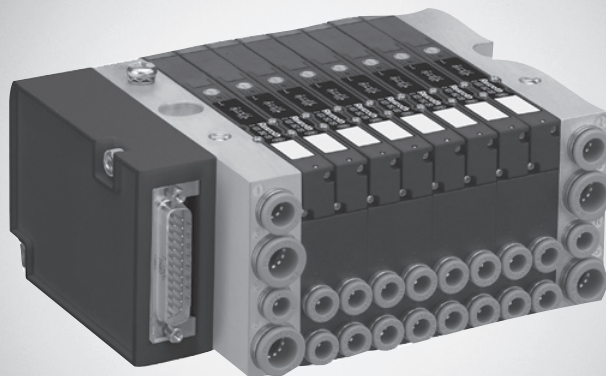


Valve terminal systems → Valve terminal systems







## Series HF04

Brochure









Valve terminal systems → Valve terminal systems



**Series HF04****Valve terminal systems**

	Valve terminal system, Series HF04 ► Qn max. = 400 l/min ► Multipole ► Electr. connection: D-Sub plug, 25-pin, side	<b>4</b>
	Valve terminal system, Series HF04 ► Qn max. = 400 l/min ► Direct field bus connection (BDC) ► B-design	<b>6</b>
	Valve terminal system, Series HF04 ► Qn max. = 400 l/min ► Optional field bus connection with I/O function (CMS) ► B-design	<b>8</b>
	Valve terminal system, Series HF04 ► Qn max. = 400 l/min ► Connection with diagnosis (DDL) ► B-design	<b>10</b>
	Valve terminal system, Series HF04 ► Qn max. = 400 l/min ► Connection with diagnosis, optionally with I/O function (DDL) ► B-design	<b>12</b>
	Valve terminal system, Series HF04 ► Qn max. = 400 l/min ► Field bus connection with AS i ► B-design	<b>14</b>

**Valves**










	2x3/2-way valve, Series HF04 and LP04 ► Qn = 400 l/min ► plate connection ► manual override: with detent	<b>19</b>
	2x3/2-way valve, Series HF04 and LP04 ► Qn = 400 l/min ► plate connection ► manual override: without detent	<b>21</b>
	5/2-way valve, Series HF04 and LP04 ► Qn = 400 l/min ► plate connection ► manual override: with detent ► single solenoid, double solenoid	<b>23</b>
	5/2-way valve, Series HF04 and LP04 ► Qn = 400 l/min ► plate connection ► manual override: without detent ► single solenoid, double solenoid	<b>25</b>
	5/3-way valve, Series HF04 and LP04 ► Qn = 400 l/min ► plate connection ► manual override: with detent	<b>27</b>
	5/3-way valve, Series HF04 and LP04 ► Qn = 400 l/min ► plate connection ► manual override: without detent	<b>29</b>

**Accessories****Field Bus Modules**

	Direct field bus connection (BDC), B-design ► Bus module with driver ► Field bus protocol: Profibus DP / CANopen / CANopen sb / DeviceNet / SERCOS III	<b>31</b>
	Optional field bus connection with I/O function (CMS), B-design ► Bus module with driver ► Field bus protocol: Profibus DP / DeviceNet / CANopen / INTERBUS-S / ETHERNET IP	<b>32</b>

Valve terminal systems → Valve terminal systems

**Series HF04**

	Field bus connection with diagnosis (DDL), B-design ► Driver	<b>38</b>
	Connection with diagnosis, optionally with I/O function (DDL), B-design ► Driver	<b>40</b>
	Field bus connection with AS i, B-design ► Bus module with driver ► Field bus protocol: AS-i	<b>42</b>
	Field bus connection with AS i, B-design ► Bus module with driver ► Field bus protocol: AS i with inputs	<b>44</b>
<b>other accessories</b>		
	Multiple plug D-Sub (25-pin) ► Socket, D-Sub, 25-pin	<b>46</b>
	Multiple plug D-Sub (25-pin) ► Socket, D-Sub, 25-pin ► with cable	<b>47</b>
	Pressure regulator subplate, Series HF04, HF04-XF and LP04	<b>48</b>
	HF04, CKD kit metric ► compressed air connection output: Ø 6 - M7 ► Can be assembled into blocks ► Double base plate principle ► Reversed pressure supply permissible ► Bus module extension possible ► I/O extension possible ► With collective pilot air exhaust	<b>50</b>
	HF04, CKD kit inch ► compressed air connection output: M7 ► Can be assembled into blocks ► Double base plate principle ► Reversed pressure supply permissible ► Bus module extension possible ► I/O extension possible ► With collective pilot air exhaust	<b>51</b>
	Accessories, for valve terminal system, series HF04	<b>52</b>

Valve terminal systems → Valve terminal systems

Valve terminal system, Series HF04


► Qn max. = 400 l/min ► Multipole ► Electr. connection: D-Sub plug, 25-pin, side



Blocking principle	Double base plate principle
Working pressure min./max.	-0.9 bar / 10 bar
Control pressure min./max.	3 bar / 8 bar
Ambient temperature min./max.	-5 °C / +50 °C
Medium temperature min./max.	+0 °C / +50 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 mg/m³ - 5 mg/m³
Protection class according to EN 60529:2000, with	IP 65
Number of valve positions	24
Number of solenoid coils	24
DC operating voltage	24 V
Voltage tolerance DC	-10% / +10%

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

Technical Remarks
<ul style="list-style-type: none"><li>■ The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.</li><li>■ The oil content of air pressure must remain constant during the life cycle.</li><li>■ Use only the approved oils from Bosch Rexroth, see chapter „Technical information“.</li><li>■ See the following pages on the series for technical data for individual components.</li></ul>

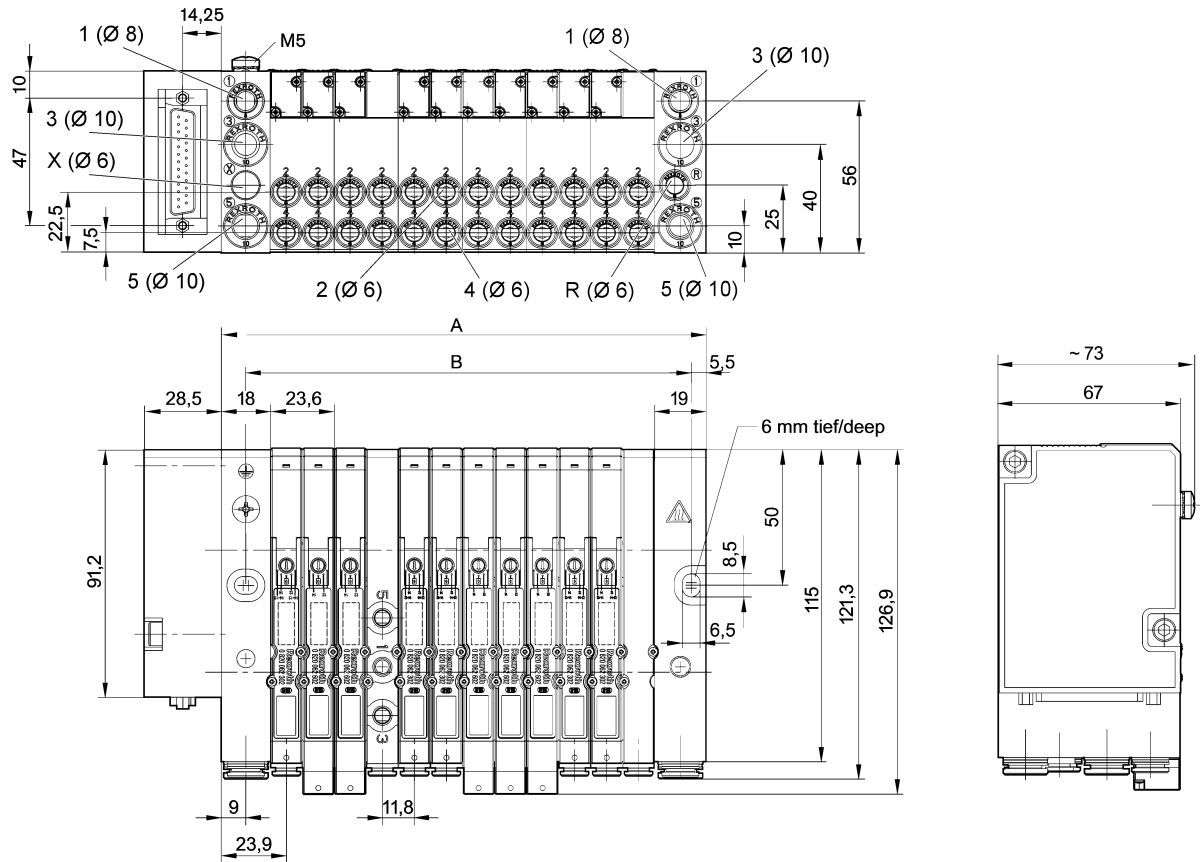
Configurable product	
	This product is configurable. Please use our Internet configurator at <a href="http://www.boschrexroth.com/pneumatics">www.boschrexroth.com/pneumatics</a> or contact the nearest Bosch Rexroth sales office.

## Valve terminal systems → Valve terminal systems

## Valve terminal system, Series HF04

► Qn max. = 400 l/min ► Multipole ► Electr. connection: D-Sub plug, 25-pin, side

## Dimensions



1 = plug-in connection Ø 8 mm or plug-in connection 3/8" (inch)

2 and 4 = plug-in connections Ø 6 mm or thread connections M7

3 and 5 = plug-in connections Ø 10 mm or plug-in connections 3/8" (inch)

R = collected pilot exhaust, plug-in connection Ø 6 mm or plug-in connection 1/4" (inch)

X = external pilot, plug-in connection Ø 6 mm or plug-in connection 1/4" (inch), connection X plugged with internal pilot control

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

n	1	2	3	4	5	6	7	8	9	10	11	12		
A	60.6	84.2	107.8	131.4	155	178.6	202	225.8	249.4	273	296.6	320		
B	46.1	69.7	93.3	116.9	140.5	164.1	187.7	211.3	234.9	258.5	282	305.7		

n = number of double subplates

Valve terminal systems → Valve terminal systems


Valve terminal system, Series HF04  
► Qn max. = 400 l/min ► Direct field bus connection (BDC) ► B-design



Version	Field bus
Blocking principle	Double base plate principle
Working pressure min./max.	-0.9 bar / 10 bar
Control pressure min./max.	3 bar / 8 bar
Ambient temperature min./max.	-5 °C / +50 °C
Medium temperature min./max.	+0 °C / +50 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 mg/m³ - 5 mg/m³
Protection class according to EN 60529; with plug	IP 65
Number of valve positions	24
Number of solenoid coils	24
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-10% / +10%

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

Technical Remarks
<ul style="list-style-type: none"><li>■ The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.</li><li>■ The oil content of air pressure must remain constant during the life cycle.</li><li>■ Use only the approved oils from Bosch Rexroth, see chapter „Technical information“.</li><li>■ See the following pages on the series for technical data for individual components.</li><li>■ For technical data for electronics (link structures), see the Chapter “Control systems/bus connections.”</li></ul>

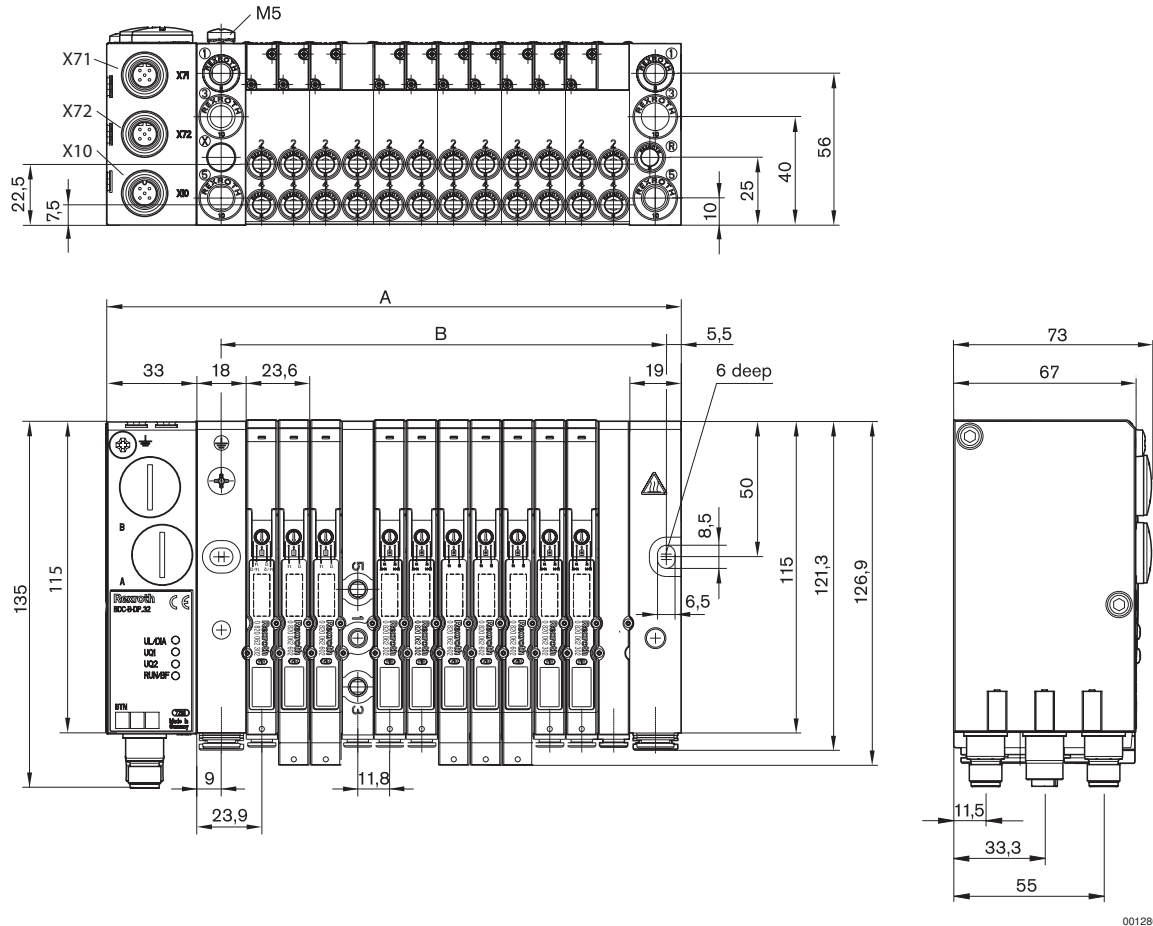
Configurable product
<div></div> <div>This product is configurable. Please use our Internet configurator at <a href="http://www.boschrexroth.com/pneumatics">www.boschrexroth.com/pneumatics</a> or contact the nearest Bosch Rexroth sales office.</div>

## Valve terminal systems → Valve terminal systems

## Valve terminal system, Series HF04

► Qn max. = 400 l/min ► Direct field bus connection (BDC) ► B-design

## Dimensions



1 = plug-in connection Ø 8 mm or plug-in connection 3/8" (inch)

2 and 4 = plug-in connections Ø 6 mm or thread connections M7

3 and 5 = plug-in connections Ø 10 mm or plug-in connections 3/8" (inch)

R = collected pilot exhaust, plug-in connection Ø 6 mm or plug-in connection 1/4" (inch)

X = external pilot, plug-in connection Ø 6 mm or plug-in connection 1/4" (inch), connection X plugged with internal pilot control

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

n	1	2	3	4	5	6	7	8	9	10	11	12		
A	93.6	117.2	140.8	164.4	188	211.6	235.2	258.8	282.4	306	329.6	353.2		
B	46.1	69.7	93.3	116.9	140.5	164.1	187.7	211.3	234.9	258.5	282.1	305.7		

n = number of double subplates



Valve terminal systems → Valve terminal systems

Valve terminal system, Series HF04


► Qn max. = 400 l/min ► Optional field bus connection with I/O function (CMS) ► B-design



Version	field bus CMS
Blocking principle	Double base plate principle
Working pressure min./max.	-0.9 bar / 10 bar
Control pressure min./max.	3 bar / 8 bar
Ambient temperature min./max.	-5 °C / +50 °C
Medium temperature min./max.	+0 °C / +50 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 mg/m³ - 5 mg/m³
Protection class according to EN 60529:, with plug	IP 65
Number of valve positions	24
Number of solenoid coils	24
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-10% / +10%

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

Technical Remarks
<ul style="list-style-type: none"><li>■ The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.</li><li>■ The oil content of air pressure must remain constant during the life cycle.</li><li>■ Use only the approved oils from Bosch Rexroth, see chapter „Technical information“.</li><li>■ See the following pages on the series for technical data for individual components.</li><li>■ For technical data for electronics (link structures), see the Chapter “Control systems/bus connections.”</li></ul>

Configurable product	
	This product is configurable. Please use our Internet configurator at <a href="http://www.boschrexroth.com/pneumatics">www.boschrexroth.com/pneumatics</a> or contact the nearest Bosch Rexroth sales office.

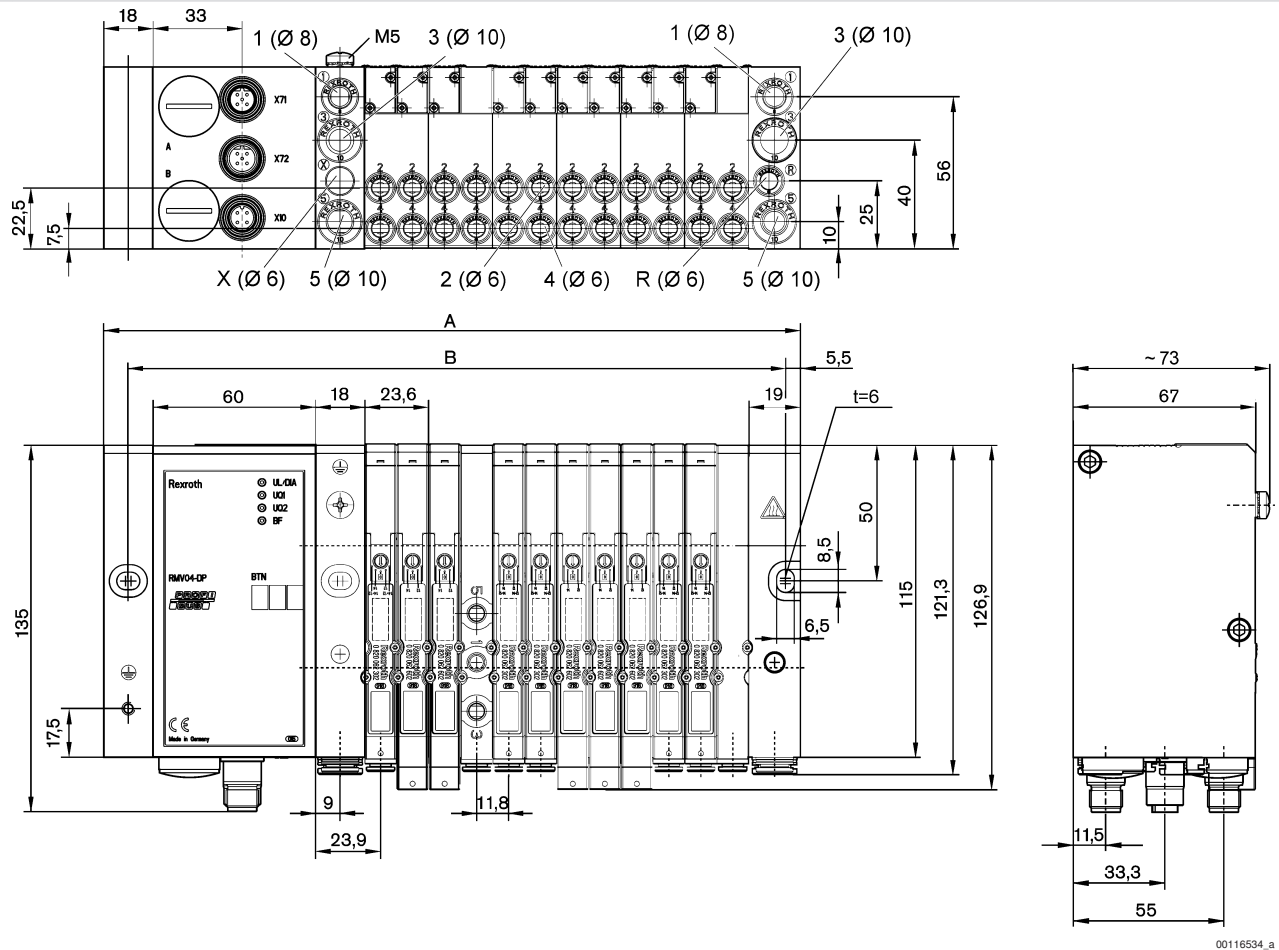


## Valve terminal systems → Valve terminal systems

## Valve terminal system, Series HF04

► Qn max. = 400 l/min ► Optional field bus connection with I/O function (CMS) ► B-design

## Dimensions



1 = plug-in connection Ø 8 mm or plug-in connection 3/8" (inch)

2 and 4 = plug-in connections Ø 6 mm or thread connections M7

3 and 5 = plug-in connections Ø 10 mm or plug-in connections 3/8" (inch)

R = collected pilot exhaust, plug-in connection Ø 6 mm or plug-in connection 1/4" (inch)

X = external pilot, plug-in connection Ø 6 mm or plug-in connection 1/4" (inch), connection X plugged with internal pilot control

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

n	1	2	3	4	5	6	7	8	9	10	11	12		
A	138.6	162.2	185.8	209.4	233	256.6	280.2	303.8	327.4	351	374.6	398.2		
B	124.1	147.7	171.3	194.9	218.5	242.1	265.7	289.3	312.9	336.5	360.1	383.7		

n = number of double subplates

Valve terminal systems → Valve terminal systems

Valve terminal system, Series HF04  
► Qn max. = 400 l/min ► Connection with diagnosis (DDL) ► B-design



Version	Link structure DDL
Blocking principle	Double base plate principle
Working pressure min./max.	-0.9 bar / 10 bar
Control pressure min./max.	3 bar / 8 bar
Ambient temperature min./max.	-5 °C / +50 °C
Medium temperature min./max.	+0 °C / +50 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 mg/m³ - 5 mg/m³
Protection class according to EN 60529:, with plug	IP 65
Number of valve positions	24
Number of solenoid coils	24
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-10% / +10%

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

Technical Remarks
<ul style="list-style-type: none"><li>■ The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.</li><li>■ The oil content of air pressure must remain constant during the life cycle.</li><li>■ Use only the approved oils from Bosch Rexroth, see chapter „Technical information“.</li><li>■ See the following pages on the series for technical data for individual components.</li><li>■ For technical data for electronics (link structures), see the Chapter “Control systems/bus connections.”</li></ul>

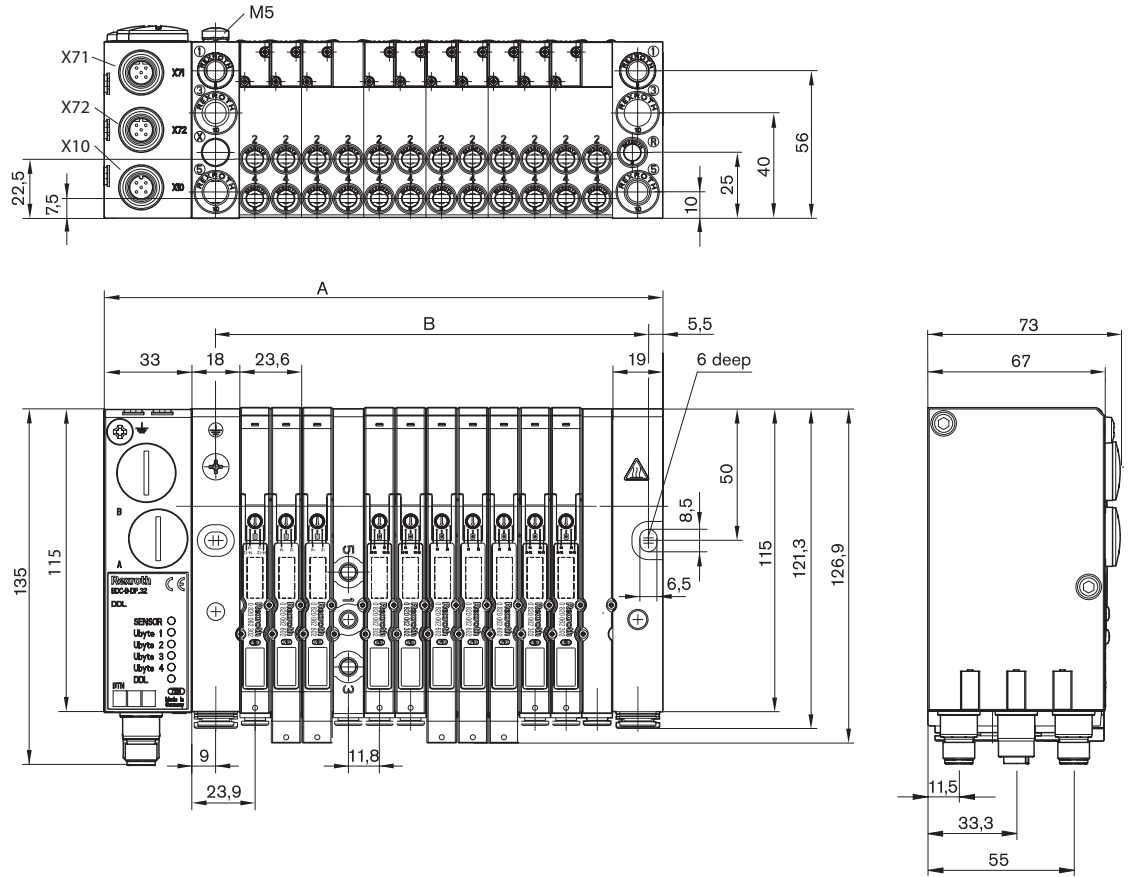
Configurable product
<div></div> <div>This product is configurable. Please use our Internet configurator at <a href="http://www.boschrexroth.com/pneumatics">www.boschrexroth.com/pneumatics</a> or contact the nearest Bosch Rexroth sales office.</div>

## Valve terminal systems → Valve terminal systems

## Valve terminal system, Series HF04

► Qn max. = 400 l/min ► Connection with diagnosis (DDL) ► B-design

## Dimensions



00128616

1 = plug-in connection Ø 8 mm or plug-in connection 3/8" (inch)

2 and 4 = plug-in connections Ø 6 mm or thread connections M7

3 and 5 = plug-in connections Ø 10 mm or plug-in connections 3/8" (inch)

R = collected pilot exhaust, plug-in connection Ø 6 mm or plug-in connection 1/4" (inch)

X = external pilot, plug-in connection Ø 6 mm or plug-in connection 1/4" (inch), connection X plugged with internal pilot control

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

n	1	2	3	4	5	6	7	8	9	10	11	12		
A	93.6	117.2	140.8	164.4	188	211.6	235.2	258.8	282.4	306	329.6	353.2		
B	46.1	69.7	93.3	116.9	140.5	164.1	187.7	211.3	234.9	258.5	282.1	305.7		

n = number of double subplates

Valve terminal systems → Valve terminal systems


Valve terminal system, Series HF04  
► Qn max. = 400 l/min ► Connection with diagnosis, optionally with I/O function (DDL) ► B-design



Version	Link structure DDL
Blocking principle	Double base plate principle
Working pressure min./max.	-0.9 bar / 10 bar
Control pressure min./max.	3 bar / 8 bar
Ambient temperature min./max.	-5 °C / +50 °C
Medium temperature min./max.	+0 °C / +50 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 mg/m³ - 5 mg/m³
Protection class according to EN 60529:, with plug	IP 65
Number of valve positions	24
Number of solenoid coils	24
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-10% / +10%

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

Technical Remarks
<ul style="list-style-type: none"><li>■ The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.</li><li>■ The oil content of air pressure must remain constant during the life cycle.</li><li>■ Use only the approved oils from Bosch Rexroth, see chapter „Technical information“.</li><li>■ See the following pages on the series for technical data for individual components.</li><li>■ For technical data for electronics (link structures), see the Chapter “Control systems/bus connections.”</li></ul>

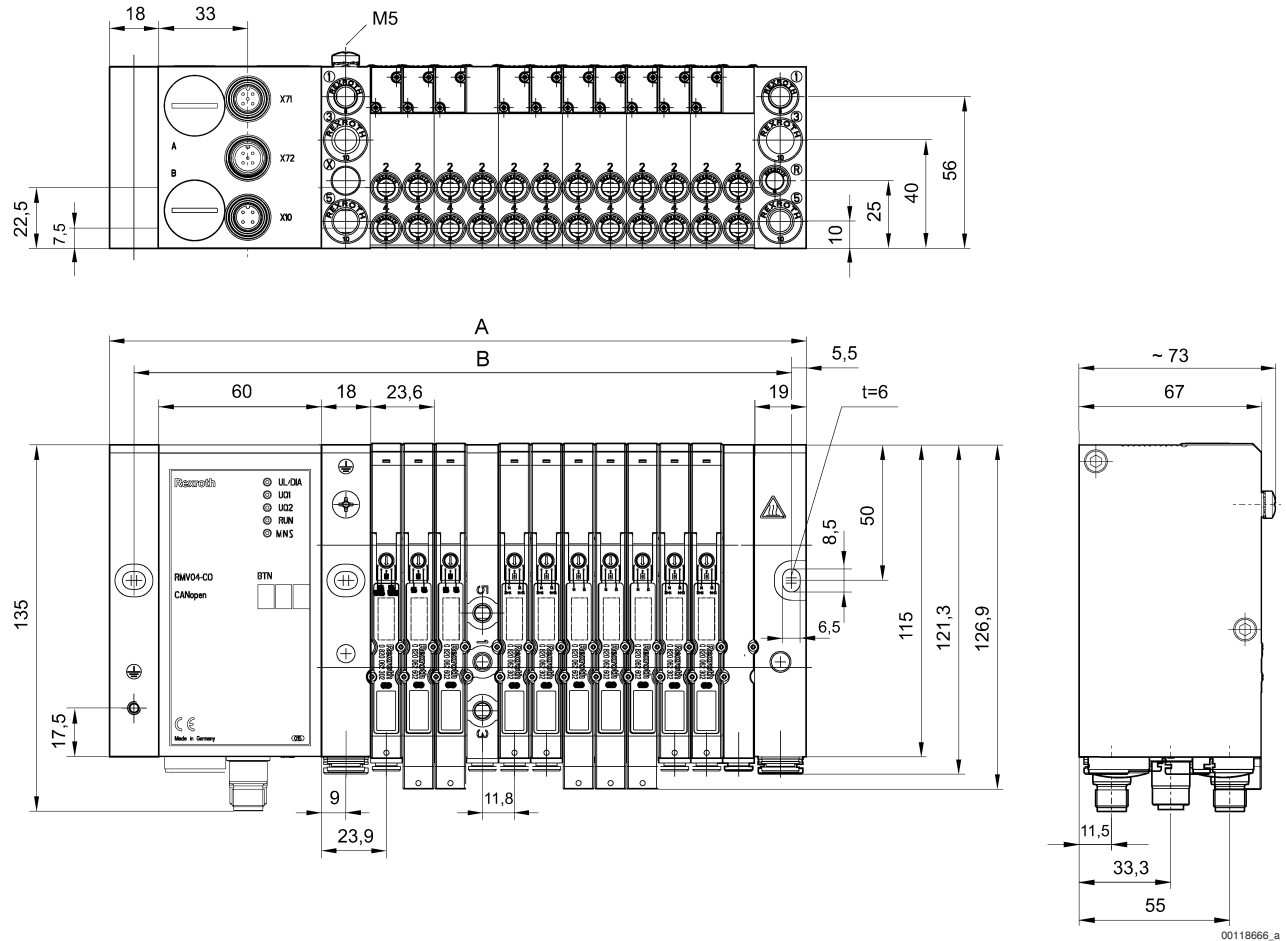
Configurable product	
	This product is configurable. Please use our Internet configurator at <a href="http://www.boschrexroth.com/pneumatics">www.boschrexroth.com/pneumatics</a> or contact the nearest Bosch Rexroth sales office.

## Valve terminal systems → Valve terminal systems

## Valve terminal system, Series HF04

► Qn max. = 400 l/min ► Connection with diagnosis, optionally with I/O function (DDL) ► B-design

## Dimensions



1 = plug-in connection Ø 8 mm or plug-in connection 3/8" (inch)

2 and 4 = plug-in connections Ø 6 mm or thread connections M7

3 and 5 = plug-in connections Ø 10 mm or plug-in connections 3/8" (inch)

R = collected pilot exhaust, plug-in connection Ø 6 mm or plug-in connection 1/4" (inch)

X = external pilot, plug-in connection Ø 6 mm or plug-in connection 1/4" (inch), connection X plugged with internal pilot control

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

n	1	2	3	4	5	6	7	8	9	10	11	12		
A	138.6	162.2	185.8	209.4	233	256.6	280.2	303.8	327.4	351	374.6	398.2		
B	124.1	147.7	171.3	194.9	218.5	242.1	265.7	289.3	312.9	336.5	360.1	383.7		

n = number of double subplates

Valve terminal systems → Valve terminal systems


Valve terminal system, Series HF04  
► Qn max. = 400 l/min ► Field bus connection with AS i ► B-design



Version	field bus BDC
Blocking principle	Double base plate principle
Working pressure min./max.	-0.9 bar / 10 bar
Control pressure min./max.	3 bar / 8 bar
Ambient temperature min./max.	-5 °C / +50 °C
Medium temperature min./max.	+0 °C / +50 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 mg/m³ - 5 mg/m³
Protection class according to EN 60529; with plug	IP 65
Number of valve positions	4, 8
Number of solenoid coils	4, 8
Supported field bus protocols:	AS-i
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-10% / +10%
Power supply connection	Black AS-i flat cable
Communication port	Yellow AS-i flat cable

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

Technical Remarks
<ul style="list-style-type: none"><li>■ The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.</li><li>■ The oil content of air pressure must remain constant during the life cycle.</li><li>■ Use only the approved oils from Bosch Rexroth, see chapter „Technical information“.</li><li>■ See the following pages on the series for technical data for individual components.</li><li>■ For technical data for electronics (link structures), see the Chapter “Control systems/bus connections.”</li></ul>

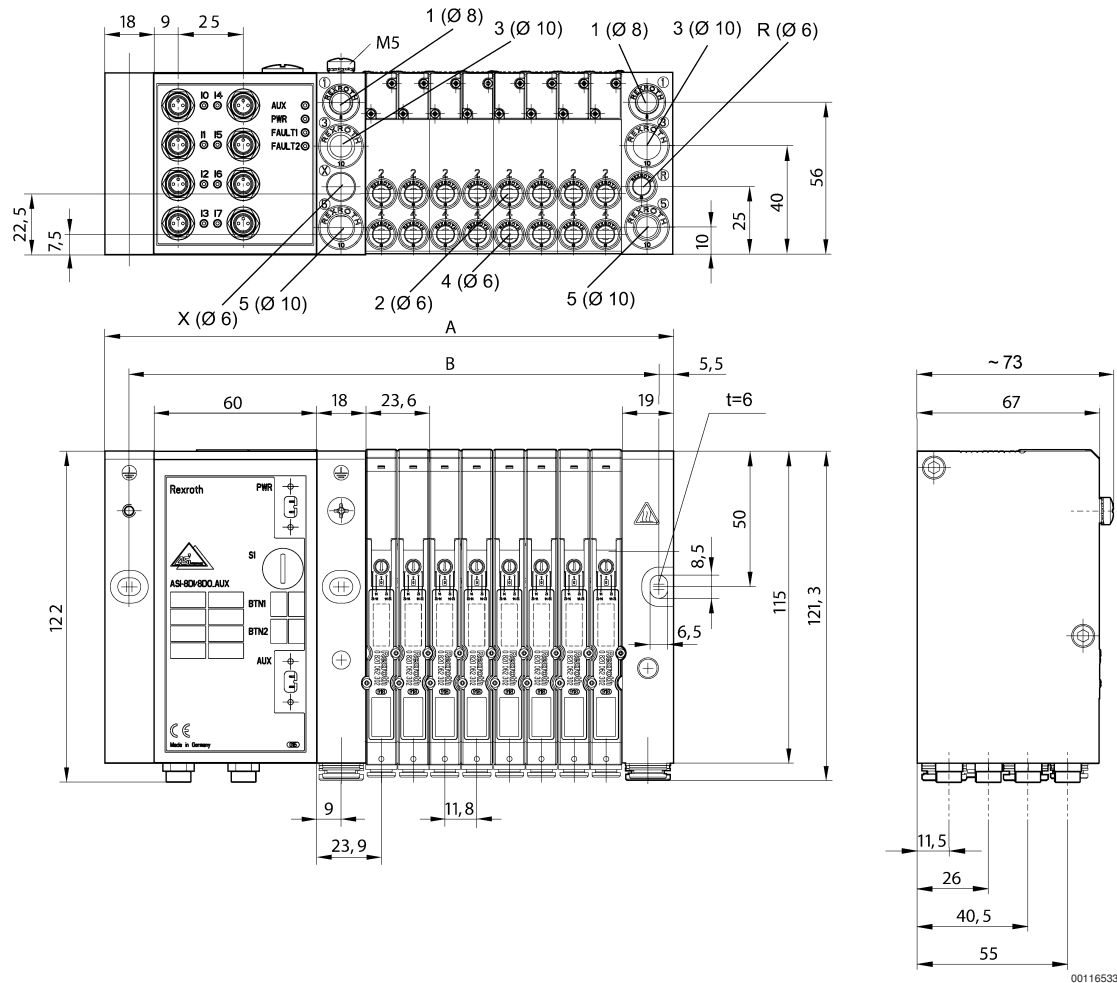
Configurable product
<div></div> <div>This product is configurable. Please use our Internet configurator at <a href="http://www.boschrexroth.com/pneumatics">www.boschrexroth.com/pneumatics</a> or contact the nearest Bosch Rexroth sales office.</div>

## Valve terminal systems → Valve terminal systems

## Valve terminal system, Series HF04

► Qn max. = 400 l/min ► Field bus connection with AS i ► B-design

## Dimensions, 8DI/8DO-AUX



1 = plug-in connection Ø 8 mm or plug-in connection 3/8" (inch)

2 and 4 = plug-in connections Ø 6 mm or thread connections M7

3 and 5 = plug-in connections Ø 10 mm or plug-in connections 3/8" (inch)

R = collected pilot exhaust, plug-in connection Ø 6 mm or plug-in connection 1/4" (inch)

X = external pilot, plug-in connection Ø 6 mm or plug-in connection 1/4" (inch), connection X plugged with internal pilot control

Max. 4 double subbases possible, max. 8 valves

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

n	1	2	3	4									
A	138.6	162.2	185.8	209.4									
B	124.1	147.7	171.3	194.9									

n = number of double subplates

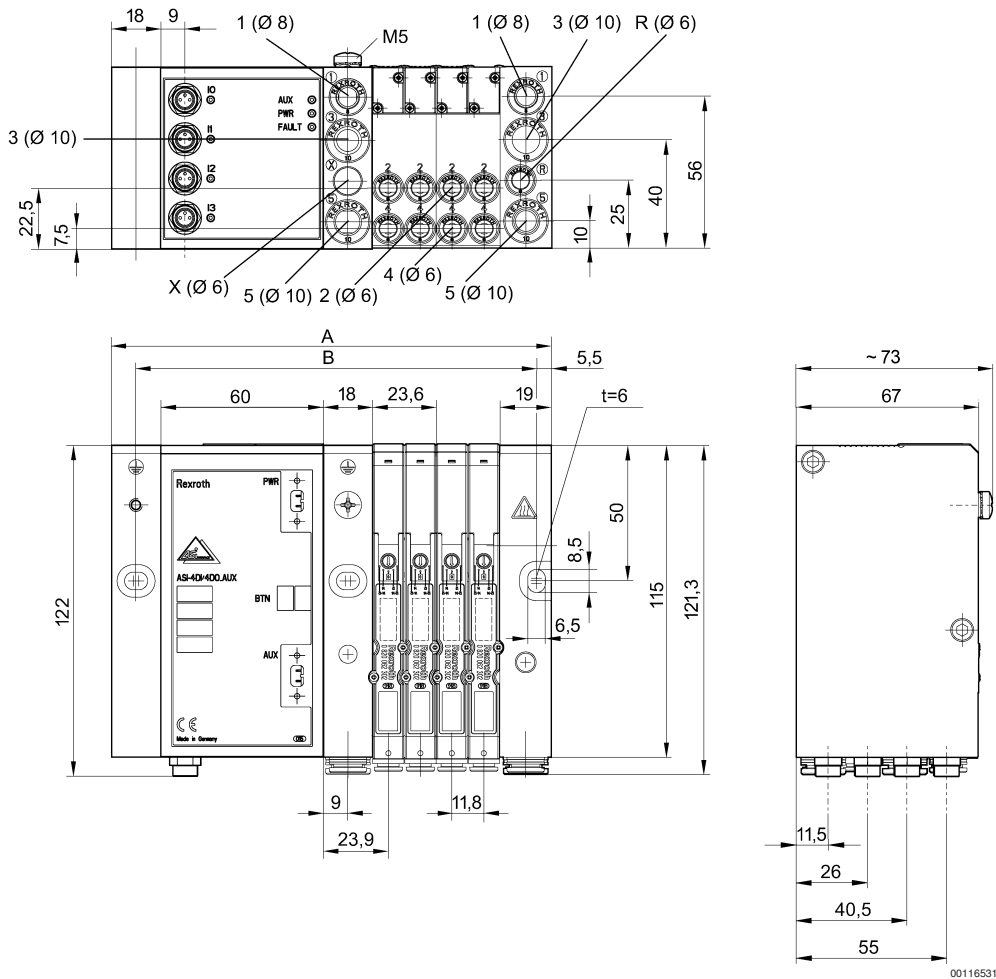


Valve terminal systems → Valve terminal systems

Valve terminal system, Series HF04

► Qn max. = 400 l/min ► Field bus connection with AS i ► B-design

Dimensions, 4DI/4DO-AUX



1 = plug-in connection Ø 8 mm or plug-in connection 3/8" (inch)  
2 and 4 = plug-in connections Ø 6 mm or thread connections M7  
3 and 5 = plug-in connections Ø 10 mm or plug-in connections 3/8" (inch)  
R = collected pilot exhaust, plug-in connection Ø 6 mm or plug-in connection 1/4" (inch)  
X = external pilot, plug-in connection Ø 6 mm or plug-in connection 1/4" (inch), connection X plugged with internal pilot control  
Max. 2 double subbases possible, max. 4 valves  
An example configuration is illustrated. The delivered product may thus deviate from the illustration.

n	1	2											
A	138.6	162.2											
B	124.1	147.7											

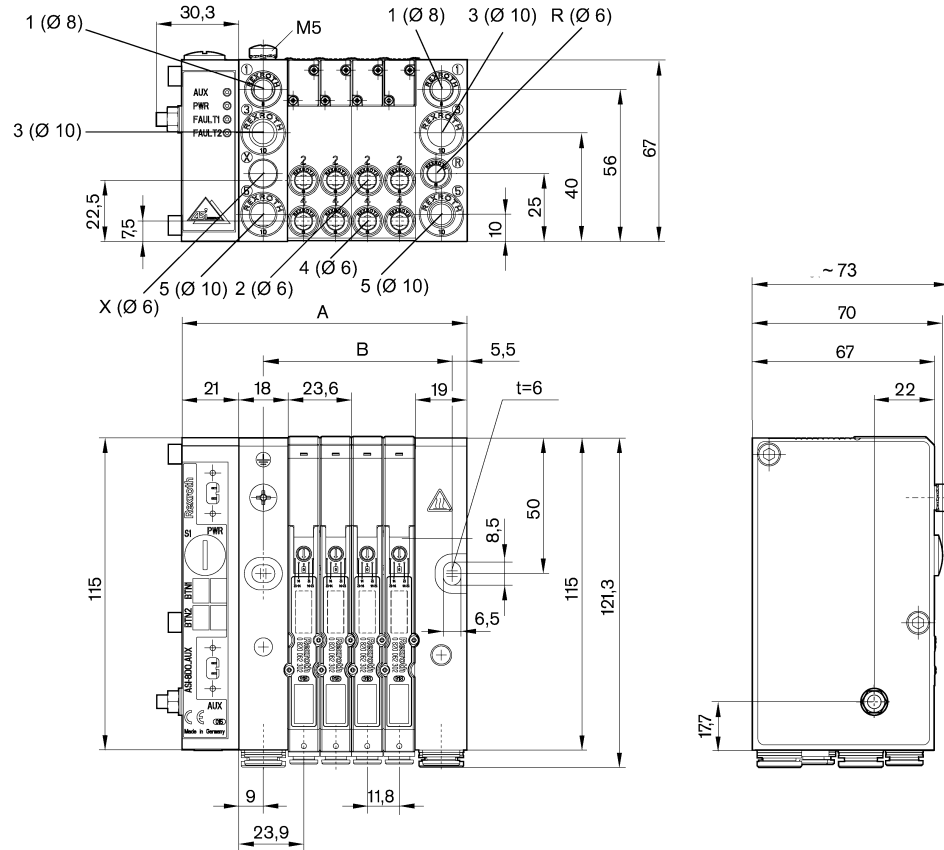
n = number of double subplates

## Valve terminal systems → Valve terminal systems

## Valve terminal system, Series HF04

► Qn max. = 400 l/min ► Field bus connection with AS i ► B-design

## Dimensions, 8DO-AUX



00123197

1 = plug-in connection Ø 8 mm or plug-in connection 3/8" (inch)  
 2 and 4 = plug-in connections Ø 6 mm or thread connections M7  
 3 and 5 = plug-in connections Ø 10 mm or plug-in connections 3/8" (inch)  
 R = collected pilot exhaust, plug-in connection Ø 6 mm or plug-in connection 1/4" (inch)  
 X = external pilot, plug-in connection Ø 6 mm or plug-in connection 1/4" (inch), connection X plugged with internal pilot control  
 Max. 4 double subbases possible, max. 8 valves  
 An example configuration is illustrated. The delivered product may thus deviate from the illustration.

n	1	2	3	4									
A	81.6	105.2	128.8	152.4									
B	46.1	69.7	93.3	116.9									

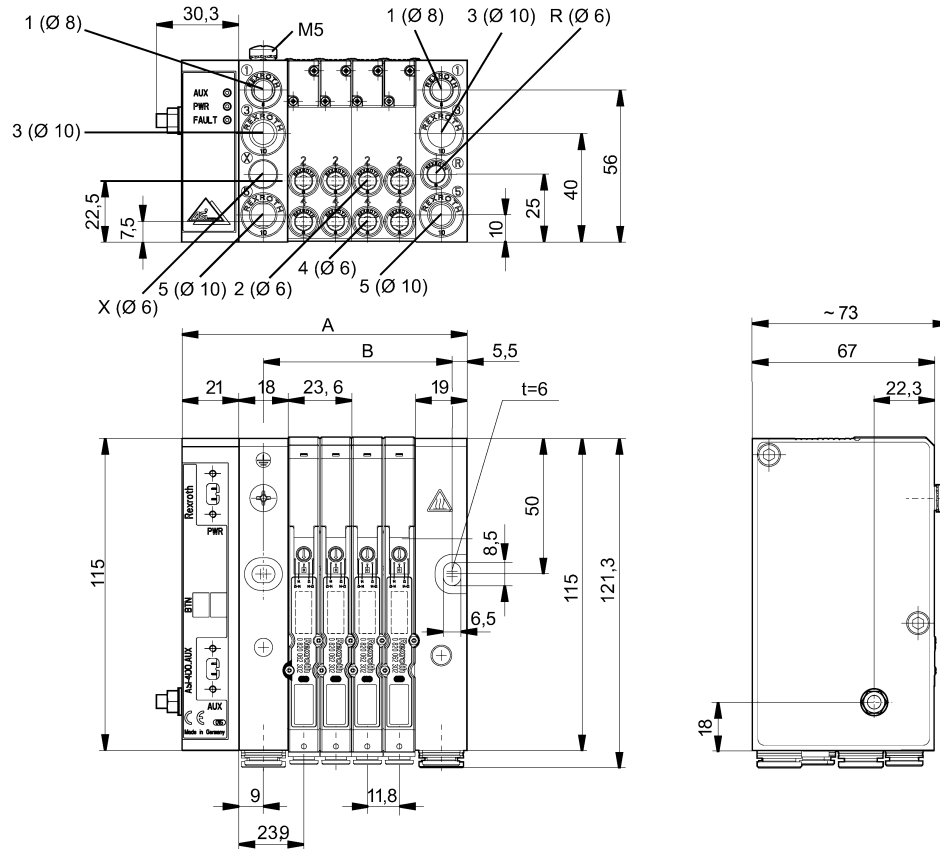
n = number of double subplates

## Valve terminal systems → Valve terminal systems

## Valve terminal system, Series HF04

► Qn max. = 400 l/min ► Field bus connection with AS i ► B-design

### Dimensions, 4DO-AUX



00116532

1 = plug-in connection Ø 8 mm or plug-in connection 3/8" (inch)

2 and 4 = plug-in connections Ø 6 mm or thread connections M7

3 and 5 = plug-in connections Ø 10 mm or plug-in connections 3/8" (inch)

R = collected pilot exhaust, plug-in connection Ø 6 mm or plug-in connection 1/4" (inch)

X = external pilot, plug-in connection Ø 6 mm or plug-in connection 1/4" (inch), connection X plugged with internal pilot control

Max. 2 double subbases possible, max. 4 valves

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

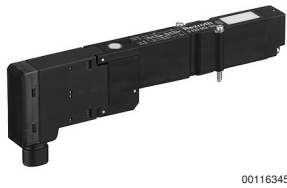
[illegible]

n = number of double subplates

## Valve terminal systems → Valve terminal systems

**2x3/2-way valve, Series HF04 and LP04**

► Qn = 400 l/min ► plate connection ► manual override: with detent



00116345

Version	Spool valve, zero overlap
Pilot	external, internal
Sealing principle	soft sealing
Blocking principle	Double base plate principle
Working pressure min./max.	-0.9 bar / 8 bar
Control pressure min./max.	2.5 bar / 8 bar
Ambient temperature min./max.	-5 °C / +50 °C
Medium temperature min./max.	+0 °C / +50 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 mg/m³ - 5 mg/m³
Protection class according to EN 60529:2000 with electrical connector/plug	IP 65
Protective circuit	Z-diode short circuit protected
Status display LED	Yellow
Duty cycle	100 %
Switch-on time	13 ms
Switch-off time	20 ms
Generic emission standard in accordance with	EN 50081-1
Generic immunity standard in accordance with	EN 50082-2
Mounting screw	cross recessed DIN EN ISO 4757-Z0
mounting screw tightening torque	0.25 Nm
Materials:	
Housing	Polyamide
Seals	Acrylonitrile Butadiene Rubber; Polyurethane

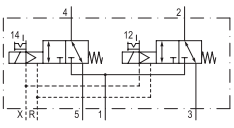

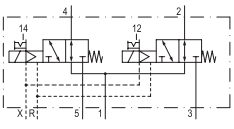

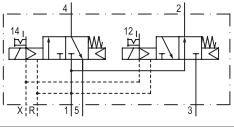

**Technical Remarks**

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of air pressure must remain constant during the life cycle.
- Use only the approved oils from Bosch Rexroth, see chapter „Technical information“.
- The pilot type (external/internal) is not implemented in the valve, but in the end plate of the valve terminal system.

Operating voltage	Voltage tolerance	Power consumption
DC	DC	DC
		W
24 V	-10% / +10%	0.35

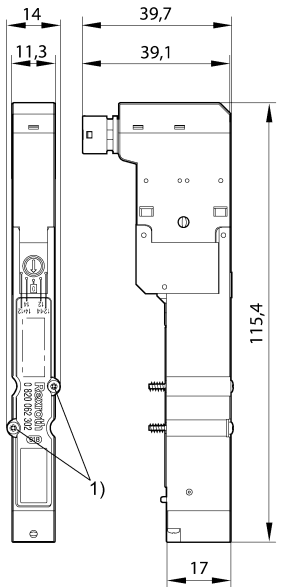
Valve terminal systems → Valve terminal systems

2x3/2-way valve, Series HF04 and LP04  
► Qn = 400 l/min ► plate connection ► manual override: with detent

		MO	Operating voltage	Flow rate value	Weight	Part No.
			DC	Qn		
				[l/min]	[kg]	
	NC/NC		24 V	400	0.048	0820062101
	NO/NO		24 V	400	0.048	0820062201
	NC/NO		24 V	400	0.048	0820062301

MO = Manual override  
With collective pilot air exhaust  
Nominal flow Qn at 6 bar and Δp = 1 bar

Dimensions



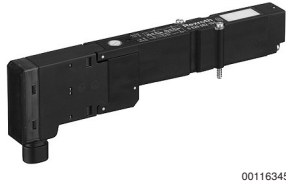
00115993

1) Mounting screw: X-slot DIN EN ISO 4757-Z0  
tightening torque for mounting screw [Nm]: 0.25

## Valve terminal systems → Valve terminal systems

**2x3/2-way valve, Series HF04 and LP04**

► Qn = 400 l/min ► plate connection ► manual override: without detent



00116345

Version	Spool valve, zero overlap
Pilot	external, internal
Sealing principle	soft sealing
Blocking principle	Double base plate principle
Working pressure min./max.	-0.9 bar / 8 bar
Control pressure min./max.	2.5 bar / 8 bar
Ambient temperature min./max.	-5 °C / +50 °C
Medium temperature min./max.	+0 °C / +50 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 mg/m³ - 5 mg/m³
Protection class according to EN 60529:2000 with electrical connector/plug	IP 65
Protective circuit	Z-diode short circuit protected
Status display LED	Yellow
Duty cycle	100 %
Switch-on time	13 ms
Switch-off time	20 ms
Generic emission standard in accordance with	EN 50081-1
Generic immunity standard in accordance with	EN 50082-2
Mounting screw	cross recessed DIN EN ISO 4757-Z0
mounting screw tightening torque	0.25 Nm
Materials:	
Housing	Polyamide
Seals	Acrylonitrile Butadiene Rubber; Polyurethane

**Technical Remarks**

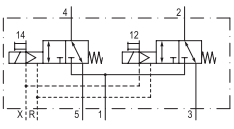

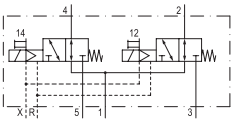

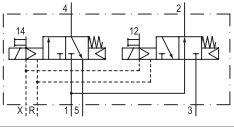

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of air pressure must remain constant during the life cycle.
- Use only the approved oils from Bosch Rexroth, see chapter „Technical information“.
- The pilot type (external/internal) is not implemented in the valve, but in the end plate of the valve terminal system.

Operating voltage	Voltage tolerance	Power consumption
DC	DC	DC
		W
24 V	-10% / +10%	0.35

Valve terminal systems → Valve terminal systems

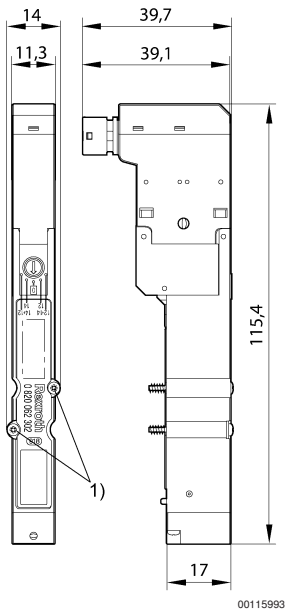
2x3/2-way valve, Series HF04 and LP04

▶ Qn = 400 l/min ▶ plate connection ▶ manual override: without detent

		MO	Operating voltage	Flow rate value	Weight	Part No.
			DC	Qn		
				[l/min]	[kg]	
	NC/NC		24 V	400	0.048	0820062102
	NO/NO		24 V	400	0.048	0820062202
	NC/NO		24 V	400	0.048	0820062302

MO = Manual override  
Nominal flow Qn at 6 bar and Δp = 1 bar

Dimensions



00115993

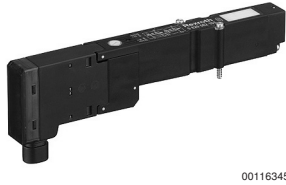
1) Mounting screw: X-slot DIN EN ISO 4757-Z0  
tightening torque for mounting screw [Nm]: 0.25



## Valve terminal systems → Valve terminal systems

**5/2-way valve, Series HF04 and LP04**

► Qn = 400 l/min ► plate connection ► manual override: with detent ► single solenoid, double solenoid



00116345

Version	Spool valve, zero overlap
Pilot	external, internal
Sealing principle	soft sealing
Blocking principle	Double base plate principle
Working pressure min./max.	-0.9 bar / 8 bar
Control pressure min./max.	See table below
Ambient temperature min./max.	-5 °C / +50 °C
Medium temperature min./max.	+0 °C / +50 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 mg/m³ - 5 mg/m³
Protection class according to EN 60529:2000 with electrical connector/plug	IP 65
Protective circuit	Z-diode short circuit protected
Status display LED	Yellow
Duty cycle	100 %
Generic emission standard in accordance with	EN 50081-1
Generic immunity standard in accordance with	EN 50082-2
Mounting screw	cross recessed DIN EN ISO 4757-Z0
mounting screw tightening torque	0.25 Nm
Materials:	
Housing	Polyamide
Seals	Acrylonitrile Butadiene Rubber; Polyurethane

**Technical Remarks**

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of air pressure must remain constant during the life cycle.
- Use only the approved oils from Bosch Rexroth, see chapter „Technical information“.
- The pilot type (external/internal) is not implemented in the valve, but in the end plate of the valve terminal system.

Operating voltage	Voltage tolerance	Power consumption
DC	DC	DC
		<b>W</b>
24 V	-10% / +10%	0.35

	MO	Operating voltage	Flow rate value	Control pressure min./max.	Switch-on time	Switch-off time	Weight	Part No.
		DC	Qn					
			[l/min]	[bar]	[ms]	[ms]	[kg]	
		24 V	400	3 / 8	9	28	0.048	0820062051

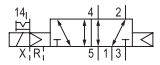

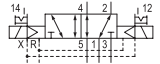

MO = Manual override

Nominal flow Qn at 6 bar and Δp = 1 bar

Valve terminal systems → Valve terminal systems

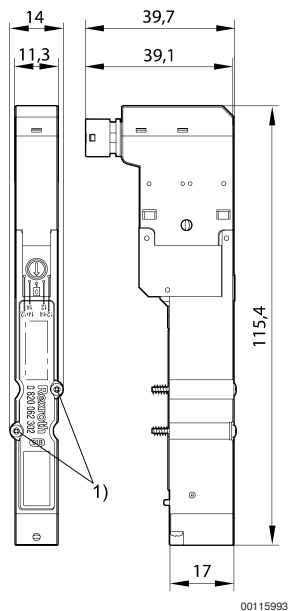
5/2-way valve, Series HF04 and LP04

► Qn = 400 l/min ► plate connection ► manual override: with detent ► single solenoid, double solenoid

	MO	Operating voltage	Flow rate value	Control pressure min./max.	Switch-on time	Switch-off time	Weight	Part No.
		DC	Qn					
			[l/min]	[bar]	[ms]	[ms]	[kg]	
		24 V	400	2.5 / 8	16	18	0.048	0820062001
		24 V	400	2.5 / 8	7	8	0.048	0820062501

MO = Manual override  
Nominal flow Qn at 6 bar and Δp = 1 bar

Dimensions



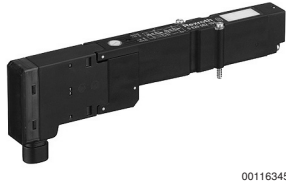
00115993

1) Mounting screw: X-slot DIN EN ISO 4757-Z0  
tightening torque for mounting screw [Nm]: 0.25

## Valve terminal systems → Valve terminal systems

**5/2-way valve, Series HF04 and LP04**

► Qn = 400 l/min ► plate connection ► manual override: without detent ► single solenoid, double solenoid



00116345

Version	Spool valve, zero overlap
Pilot	external, internal
Sealing principle	soft sealing
Blocking principle	Double base plate principle
Working pressure min./max.	-0.9 bar / 8 bar
Control pressure min./max.	See table below
Ambient temperature min./max.	-5 °C / +50 °C
Medium temperature min./max.	+0 °C / +50 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 mg/m³ - 5 mg/m³
Protection class according to EN 60529:2000 with electrical connector/plug	IP 65
Protective circuit	Z-diode short circuit protected
Status display LED	Yellow
Duty cycle	100 %
Generic emission standard in accordance with	EN 50081-1
Generic immunity standard in accordance with	EN 50082-2
Mounting screw	cross recessed DIN EN ISO 4757-Z0
mounting screw tightening torque	0.25 Nm
Materials:	
Housing	Polyamide
Seals	Acrylonitrile Butadiene Rubber; Polyurethane

**Technical Remarks**

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of air pressure must remain constant during the life cycle.
- Use only the approved oils from Bosch Rexroth, see chapter „Technical information“.
- The pilot type (external/internal) is not implemented in the valve, but in the end plate of the valve terminal system.

Operating voltage	Voltage tolerance	Power consumption
DC	DC	DC
		<b>W</b>
24 V	-10% / +10%	0.35

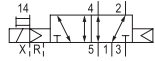

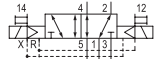

	MO	Operating voltage	Flow rate value	Control pressure min./max.	Switch-on time	Switch-off time	Weight	Part No.
		DC	Qn					
			[l/min]	[bar]	[ms]	[ms]	[kg]	
		24 V	400	3 / 8	9	28	0.048	0820062052

MO = Manual override

Nominal flow Qn at 6 bar and Δp = 1 bar

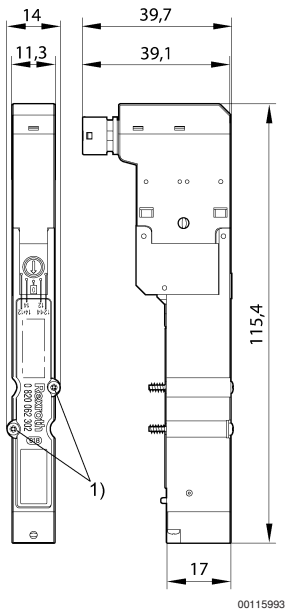
Valve terminal systems → Valve terminal systems

5/2-way valve, Series HF04 and LP04  
► Qn = 400 l/min ► plate connection ► manual override: without detent ► single solenoid, double solenoid

	MO	Operating voltage	Flow rate value	Control pressure min./max.	Switch-on time	Switch-off time	Weight	Part No.
		DC	Qn					
			[l/min]	[bar]	[ms]	[ms]	[kg]	
		24 V	400	2.5 / 8	16	18	0.048	0820062002
		24 V	400	2.5 / 8	7	8	0.048	0820062502

MO = Manual override  
Nominal flow Qn at 6 bar and Δp = 1 bar

Dimensions



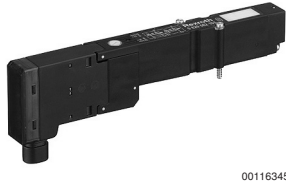
00115993

1) Mounting screw: X-slot DIN EN ISO 4757-Z0  
tightening torque for mounting screw [Nm]: 0.25

## Valve terminal systems → Valve terminal systems

**5/3-way valve, Series HF04 and LP04**

► Qn = 400 l/min ► plate connection ► manual override: with detent



00116345

Version	Spool valve, zero overlap
Pilot	external, internal
Sealing principle	soft sealing
Blocking principle	Double base plate principle
Working pressure min./max.	-0.9 bar / 8 bar
Control pressure min./max.	2.5 bar / 8 bar
Ambient temperature min./max.	-5 °C / +50 °C
Medium temperature min./max.	+0 °C / +50 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 mg/m³ - 5 mg/m³
Protection class according to EN 60529:2000 with electrical connector/plug	IP 65
Protective circuit	Z-diode short circuit protected
Status display LED	Yellow
Duty cycle	100 %
Switch-on time	8 ms
Switch-off time	10 ms
Generic emission standard in accordance with	EN 50081-1
Generic immunity standard in accordance with	EN 50082-2
Mounting screw	cross recessed DIN EN ISO 4757-Z0
mounting screw tightening torque	0.25 Nm
Materials:	
Housing	Polyamide
Seals	Acrylonitrile Butadiene Rubber; Polyurethane

**Technical Remarks**

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of air pressure must remain constant during the life cycle.
- Use only the approved oils from Bosch Rexroth, see chapter „Technical information“.
- The pilot type (external/internal) is not implemented in the valve, but in the end plate of the valve terminal system.

Operating voltage	Voltage tolerance	Power consumption
DC	DC	DC
		W
24 V	-10% / +10%	0.35

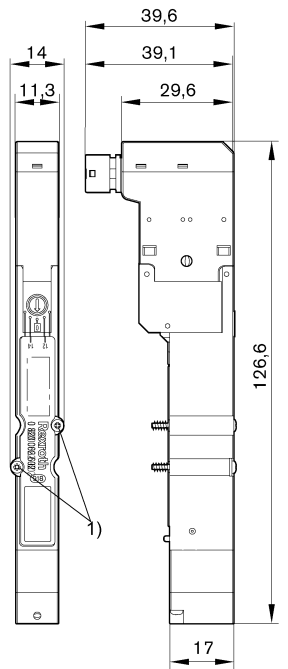
	MO	Operating voltage	Flow rate value	Weight	Part No.
		DC	Qn		
			[l/min]	[kg]	
		24 V	400	0.048	0820062601

MO = Manual override

Nominal flow Qn at 6 bar and Δp = 1 bar

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for detailed information  
Pneumatics catalog, online PDF, as of 2010-01-28, © Bosch Rexroth AG, subject to change

## Valve terminal systems → Valve terminal systems

**5/3-way valve, Series HF04 and LP04**► Q<sub>n</sub> = 400 l/min ► plate connection ► manual override: with detent**Dimensions**

1) Mounting screw: X-slot DIN EN ISO 4757-Z0  
tightening torque for mounting screw [Nm]: 0.25

## Valve terminal systems → Valve terminal systems

**5/3-way valve, Series HF04 and LP04**

► Qn = 400 l/min ► plate connection ► manual override: without detent



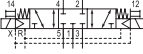

00116345

Version	Spool valve, zero overlap
Pilot	external, internal
Sealing principle	soft sealing
Blocking principle	Double base plate principle
Working pressure min./max.	-0.9 bar / 8 bar
Control pressure min./max.	2.5 bar / 8 bar
Ambient temperature min./max.	-5 °C / +50 °C
Medium temperature min./max.	+0 °C / +50 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 mg/m³ - 5 mg/m³
Protection class according to EN 60529:2000 with electrical connector/plug	IP 65
Protective circuit	Z-diode short circuit protected
Status display LED	Yellow
Duty cycle	100 %
Switch-on time	8 ms
Switch-off time	10 ms
Generic emission standard in accordance with	EN 50081-1
Generic immunity standard in accordance with	EN 50082-2
Mounting screw	cross recessed DIN EN ISO 4757-Z0
mounting screw tightening torque	0.25 Nm
Materials:	
Housing	Polyamide
Seals	Acrylonitrile Butadiene Rubber; Polyurethane

**Technical Remarks**

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of air pressure must remain constant during the life cycle.
- Use only the approved oils from Bosch Rexroth, see chapter „Technical information“.
- The pilot type (external/internal) is not implemented in the valve, but in the end plate of the valve terminal system.

Operating voltage	Voltage tolerance	Power consumption
DC	DC	DC
		W
24 V	-10% / +10%	0.35

	MO	Operating voltage	Flow rate value	Weight	Part No.
		DC	Qn		
			[l/min]	[kg]	
		24 V	400	0.048	0820062602

MO = Manual override

Nominal flow Qn at 6 bar and Δp = 1 bar

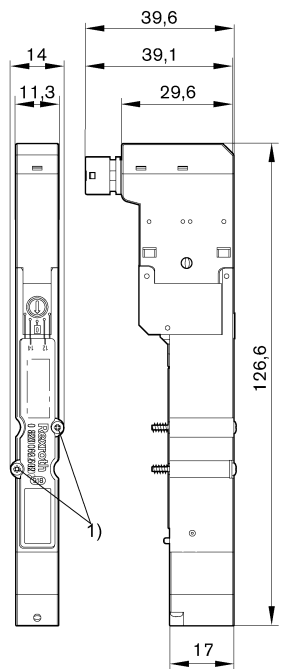
Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for detailed information  
Pneumatics catalog, online PDF, as of 2010-01-28, © Bosch Rexroth AG, subject to change



## Valve terminal systems → Valve terminal systems

**5/3-way valve, Series HF04 and LP04**

► Qn = 400 l/min ► plate connection ► manual override: without detent

**Dimensions**

1) Mounting screw: X-slot DIN EN ISO 4757-Z0  
tightening torque for mounting screw [Nm]: 0.25

## Valve terminal systems → Valve terminal systems

## Series HF04

### Accessories

### Direct field bus connection (BDC), B-design

► Bus module with driver ► Field bus protocol: Profibus DP / CANopen / CANopen sb / DeviceNet / SERCOS III



Ambient temperature min./max.	+0 °C / +50 °C
Protection class according to EN 60529, with plug	IP 65
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-15% / +20%
Power consumption electronics	0.05 A
Operational voltage valves	24 V DC
Number of outputs for valve coils	32
Total output for valves	3 A
Max. power consumption per coil	0.1 A
Communication port Bus	See table below
VTs connection	Socket, 2.0 mm strip, 2x13-pin
power supply	Plug, M12, 4-pin, A-coded port for second power supply

Materials:

Housing

Die-cast aluminum

#### Technical Remarks

- Max. number of valves: 16 double solenoid or 32 single solenoid
- You will find assignment schemes for the product in the manual or contact the nearest Bosch Rexroth sales office.

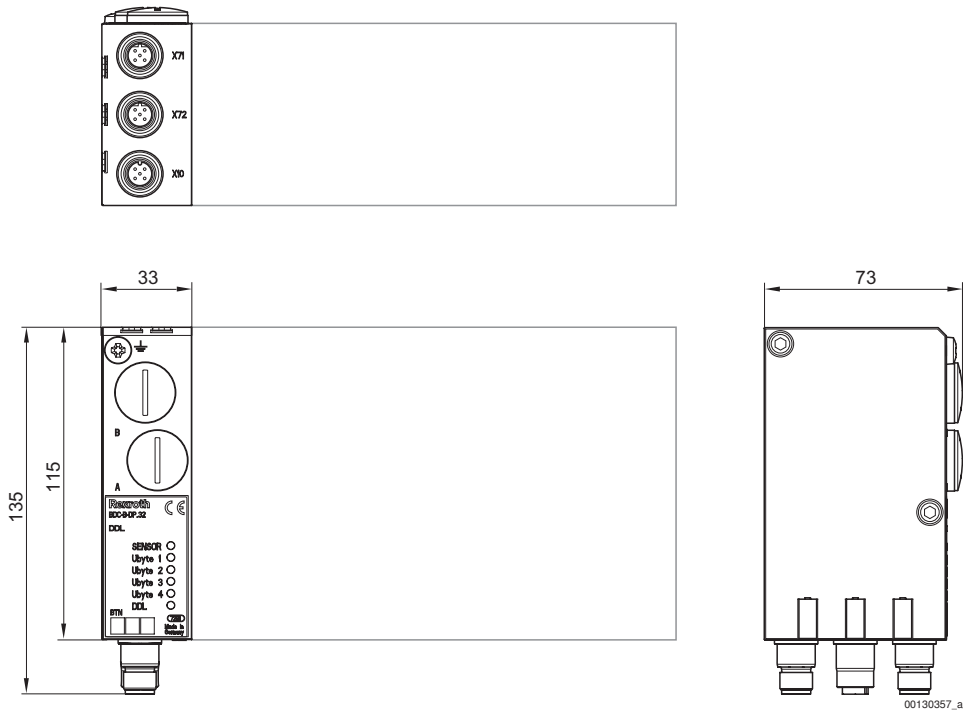
Field bus protocol	Communication port Bus	Manual	Weight	Part No.
			[kg]	
Profibus DP	Plug, M12x1, 5-pin, B-coded	R412009414	0.29	R412008537
CANopen	Plug, M12x1, 5-pin, A-coded	R412009415	0.29	R412008538
CANopen sb	Plug, M12x1, 5-pin, A-coded	R412009415	0.29	R412008990
DeviceNet	Plug, M12x1, 5-pin, A-coded	R412009416	0.29	R412008539
SERCOS III	Plug, M12x1, 5-pin, D-coded	R412012610	0.29	R412009516

Scope of delivery incl. 2 screws and seal

Valve terminal systems → Valve terminal systems

Series HF04  
Accessories

Dimensions



X71 = BUS IN  
X72 = BUS OUT  
X10 = POWER

Optional field bus connection with I/O function (CMS), B-design

► Bus module with driver ► Field bus protocol: Profibus DP / DeviceNet / CANopen / INTERBUS-S / ETHERNET IP



Ambient temperature min./max.	+0°C / +50°C
Protection class according to EN 60529, with plug	IP 65
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-15% / +20%
Power consumption electronics	0.12 A
Operational voltage valves	24 V DC
Max. power consumption per coil	0.063 A
Communication port Bus	See table below
VTS connection	Socket, 2.0 mm strip, 2x13-pin
power supply	Plug, M12, 4-pin
	port for second power supply
	6
I/O extension possible, max.	
Materials:	
Housing	Die-cast aluminum

The delivered product may vary from that in the illustration.

## Valve terminal systems → Valve terminal systems

## Series HF04

### Accessories

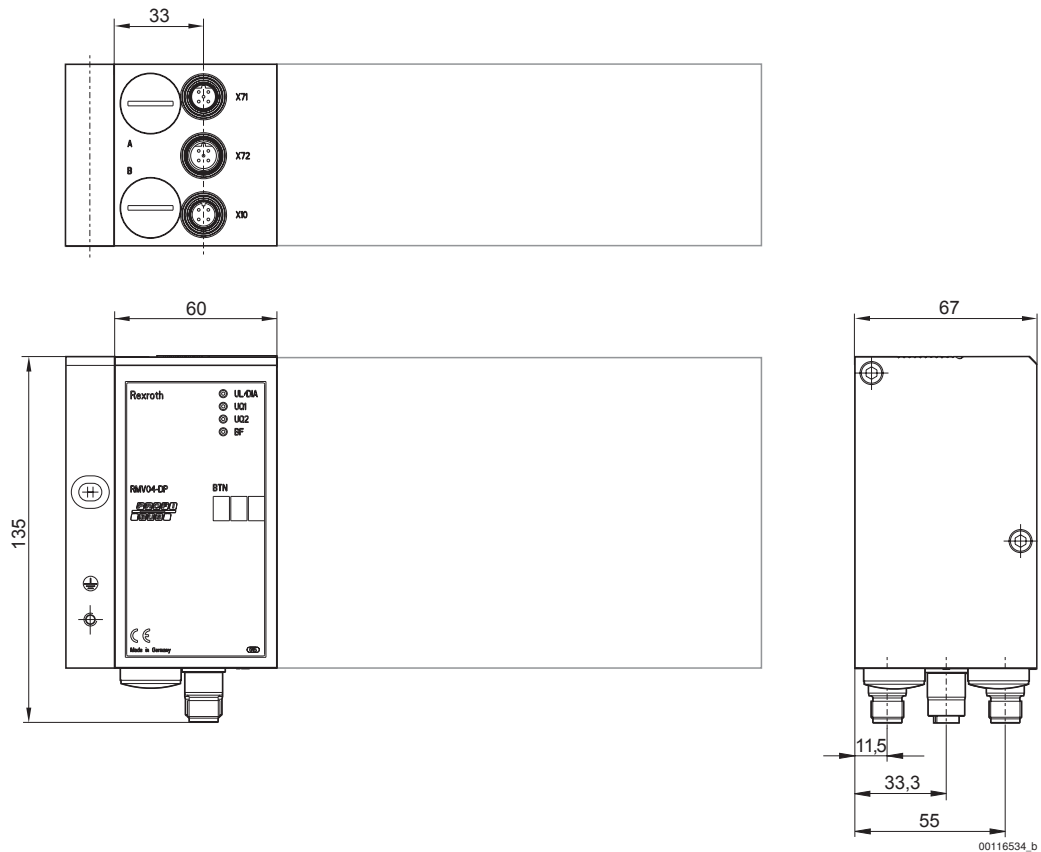
#### Technical Remarks

- You will find assignment schemes for the product in the manual or contact the nearest Bosch Rexroth sales office.

Field bus protocol	Communication port Bus	Number of outputs for valve coils	Manual	Weight	Note	Part No.
				[kg]		
Profibus DP	Plug, M12, 5-pin, B-coded	24 32	R499050016	0.84	Fig. 1	<b>R412003484</b> <b>R412008516</b>
DeviceNet	Plug, M12, 5-pin, A-coded	24 32	R499050019	1	Fig. 2	<b>R412004346</b> R412008517
CANopen	Plug, M12, 5-pin, A-coded	24 32	R412005742	1	Fig. 3	R412005747 R412008518
INTERBUS-S	Plug, M12, 5-pin, B-coded	24 32	R412005743	0.91	Fig. 4	R412005748 R412008515
ETHERNET IP	Plug, M12, 5-pin, D-coded	32	R412012728	1	Fig. 5; 1)	R412012755

1) Only star topology  
Scope of delivery incl. 2 tie rod extensions and seal

Fig. 1

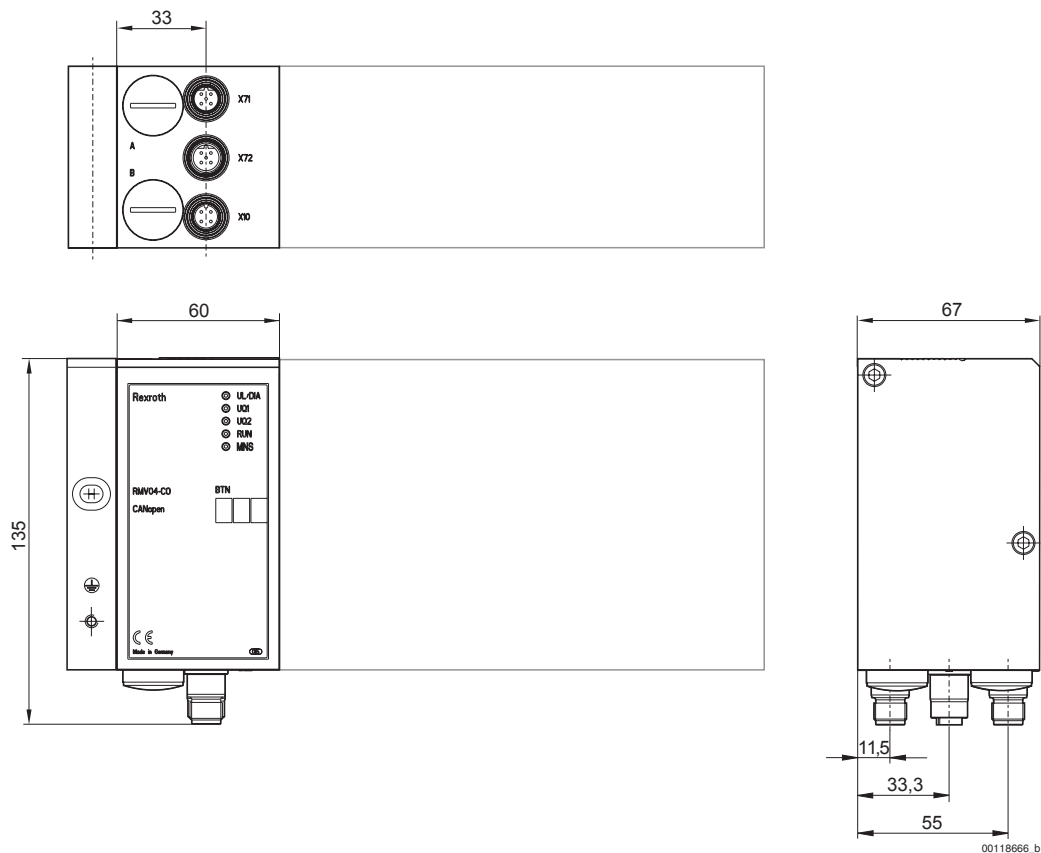


## Valve terminal systems → Valve terminal systems

## Series HF04

### Accessories

Fig. 2

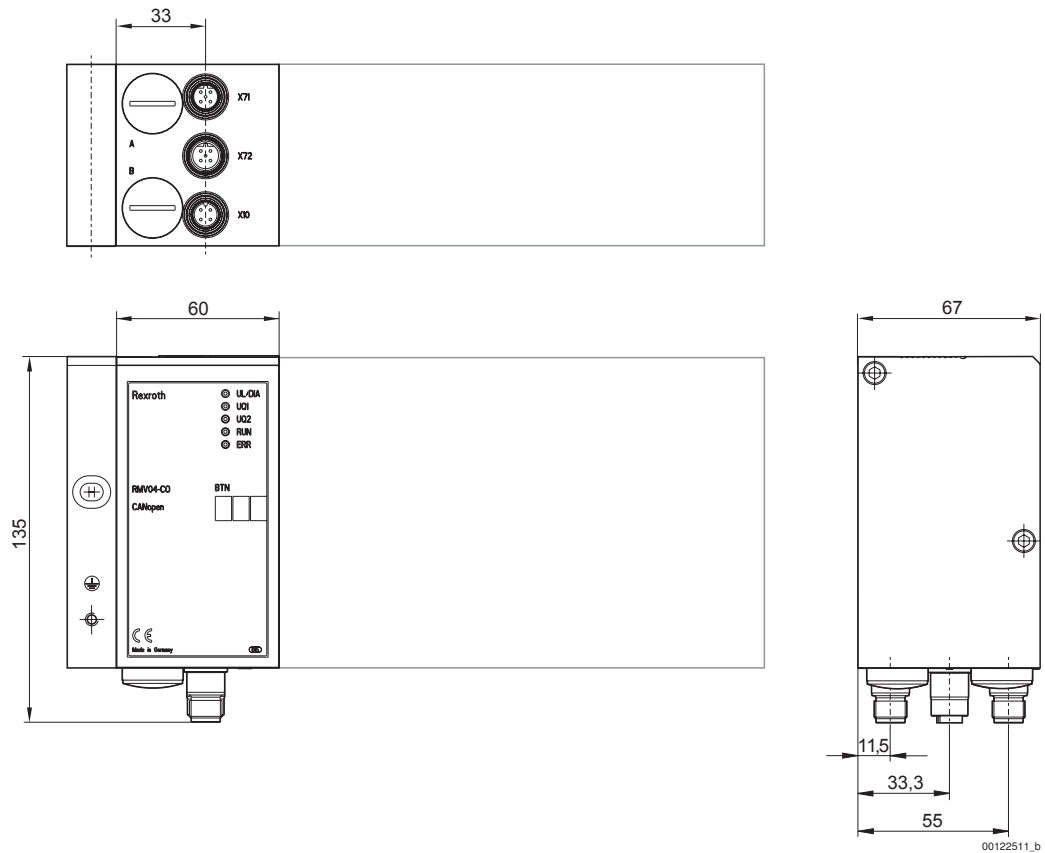


## Valve terminal systems → Valve terminal systems

## Series HF04

### Accessories

Fig. 3

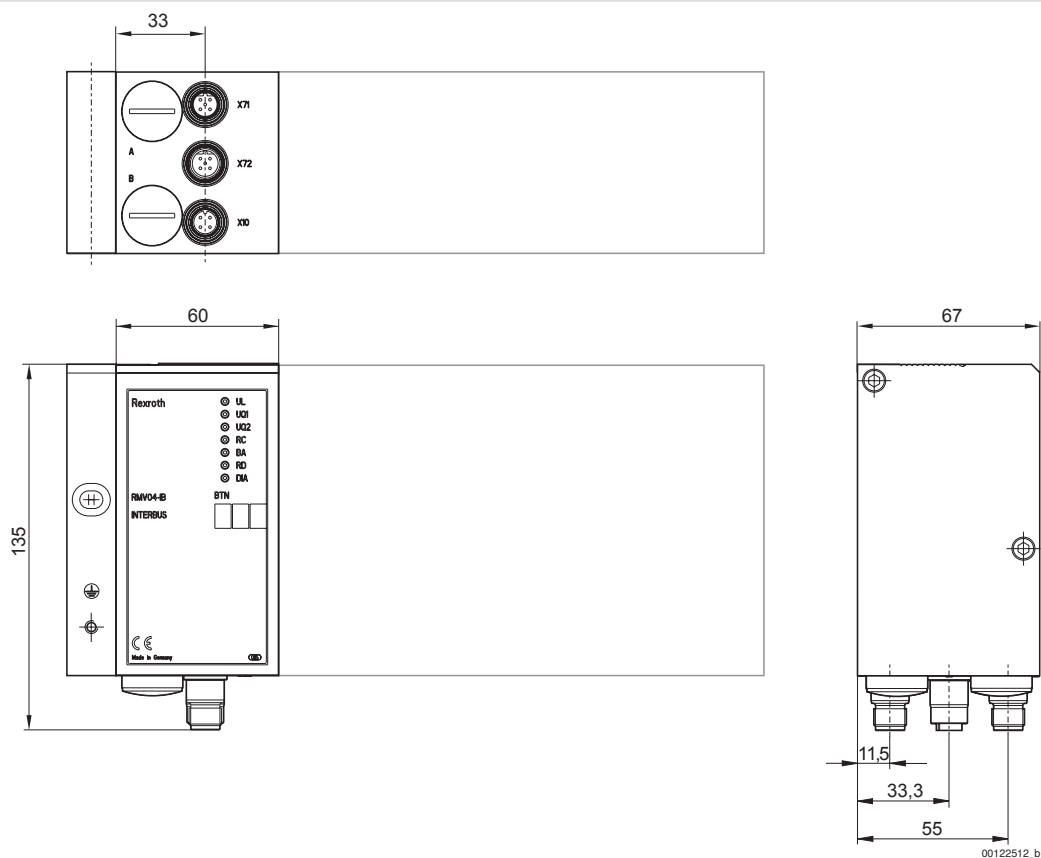


## Valve terminal systems → Valve terminal systems

## Series HF04

### Accessories

Fig. 4



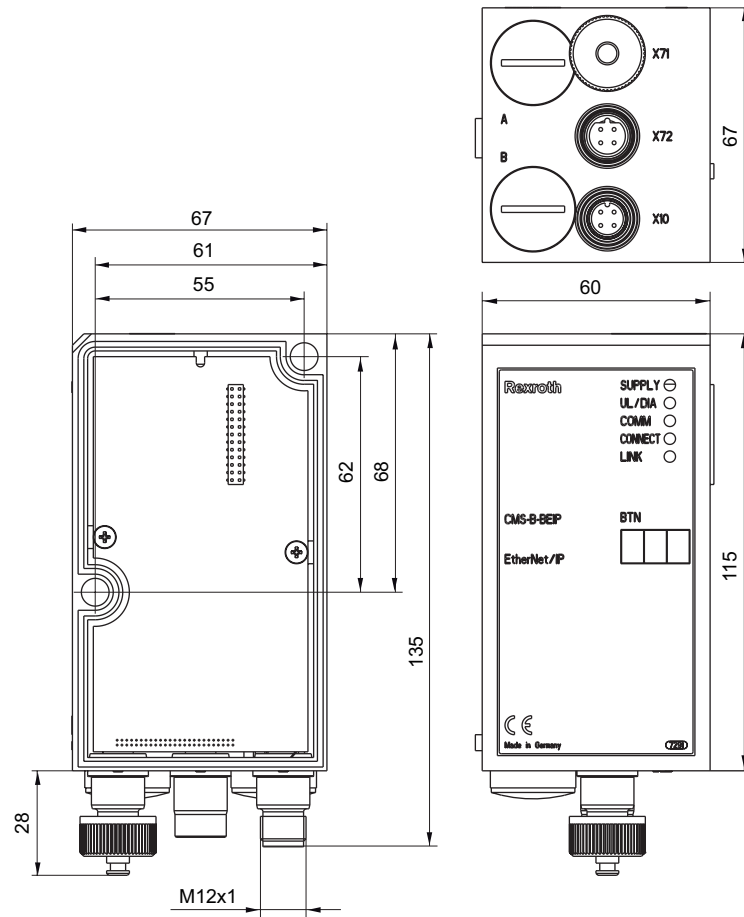


## Valve terminal systems → Valve terminal systems

## Series HF04

### Accessories

Fig. 5



00135275

Valve terminal systems → Valve terminal systems

Series HF04  
Accessories

Field bus connection with diagnosis (DDL), B-design

► Driver



Ambient temperature min./max.	+0°C / +50°C
Protection class according to EN 60529, with plug	IP 65
Operational voltage electronics	24 V DC
Power consumption electronics	0.05 A
Operational voltage valves	24 V DC
Number of outputs for valve coils	32
Total output for valves	3 A
Max. power consumption per coil	0.1 A
Max. cable length (DDL)	40 m
Max. number of DDL participants	14
Communication port Bus	Socket, M12, 5-pin
VTS connection	Socket, 2.0 mm strip, 2x13-pin
power supply	Plug, M12, 4-pin, A-coded port for second power supply
Materials:	
Housing	Die-cast aluminum

The delivered product may vary from that in the illustration.

Technical Remarks
■ Max. current in 0 V line: 4 A
■ You will find assignment schemes for the product in the manual or contact the nearest Bosch Rexroth sales office.

Manual	Weight	Part No.
	[kg]	
R412009417	0.29	R412008541

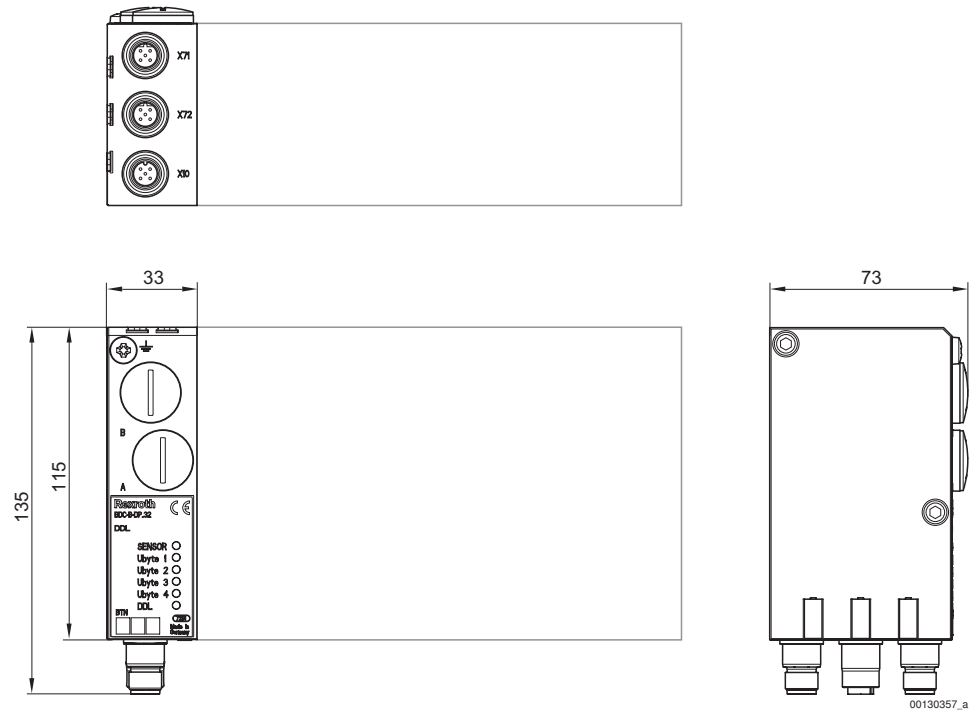
Scope of delivery incl. 2 tie rod extensions and seal

## Valve terminal systems → Valve terminal systems

## Series HF04

### Accessories

#### Dimensions



X71 = M12, A-coded, 5-pin, pin  
 X72 = M12, A-coded, 5-pin, socket  
 X10 = M12, A-coded, 4-pin, pin

Valve terminal systems → Valve terminal systems

Series HF04  
Accessories

Connection with diagnosis, optionally with I/O function (DDL), B-design

► Driver



00119265

Ambient temperature min./max.	+0 °C / +50 °C
Protection class according to EN 60529, with plug	IP 65
Operational voltage electronics	24 V DC
Power consumption electronics	0.2 A
Operational voltage valves	24 V DC
Number of outputs for valve coils	24
Total output for valves	3 A
Max. power consumption per coil	0.1 A
Max. cable length (DDL)	40 m
Max. number of DDL participants	14
Communication port Bus	Socket, M12, 5-pin
VTS connection	Socket, 2.0 mm strip, 2x13-pin
power supply	Plug, M12, 4-pin, A-coded port for second power supply
I/O extension possible, max.	6
I/O module extension Input max.	4
I/O module extension Output max.	3
Materials:	
Housing	Die-cast aluminum

Technical Remarks
■ Max. current in 0 V line: 4 A
■ You will find assignment schemes for the product in the manual or contact the nearest Bosch Rexroth sales office.

Manual	Weight	Part No.
	[kg]	
R499050020	1.041	R412006880

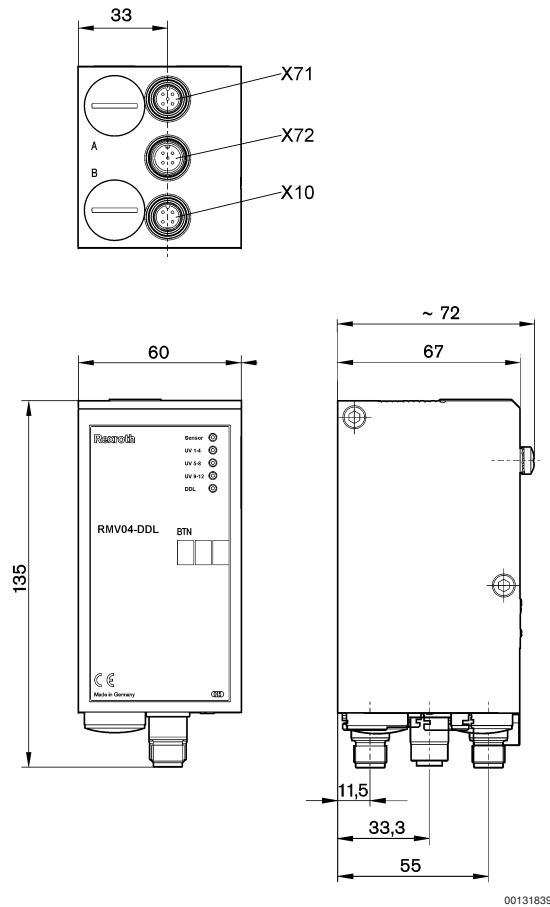
Scope of delivery incl. 2 tie rod extensions and seal

## Valve terminal systems → Valve terminal systems

## Series HF04

### Accessories

#### Dimensions



00131839

X71 = M12x1 (BUS IN), 5-pin  
 X72 = M12x1 (BUS OUT), 5-pin  
 X10 = M12x1 (POWER), 5-pin

Valve terminal systems → Valve terminal systems

Series HF04  
Accessories

Field bus connection with AS i, B-design  
► Bus module with driver ► Field bus protocol: AS-i



00117212

Ambient temperature min./max.	+0°C / +50°C
Protection class according to EN 60529, with plug	IP 65
Operational voltage electronics	AS-i compatible
Operational voltage valves	24 V DC
Max. power consumption per coil	0.03 A
Communication port Bus	Yellow AS-i flat cable
VTs connection	Socket, 2.0 mm strip, 2x13-pin
power supply	Black AS-i flat cable
ID Code / ID2 Code	F / E
I/O Code	8
Materials:	
Housing	Aluminum, Die-cast aluminum

The delivered product may vary from that in the illustration.

Technical Remarks
■ You will find assignment schemes for the product in the manual or contact the nearest Bosch Rexroth sales office.

Field bus protocol	Number of outputs for valve coils	Power consumption electronics	Manual	Weight	Note	Part No.
		[A]		[kg]		
AS-i	4	0.05	R499050017	0.14	Fig. 1	R412003488
	8	0.08			Fig. 2	R412006761

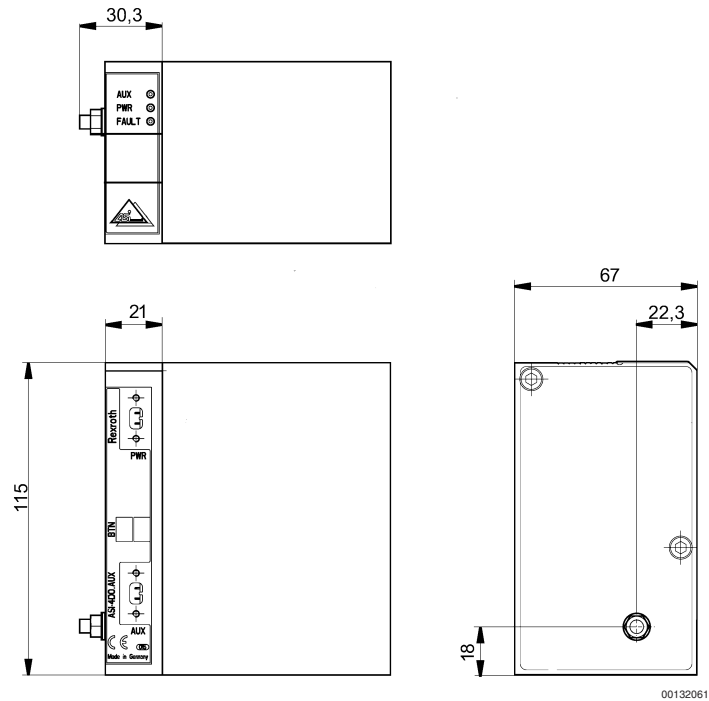
Scope of delivery incl. seal and mounting screws

## Valve terminal systems → Valve terminal systems

# Series HF04

## Accessories

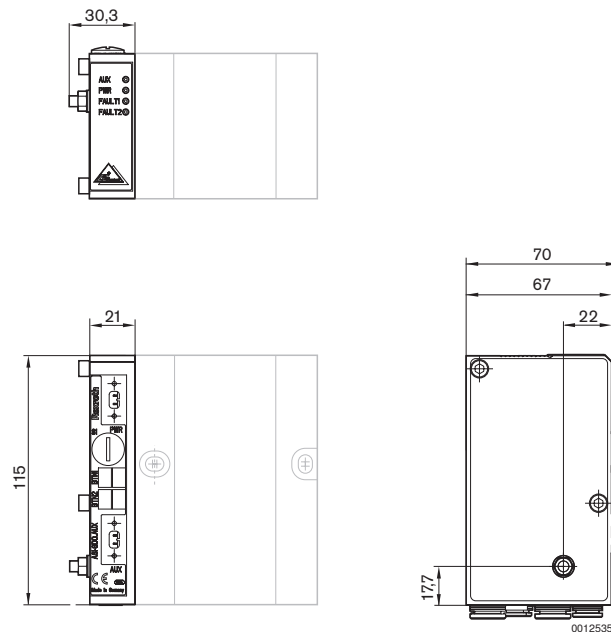
Fig. 1



00132061

AS-i, 4DO-AUX

Fig. 2



00125351

AS-i, 8DO-AUX

Valve terminal systems → Valve terminal systems

Series HF04  
Accessories

Field bus connection with AS i, B-design  
► Bus module with driver ► Field bus protocol: AS i with inputs



00132216

Ambient temperature min./max.	+0°C / +50°C
Protection class according to EN 60529, with plug	IP 65
Operational voltage electronics	AS-i compatible
Operational voltage valves	24 V DC
Max. power consumption per coil	0.03 A
Communication port Bus	Yellow AS-i flat cable
VTs connection	Socket, 2.0 mm strip, 2x13-pin
power supply	Black AS-i flat cable
ID Code / ID2 Code	F / E
I/O Code	7
Materials:	
Housing	Aluminum

The delivered product may vary from that in the illustration.

Technical Remarks
■ You will find assignment schemes for the product in the manual or contact the nearest Bosch Rexroth sales office.

Field bus protocol	Number of inputs	Number of out-puts for valve coils	I/O connection	Power con-sumption electronics	Manual	Note	Part No.
				[A]			
AS i with inputs	8	8	input or output, Socket, M8, 8x	0.1	R499050017	Fig. 2	<b>R412003486</b>
	4	4	input or output, Socket, M8, 4x	0.05		Fig. 1	R412003487

Scope of delivery incl. 2 tie rod extensions and seal

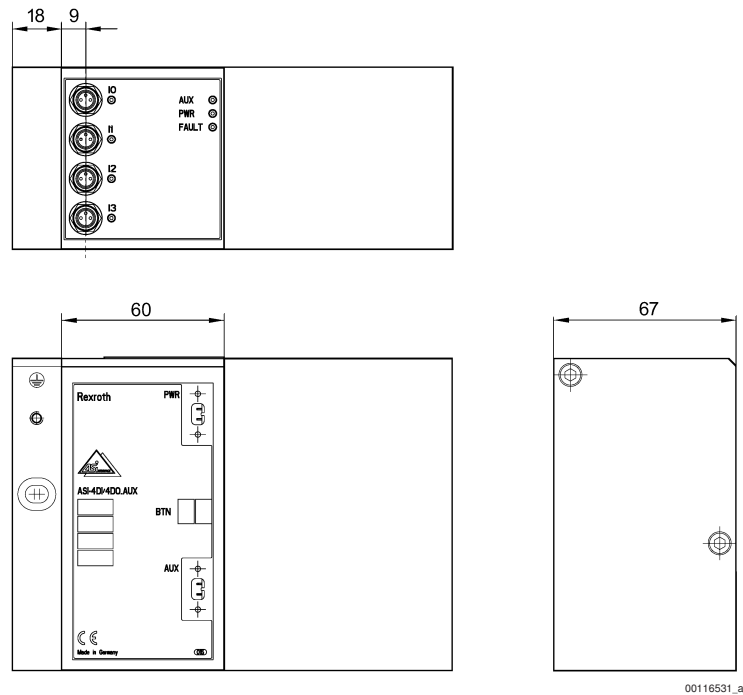


## Valve terminal systems → Valve terminal systems

## Series HF04

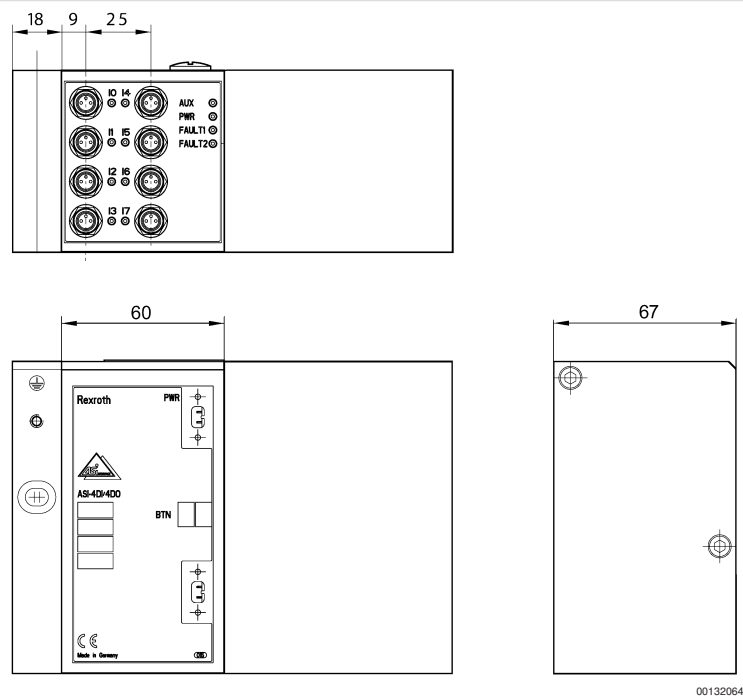
### Accessories

Fig. 1



4DI/4DO-AUX

Fig. 2



8DI/8DO-AUX

Valve terminal systems → Valve terminal systems

Series HF04  
Accessories

Multiple plug D-Sub (25-pin)  
► Socket, D-Sub, 25-pin

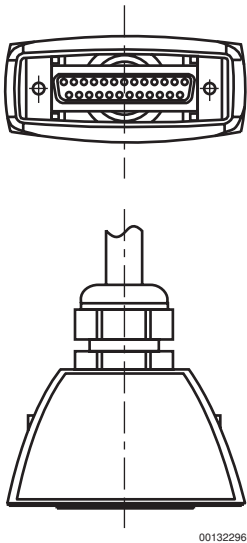


Ambient temperature min./max.	-5 °C / +50 °C
Protection class according to EN 60529	IP 65
Operating voltage DC max.	24 V
Operational voltage AC, max.	115 V
Materials:	
Housing	Polyamide

Technical Remarks
■ The specified protection class is valid only in assembled and tested state.
■ Note for use with VTS LP04: The plug can only be used in the LP04 versions with a side electrical connection.

Electrical interface	Cable length	Cable sheath		Weight	Part No.
[Port 1]	[m]			[kg]	
Socket, D-Sub, 25-pin	3	Polyvinyl chloride	-	0.462	0493859807
Socket, D-Sub, 25-pin	10	Polyvinyl chloride	-	1.59	0493845705
Socket, D-Sub, 25-pin	10	Polyurethane	suitable for dynamic laying	1.59	8946203902

Dimensions

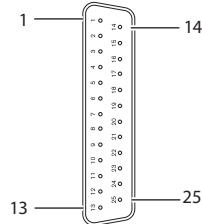


## Valve terminal systems → Valve terminal systems

## Series HF04

### Accessories

#### PIN assignment and cable colors

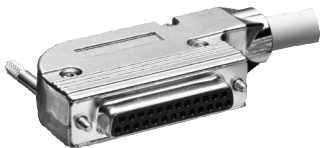


00136701

cable identification as per DIN 47100

## Multiple plug D-Sub (25-pin)

► Socket, D-Sub, 25-pin ► with cable



00128872

Ambient temperature min./max.  
Protection class according to EN 60529  
Operating voltage DC max.  
Cable exit

-5 °C / +50 °C  
IP 20  
24 V  
angled 90°

Materials:  
Housing  
Cable sheath

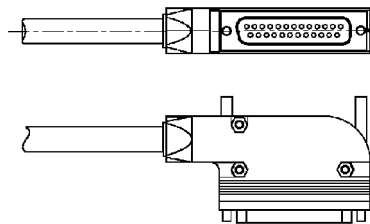
metal  
Polyvinyl chloride

#### Technical Remarks

- The specified protection class is valid only in assembled and tested state.

Electrical interface	Cable length	Weight	Part No.
[Port 1]	[m]	[kg]	
Socket, D-Sub, 25-pin	3	0.487	R402000782
Socket, D-Sub, 25-pin	10	1.411	R402000783

#### Dimensions

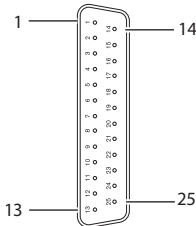


00132298

Valve terminal systems → Valve terminal systems

Series HF04  
Accessories

PIN assignment and cable colors



00136701

cable identification as per DIN 47100

Pressure regulator subplate, Series HF04, HF04-XF and LP04



Version	Poppet valve
Ambient temperature min./max.	-5 °C / +50 °C
Medium temperature min./max.	+0 °C / +50 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 mg/m³ - 5 mg/m³
Materials:	
Housing	Polyamide
Seals	Acrylonitrile Butadiene Rubber

Technical Remarks
<ul style="list-style-type: none"> <li>Protection class when mounted: IP65</li> <li>Please note that HF04 and LP04 series valve terminal systems can only be retrofitted without modifications from 05/2008. Older valve terminal systems do not have the required mounting holes in the subbases.</li> </ul>

	Compressed air connection		Working pressure min./max.	Adjustment range min./max.	Weight	Note	Part No.
	Input	Output					
			[bar]	[bar]	[kg]		
	Special base plate	Special base plate	0.5 / 10	0.5 / 8	0.1	Fig. 1	<b>R412000999</b>
				0.5 / 4		Fig. 2	<b>R412008584</b>
	-	-	-	-	-	1)2)	R412009413

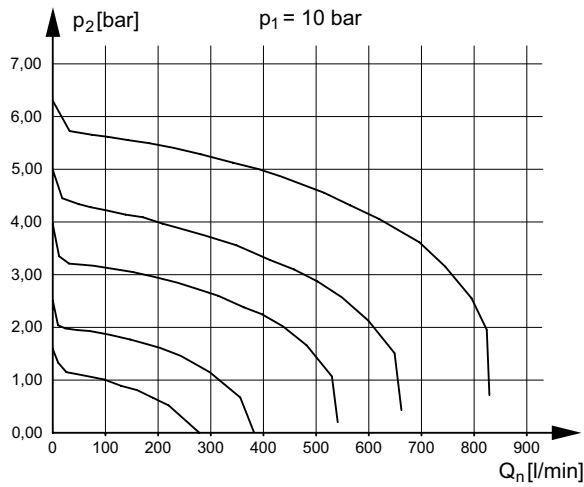
1) Pressure gauge 0-1 MPa  
2) Push-in fitting Ø 4 mm

## Valve terminal systems → Valve terminal systems

# Series HF04

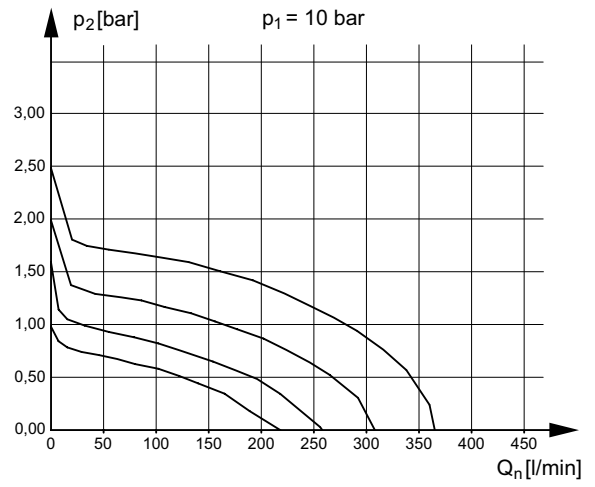
## Accessories

Fig. 1



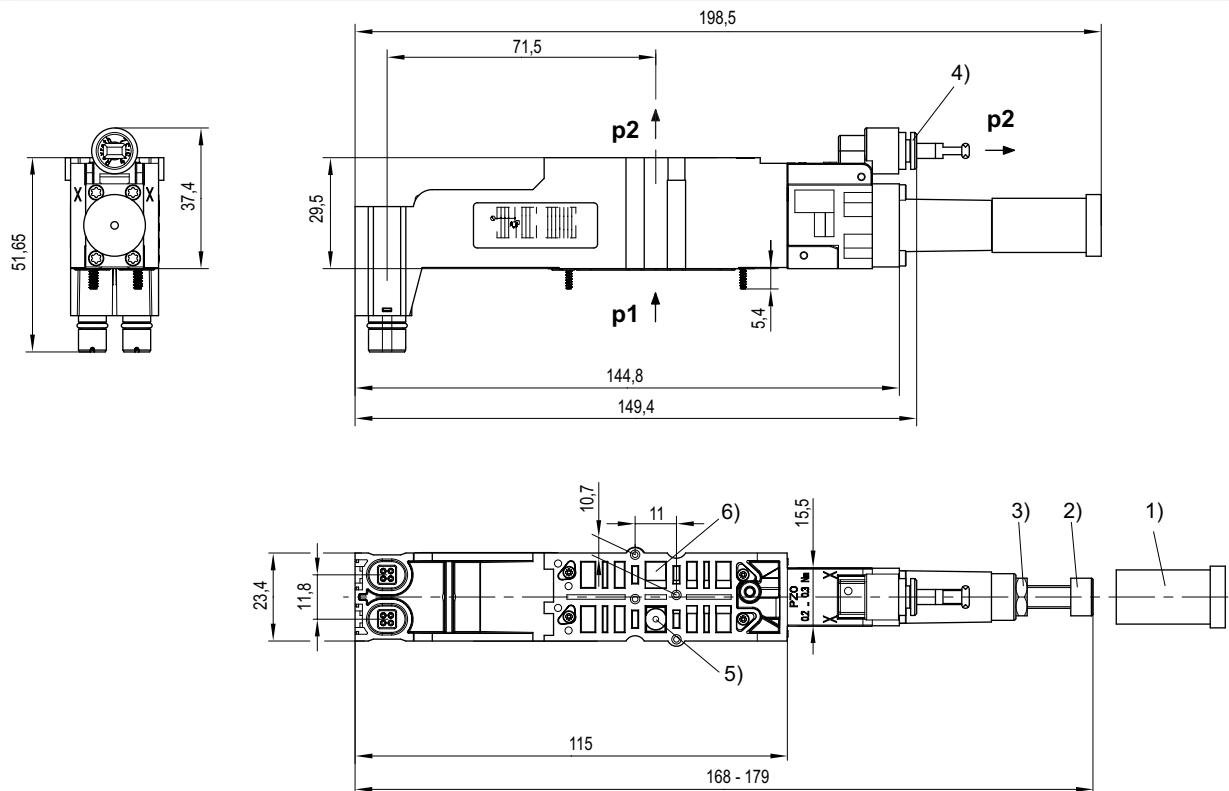
$p_1$  = working pressure;  $p_2$  = secondary pressure;  $q_n$  = nominal flow

Fig. 2



$p_1$  = working pressure;  $p_2$  = secondary pressure;  $q_n$  = nominal flow

### Dimensions



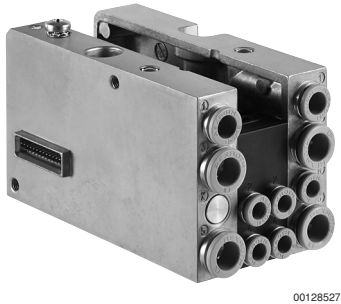
- 1) locking cap; 2) regulating screw; 3) lock nut; 4) push-in fitting;
- $p_1$  = working pressure;  $p_2$  = secondary pressure
- 5) valve position is controlled by the pressure regulator subplate;
- 6) valve position is directly supplied via channel 1 of the valve terminal system

00132658

Valve terminal systems → Valve terminal systems

Series HF04  
Accessories

**HF04, CKD kit metric**  
► compressed air connection output: Ø 6 - M7 ► Can be assembled into blocks ► Double base plate principle  
► Reversed pressure supply permissible ► Bus module extension possible ► I/O extension possible ► With collective pilot air exhaust



Function	VTs
Version	Multipole
Ambient temperature min./max.	-5 °C / +50 °C
Medium temperature min./max.	+0 °C / +50 °C
Medium	Compressed air
Working pressure min./max.	See table below
Power supply connection	Plug, D-Sub, 25-pin
Number of valve positions	2
Grid dimension	11.8 mm
Rail mounting DIN EN 60715	TH35 x 15
Mounting screw	cross recessed DIN EN ISO 4757-Z0
Tightening torque for mounting screws	0.2 Nm+0,05
Direction of pneumatic port (1)	On the side
Direction of pneumatic port (3,5)	On the side
Direction of pneumatic port (2,4)	On the side
Direction of pneumatic port (R)	On the side
Direction of pneumatic port (X)	On the side
Exhaust (3,5)	With directional exhaust (3/5) Ports separated
Materials:	
Subbase	Polyamide
Push-in fitting	Brass, nickel-plated
Seals	Acrylonitrile Butadiene Rubber
Screws	Steel
Tie-rods	Aluminum

Technical Remarks
■ The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
■ The oil content of air pressure must remain constant during the life cycle.
■ Use only the approved oils from Bosch Rexroth, see chapter „Technical information“.

Compressed air connection					Working pres- sure min./ max.	Pilot	Part No.
Input	Output	Exhaust	Pilot control exhaust	Pilot connec- tion			
[1]	[2 / 4]	[3 / 5]					
Ø 8	Ø 6	Ø 10	Ø 6	-	3 / 8	internal	<b>R412008545</b>
	Ø 6			Ø 6	-0.9 / 10	external	R412008546
	M7			-	3 / 8	internal	R412008547
	M7			Ø 6	-0.9 / 10	external	R412008548

## Valve terminal systems → Valve terminal systems

## Series HF04

### Accessories

Part No.	DC operating voltage	Voltage tolerance DC
	[V]	
<b>R412008545</b> R412008546 R412008547 R412008548	24 V	-10% / +10%

1 = plug-in connection Ø 8 mm

2 and 4 = plug-in connection Ø 6 mm or thread connections M7

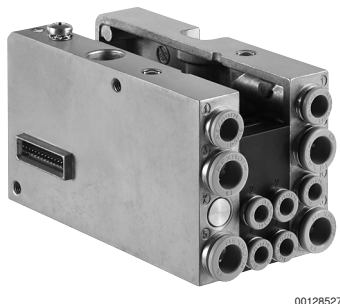
3 and 5 = plug-in connection Ø 10 mm

R = collected pilot exhaust, plug-in connection Ø 6 mm

X = external pilot, plug-in connection Ø 6 mm, connection X plugged with internal pilot control

## HF04, CKD kit inch

► compressed air connection output: M7 ► Can be assembled into blocks ► Double base plate principle  
► Reversed pressure supply permissible ► Bus module extension possible ► I/O extension possible ► With collective pilot air exhaust



00128527

Function	VTS
Version	Multipole
Ambient temperature min./max.	-5 °C / +50 °C
Medium temperature min./max.	+0 °C / +50 °C
Medium	Compressed air
Working pressure min./max.	See table below
Power supply connection	Plug, D-Sub, 25-pin
Number of valve positions	2
Grid dimension	11.8 mm
Rail mounting DIN EN 60715	TH35 x 15
Mounting screw	cross recessed DIN EN ISO 4757-Z0
Tightening torque for mounting screws	0.2 Nm+0,05
Direction of pneumatic port (1)	On the side
Direction of pneumatic port (3,5)	On the side
Direction of pneumatic port (2,4)	On the side
Direction of pneumatic port (R)	On the side
Direction of pneumatic port (X)	On the side
Exhaust (3,5)	With directional exhaust (3/5) Ports separated
Materials:	
Subbase	Polyamide
Push-in fitting	Brass, nickel-plated
Seals	Acrylonitrile Butadiene Rubber
Screws	Steel
Tie-rods	Aluminum

### Technical Remarks

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of air pressure must remain constant during the life cycle.
- Use only the approved oils from Bosch Rexroth, see chapter „Technical information“.

## Valve terminal systems → Valve terminal systems

Series HF04  
Accessories

Compressed air connection					Working pressure min./max.	Pilot	Part No.
Input	Output	Exhaust	Pilot control exhaust	Pilot connection			
[1]	[2 / 4]	[3 / 5]					
3/8 inch	M7	3/8 inch	1/4 inch (Da 6,3)	1/4 inch (Da 6,3)	3 / 8 -0.9 / 10	internal external	R412008549 R412008550
Part No.	DC operating voltage			Voltage tolerance DC			
				[V]			
R412008549 R412008550	24 V			-10% / +10%			

1 = plug-in connection 3/8" (inch)

2 and 4 = thread connections M7

3 and 5 = plug-in connection 3/8" (inch)

R = collected pilot exhaust, plug-in connection 1/4" (inch)

X = external pilot, plug-in connection 1/4" (inch), connection X plugged with internal pilot control

## Accessories, for valve terminal system, series HF04

Part No.	Type	Weight [kg]	Delivery quantity [Piece]						
1827030206	HD multipole plug box, 25-pin, complete	0.12	1						
1825700104	Blanking plate, incl. sealing kit, 2x mounting screws	0.082	-						
1821039039	Supply plate, incl. sealing kit, 2x mounting screws	0.089	-						
R412003402	Separators between two double sub-bases, channel 1	0.025	5						
R412000998	Separators: between two double sub-bases, channels 3 and 5	0.017	10						
R412003404	Separators: between two valve positions, channels 1, 3 and 5	0.029	-						
1827010708	"Base plate for 2 double solenoid valves, push-in fitting Ø6 mm, 2 tie rod extensions, and 1 sealing kit "	0.123	-						
1827010709	Mounting kit for hat rail EN 60715, 35x15	0.052	-						
R412004053	"Base plate for 2 double solenoid valves, thread connection M7, 2 tie rod extensions, and 1 sealing kit "	-	-						
R412006823	Base plate for 2 single solenoid valves, push-in fitting Ø6 mm, 2 tie rod extensions, and 1 sealing kit	0.122	-						

Further accessories:

For electrical connectors, contact bridges, plugs and cables, see the Chapter "Valve terminal systems/electrical connectors and accessories."

For connectors, silencers, etc., see the Chapter "Assembly material."

For bus connections, see the Chapter "Control systems".



---

Valve terminal systems → Valve terminal systems

---

**Series HF04**  
**Accessories**

Part No.	Type	Weight [kg]	Delivery quantity [Piece]						
R412006824	Base plate for 2 single solenoid valves, M7 thread connection, 2 tie rod extensions, and 1 sealing kit	-	-						
1823391441	Blanking plug for port 2 and 4	0.003	10						
1823391248	Blanking plug, Ø 6	0.009	50						
1823105007	Blanking plug for port 2 and 4, Ø 8 mm	0.002	25						

Further accessories:

For electrical connectors, contact bridges, plugs and cables, see the Chapter "Valve terminal systems/electrical connectors and accessories."

For connectors, silencers, etc., see the Chapter "Assembly material."

For bus connections, see the Chapter "Control systems".

---

Bosch Rexroth AG  
Pneumatics  
Ulmer Straße 4  
D - 30880 Laatzen  
Phone +49 511 2136-0  
Fax +49 511 2136-2 69  
sales-pneumatics@boschrexroth.de  
www.boschrexroth.com/pneumatics

Your contact:

#### **Canada**

Bosch Rexroth Canada Corp.  
3426 Mainway Drive  
Burlington, Ontario L7M 1A8  
Tel. +1 905 335-5511  
Fax +1 905 335-4184

#### **Australia**

Bosch Rexroth Pty. Ltd.  
3 Valediction Road  
Kings Park NSW 2148  
Sydney  
Tel. +61 2 9831-7788  
Fax +61 2 9831-5553

#### **U.S.A.**

Bosch Rexroth Corp.  
1953 Mercer Road  
Lexington, KY 40511-1021  
Kentucky  
Tel. +1 859 254-8031  
Fax +1 859 254-4188

#### **Great Britain**

Bosch Rexroth Ltd.  
Broadway Lane  
South Cerney  
Cirencester, GL7 5UH  
Gloucestershire  
Tel. +44 1285 86-3000  
Fax +44 1285 86-3003

further contacts:  
[www.boschrexroth.com/addresses](http://www.boschrexroth.com/addresses)

The data specified above only serve to describe the product. No statements concerning a certain condition or suitability for a certain application can be derived from our information. The information given does not release the user from the obligation of own judgment and verification. It must be remembered that our products are subject to a natural process of wear and aging.

© This document, as well as the data, specifications and other informations set forth in it, are the exclusive property of Bosch Rexroth AG. Without their consent it may not be reproduced or given to third parties.

Subject to modifications.

Online-PDF  
28-01-2010