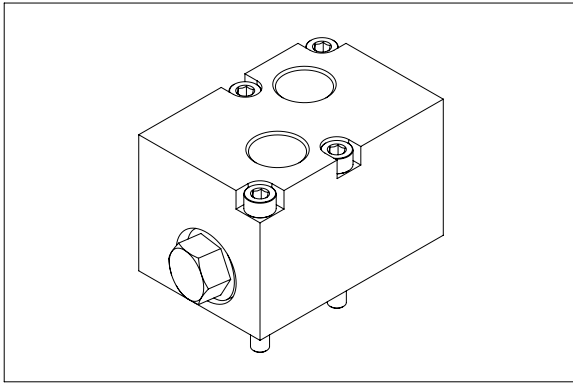
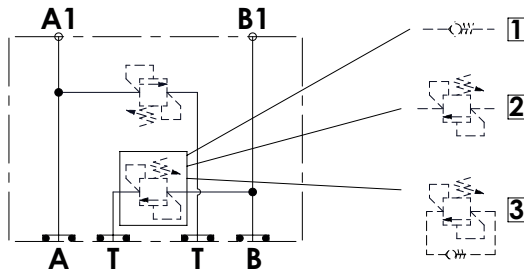


# MADN-060-ZNFD

ANTI SHOCK/CAVITATION  
FLANGEABLE VALVE



HYDRAULIC SCHEME



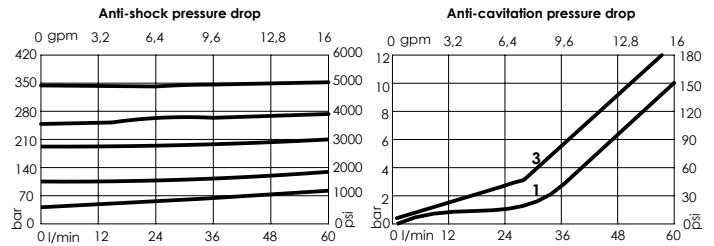
This flangeable valve can be mounted on top of the monoblock after removing the T line plugs; it has different configurations such as anti-shock, anti-cavitation or anti-shock/cavitation.

There are three mounting options, single valve on A or on B for single effect operation or valves on A and B for double effect operation. The manifold is made in aluminium with anodization surface treatment or on request in steel with zinc plating treatment.

## TECHNICAL DATA

|                                |  |
|--------------------------------|--|
| <b>Max pressure</b>            | 210/320 bar (3000/4600 psi)                              |
| <b>Rated flow</b>              | 60 l/min (16 gpm)  |
| <b>Hydraulic fluid</b>         | Mineral oil DIN 51524                                    |
| <b>Fluid viscosity</b>         | 10-500 mm <sup>2</sup> /s (0,02-0,78 in <sup>2</sup> /s) |
| <b>Fluid temperature</b>       | -25°C/75°C (-13°F/167°F)                                 |
| <b>Environment temperature</b> | -25°C/60°C (-13°F/140°F)                                 |
| <b>Weight</b>                  | 0,4 kg (0,88 lb)   |

## PRESSURE DROP



## ORDERING DETAILS: SEPARATE ELEMENTS

MA\*\*\*-060-\*NFD-\*\*-\*\*\*-N\*\*\*

|   |                   |
|---|-------------------|
| * | <b>VALVE TYPE</b> |
| S | Single effect     |
| D | Double effect     |

|   |                      |
|---|----------------------|
| * | <b>VALVE OPTION</b>  |
| N | Valves in both ports |
| A | Valve only A port    |
| B | Valve only B port    |

|   |                                       |
|---|---------------------------------------|
| * | <b>MATERIAL TYPE</b>                  |
| A | Steel zinc-plated (320 bar/4600 psi)  |
| Z | Aluminium anodized (210 bar/3000 psi) |

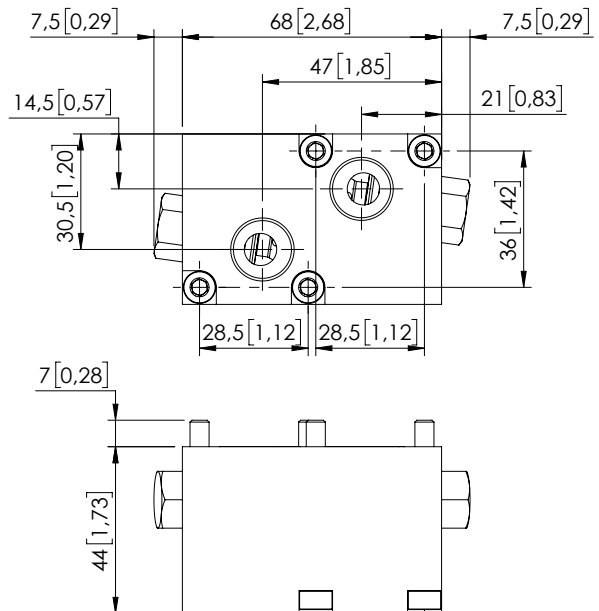
|    |                   |                 |
|----|-------------------|-----------------|
| ** | <b>VALVE TYPE</b> |                 |
|    | A line            | B line          |
|    | no valve          | no valve        |
| 1  | anti-cavitation   | anti-cavitation |
| 2  | anti-shock        | anti-shock      |
| 3  | anti-cav/shock    | anti-cav/shock  |

|     |              |              |   |
|-----|--------------|--------------|---|
| *** | <b>PORTS</b> |              |   |
|     | A line       | B line       | M |
| G38 | G 3/8"       | G 3/8"       | / |
| U09 | 9/16"-18 UNF | 9/16"-18 UNF | / |

|       |                                      |
|-------|--------------------------------------|
| *     | <b>SETTINGS RANGE</b>                |
| ...   | 10 - 310 bar                         |
| ../.. | For difference A e B setting sign it |

|                   |      |
|-------------------|------|
| <b>QUICK CODE</b> |      |
| DESCRIPTION       | CODE |
|                   |      |
|                   |      |

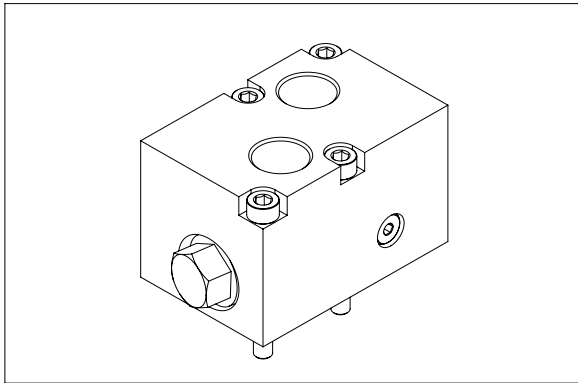
## OVERALL DIMENSIONS



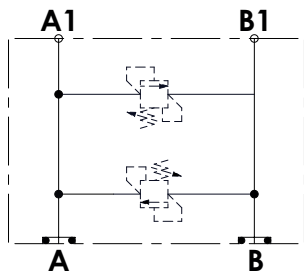
Dimensions: mm [inches]

# MADN-060-ZNFR

ANTI SHOCK  
FLANGEABLE VALVE



HYDRAULIC SCHEME

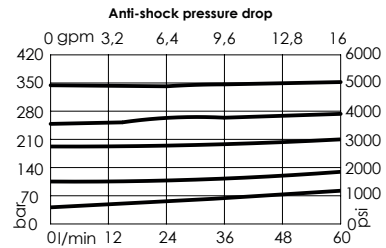


This flangeable valve can be mounted on top of the monoblock.  
There are three mounting options, single valve on A or on B for single effect operation or valves on A and B for double effect operation. The manifold is made in aluminium with anodization surface treatment or on request in steel with zinc plating treatment.

## TECHNICAL DATA

|                                |                             |
|--------------------------------|-----------------------------|
| <b>Max pressure</b>            | 210/320 bar (3000/4600 psi) |
| <b>Rated flow</b>              | 60 l/min (16 gpm)           |
| <b>Hydraulic fluid</b>         | Mineral oil DIN 51524       |
| <b>Fluid viscosity</b>         | 10-500 mm <sup>2</sup> /s   |
| <b>Fluid temperature</b>       | -25°C/75°C (-13°F/167°F)    |
| <b>Environment temperature</b> | -25°C/60°C (-13°F/140°F)    |
| <b>Weight</b>                  | 0,4 kg (0,88 lb)            |

## PRESSURE DROP

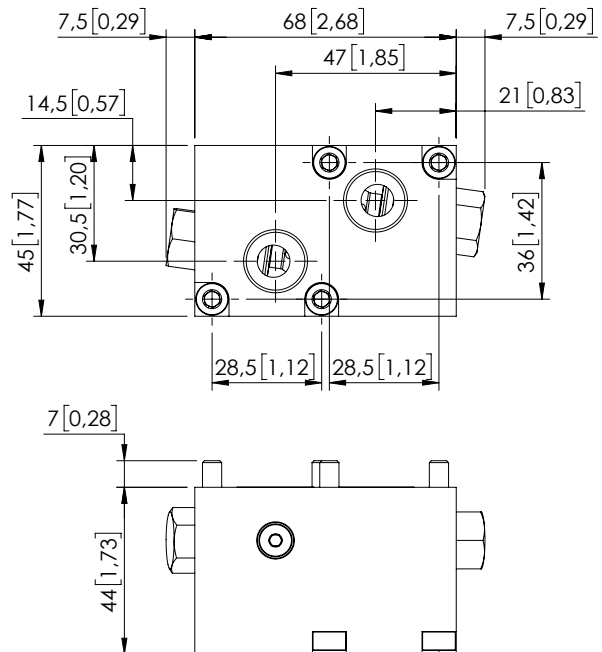


## ORDERING DETAILS: SEPARATE ELEMENTS

MA\*\*\*-060-\*NFR-\*\*-\*\*\*-N\*\*\*

|                   |                                       |              |   |
|-------------------|---------------------------------------|--------------|---|
| *                 | <b>VALVE TYPE</b>                     |              |   |
| S                 | Single effect                         |              |   |
| D                 | Double effect                         |              |   |
| *                 | <b>VALVE OPTION</b>                   |              |   |
| N                 | Valves in both ports                  |              |   |
| A                 | Valve only A port                     |              |   |
| B                 | Valve only B port                     |              |   |
| *                 | <b>MATERIAL TYPE</b>                  |              |   |
| A                 | Steel zinc-plated (320 bar/4600 psi)  |              |   |
| Z                 | Aluminium anodized (210 bar/3000 psi) |              |   |
| **                | <b>VALVE TYPE</b>                     |              |   |
|                   | A line                                | B line       |   |
|                   | no valve                              | no valve     |   |
| ***               | <b>PORTS</b>                          |              |   |
|                   | A line                                | B line       | M |
| G38               | G 3/8"                                | G 3/8"       | / |
| U09               | 9/16"-18 UNF                          | 9/16"-18 UNF | / |
| *                 | <b>SETTINGS RANGE</b>                 |              |   |
| ...               | 10 - 310 bar                          |              |   |
| ../..             | For difference A e B setting sign it  |              |   |
| <b>QUICK CODE</b> |                                       |              |   |
| DESCRIPTION       |                                       | CODE         |   |
|                   |                                       |              |   |

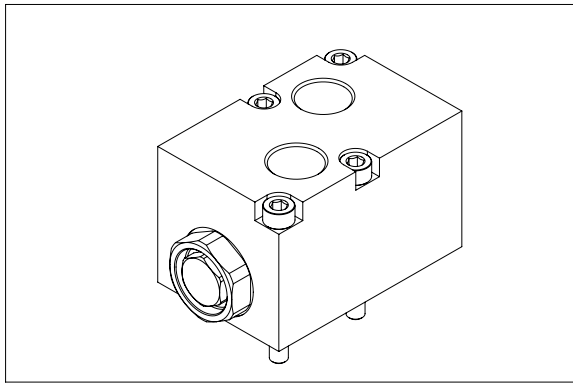
## OVERALL DIMENSIONS



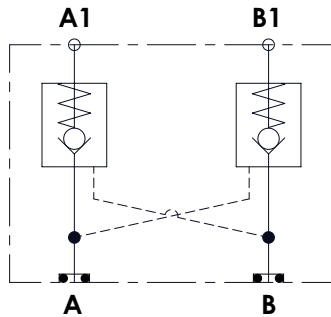
Dimensions: mm [inches]

# MCDN-060-ZNFD

PO CHECK VALVE  
FLANGIABLE VALVE



HYDRAULIC SCHEME

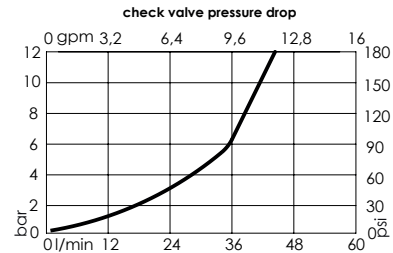


This flangeable valve can be mounted on top of the monoblock keeping the T line plugs. The valve consists of two pilot operated check valves piloted by the opposite line and is poppet type. The manifold is made in aluminium with anodization surface treatment or on request in steel with zinc plating treatment.

## TECHNICAL DATA

|                                |  |
|--------------------------------|--|
| <b>Max pressure</b>            | 210/320 bar (3000/4600 psi)                              |
| <b>Rated flow</b>              | 60 l/min (16 gpm)  |
| <b>Pilot ratio</b>             | 6:1  |
| <b>Hydraulic fluid</b>         | Mineral oil DIN 51524                                    |
| <b>Fluid viscosity</b>         | 10-500 mm <sup>2</sup> /s (0,02-0,78 in <sup>2</sup> /s) |
| <b>Fluid temperature</b>       | -25°C/75°C (-13°F/167°F)                                 |
| <b>Environment temperature</b> | -25°C/60°C (-13°F/140°F)                                 |
| <b>Weight</b>                  | 0,9 kg (1,9 lb)  |

## PRESSURE DROP



## ORDERING DETAILS: SEPARATE ELEMENTS

MC\*\* - 060 - \* NFD-06-\*\*\*-N

|   |                   |
|---|-------------------|
| * | <b>VALVE TYPE</b> |
| S | Single effect     |
| D | Double effect     |

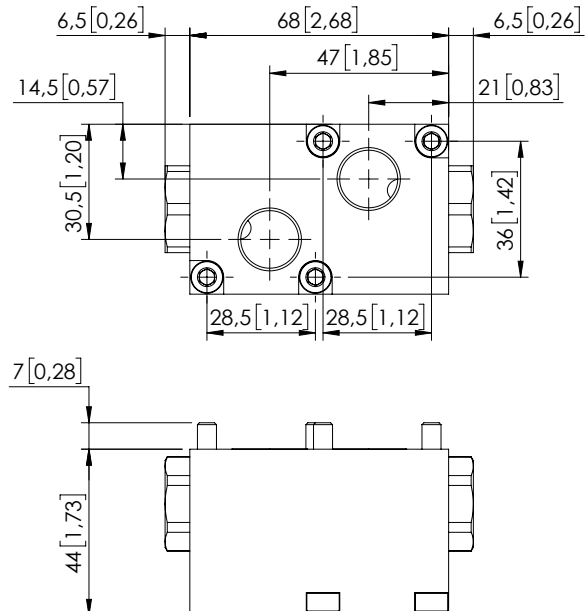
|   |                            |
|---|----------------------------|
| * | <b>VALVE OPTION</b>        |
| N | Check valve on A e B ports |
| A | Check valve only A port    |
| B | Check valve only B port    |

|   |                                       |
|---|---------------------------------------|
| * | <b>MATERIAL TYPE</b>                  |
| A | Steel zinc-plated (320 bar/4600 psi)  |
| Z | Aluminium anodized (210 bar/3000 psi) |

|     |              |              |   |
|-----|--------------|--------------|---|
| *** | <b>PORTS</b> |              |   |
|     | A line       | B line       | M |
| G38 | G 3/8"       | G 3/8"       | / |
| U09 | 9/16"-18 UNF | 9/16"-18 UNF | / |

|                           |          |
|---------------------------|----------|
| <b>QUICK CODE</b>         |          |
| DESCRIPTION               | CODE     |
| MCDN-060-ZNFD-06-G38-N210 | MC000173 |
| MCSA-060-ZNFD-06-G38-N210 | MC000185 |

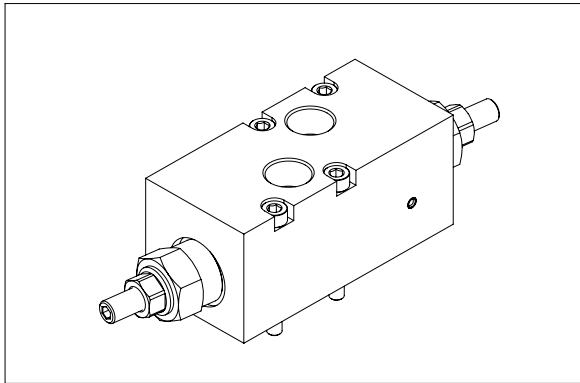
## OVERALL DIMENSIONS



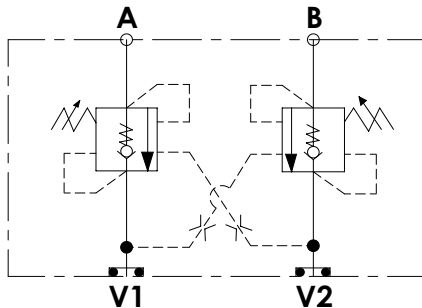
Dimensions: mm [inches]

# MBDN-060-ZNFD

OVERCENTER  
FLANGEABLE VALVE



HYDRAULIC SCHEME

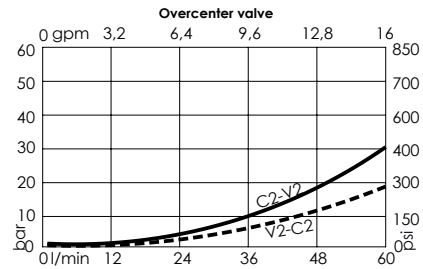


This modular block is made with overcenter valves to control the load on A and B port. The valves are poppet type with a pilot ratio of 4:1, other pilot ratios are available on request. The standard configuration provides valves on both lines, it is possible to order also valves on only one side. The manifold is made in aluminium with anodization surface treatment or on request in steel with zinc plating treatment.

## TECHNICAL DATA

|                                |  |
|--------------------------------|--|
| <b>Max pressure</b>            | 210/320 bar (3000/4600 psi)                              |
| <b>Rated flow</b>              | 60 l/min (16 gpm)  |
| <b>Pilot ratio</b>             | 4:1  |
| <b>Hydraulic fluid</b>         | Mineral oil DIN 51524                                    |
| <b>Fluid viscosity</b>         | 10-500 mm <sup>2</sup> /s (0,02-0,78 in <sup>2</sup> /s) |
| <b>Fluid temperature</b>       | -25°C/75°C (-13°F/167°F)                                 |
| <b>Environment temperature</b> | -25°C/60°C (-13°F/140°F)                                 |
| <b>Weight</b>                  | 1,4 kg (3,08 lb)   |

## PRESSURE DROP



## ORDERING DETAILS: SEPARATE ELEMENTS

**MB\*\* - 060 - \*NFD-04-\*\*\*-N\*\*\***

|          |                   |
|----------|-------------------|
| *        | <b>VALVE TYPE</b> |
| <b>S</b> | Single effect     |
| <b>D</b> | Double effect     |

|          |                            |
|----------|----------------------------|
| *        | <b>VALVE OPTION</b>        |
| <b>N</b> | Check valve on A e B ports |
| <b>A</b> | Check valve only A port    |
| <b>B</b> | Check valve only B port    |

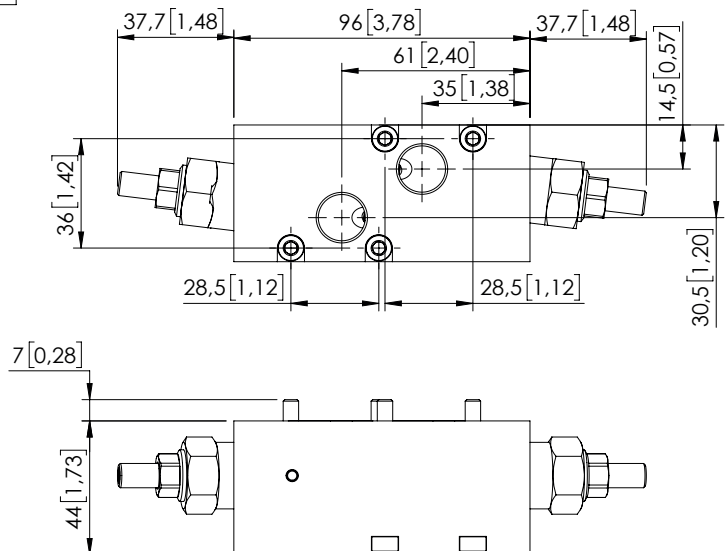
|          |                                       |
|----------|---------------------------------------|
| *        | <b>MATERIAL TYPE</b>                  |
| <b>A</b> | Steel zinc-plated (320 bar/4600 psi)  |
| <b>Z</b> | Aluminium anodized (210 bar/3000 psi) |

|            |                                       |
|------------|---------------------------------------|
| ***        | <b>PORTS</b>                          |
|            | A line      B line      M             |
| <b>G38</b> | G 3/8"      G 3/8"      /             |
| <b>U09</b> | 9/16"-18 UNF      9/16"-18 UNF      / |

|            |                                   |
|------------|-----------------------------------|
| *          | <b>O-RING TYPE</b>                |
| <b>100</b> | 100 bar settings                  |
| <b>210</b> | 210 bar settings (standard)       |
| <b>320</b> | 320 bar settings (steel manifold) |

|                           |          |
|---------------------------|----------|
| <b>QUICK CODE</b>         |          |
| DESCRIPTION               | CODE     |
| MBDN-060-ZNFD-04-G38-N210 | MB000874 |
| MBSA-060-ZNFD-04-G38-N210 | MB000875 |

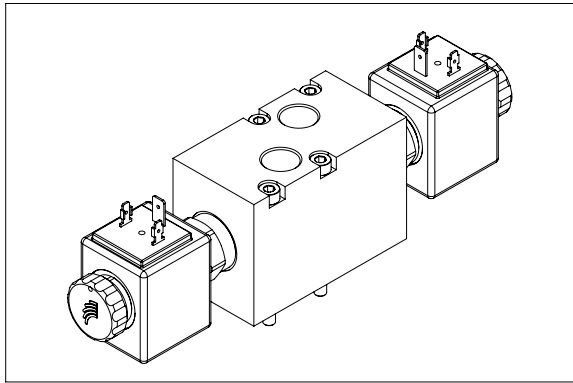
## OVERALL DIMENSIONS



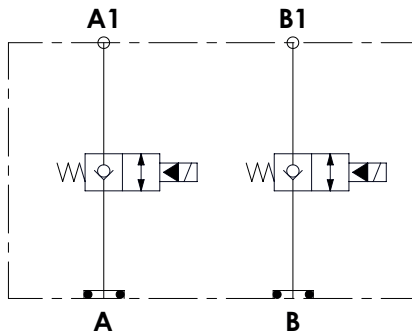
Dimensions: mm [inches]

# KEDN-060-ZNFD

IN LINE ELECTRICAL FLANGEABLE VALVE



HYDRAULIC SCHEME



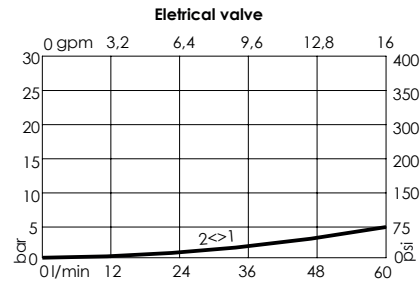
This modular block is equipped with solenoid valves, normally closed, poppet type and can be used to obtain a leak free function on the spool valve or to stop functions. It is available in three configurations, with valves on both lines or on A or on B line.

The manifold is made in aluminium with anodization surface treatment or on request in steel with zinc plating treatment.

## TECHNICAL DATA

|                                |  |
|--------------------------------|--|
| <b>Max pressure</b>            | 210/320 bar (3000/4600 psi)                              |
| <b>Rated flow</b>              | 60 l/min (16 gpm)  |
| <b>Insertion</b>               | 100% ED  |
| <b>Hydraulic fluid</b>         | Mineral oil DIN 51524                                    |
| <b>Fluid viscosity</b>         | 10-500 mm <sup>2</sup> /s (0,02-0,78 in <sup>2</sup> /s) |
| <b>Fluid temperature</b>       | -25°C/75°C (-13°F/167°F)                                 |
| <b>Environment temperature</b> | -25°C/60°C (-13°F/140°F)                                 |
| <b>Weight</b>                  | 0,8 kg (1,8 lb)  |

## PRESSURE DROP



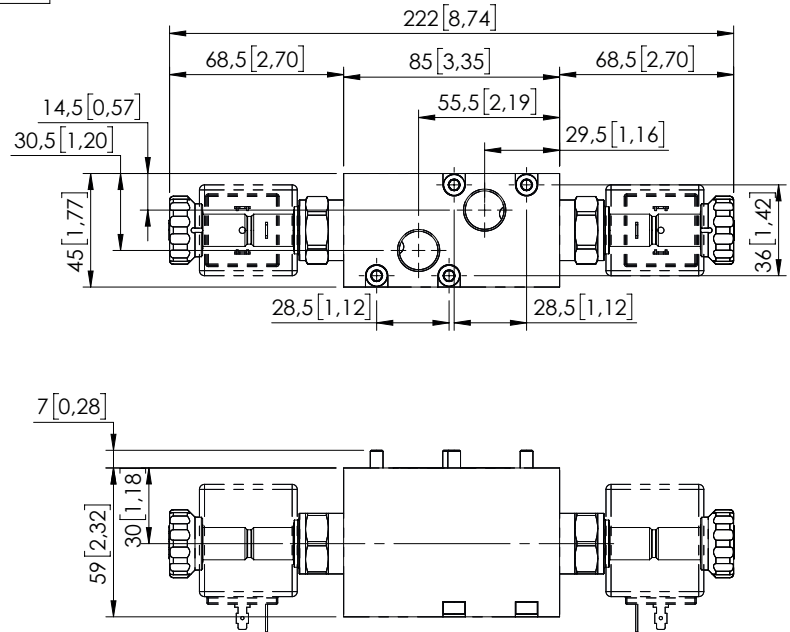
## ORDERING DETAILS: SEPARATE ELEMENTS

KE \* \* - 060 - \* NFD-04 - \*\*\* - \* \* \* N

|            |                                       |               |          |
|------------|---------------------------------------|---------------|----------|
| <b>*</b>   | <b>VALVE TYPE</b>                     |               |          |
| <b>S</b>   | Single effect                         |               |          |
| <b>D</b>   | Double effect                         |               |          |
| <b>*</b>   | <b>VALVE OPTION</b>                   |               |          |
| <b>N</b>   | EV on A e B ports                     |               |          |
| <b>A</b>   | EV only A port                        |               |          |
| <b>B</b>   | EV only B port                        |               |          |
| <b>*</b>   | <b>MATERIAL TYPE</b>                  |               |          |
| <b>A</b>   | Steel zinc-plated (320 bar/4600 psi)  |               |          |
| <b>Z</b>   | Aluminium anodized (210 bar/3000 psi) |               |          |
| <b>***</b> | <b>PORTS</b>                          |               |          |
|            | <b>A line</b>                         | <b>B line</b> | <b>M</b> |
| <b>G38</b> | G 3/8"                                | G 3/8"        | /        |
| <b>U09</b> | 9/16"-18 UNF                          | 9/16"-18 UNF  | /        |
| <b>*</b>   | <b>VOLTAGE</b>                        |               |          |
|            | no coils                              |               |          |
| <b>A</b>   | 12 V dc                               |               |          |
| <b>B</b>   | 24 V dc                               |               |          |
| <b>**</b>  | <b>COILS TYPE</b>                     |               |          |
|            | no coils                              |               |          |
| <b>HR</b>  | Hirschmann (ISO 4400 DIN 43650)       |               |          |
| <b>DT</b>  | Deutsch (DT04-2P)                     |               |          |
| <b>AJ</b>  | Amp junior (AJ type)                  |               |          |

| QUICK CODE  |      |
|-------------|------|
| DESCRIPTION | CODE |
|             |      |
|             |      |

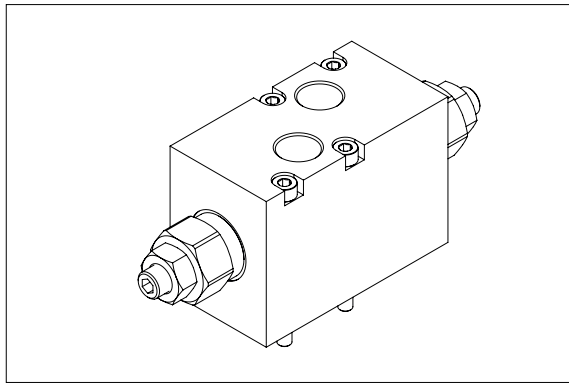
## OVERALL DIMENSIONS



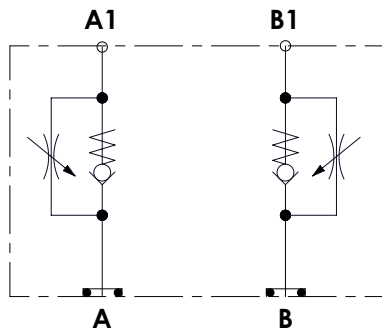
Dimensions: mm [inches]

# KFDN-060-ZNFD

IN LINE FLOW RESTRICTOR  
FLANGIABLE VALVE



HYDRAULIC SCHEME

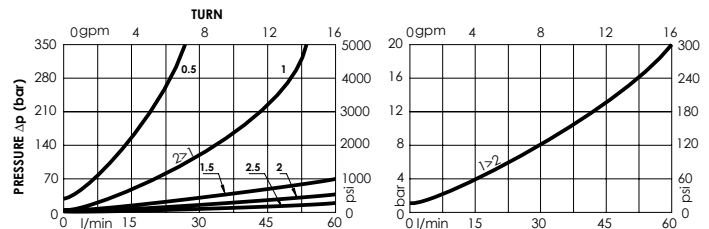


This modula valve is equipped with mono directional flow restrictor not compensated to adjust the speed of the application; it is available in three configurations, with valves on A line, on B line(single effect) or A and B line (double effect). The manifold is made in aluminium with anodization surface treatment or on request in steel with zinc plating treatment.

## TECHNICAL DATA

|                               |  |
|-------------------------------|--|
| <b>Max pressure</b>           | 210/320 bar (3000/4600 psi)                              |
| <b>Rated flow</b>             | 60 l/min (16 gpm)  |
| <b>Hydraulic fluid</b>        | Mineral oil DIN 51524                                    |
| <b>Fluid viscosity</b>        | 10-500 mm <sup>2</sup> /s (0,02-0,78 in <sup>2</sup> /s) |
| <b>Fluid temperature</b>      | -25°C/75°C (-13°F/167°F)                                 |
| <b>Enviroment temperature</b> | -25°C/60°C (-13°F/140°F)                                 |
| <b>Weight</b>                 | 0,8 kg (1,8 lb)  |

## PRESSURE DROP

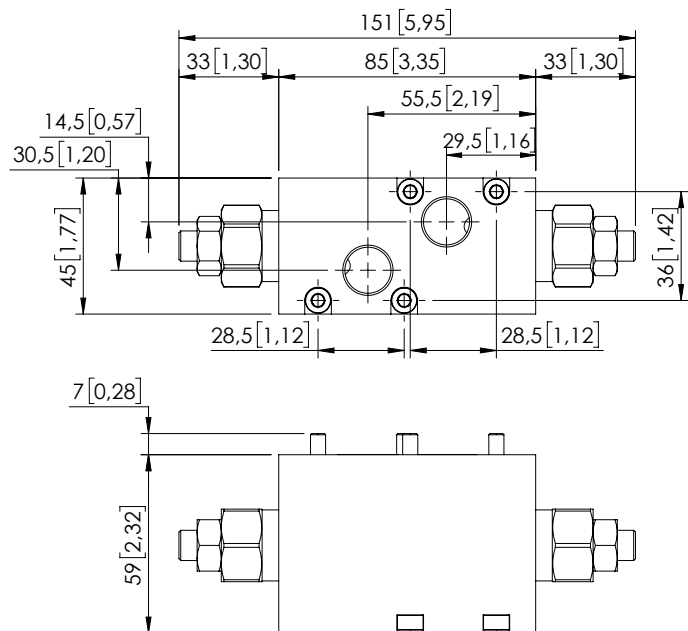


## ORDERING DETAILS: SEPARATE ELEMENTS

KF\*-\*-060-\*NFD-04-\*\*\*-N

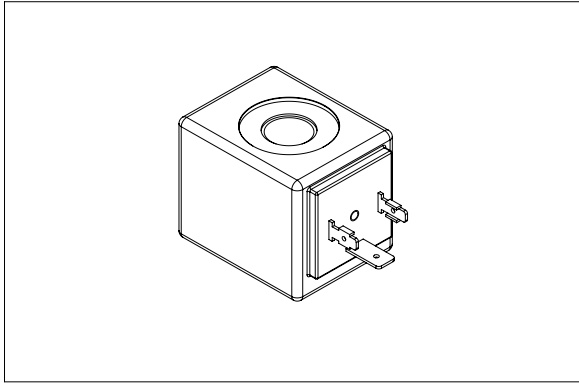
|                   |                                       |               |          |
|-------------------|---------------------------------------|---------------|----------|
| <b>*</b>          | <b>VALVE TYPE</b>                     |               |          |
| <b>S</b>          | Single effect                         |               |          |
| <b>D</b>          | Double effect                         |               |          |
| <b>*</b>          | <b>VALVE OPTION</b>                   |               |          |
| <b>N</b>          | Flow restrictor on A e B ports        |               |          |
| <b>A</b>          | Flow restrictor only A port           |               |          |
| <b>B</b>          | Flow restrictor only B port           |               |          |
| <b>*</b>          | <b>MATERIAL TYPE</b>                  |               |          |
| <b>A</b>          | Steel zinc-plated (320 bar/4600 psi)  |               |          |
| <b>Z</b>          | Aluminium anodized (210 bar/3000 psi) |               |          |
| <b>***</b>        | <b>PORTS</b>                          |               |          |
|                   | <b>A line</b>                         | <b>B line</b> | <b>M</b> |
| <b>G38</b>        | G 3/8"                                | G 3/8"        | /        |
| <b>U09</b>        | 9/16"-18 UNF                          | 9/16"-18 UNF  | /        |
| <b>QUICK CODE</b> |                                       |               |          |
| DESCRIPTION       |                                       | CODE          |          |
|                   |                                       |               |          |

## OVERALL DIMENSIONS



Dimensions: mm [inches]

# COIL SERIES M7



**COIL TYPE**

The coils have the magnetic circuit coated with black thermoplastic material. All metal parts are protected against oxidation according to RoHS directive. For proper insulation it is required to install the proper seals supplied with the tubes.

## TECHNICAL DATA

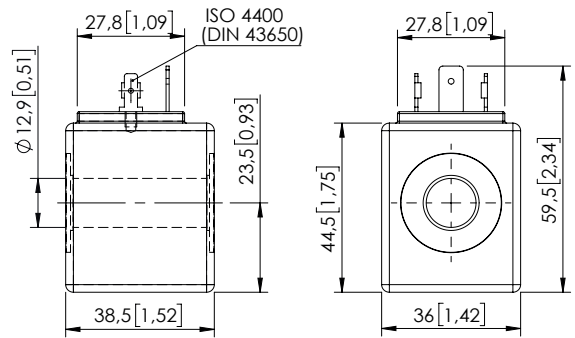
|                        |   |
|------------------------|---|
| Protection type        | IP 65 with all seal                               |
| Protection type        | IP 69K with all seal only DT                      |
| Alimentation tolerance | +10%  |
| Ambient temperature    | -20°C +50°C (-4/+122 °F)                          |
| Duty cycle             | 100% ED (max 40°C ambient)<br>(max 104°F ambient) |
| Isolation class        | Class H (max 180°C)(max 356 °F)                   |
| Weight                 | 0,2 kg (0,44 lb)                                  |

## OVERALL DIMENSIONS

Coils are available with three different connections type, special voltage are available on request, please contact AFT sales network.  
 (1) Ambient temperature 25°C (77°F)  
 (2) Ambient temperature 20°C (68°F)

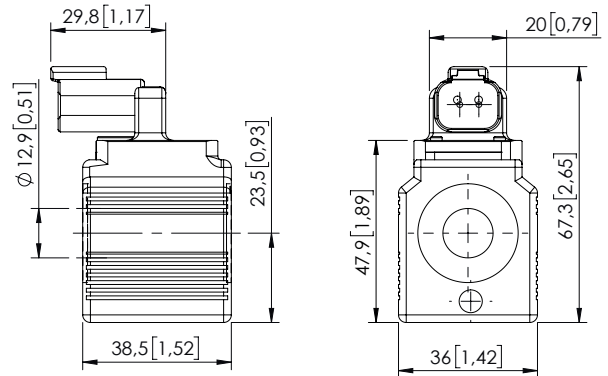
### DIN 43650 (HR)

| Coils |          | Max winding temperature (1) | Nominal potency | Resistance (±7%) (2) | Code parts |
|-------|----------|-----------------------------|-----------------|----------------------|------------|
| Code  | Voltage  |                             |                 |                      |            |
| A     | 12 V DC  | 135°C                       | 20 W            | 7.2                  | AB000002   |
| B     | 24 V DC  | 135°C                       | 20 W            | 28.8                 | AB000003   |
| C     | 48 V DC  | 135°C                       | 20 W            | 115.2                | AB000046   |
| D     | 110 R AC | 120°C                       | 20 W            | 605                  | AB000012   |
| E     | 220 R AC | 120°C                       | 20 W            | 2420                 | AB000007   |



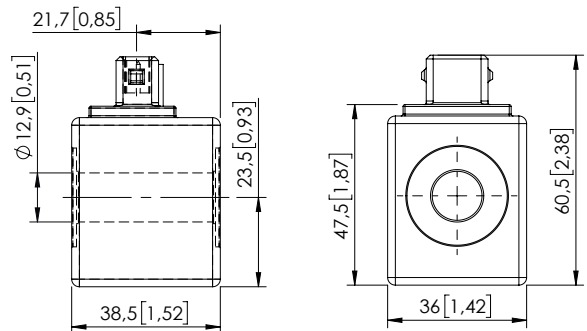
### DEUTSCH (DTV)

| Coils |          | Max winding temperature (1) | Nominal potency | Resistance (±7%) (2) | Code parts |
|-------|----------|-----------------------------|-----------------|----------------------|------------|
| Code  | Voltage  |                             |                 |                      |            |
| A     | 12 V DC  | 135°C                       | 20 W            | 7.2                  | AB000022   |
| B     | 24 V DC  | 135°C                       | 20 W            | 28.8                 | AB000023   |
| C     | 48 V DC  | 135°C                       | 20 W            | 115.2                |            |
| D     | 110 R AC | 120°C                       | 20 W            | 605                  |            |
| E     | 220 R AC | 120°C                       | 20 W            | 2420                 |            |

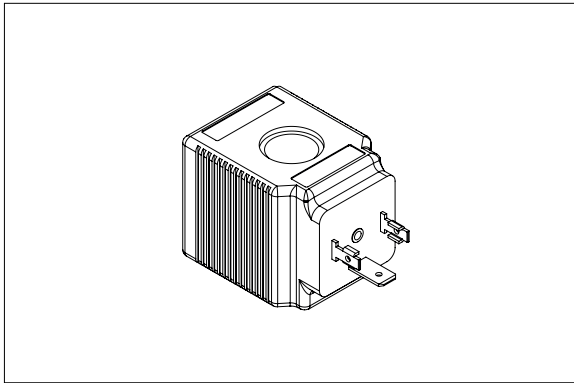


### AMP JUNIOR (AJ)

| Coils |          | Max winding temperature | Nominal potency | Resistance (±7%) | Code parts |
|-------|----------|-------------------------|-----------------|------------------|------------|
| Code  | Voltage  |                         |                 |                  |            |
| A     | 12 V DC  | 135°C                   | 20 W            | 7.2              | AB000005   |
| B     | 24 V DC  | 135°C                   | 20 W            | 28.8             | AB000014   |
| C     | 48 V DC  | 135°C                   | 20 W            | 115.2            | AB000021   |
| D     | 110 R AC | 120°C                   | 20 W            | 605              |            |
| E     | 220 R AC | 120°C                   | 20 W            | 2420             |            |



Dimensions: mm [inches]



COILS TYPE

The coils have the magnetic circuit coated with black thermoplastic material. All metal parts are protected against oxidation according to RoHS directive. For proper insulation it is required to install the proper seals supplied with the tubes.

TECHNICAL DATA

|                        |   |
|------------------------|---|
| Protection type        | IP 65 with all seal                               |
| Protection type        | IP 69K with all seal only DT                      |
| Activation             | 18000/h   |
| Alimentation tolerance | +10%  |
| Ambient temperature    | -20°C +50°C (-4/+122 °F)                          |
| Duty cycle             | 100% ED (max 40°C ambient)<br>(max 104°F ambient) |
| Isolation class        | Class H (max 180°C)(max 356 °F)                   |
| Weight                 | 0,20 kg (0,44 lb)                                 |

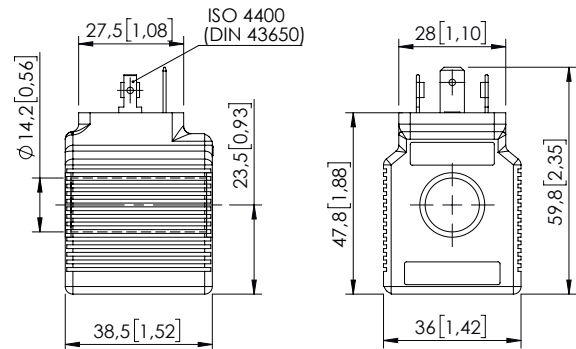
OVERALL DIMENSIONS

Coils are available with three different connections type, special voltage are available on request, please contact AFT sales network.

- (1) Ambient temperature 25°C (77°F)
- (2) Ambient temperature 20°C (68°F)

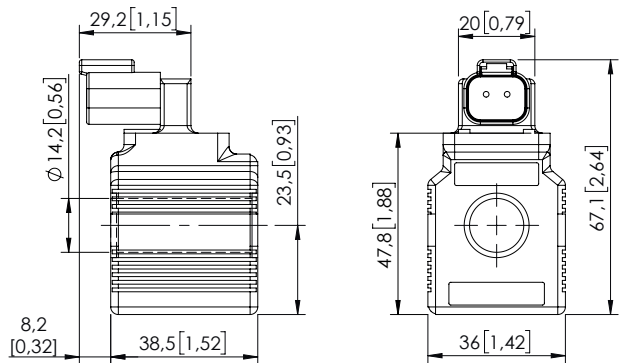
DIN 43650 (HR)

| Coils |          | Max winding temperature (1) | Nominal potency | Resistance (±7%) (2) | Code parts |
|-------|----------|-----------------------------|-----------------|----------------------|------------|
| Code  | Voltage  |                             |                 |                      |            |
| A     | 12 V DC  | 135°C                       | 26 W            | 5.54                 | AB000143   |
| B     | 24 V DC  | 135°C                       | 26 W            | 22.15                | AB000144   |
| C     | 48 V DC  | 135°C                       | 26 W            | 88.6                 |            |
| D     | 110 R AC | 120°C                       | 26 W            | 465.4                |            |
| E     | 220 R AC | 120°C                       | 26 W            | 1861.5               |            |



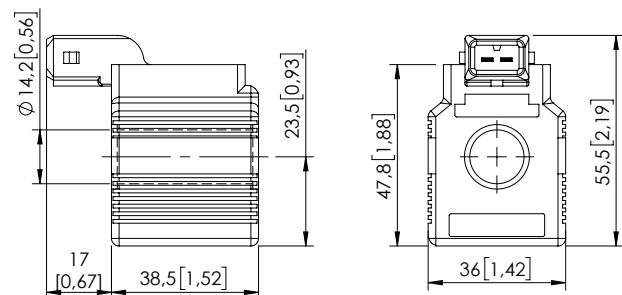
DEUTSCH (DTV)

| Coils |          | Max winding temperature (1) | Nominal potency | Resistance (±7%) (2) | Code parts |
|-------|----------|-----------------------------|-----------------|----------------------|------------|
| Code  | Voltage  |                             |                 |                      |            |
| A     | 12 V DC  | 135°C                       | 26 W            | 5.54                 | AB000132   |
| B     | 24 V DC  | 135°C                       | 26 W            | 22.15                | AB000133   |
| C     | 48 V DC  | 135°C                       | 26 W            | 88.6                 |            |
| D     | 110 R AC | 120°C                       | 26 W            | 465.4                |            |
| E     | 220 R AC | 120°C                       | 26 W            | 1861.5               |            |



AMP JUNIOR (AJ)

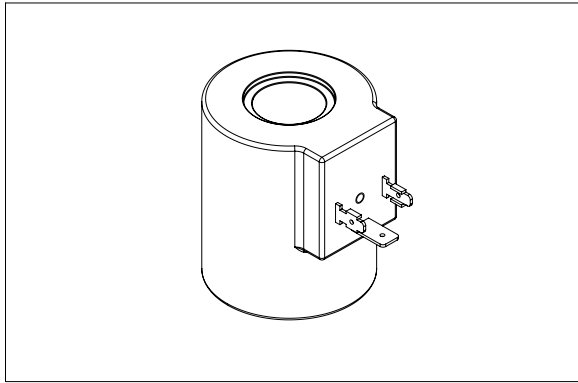
| Coils |          | Max winding temperature | Nominal potency | Resistance (±7%) | Code parts |
|-------|----------|-------------------------|-----------------|------------------|------------|
| Code  | Voltage  |                         |                 |                  |            |
| A     | 12 V DC  | 135°C                   | 26 W            | 5.54             | AB000136   |
| B     | 24 V DC  | 135°C                   | 26 W            | 22.15            | AB000181   |
| C     | 48 V DC  | 135°C                   | 26 W            | 88.6             | AB000131   |
| D     | 110 R AC | 120°C                   | 26 W            | 465.4            |            |
| E     | 220 R AC | 120°C                   | 26 W            | 1861.5           |            |



Dimensions: mm [inches]



# COIL SERIES M8



**COILS TYPE**

Coils are available with three different connections type, special voltage are available on request, please contact AFT sales network.

- (1) Ambient temperature 25°C (77°F)
- (2) Ambient temperature 20°C (68°F)

## HIRSCHMANN (HR)

| Coils |          | Max winding temperature (1) | Nominal potency | Resistance (±7%) (2) | Code parts |
|-------|----------|-----------------------------|-----------------|----------------------|------------|
| Code  | Voltage  |                             |                 |                      |            |
| A     | 12 V DC  | 135°C                       | 33 W            | 4.36                 | AB000015   |
| B     | 24 V DC  | 135°C                       | 33 W            | 17.5                 | AB000029   |
| C     | 48 V DC  | 135°C                       | 33 W            | 69.8                 | AB000158   |
| D     | 110 R AC | 120°C                       | 33 W            | 366.7                | AB000092   |
| E     | 220 R AC | 120°C                       | 33 W            | 1466.7               |            |

## DEUTSCH (DTV)

| Coils |          | Max winding temperature (1) | Nominal potency | Resistance (±7%) (2) | Code parts |
|-------|----------|-----------------------------|-----------------|----------------------|------------|
| Code  | Voltage  |                             |                 |                      |            |
| A     | 12 V DC  | 135°C                       | 33 W            | 4.36                 | AB000104   |
| B     | 24 V DC  | 135°C                       | 33 W            | 17.5                 | AB000105   |
| C     | 48 V DC  | 135°C                       | 33 W            | 69.8                 |            |
| D     | 110 R AC | 120°C                       | 33 W            | 366.7                |            |
| E     | 220 R AC | 120°C                       | 33 W            | 1466.7               |            |

## AMP JUNIOR (AJ)

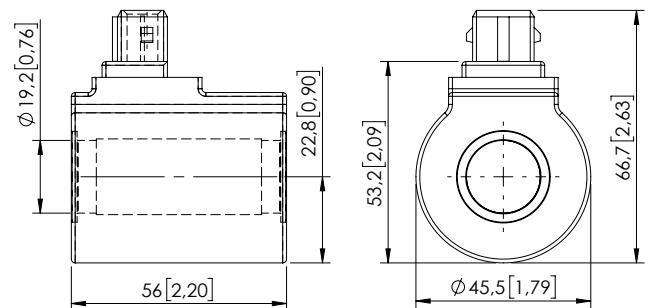
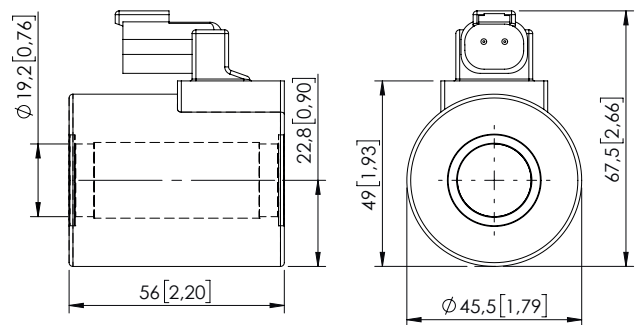
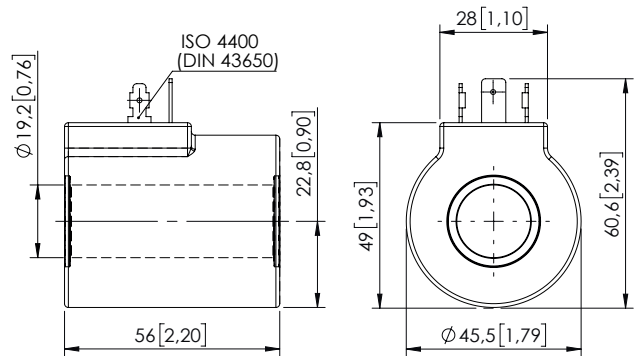
| Coils |          | Max winding temperature | Nominal potency | Resistance (±7%) | Code parts |
|-------|----------|-------------------------|-----------------|------------------|------------|
| Code  | Voltage  |                         |                 |                  |            |
| A     | 12 V DC  | 135°C                   | 33 W            | 4.36             | AB000048   |
| B     | 24 V DC  | 135°C                   | 33 W            | 17.5             | AB000224   |
| C     | 48 V DC  | 135°C                   | 33 W            | 69.8             |            |
| D     | 110 R AC | 120°C                   | 33 W            | 366.7            |            |
| E     | 220 R AC | 120°C                   | 33 W            | 1466.7           |            |

The coils have the magnetic circuit coated with black thermoplastic material. All metal parts are protected against oxidation according to RoHS directive. For proper insulation it is required to install the proper seals supplied with the tubes.

## TECHNICAL DATA

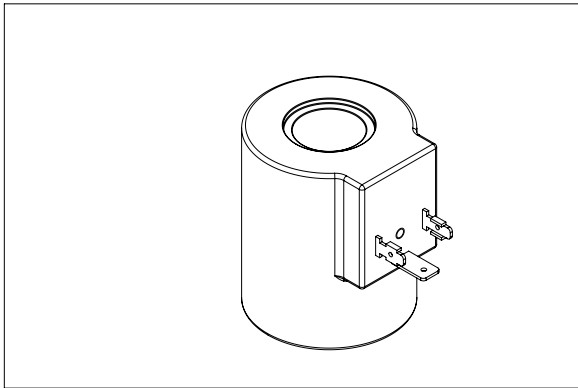
|                        |  |
|------------------------|--|
| Protection type        | IP 65 with all seal                            |
| Protection type        | IP 69K with all seal only DT                   |
| Alimentation tolerance | +10%   |
| Ambient temperature    | -20°C +50°C (-4/+122 °F)                       |
| Duty cycle             | 100% ED (max 40°C ambient) (max 104°F ambient) |
| Isolation class        | Class H (max 180°C) (max 356 °F)               |
| Weight                 | 0,380 kg (0,84 lb)                             |

## OVERALL DIMENSIONS



Dimensions: mm [inches]

# COIL SERIES M15



**COILS TYPE**

The coils have the magnetic circuit coated with black thermoplastic material. All metal parts are protected against oxidation according to RoHS directive. For proper insulation it is required to install the proper seals supplied with the tubes.

## TECHNICAL DATA

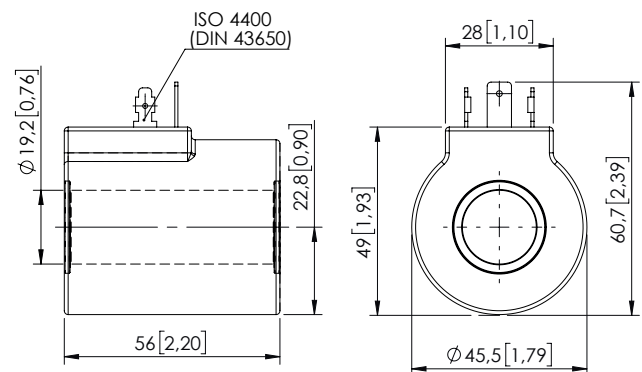
|                        |   |
|------------------------|---|
| Protection type        | IP 65 with all seal                               |
| Protection type        | IP 69K with all seal only DT                      |
| Alimentation tolerance | +10%  |
| Ambient temperature    | -20°C +50°C (-4/+122 °F)                          |
| Duty cycle             | 100% ED (max 40°C ambient)<br>(max 104°F ambient) |
| Isolation class        | Class H (max 180°C)(max 356 °F)                   |
| Weight                 | 0,360 kg (0,8 lb)                                 |

Coils are available with three different connections type, special voltage are available on request, please contact AFT sales network.

- (1) Ambient temperature 25°C (77°F)
- (2) Ambient temperature 20°C (68°F)

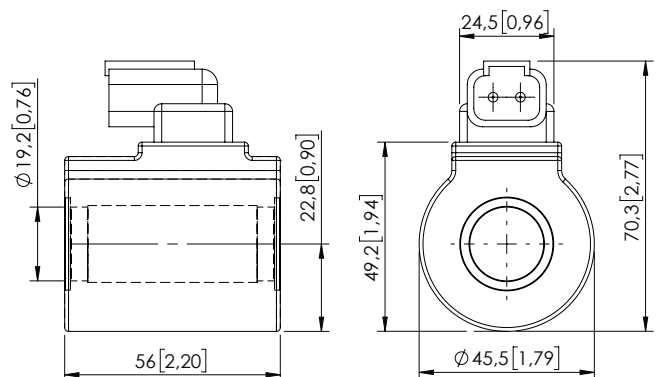
## HIRSCHMANN (HR)

| Coils |          | Max winding temperature (1) | Nominal potency | Resistance (±7%) (2) | Code parts |
|-------|----------|-----------------------------|-----------------|----------------------|------------|
| Code  | Voltage  |                             |                 |                      |            |
| A     | 12 V DC  | 135°C                       | 23 W            | 6.3                  | AB000137   |
| B     | 24 V DC  | 135°C                       | 23 W            | 25                   | AB000138   |
| C     | 48 V DC  | 135°C                       | 23 W            | 100.2                |            |
| D     | 110 R AC | 120°C                       | 23 W            | 526                  |            |
| E     | 220 R AC | 120°C                       | 23 W            | 2104.3               |            |



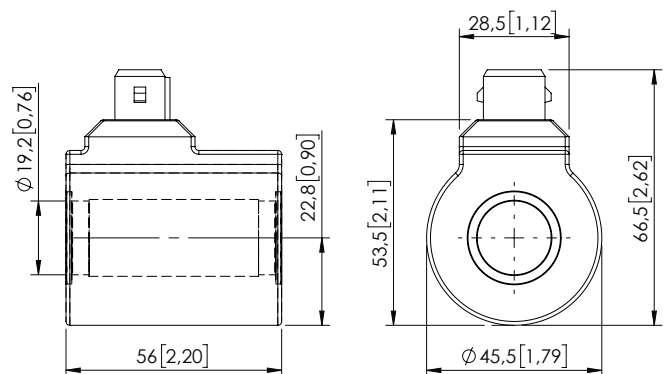
## DEUTSCH (DTV)

| Coils |          | Max winding temperature (1) | Nominal potency | Resistance (±7%) (2) | Code parts |
|-------|----------|-----------------------------|-----------------|----------------------|------------|
| Code  | Voltage  |                             |                 |                      |            |
| A     | 12 V DC  | 135°C                       | 23 W            | 6.3                  | AB000141   |
| B     | 24 V DC  | 135°C                       | 23 W            | 25                   | AB000142   |
| C     | 48 V DC  | 135°C                       | 23 W            | 100.2                |            |
| D     | 110 R AC | 120°C                       | 23 W            | 526                  |            |
| E     | 220 R AC | 120°C                       | 23 W            | 2104.3               |            |



## AMP JUNIOR (AJ)

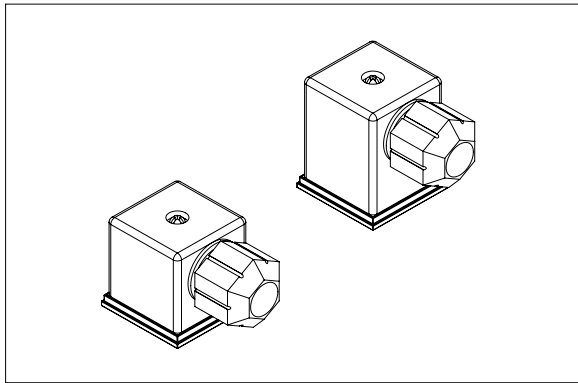
| Coils |          | Max winding temperature | Nominal potency | Resistance (±7%) | Code parts |
|-------|----------|-------------------------|-----------------|------------------|------------|
| Code  | Voltage  |                         |                 |                  |            |
| A     | 12 V DC  | 135°C                   | 23 W            | 6.3              | AB000139   |
| B     | 24 V DC  | 135°C                   | 23 W            | 25               | AB000140   |
| C     | 48 V DC  | 135°C                   | 23 W            | 100.2            |            |
| D     | 110 R AC | 120°C                   | 23 W            | 526              |            |
| E     | 220 R AC | 120°C                   | 23 W            | 2104.3           |            |



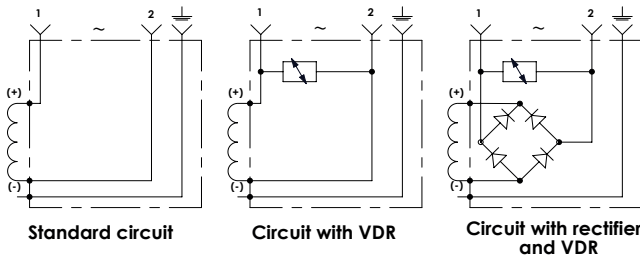
Dimensions: mm [inches]

# CONNECTORS

CONNECTOR FOR SOLENOID VALVE



## ELECTRIC SCHEME

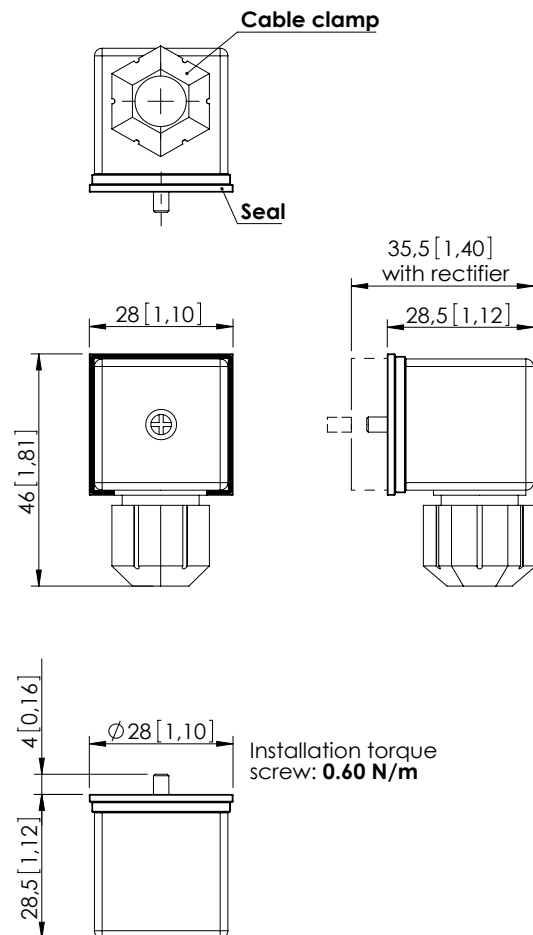


Connector for solenoid valve according to standards DIN 43650 / ISO 4400, different types of circuits are available, standard circuit, circuit with "VDR", circuit with "VDR+ rectifier" or circuit with LED

## TECHNICAL DATA

|                           |                                     |
|---------------------------|-------------------------------------|
| <b>Voltage rating</b>     | AC/DC: up to 250/300 V max          |
| <b>Max current</b>        | 16.0 A                              |
| <b>Contact resistance</b> | ≤ 4 mΩ                              |
| <b>Max conductor</b>      | 1.5 mm <sup>2</sup> (1,6 fb2)       |
| <b>Cable range</b>        | Ø4.0 to Ø9.0 mm (Ø0,15 to Ø0,35 fb) |
| <b>Protection class</b>   | IP 67 EN60529                       |
| <b>Seal</b>               | Nitrile rubber                      |
| <b>Poles</b>              | 2 plus ground                       |
| <b>Connector</b>          | EN 175301-803 (DIN 43650)           |

## OVERALL DIMENSIONS

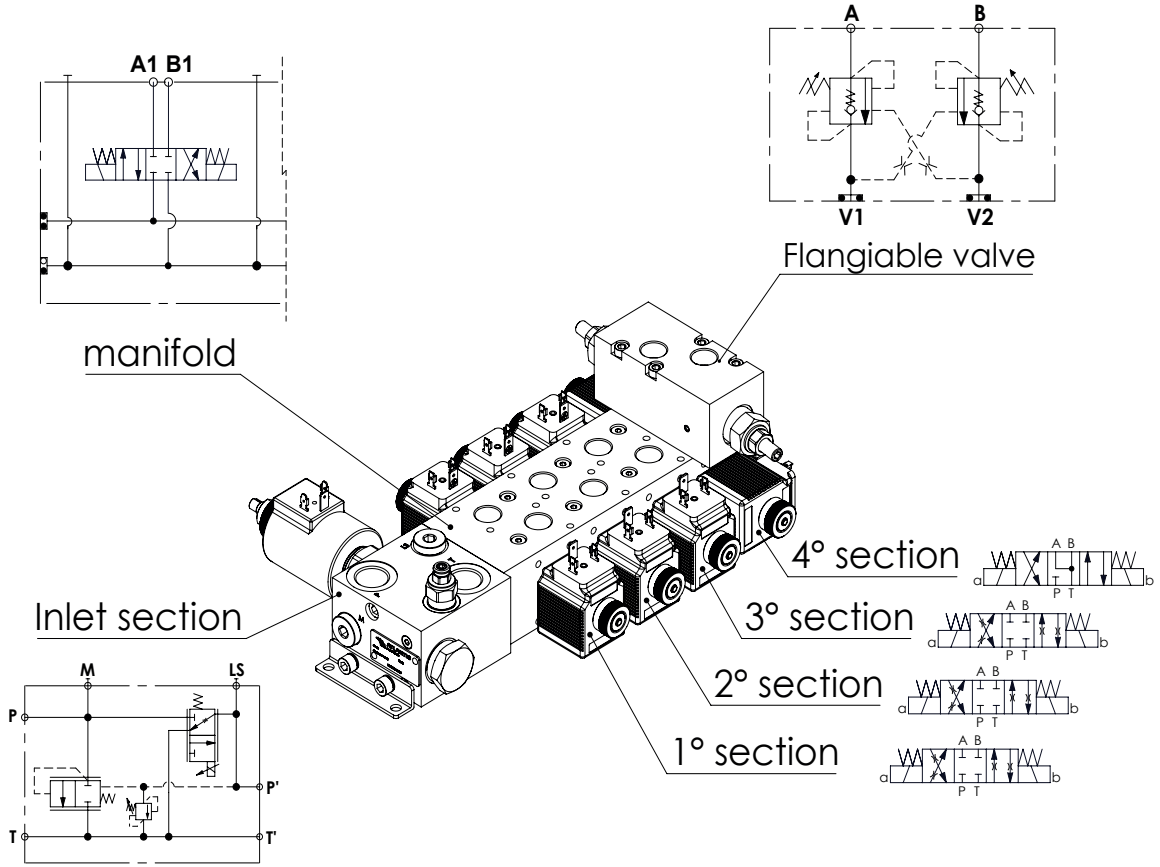


## ORDERING DETAILS: SEPARATE ELEMENTS

| Quick code | Colour     | VDR | LED | Rectifier | Voltage     |
|------------|------------|-----|-----|-----------|-------------|
| PV000171   | Black      | No  | No  | No        | 12V to 230V |
| PV000195   | Black      | Yes | No  | No        | 12V dc      |
| PV000349   | Black      | Yes | No  | No        | 24V dc      |
| PV000198   | Trasparent | Yes | Yes | No        | 12V dc      |
| PV000196   | Trasparent | Yes | Yes | No        | 24V dc      |
| PV000347   | Black      | Yes | No  | Yes       | 12V RAC     |
| PV000348   | Black      | Yes | No  | Yes       | 24V RAC     |
|            | Black      | Yes | No  | Yes       | 110V RAC    |
|            | Black      | Yes | No  | Yes       | 220V RAC    |
|            | Trasparent | Yes | Yes | Yes       | 110V RAC    |
|            | Trasparent | Yes | Yes | Yes       | 220V RAC    |

**NB: To have full performance and to guarantee the IP 65 level of protection, it is essential to assemble connectors with the supplied seals and with screw properly installed.**

Dimensions: mm [inches]



**ORDER CODE**

|  | QUICK CODE OR DESCRIPTION  | COIL QUICK CODE OR DESCRIPTION |
|--|----------------------------|--------------------------------|
|  | INLET SECTION              |                                |
|  | MANIFOLD                   |                                |
|  | SPOOL SECTION 1            |                                |
|  | FLANGEABLE VALVE SECTION 1 |                                |
|  | SPOOL SECTION 2            |                                |
|  | FLANGEABLE VALVE SECTION 2 |                                |
|  | SPOOL SECTION 3            |                                |
|  | FLANGEABLE VALVE SECTION 3 |                                |
|  | SPOOL SECTION 4            |                                |
|  | FLANGEABLE VALVE SECTION 4 |                                |
|  | SPOOL SECTION 5            |                                |
|  | FLANGEABLE VALVE SECTION 5 |                                |
|  | SPOOL SECTION 6            |                                |
|  | FLANGEABLE VALVE SECTION 6 |                                |
|  | SPOOL SECTION 7            |                                |
|  | FLANGEABLE VALVE SECTION 7 |                                |
|  | SPOOL SECTION 8            |                                |
|  | FLANGEABLE VALVE SECTION 8 |                                |
|  | COILS                      |                                |
|  | OPTIONS                    |                                |
|  | OPTIONS                    |                                |