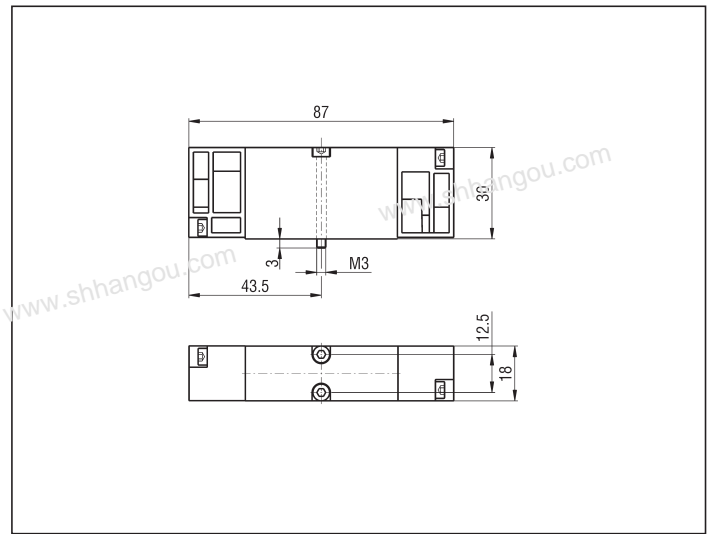
PILOT ACTUATED VALVES TO VDMA 24563 STANDARD SIZE 02 - MEV 18

| Symbol | Function | Controls | | Response time at 6 bar (ms) | | Flow rate at 6 bar $\Delta P = 1$ bar (Nl/min) | Weight (g) | TYPE |
|--------|---------------------|-----------|-------------------|-----------------------------|--------------|--|------------|-------------|
| | | Pilot | Return | Energized | De-energized | | | |
| | 5/2 monostable | Pneumatic | Mechanical spring | 12 | 50 | 510 | 100 | MEV18 KR/ZR |
| | | Pneumatic | Mechanical spring | 20 | 35 | 510 | 100 | MEV18 KR/TQ |
| | 5/2 bistable | Pneumatic | Pneumatic | 12 | 12 | 510 | 100 | MEV18 KR/KR |
| | 5/3 closed centre | Pneumatic | Mechanical spring | 15 | 15 | 420 | 100 | MEV18 SR/SR |
| | 5/3 open centre | Pneumatic | Mechanical spring | 15 | 15 | 420 | 100 | MEV18 AR/AR |
| | 5/3 pressure centre | Pneumatic | Mechanical spring | 15 | 15 | 500 | 100 | MEV18 PR/PR |

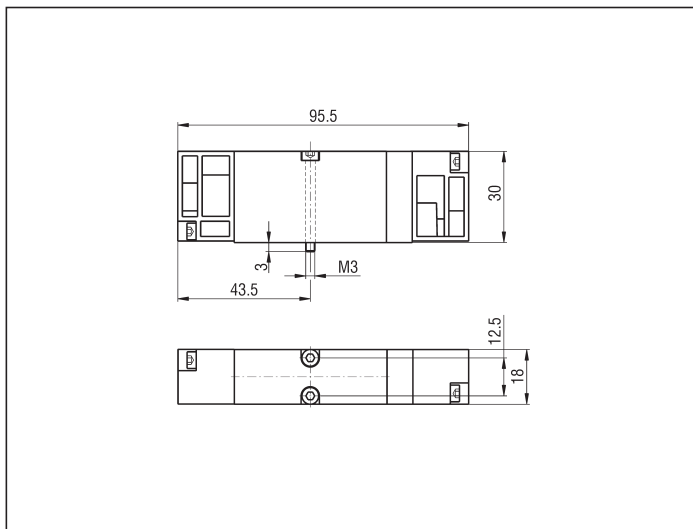
5 PORT - MONOSTABLE



5 PORT - BISTABLE



5 PORT - 3 POSITIONS



SOLENOID ACTUATED VALVES TO VDMA 24563 STANDARD SIZE 02 - MEV 18

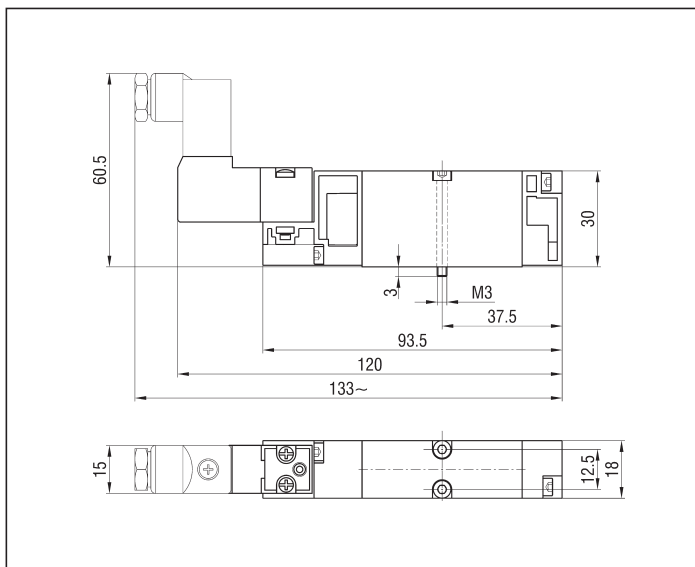
| Symbol | Function | Controls | | Response time at 6 bar (ms) | | Flow rate at 6 bar $\Delta P = 1$ bar (l/min) | Weight (g) | TYPE* |
|--------|---------------------|-------------------------|-------------------------|-----------------------------|--------------|---|------------|---------------|
| | | Pilot | Return | Energized | De-energized | | | |
| | 5/2 monostable | Solenoid | Mechanical spring | 10 | 50 | 510 | 130 | MEV18 KUC/ZR |
| | | Solenoid | Pneumatic spring | 12 | 35 | | | MEV18 KUC/TQ |
| | | Solenoid pilot assisted | Mechanical spring | 10 | 50 | | | MEV18 KUR/ZR |
| | 5/2 bistable | Solenoid | Solenoid | 10 | 10 | 510 | 160 | MEV18 KUC/KUC |
| | | Solenoid pilot assisted | Solenoid pilot assisted | | | | | MEV18 KUR/KUR |
| | 5/3 closed centre | Solenoid | Mechanical spring | 10 | 30 | 420 | 160 | MEV18 SUC/SUC |
| | | Solenoid pilot assisted | Mechanical spring | | | | | MEV18 SUR/SUR |
| | 5/3 open centre | Solenoid | Mechanical spring | 10 | 30 | 420 | 160 | MEV18 AUC/AUC |
| | | Solenoid pilot assisted | Mechanical spring | | | | | MEV18 AUR/AUR |
| | 5/3 pressure centre | Solenoid | Mechanical spring | 10 | 30 | 500 | 160 | MEV18 PUC/PUC |
| | | Solenoid pilot assisted | Mechanical spring | | | | | MEV18 PUR/PUR |

2

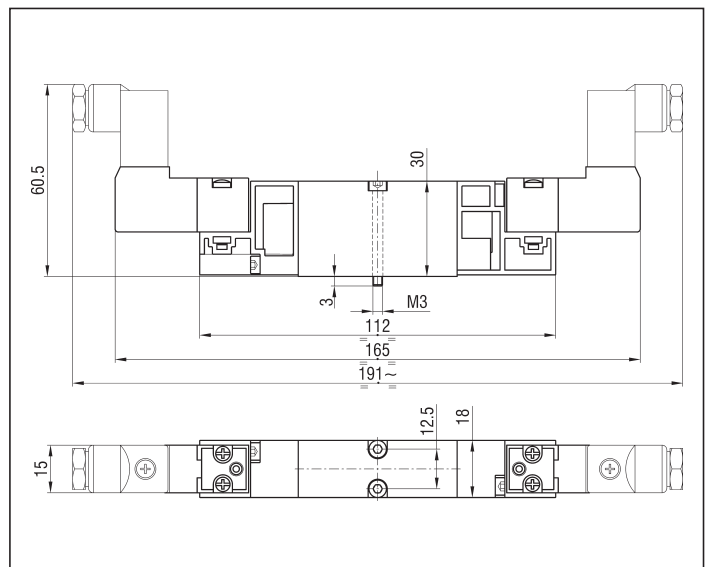
* SPECIFY THE VOLTAGE IN THE ORDER - E.G.: MEV18 KUC/ZR 02400
 (TYPES OF THE SOLENOID VALVES INCLUDE THE PILOTING SOLENOID VALVES "UMCSV" - SEE ON PAGE 2.3)

02400 = 24 V DC 11050-60 = 110 V AC
 02450-60 = 24 V AC 22050-60 = 220 V AC

5 PORT - MONOSTABLE

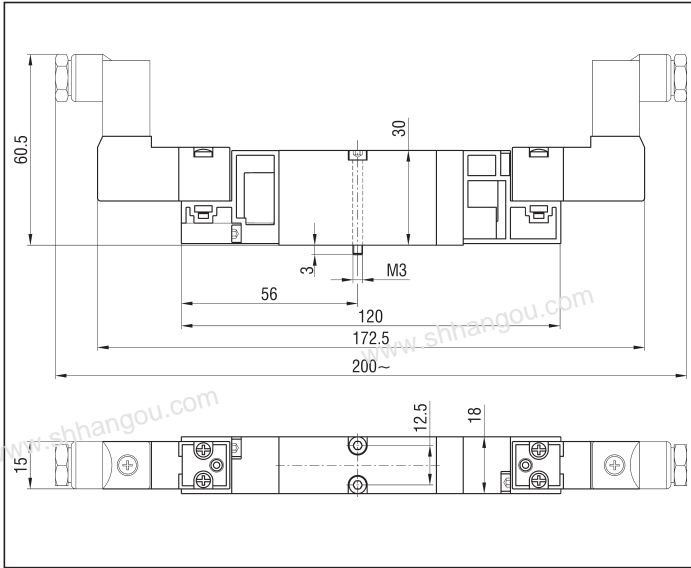


5 PORT - BISTABLE



2

5 PORT - 3 POSITION



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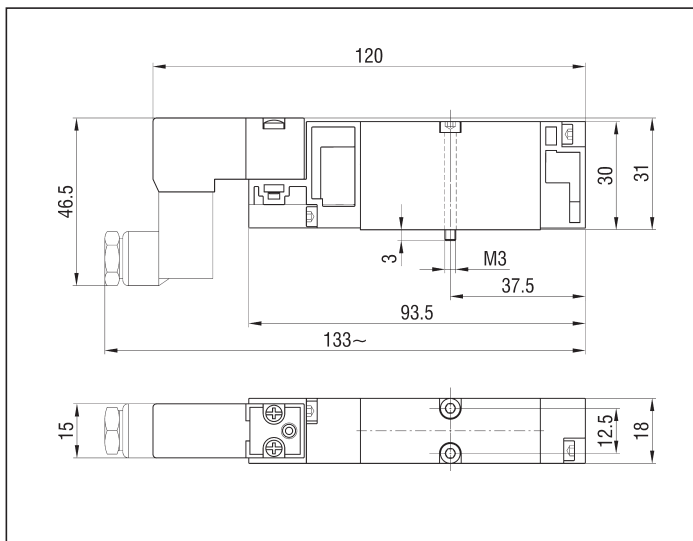
SOLENOID ACTUATED VALVES WITH COILS TOWARD THE BOTTOM TO VDMA 24563 STANDARD SIZE 02 - MEVX 18
SUITABLE FOR SINGLE USE OR MULTI-PIN PLUG CONNECTOR

| Symbol | Function | Controls | | Response time at 6 bar (ms) | | Flow rate at 6 bar $\Delta P = 1 \text{ bar (l/min)}$ | Weight (g) | TYPE* |
|--------|---------------------|-------------------------|-------------------------|-----------------------------|--------------|--|------------|----------------|
| | | Pilot | Return | Energized | De-energized | | | |
| | 5/2 monostable | Solenoid | Mechanical spring | 10 | 50 | 510 | 130 | MEVX18 KUC/ZR |
| | | Solenoid | Pneumatic spring | 12 | 35 | | | MEVX18 KUC/TQ |
| | | Solenoid pilot assisted | Mechanical spring | 10 | 50 | | | MEVX18 KUR/ZR |
| | 5/2 bistable | Solenoid | Solenoid | 10 | 10 | 510 | 175 | MEVX18 KUC/KUC |
| | | Solenoid pilot assisted | Solenoid pilot assisted | | | | | MEVX18 KUR/KUR |
| | 5/3 closed centre | Solenoid | Mechanical spring | 10 | 30 | 420 | 175 | MEVX18 SUC/SUC |
| | | Solenoid pilot assisted | Mechanical spring | | | | | MEVX18 SUR/SUR |
| | 5/3 open centre | Solenoid | Mechanical spring | 10 | 30 | 420 | 175 | MEVX18 AUC/AUC |
| | | Solenoid pilot assisted | Mechanical spring | | | | | MEVX18 AUR/AUR |
| | 5/3 pressure centre | Solenoid | Mechanical spring | 10 | 30 | 500 | 175 | MEVX18 PUC/PUC |
| | | Solenoid pilot assisted | Mechanical spring | | | | | MEVX18 PUR/PUR |

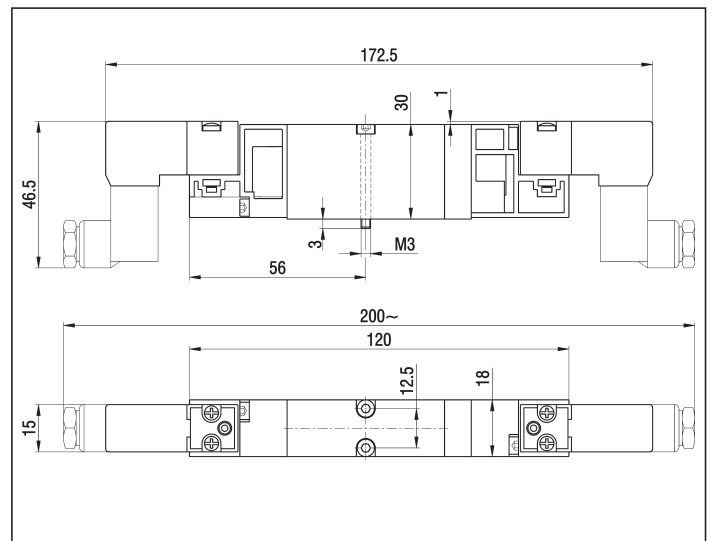
* SPECIFY THE VOLTAGE IN THE ORDER - E.G.: MEVX18 KUC/ZR 02400
(TYPES OF THE SOLENOID VALVES INCLUDE THE PILOTING SOLENOID VALVES "UMCSV" - SEE ON PAGE 2.3)

02400 = 24 V DC
02450-60 = 24 V AC

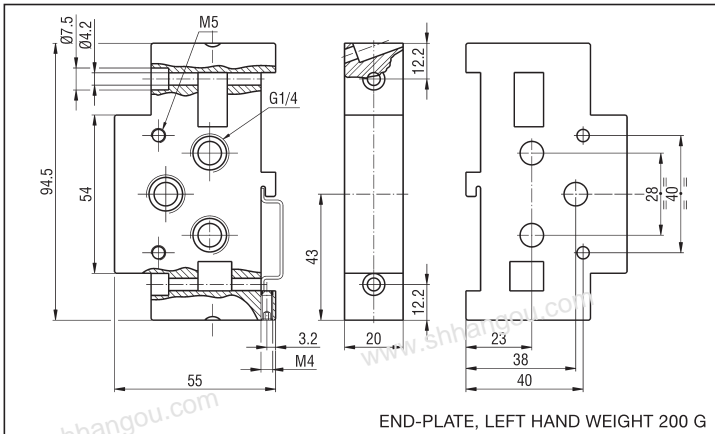
5 PORT - MONOSTABLE



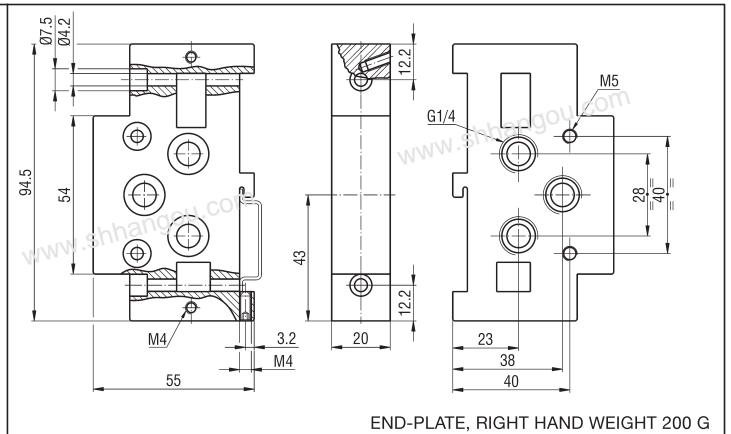
5 PORT - BISTABLE AND 5 PORT - 3 POSITIONS



INPUT PLATES (pair) - MEV18PE



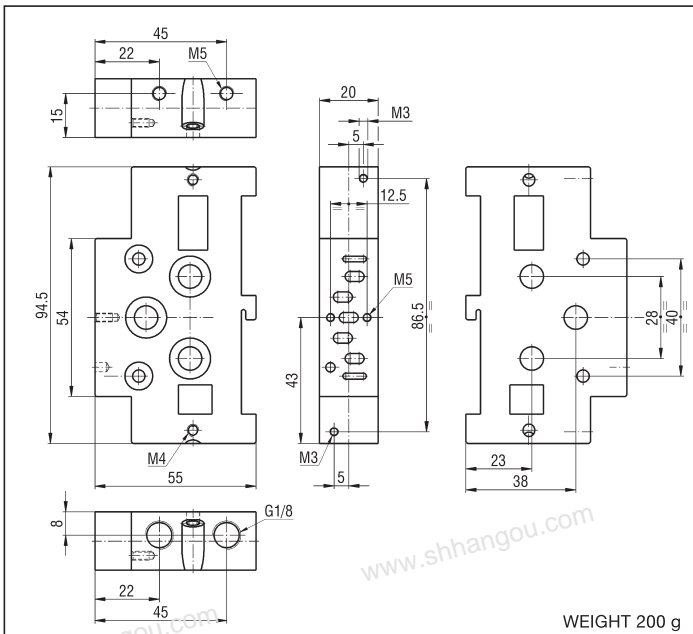
END-PLATE, LEFT HAND WEIGHT 200 G



END-PLATE, RIGHT HAND WEIGHT 200 G

INPUT PLATES ARE SUPPLIED COMPLETE WITH SCREWS AND SEALS

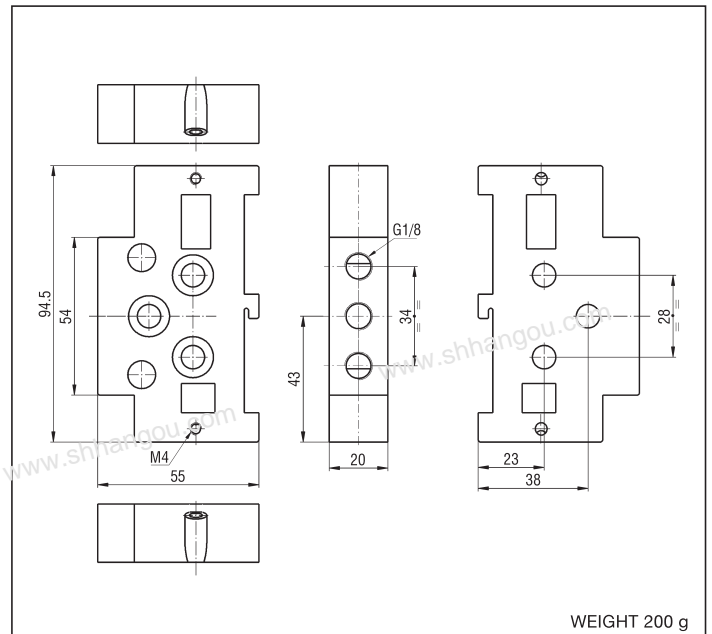
MANIFOLD BASE, SIDE PORTED - MEV18BM



WEIGHT 200 g

MANIFOLD BASE IS SUPPLIED COMPLETE WITH SCREWS AND SEALS

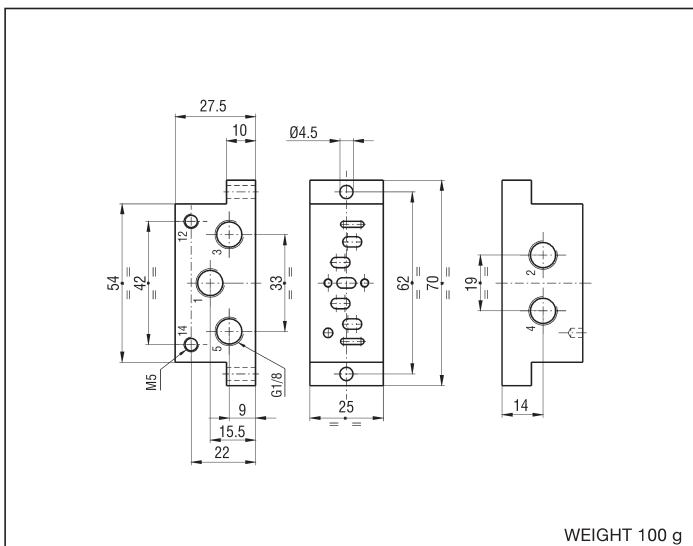
INTERMEDIATE PLATE, TOP PORTED - MEV18PUS



WEIGHT 200 g

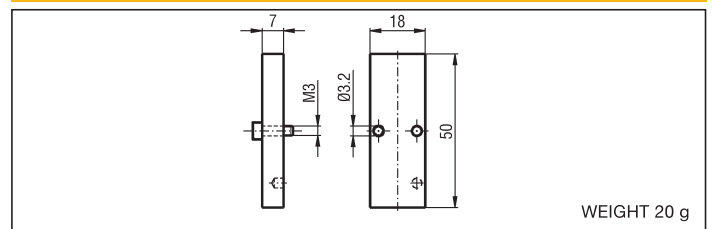
INTERMEDIATE PLATE IS SUPPLIED COMPLETE WITH SCREWS AND SEALS

SINGLE BASE SIDE PORTED - MEV18S BS



WEIGHT 100 g

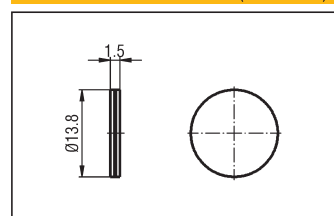
BLANKING PLATE - MEV18PC



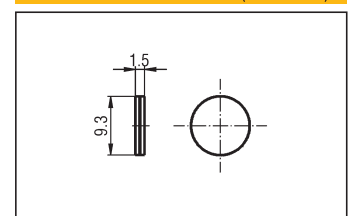
WEIGHT 20 g

BLANKING PLATE IS SUPPLIED COMPLETE WITH SCREWS AND SEALS

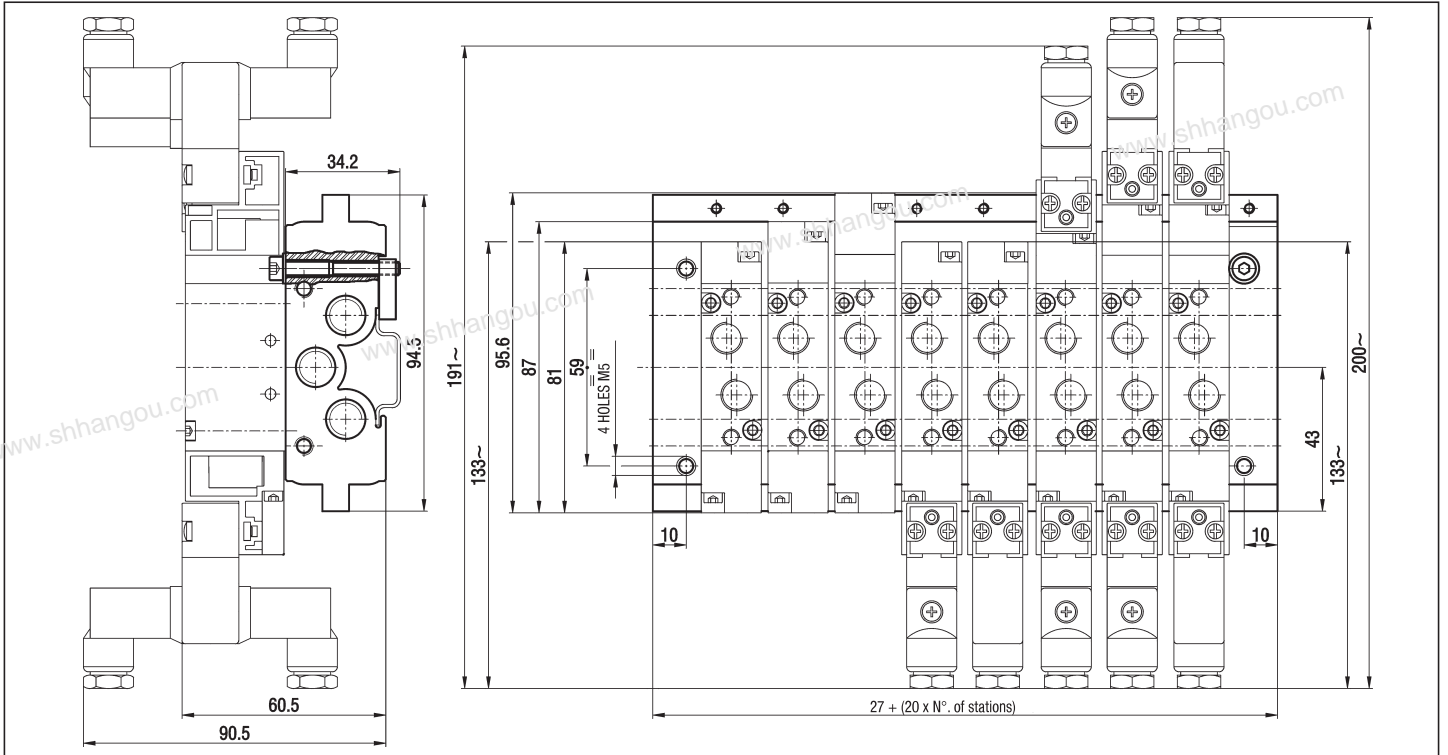
DIAPHRAGM - MEV18DG (No.3 PCS)



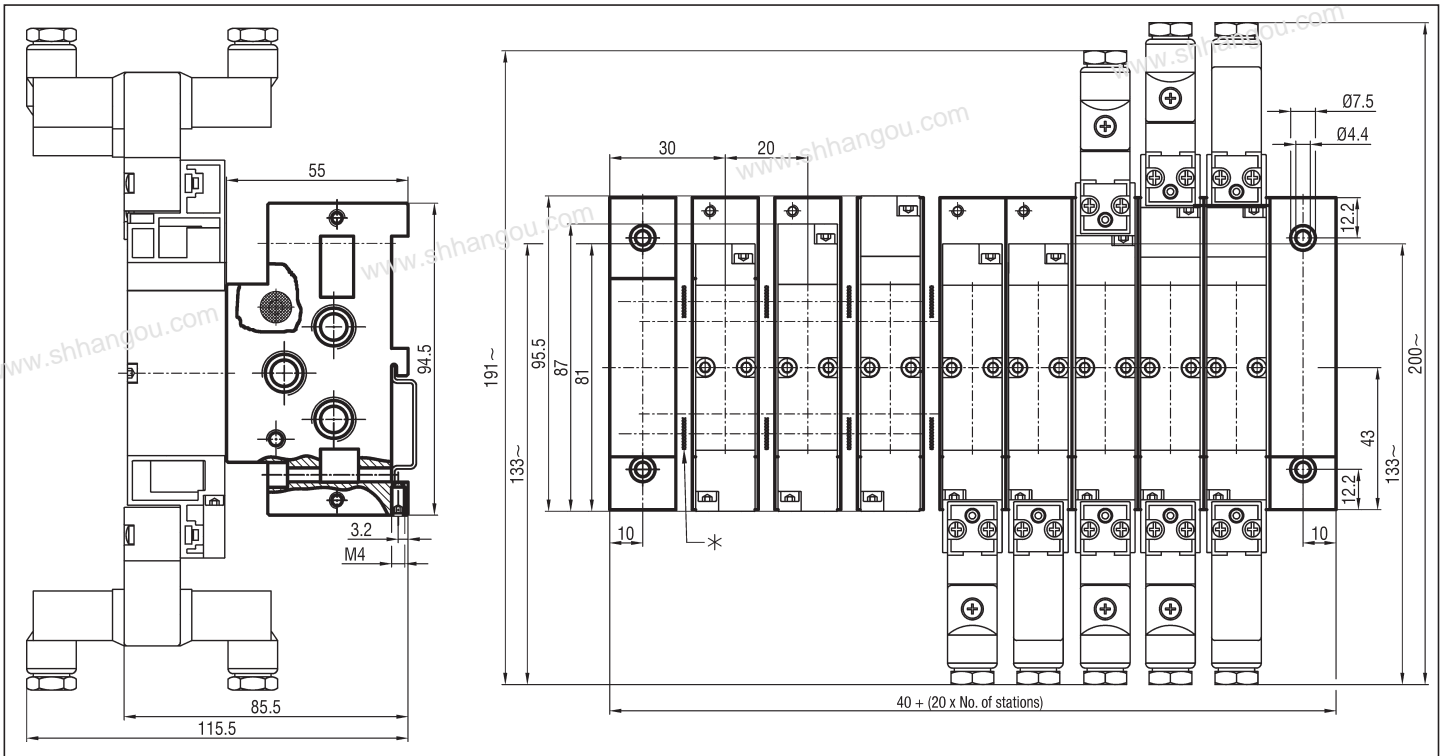
DIAPHRAGM - MEV18DP (No.2 PCS)



EXAMPLE OF ASSEMBLY - MEV 8 - MEVX 8



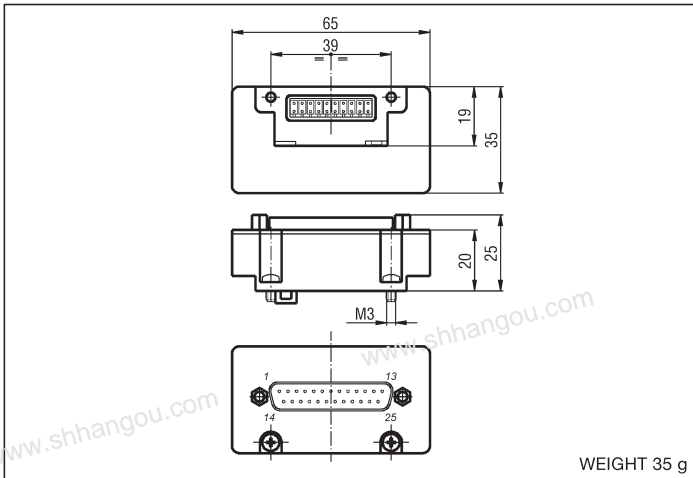
EXAMPLE OF ASSEMBLY - MEV 18 - MEVX 18



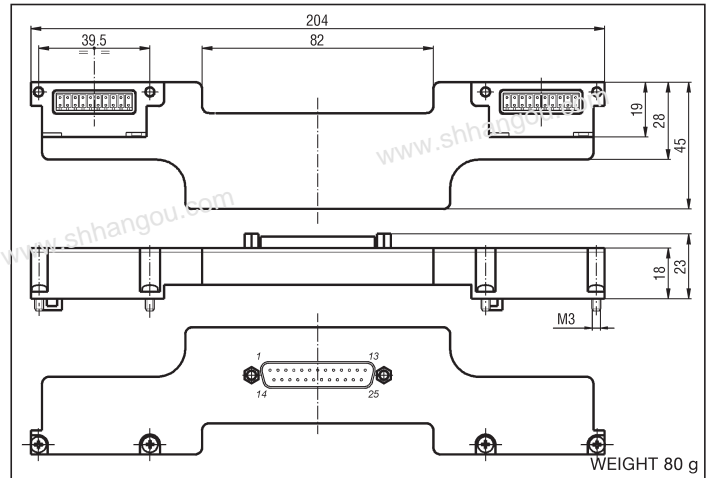
* WITH THE PILOT ACTUATED VALVES USE THE TWO DIAPHRAGMS (TYPE MEV18DP) TO EXCLUDE THE PILOTING EXHAUST (SEE ON PAGE 2.26)

2

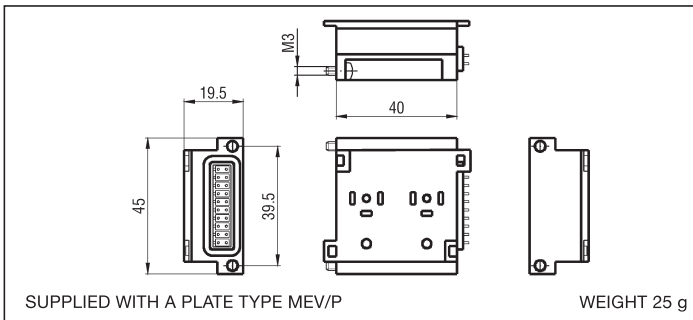
25-PIN PLUG, SINGLE - MEV/C1



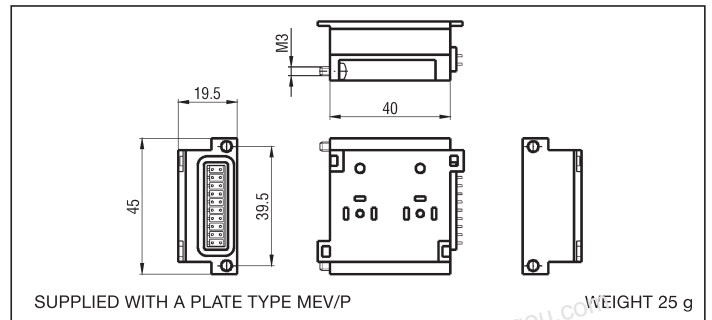
25-PIN PLUG, DOUBLE - MEV/C2



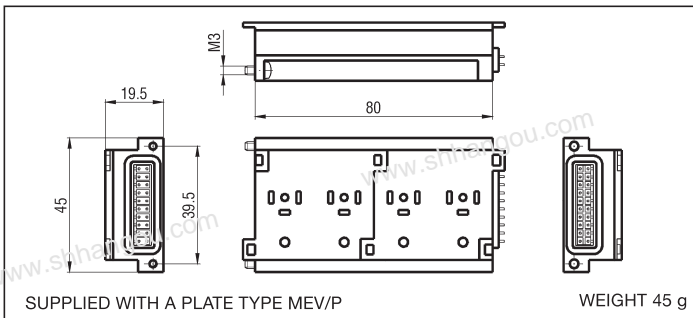
TWO STATIONS MODULE, LEFT - MEV/M2S/AC or DC (24 V)



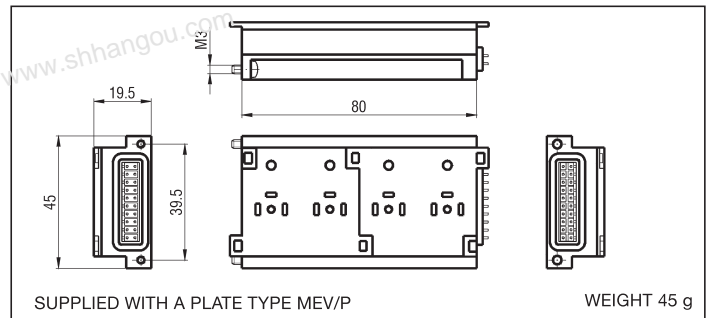
TWO STATIONS MODULE, RIGHT - MEV/M2D/AC or DC



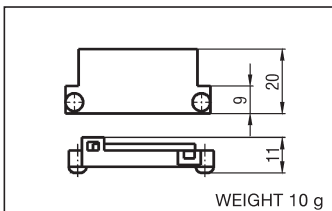
FOUR STATIONS MODULE, LEFT - MEV/M4S/AC or DC (24 V)



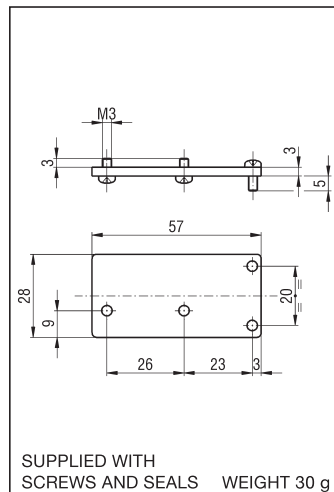
FOUR STATIONS MODULE, RIGHT - MEV/M4D/AC or DC (24 V)



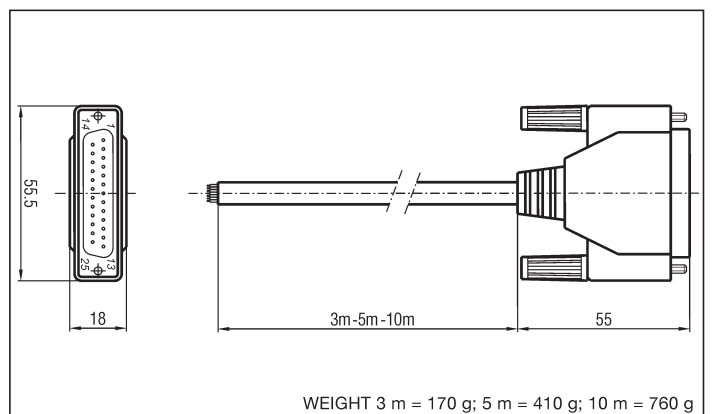
BLANKING CAP - MEV/C



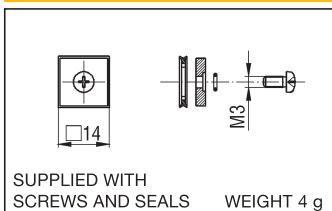
FIXING PLATE - MEV/P



PRE-ASSEMBLED MULTI-PIN CABLE "X" METERS LONG WITH 25-PIN SUB-D PLUG MEV/CF "X" (X= 3, 5, OR 10 m)



BLANKING PLATE - MEV/PM



TECHNICAL INFORMATION

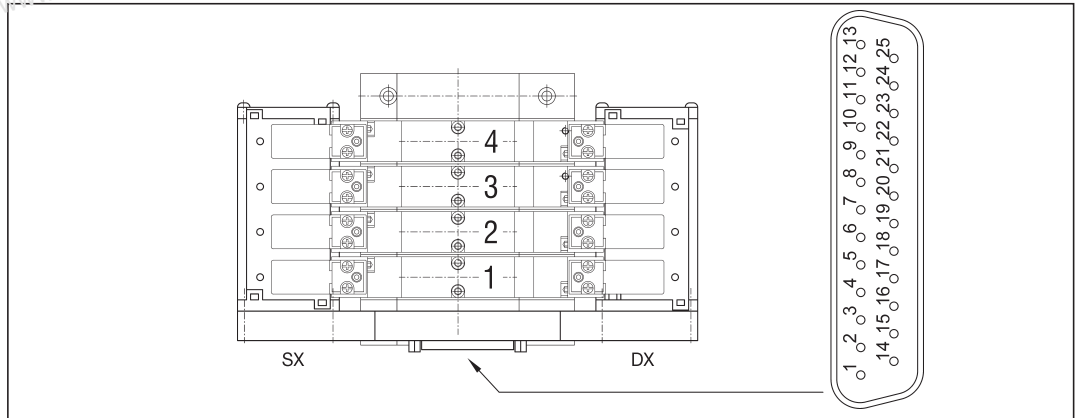
CONNECTION WITH ONE DOUBLE 25-PIN SUB-D PLUG, FOR 2 ÷ 11 STATIONS VALVE ISLANDS

| Valve | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | | 11 | |
|------------|--------|-------------|--------|--------------|--------|-----------|--------|--------------|--------|--------------|--------|-------------|--------|------------|--------|----------------|--------|------------|--------|-------------|--------|--------------|
| Pilot coil | 14(sx) | 12(dx) | 14(sx) | 12(dx) | 14(sx) | 12(dx) | 14(sx) | 12(dx) | 14(sx) | 12(dx) | 14(sx) | 12(dx) | 14(sx) | 12(dx) | 14(sx) | 12(dx) | 14(sx) | 12(dx) | 14(sx) | 12(dx) | 14(sx) | 12(dx) |
| PIN Number | 1 | 12 | 2 | 13 | 3 | 14 | 4 | 15 | 5 | 16 | 6 | 17 | 7 | 18 | 8 | 19 | 9 | 20 | 10 | 21 | 11 | 22 |
| Color | brown | green white | red | green chiaro | orange | red black | yellow | orange black | green | yellow black | blue | green black | purple | grey black | grey | black sky blue | white | rose black | black | brown black | rose | orange white |

| | | | | |
|------------|--------------|----------|------------|---|
| Valve | - | | - | |
| Pilot coil | GND* | GND* | GND* | - |
| PIN Number | 23 | 24 | 25 | - |
| Color | yellow green | sky blue | grey green | - |

*Common cable

P.S.: For monostable solenoid valves use left modules



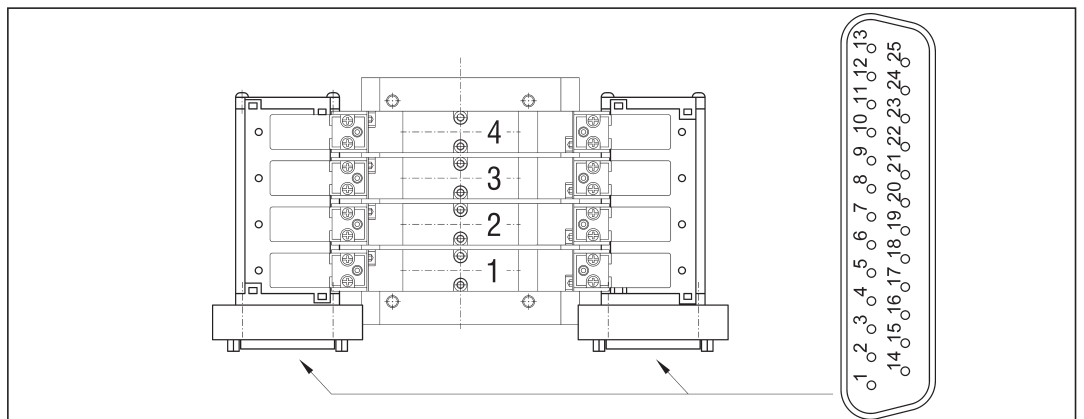
2

CONNECTION WITH TWO SINGLE 25-PIN SUB-D PLUGS, FOR 2 ÷ 16 STATIONS VALVE ISLANDS

| Valve | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | | 11 | |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Pilot coil | 14(sx) | 12(dx) | 14(sx) | 12(dx) | 14(sx) | 12(dx) | 14(sx) | 12(dx) | 14(sx) | 12(dx) | 14(sx) | 12(dx) | 14(sx) | 12(dx) | 14(sx) | 12(dx) | 14(sx) | 12(dx) | 14(sx) | 12(dx) | 14(sx) | 12(dx) |
| PIN Number | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 4 | 5 | 5 | 6 | 6 | 7 | 7 | 8 | 8 | 9 | 9 | 10 | 10 | 11 | 11 |
| Color | brown | brown | red | red | orange | orange | yellow | yellow | green | green | blue | blue | purple | purple | grey | grey | white | white | black | black | red | red |

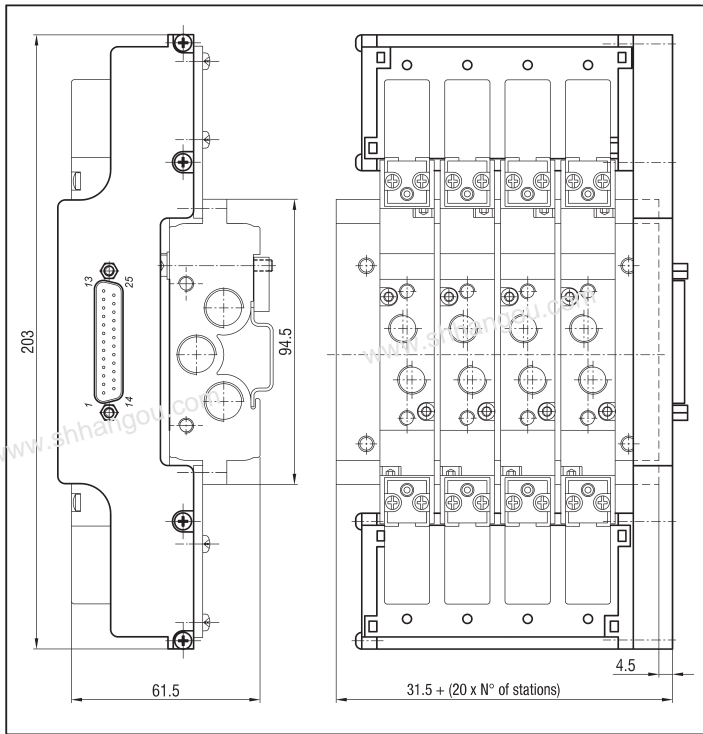
| | | | | | | | | | | | | | | | | | | | | | |
|------------|-------------|-------------|--------------|--------------|-----------|-----------|--------------|--------------|--------------|--------------|-------------|-------------|----------------|------------|-------------|--------------|--------------|----------|------------|----|---|
| Valve | 12 | | 13 | | 14 | | 15 | | 16 | | - | - | - | - | - | - | - | - | - | - | - |
| Pilot coil | 14(sx) | 12(dx) | 14(sx) | 12(dx) | 14(sx) | 12(dx) | 14(sx) | 12(dx) | 14(sx) | 12(dx) | GND* | GND* | GND* | GND* | NC | NC | NC | NC | NC | NC | - |
| PIN Number | 12 | 12 | 13 | 13 | 14 | 14 | 15 | 15 | 16 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | - | - |
| Color | green white | green white | green chiaro | green chiaro | red black | red black | orange black | orange black | yellow black | yellow black | green black | green black | black sky blue | rose black | brown black | orange white | yellow green | sky blue | grey green | - | - |

*Common cable

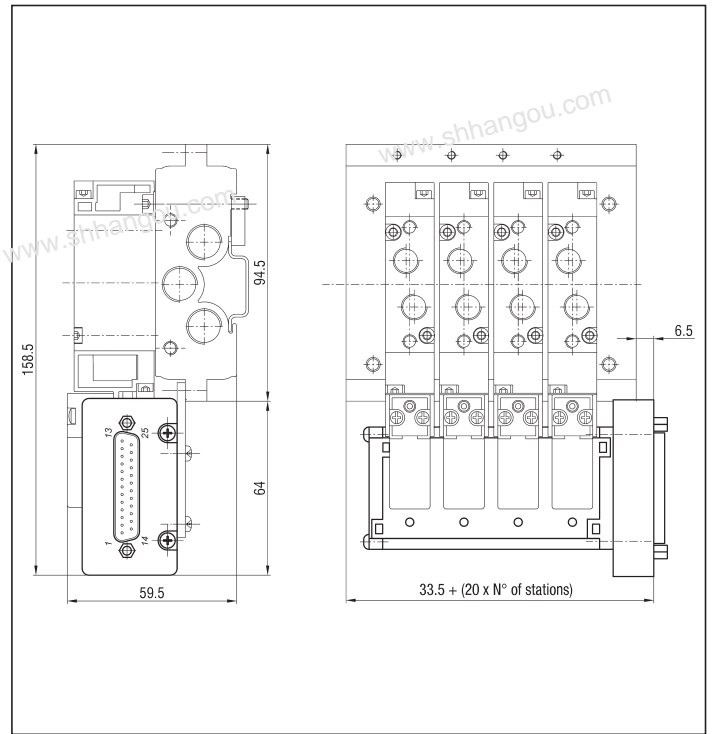


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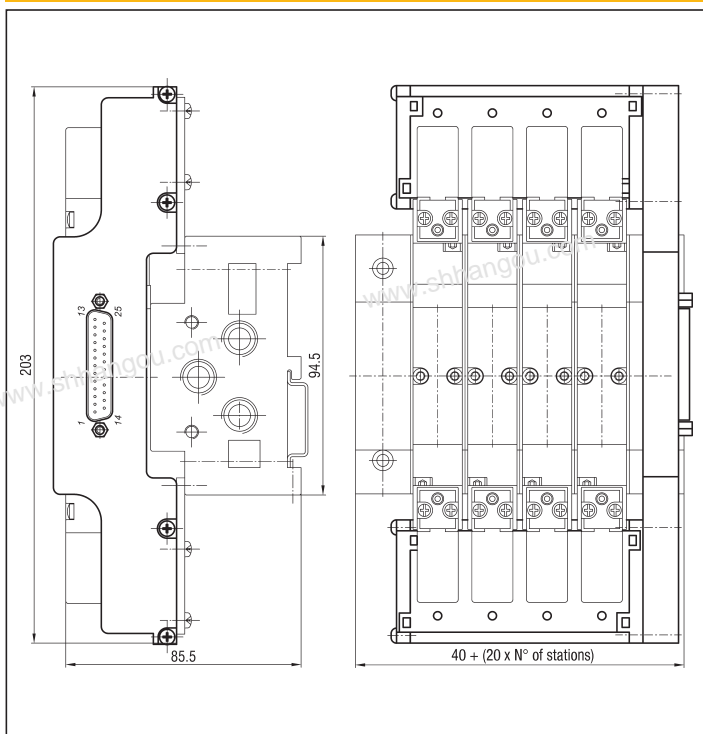
MEVX 8 WITH DOUBLE 25-PIN SUB-D PLUG



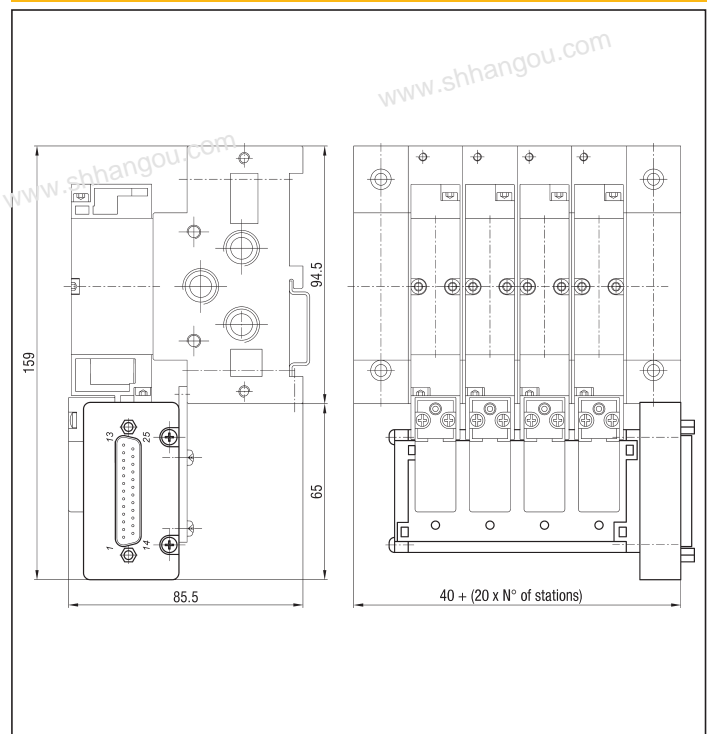
MEVX 8 WITH SINGLE 25-PIN SUB-D PLUG



MEVX 18 WITH DOUBLE 25-PIN SUB-D PLUG



MEVX 18 SINGLE 25-PIN SUB-D PLUG



Assembling examples

Multi-pin connection with solenoid valves versions MEVX 8 and MEVX 18

series MEV

2

Solenoid valves versions MEVX allow a multi-pin plug connection with the possibility of creating islands of pre-assembled solenoid valves with a number of positions chosen by the user during the assembling of the components.

The replacement of the solenoid valves can be easily made in every moment.

Connection modules are at 2 or 4 positions that can operate with 24 V AC or DC voltage.

