Rexroth
Bosch Group

On/off valves with spool position monitoring

RE 24830/03.08 1/24
Replaces: 02.08

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Information on available spare parts:
www.boschrexroth.com/spc

General

Inductive position switches and proximity sensors

In the case of poppet valves, contact-free and floating position switches and proximity sensors (in the following referred to as position switches) switch shortly before reaching, and in the case of on/off after having reached, the position to be monitored. The position reached is indicated by a binary signal.

Advantages of the position switches:

- Short-circuit-proof
- Available with M12x1 plug-in connection
- Direct monitoring of the position on the control spool
- Long service life
- High reliability, because no dynamic seals are used
- Response time of the switch upon actuation ca. 15 ms.
- The switching times according to ISO 6403 specified in the associated valve data sheets do **not** correspond to the response times of the position switch (time from the signal change at the solenoid to the signal change of the position switch).

  Time-based query mechanisms should be set to a minimum of 80 to 100 ms.

⚠ Attention!

Valves with inductive position switches and proximity sensors in safety-relevant controls may exclusively be installed and commissioned by specialists who have undergone relevant training in the fields of hydraulics and electrics! Adjustment and maintenance work requires special tools and fixtures. This work may only be carried out by authorized spcialists or in the factory!

Improper working on safety equipment involves risks of personal injury and damage to property!

- The essential valve parts were matched to each other in the production plant and adjusted during assembly. They must not be interchanged. In the event of a defect of the valve or the position switch, the complete valve must be replaced!
- The factory setting of the position switch must not be changed. The position switch may only be adjusted by the valve manufacturer.
- The machine control must monitor the position switch independently so that a new machine cycle cannot be initiated should the position switch fail.
- The machine control and the components must be selected so that leakage cannot result in an impermissible closing movement.

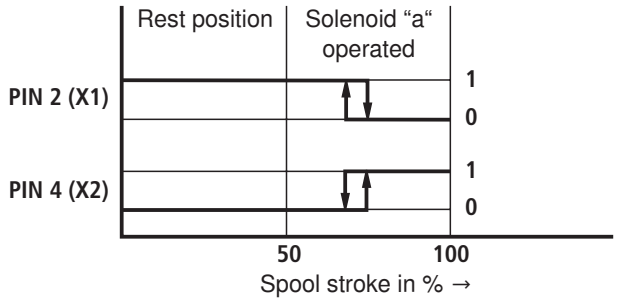
☞ Note!

- On 4/2 directional poppet valves only the main valve, but not the complete valve function, is monitored.

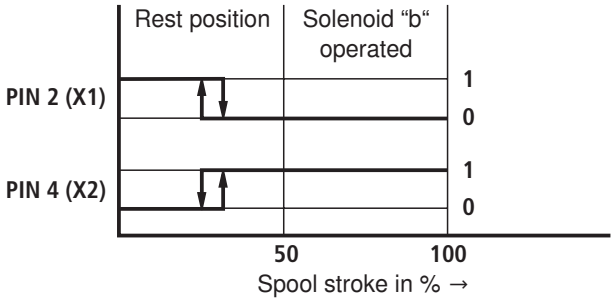
Switching logic: Inductive position switch type QM

Depending on the position to be monitored, the two switching outputs X1 and X2 assume the following function:

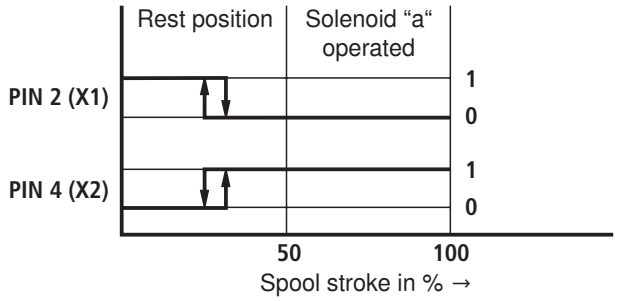
Variant QMA
(Solenoid on side “a“, monitored position “a“)



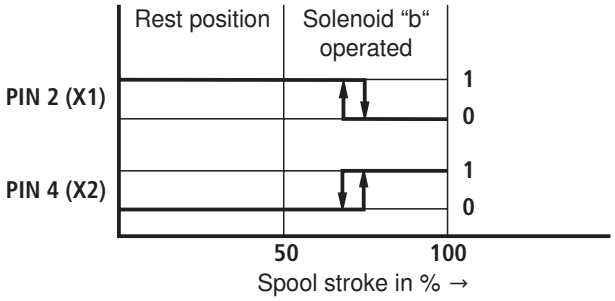
Variant QMA
(Solenoid on side “b“, monitored position “a“)



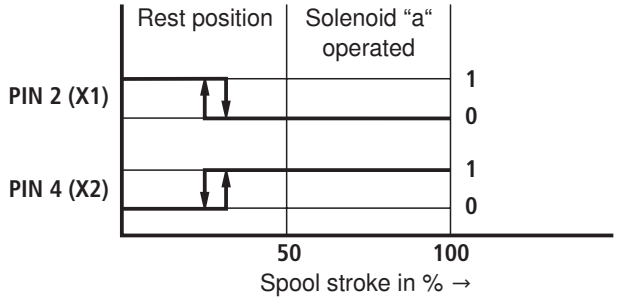
Variant QMB
(Solenoid on side “a“, monitored position “b“)



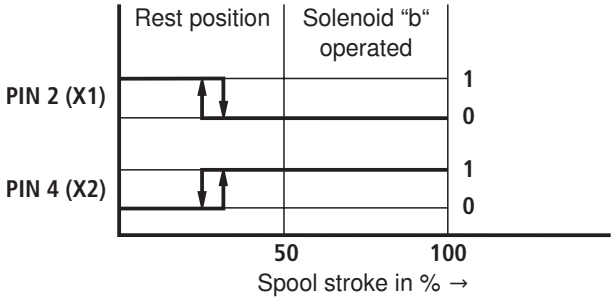
Variant QMB
(Solenoid on side “b“, monitored position “b“)



Variant QM0
(Solenoid on side “a“, monitored rest position)



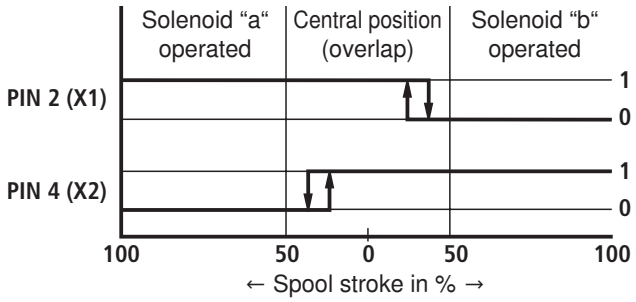
Variant QM0
(Solenoid on side “b“, monitored rest position)



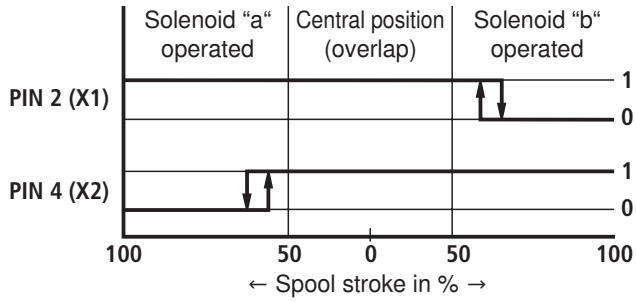
Switching logic: Inductive position switch type QR

Depending on the position to be monitored, the two switching outputs X1 and X2 assume the following function:

Variant QR0
(Solenoid on side “a“, monitored position “0“)



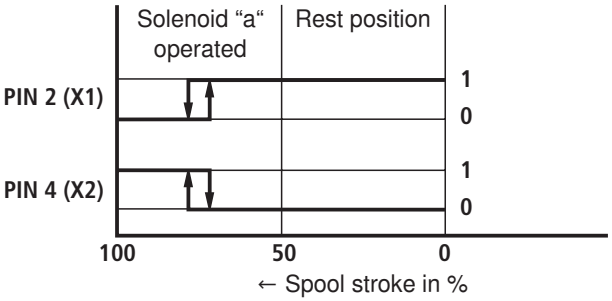
Variant QRAB
(Solenoid on side “a“, monitored position “a“ and “b“)



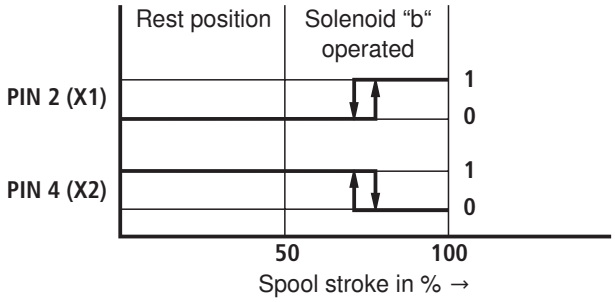
Switching logic: Inductive proximity sensor type QS

Depending on the position to be monitored, the two switching outputs X1 and X2 assume the following function:

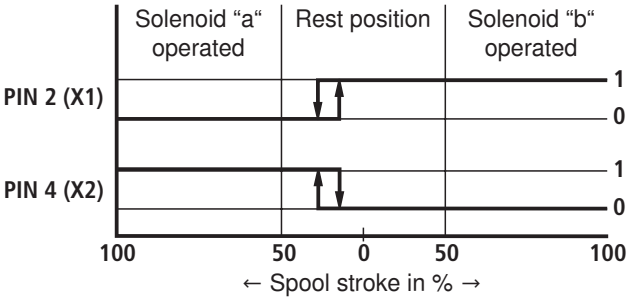
Variant QSAG24W
(Solenoid on side “a“, monitored position “a“, switch on side “B“)



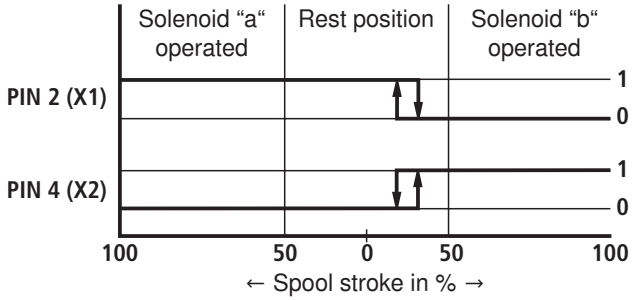
Variant QSBG24W
(Solenoid on side “b“, monitored position “b“, switch on side “A“)



Variant QS0G24W
(Solenoid on side “a“, monitored position “0“, switch on side “A“)



Variant QS0G24W
(Solenoid on side “b“, monitored position “0“, switch on side “B“)



⚠ Attention!

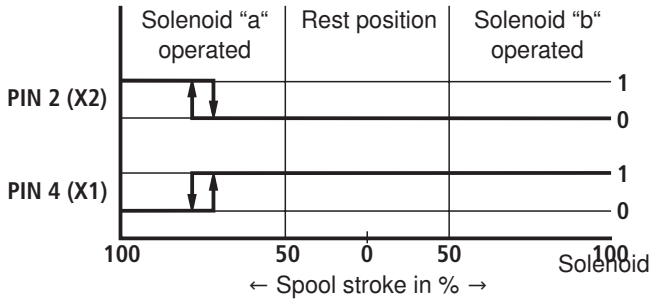
Inductive proximity sensors of type QS are used to monitor reaching of the spool position. Valves with this proximity sensor are therefore **not** suitable for use in safety applications!

Switching logic: Inductive proximity sensor type QS

Depending on the position to be monitored, the two switching outputs X1 and X2 assume the following function:

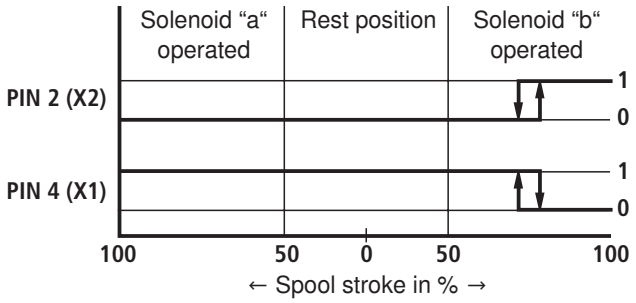
Variant QSABG24W

(Solenoid on side “a“, monitored position “a“ and “b“, switch on side “B“)



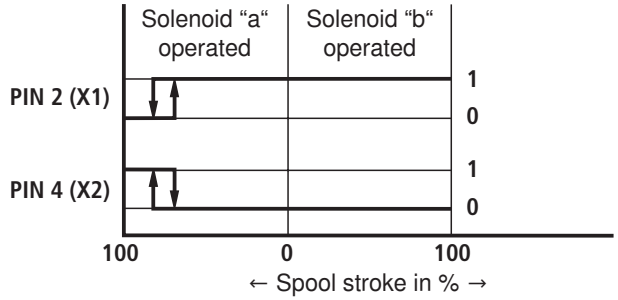
Variant QSABG24W

(Solenoid on side “b“, monitored position “a“ and “b“, switch on side “A“)



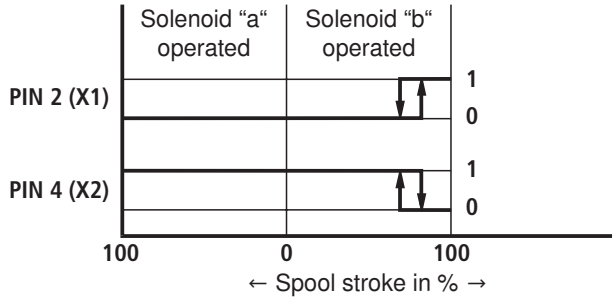
Variant OF…QSAG24W

Solenoid on side “a“, monitored position “a“, switch on side “B“)



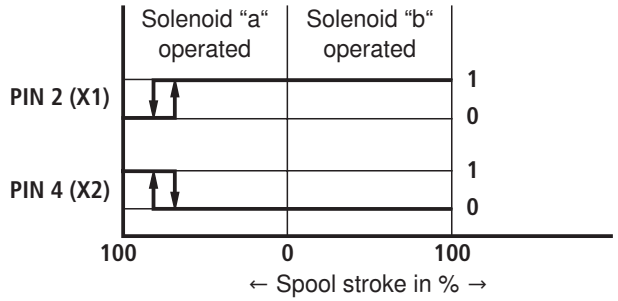
Variant OF…QSBG24W

(Solenoid on side “b“, monitored position “b“, switch on side “A“)



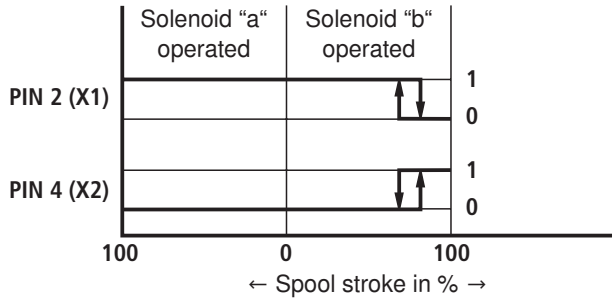
Variant OF…QSABG24W

(Solenoid on side “a“, monitored position “a“ and “b“, switch on side “B“)



Variant OF…QSABG24W

(Solenoid on side “b“, monitored position “a“ and “b“, switch on side “A“)



⚠ Attention!

Inductive proximity sensors of type QS are used to monitor reaching of the spool position. Valves with this proximity sensor are therefore **not** suitable for use in safety applications!

Directional poppet valve type SED with inductive position switch type QM

Ordering code

M –	SED		–	/					/			*

Poppet valve

Size 6 **= 6**

Size 10 **= 10**

Order example:
M-3SED 6 UK1X/350CG24N9K4**QMAG24**/...

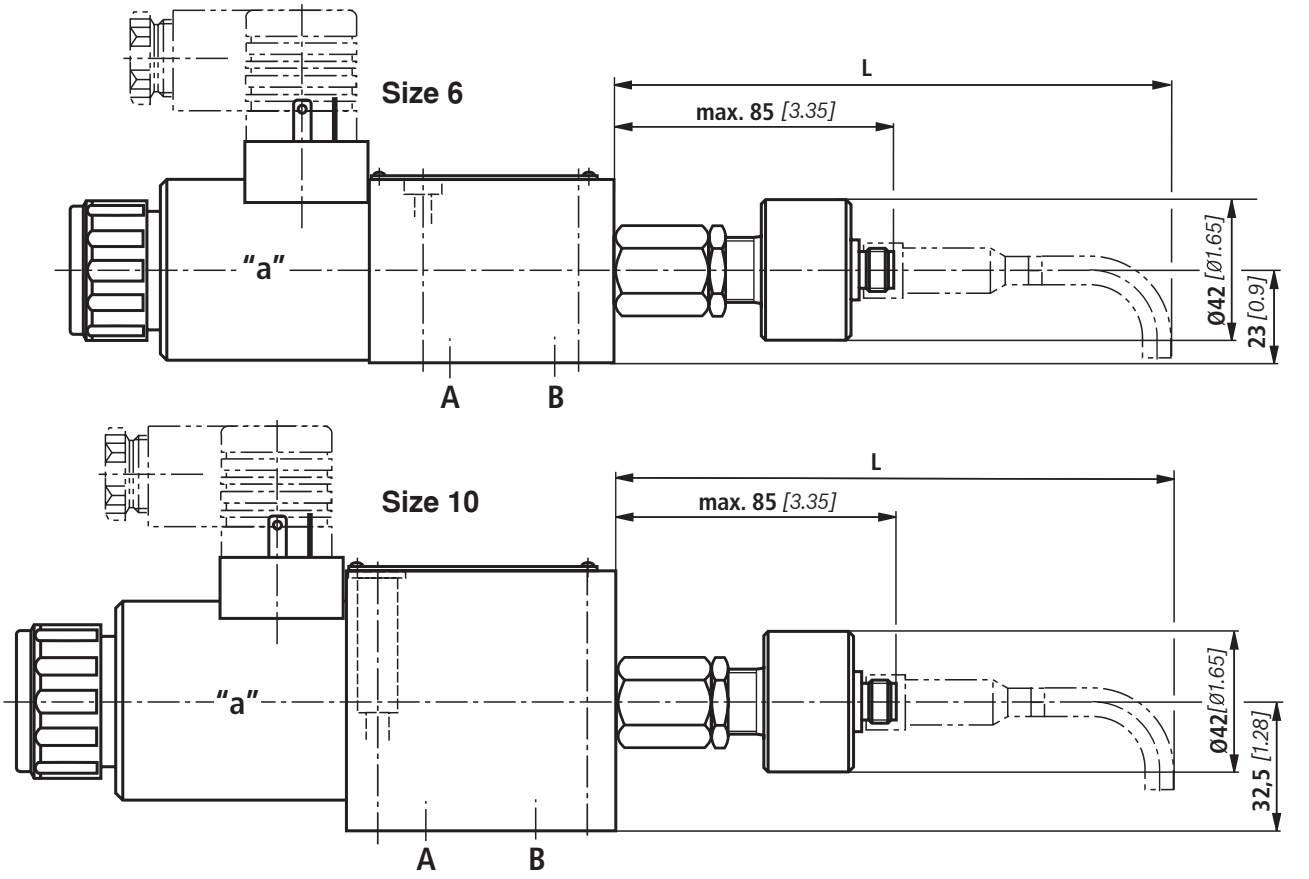
Basic data sheets:
Size 6: RE 22049
Size 10: RE 22045

Further details in clear text

Inductive position switch

No code = Without position switch
QMAG24 = Monitored position “a“
QMBG24 = Monitored position “b“

Unit dimensions (dimensions in mm *[inch]*)



Mating connector (separate order, see page 23)		**L** in mm *[inch]* [1]	
	Material no.	Size 6	Size 10
Mating connector, straight	R900031155	186 *[7.32]*	183 *[7.21]*
Mating connector, angled	R900082899	117 *[4.61]*	114 *[4.48]*
Mating connector with molded-on cable (3 m)	R900064381	156 *[6.14]*	153 *[6.02]*

[1] With mating connector, 10 mm *[0.39 inch]* space to remove connector and minimum bending radius for the connection cable

For electrical data and pinout, see page 20.

For switching logic, see page 3.

Directional poppet valve type SEW with inductive position switch type QM

Ordering code

M –	SEW		– /	M			K4	/		*

Poppet valve
Size 6 = **6**
Size 10 = **10**

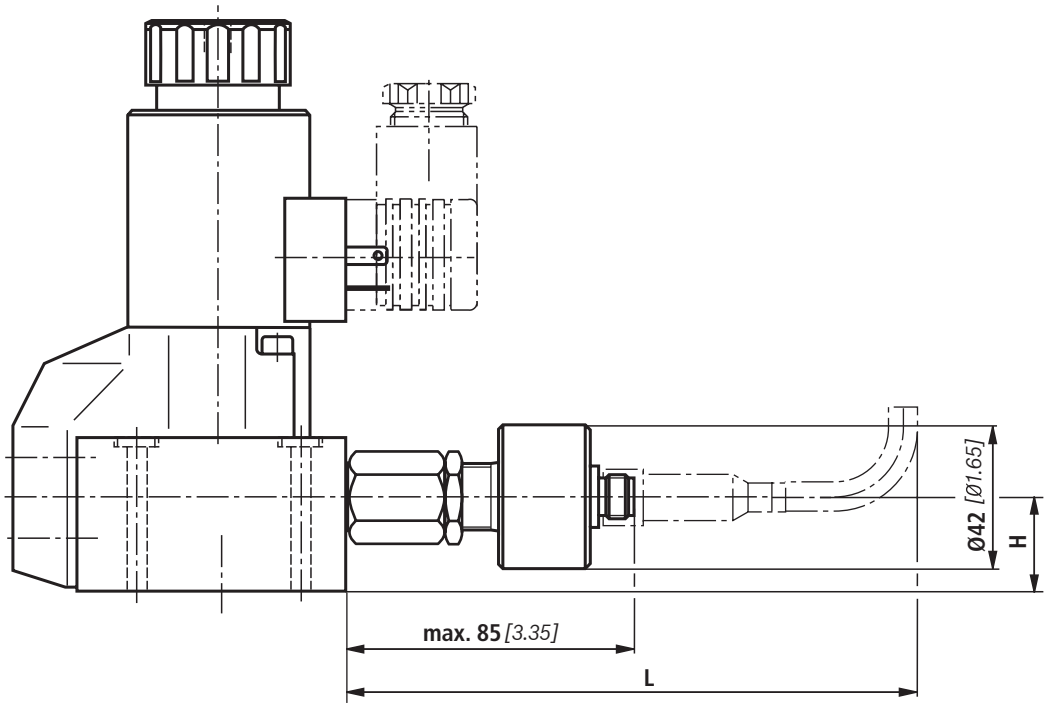
Order example:
M-3SEW 6 U3X/420MG24N9K4**QMAG24**/...

Basic data sheets:
Size 6: RE 22058
Size 10: RE 22075

Further details in clear text

Inductive position switch
No code = Without position switch
QMAG24 = Monitored position “a“
QMBG24 = Monitored position “b“

Unit dimensions (dimensions in mm *[inch]*)



Mating connector (separate order, see page 23)		**L** in mm *[inch]* [1]		H in mm *[inch]*	
	Material no.	Size 6	Size 10	Size 6	Size 10
Mating connector, straight	R900031155	186 *[7.32]*	183 *[7.21]*	23 *[0.9]*	32.5 *[1.28]*
Mating connector, angled	R900082899	117 *[4.61]*	114 *[4.48]*	23 *[0.9]*	32.5 *[1.28]*
Mating connector with molded-on cable (3 m)	R900064381	156 *[6.14]*	153 *[6.02]*	23 *[0.9]*	32.5 *[1.28]*

[1] With mating connector, 10 mm *[0.39 inch]* space to remove connector and minimum bending radius for the connection cable

For electrical data and pinout, see page 20.
For switching logic, see page 3.

Directional poppet valve types SH, SP, SMM, SMR with inductive position switch type QM

Ordering code

M–				3X/					*

Poppet valve, direct operated
Hydraulically operated **= SH**
Pneumatically operated **= SP**
Manually operated (hand lever) **= SMM**
Mechanically operated (roller plunger) **= SMR**

Size 6 **= 6**
Size 10 **= 10**

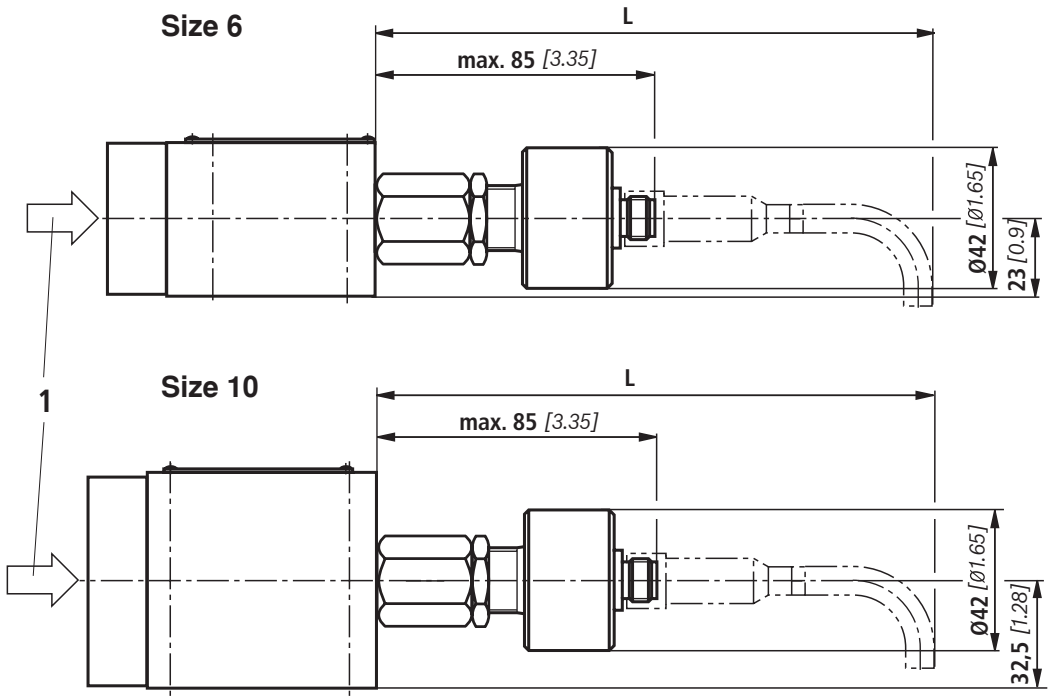
Basic data sheet:
RE 22340

Further details in clear text

Inductive position switch
No code = Without position switch
QMAG24 = Monitored position “a“
QMBG24 = Monitored position “b“

Order example:
M-2SMR 6 NU3X/420**QMAG24**…

Unit dimensions (dimensions in mm *[inch]*)



1 For actuating elements, see RE 22340

Mating connector (separate order, see page 23)		**L** in mm *[inch]* [1)]	
	Material no.	Size 6	Size 10
Mating connector, straight	R900031155	186 *[7.32]*	183 *[7.21]*
Mating connector, angled	R900082899	117 *[4.61]*	114 *[4.48]*
Mating connector with molded-on cable (3 m)	R900064381	156 *[6.14]*	153 *[6.02]*

[1)] With mating connector, 10 mm *[0.39 inch]* space to remove connector and minimum bending radius for the connection cable

For electrical data and pinout, see page 20.
For switching logic, see page 3.

Directional spool valve type WE with inductive position switch type QM

Ordering code

	WE			/					/				*

Directional spool valve, direct operated **= WE**

Size 6 **= 6**

Size 10 **= 10**

Order example:
4WE 6 C6X/EG24N9K4**QMAG24**/...

Basic data sheets:

Size 6: RE 23178

Size 10: RE 23327

Further details in clear text

Inductive position switch

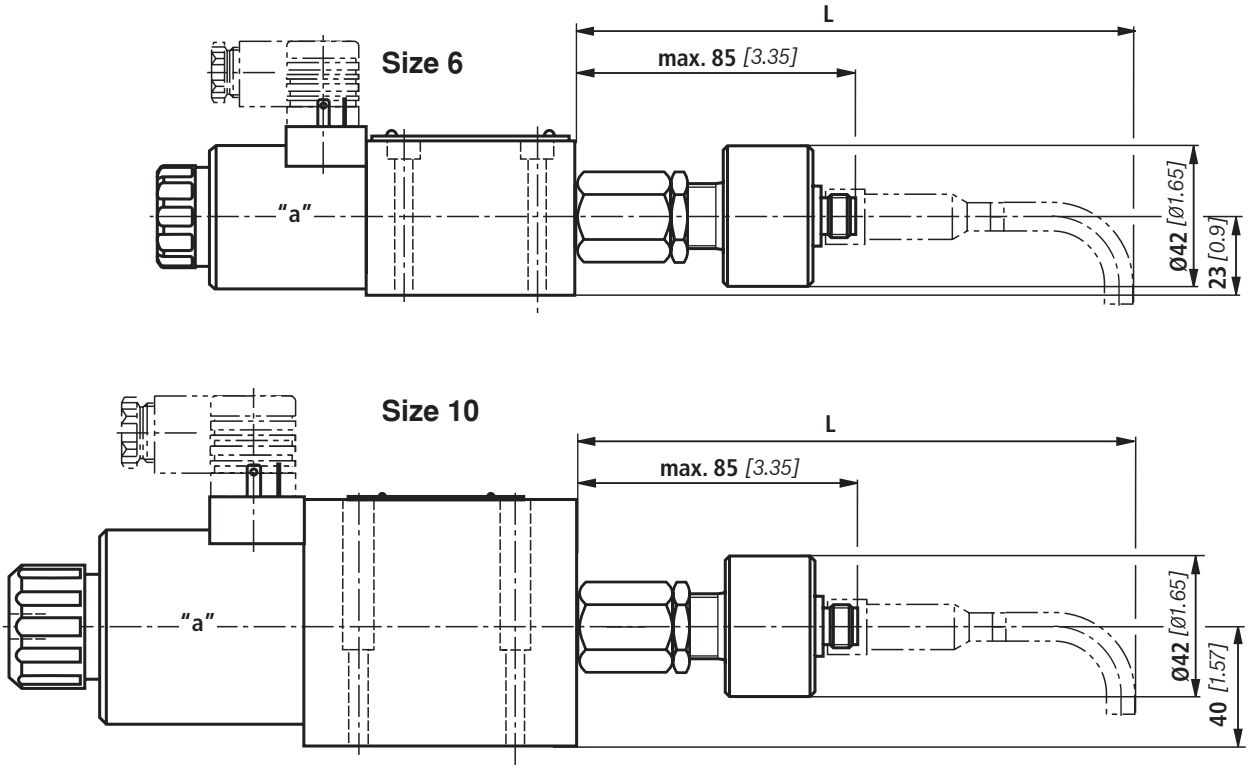
No code = Without position switch

QMAG24 = Monitored position “a“

QMBG24 = Monitored position “b“

QM0G24 = Monitored rest position

Unit dimensions (dimensions in mm *[inch]*)



Mating connector (separate order, see page 23)		**L** in mm *[inch]* [1]	
	Material no.	Size 6	Size 10
Mating connector, straight	R900031155	186 *[7.32]*	183 *[7.21]*
Mating connector, angled	R900082899	117 *[4.61]*	114 *[4.48]*
Mating connector with molded-on cable (3 m)	R900064381	156 *[6.14]*	153 *[6.02]*

[1] With mating connector, 10 mm *[0.39 inch]* space to remove connector and minimum bending radius for the connection cable

For electrical data and pinout, see page 20.

For switching logic, see page 3.

Directional spool valve type WE with inductive position switch type QR

Ordering code

5[1)]	WE			/					/				*

Directional spool valve, direct operated **= WE**

Size 6 **= 6**
Size 10 **= 10**

Order example:
4WE 6 C6X/EG24N9K4**QR0G24S**/...

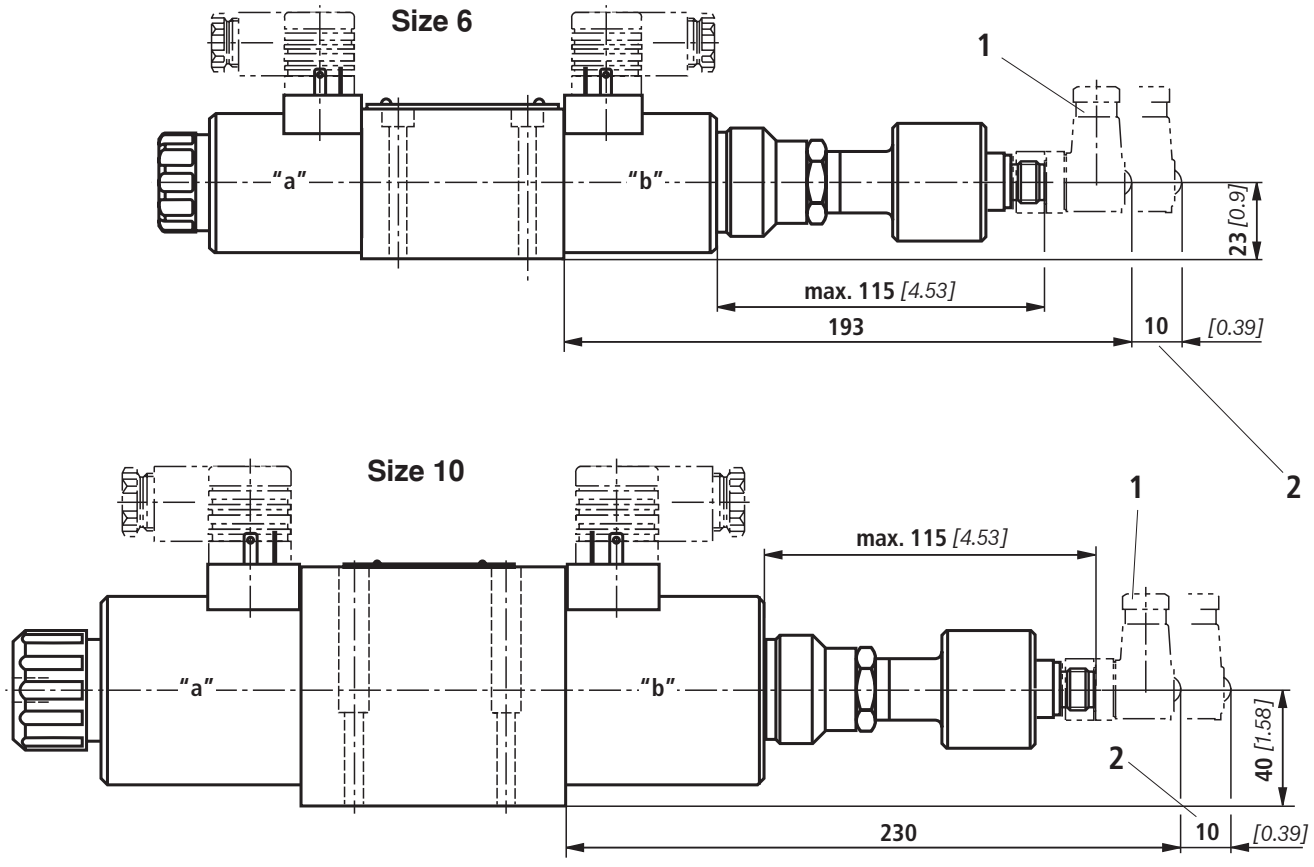
Basic data sheets:
Size 6: RE 23178
Size 10: RE 23351

Further details in clear text

Inductive position switch
No code = Without position switch
QR0G24S = Monitored rest position
QRABG24E = Monitored position “a“ and “b“

[1)] 5-chamber variant only with size 10

Unit dimensions (dimensions in mm *[inch]*)



1 Mating connector, Material no. **R900082899** (separate order, see page 23)
2 Space required to remove mating connector

☞ **Note!**
Available only **without** manual override!

For electrical data and pinout, see page 20.
For switching logic, see page 3.

Directional spool valve type WE with inductive proximity sensor type QS

Ordering code

5[1]	–	WE			/					/				*

Directional spool valve, direct operated **= WE**

Size 6 **= 6**

Size 10 **= 10**

Basic data sheets:

Size 6: RE 23178

Size 10: RE 23351

Further details in clear text

Inductive proximity sensor

No code = Without proximity sensor

QSAG24W = Monitored position “a“

QSBG24W = Monitored position “b“

QS0G24W = Monitored position “0“

QS0AG24W = Monitored position “0“ and “a“

QS0BG24W = Monitored position “0“ and “b“

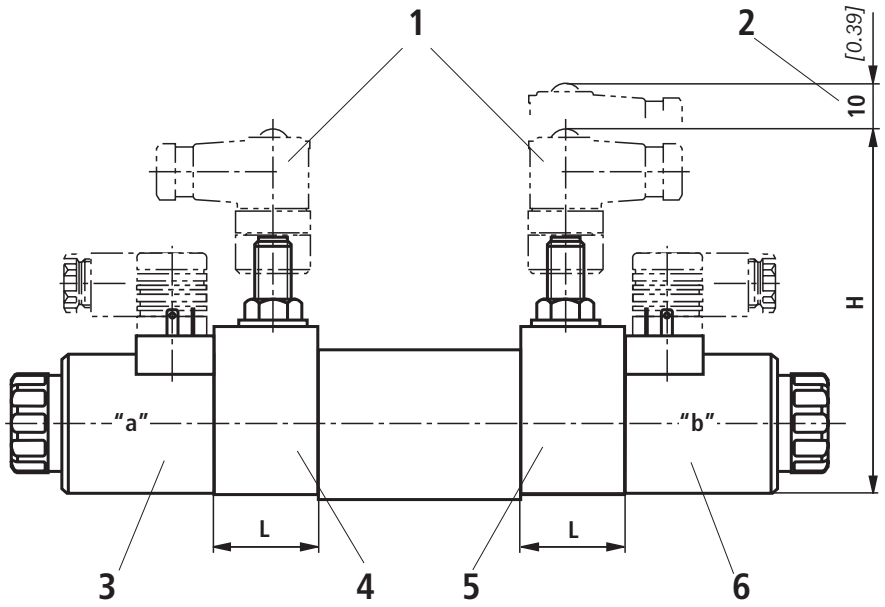
QSABG24W = Monitored position “a“ and “b“

Order example:

4WE 6 C6X/EG24N9K4**QSAG24W**/...

[1] 5-chamber variant only with size 10

Unit dimensions (dimensions in mm *[inch]*)



1 Mating connector, Material no. **R900082899** (separate order, see page 23)

2 Space required to remove mating connector

3 Solenoid side “a“

4 Switch side “a“

5 Switch side “b“

6 Solenoid side “b“

L in mm *[inch]*[1]		H in mm *[inch]*	
Size 6	Size 10	Size 6	Size 10
35 *[1.38]*	43 *[1.69]*	136 *[5.35]*	153 *[6.02]*

[1] With mating connector, 10 mm *[0.39 inch]* space to remove connector and minimum bending radius for the connection cable

For electrical data and pinout, see page 21.

For switching logic, see pages 4 and 5.

Mounting options:

Monitored position	Ordering code	3-position valve with 2 solenoids		2-position valve …/O…; …/OF…	
		Switch side “a“	Switch side “b“	Switch side “a“	Switch side “b“
“a“	**QSAG24W**		**X**		**X**
“b“	**QSBG24W**	**X**		**X**	
“0“	**QS0G24W**	**X**	**X**		
“0“ and “a“	**QS0AG24W**	**X**	**X**		
“0“ and “b“	**QS0BG24W**	**X**	**X**		
“a“ and “b“	**QSABG24W**	**X**	**X**	**X**	**X**

Directional shut-off valve type Z4WE with inductive position switch type QM

Ordering code

Z4WE	6	– /							*

Shut-off valve, sandwich plate

Size 6 **= 6**

Basic data sheet:
RE 23193

Further details in clear text

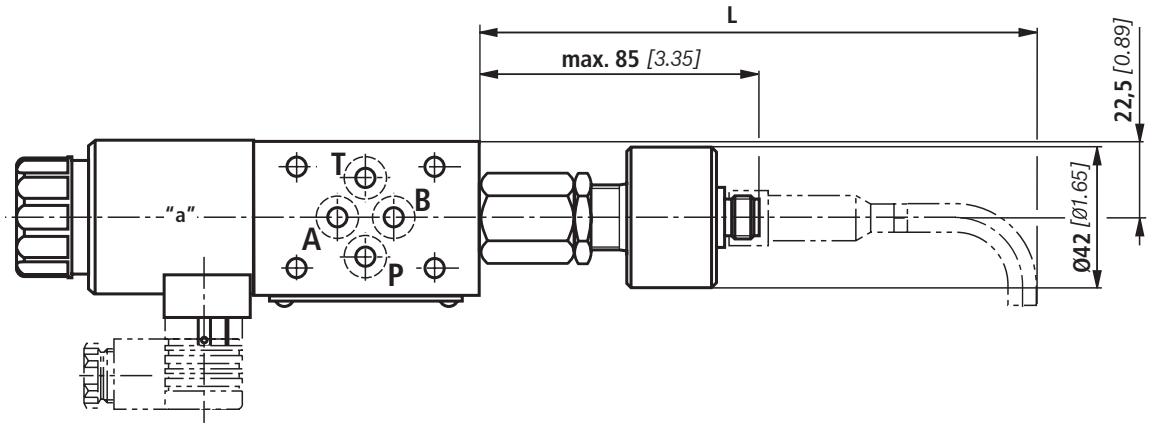
Inductive position switch

No code =	Wthout position switch
QMAG24 =	Monitored position “a“
QMBG24 =	Monitored position “b“
QM0G24 =	Monitored rest position

Order example:
Z4WE 6 D24-3X/EG24N9K4**QMAG24**/...

☞ **Note!**
Not available with spool symbol “E53“

Unit dimensions (dimensions in mm *[inch]*)



Mating connector (separate order, see page 23)		
	Material no.	**L** in mm *[inch]* [1)]
Mating connector, straight	R900031155	186 *[7.32]*
Mating connector, angled	R900082899	117 *[4.61]*
Mating connector with molded-on cable (3 m)	R900064381	156 *[6.14]*

[1)] With mating connector, 10 mm *[0.39 inch]* space to remove connector and minimum bending radius for the connection cable

For electrical data and pinout, see page 21.
For switching logic, see page 3.

Directional spool valve type WMM, WMR with inductive position switch type QM

Ordering code

				/		/				*

Further details in clear text

Type of actuation

Roller plunger	**= WMR**
Hand lever	**= WMM**

Size 6	**= 6**
Size 16	**= 16**
Size 25	**= 22**

Inductive position switch

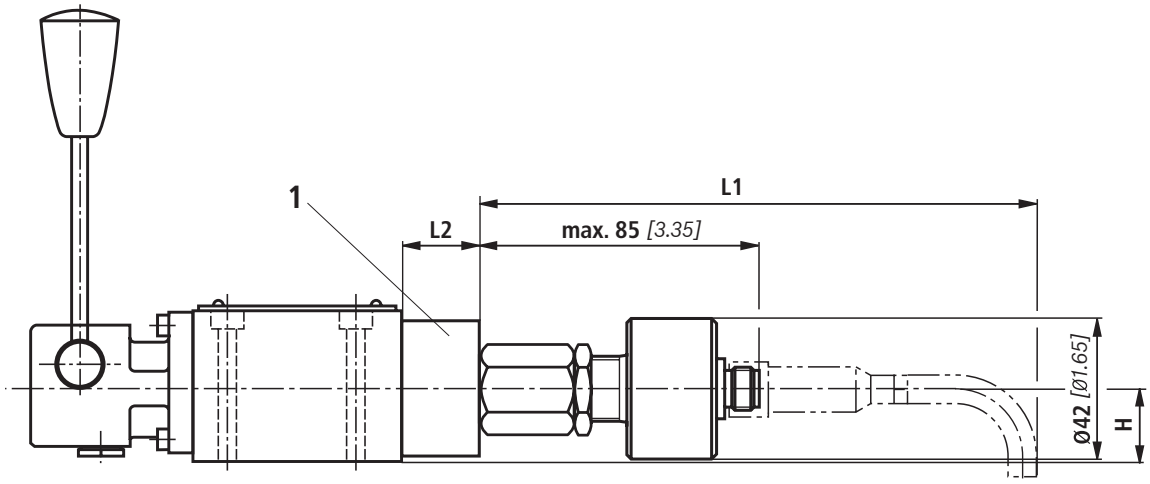
No code =	Without position switch
QMAG24 =	Monitored position “a“
QMBG24 =	Monitored position “b“
QM0G24 =	Monitored rest position

Order example:
4WMM 6 LB5X/F**QMBG24**/…

Basic data sheets:

Size 6:	RE 22280
Sizes 16 to 25:	RE 22371

Unit dimensions (dimensions in mm *[inch]*)



Mating connector (separate order, see page 23)		**L1** in mm *[inch]* [1]
	Material no.	
Mating connector, straight	R900031155	186 *[7.32]*
Mating connector, angled	R900082899	117 *[4.61]*
Mating connector with molded-on cable (3 m)	R900064381	156 *[6.14]*

Size	**L2** in mm *[inch]*	**H** in mm *[inch]*
6	31 *[1.22]*	23 *[0.9]*
16	– [2]	34 *[1.34]*
25	– [2]	37 *[1.46]*

[1] With mating connector, 10 mm *[0.39 inch]* space to remove connector and minimum bending radius for the connection cable

[2] Mounting without adapter plate

For electrical data and pinout, see page 21.
For switching logic, see page 3.

Directional spool valve type WH, WP with inductive position switch type QM

Ordering code

H[1]	–	W					/	/				*

Type of operation
Pneumatic **= P** (size 6 only)
Hydraulic **= H**

Size 6 **= 6**
Size 10 **= 10**
Size 16 **= 16**
Size 25 **= 25**
Size 32 **= 32**

Further details in clear text

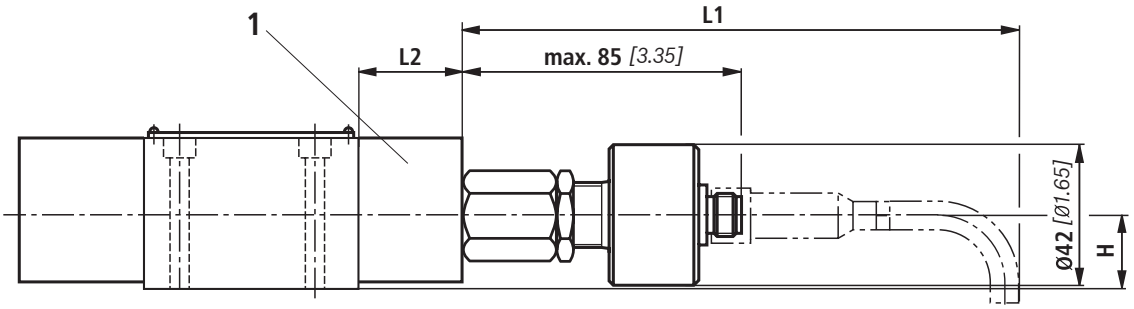
Inductive position switch
No code = Without position switch
QMAG24 = Monitored position “a“
QMBG24 = Monitored position “b“
QM0G24 = Monitored rest position

Basic data sheets:
Size 6: RE 22282
Sizes 10 to 32: RE 24751 (type WH only)

Order example:
4WH 10 D4X/**QMAG24**…

[1] Optionally for pilot operated directional spool valves

Unit dimensions (dimensions in mm *[inch]*)



Mating connector (separate order, see page 23)	**Material no.**	**L** in mm *[inch]* [1]
Mating connector, straight	R900031155	186 *[7.32]*
Mating connector, angled	R900082899	117 *[4.61]*
Mating connector with molded-on cable (3 m)	R900064381	156 *[6.14]*

Size	**L2** in mm *[inch]*	**H** in mm *[inch]*
6	31 *[1.22]*	23 *[0.9]*
10	– [2]	40 *[1.57]*
16	– [2]	34 *[1.34]*
25	– [2]	37 *[1.46]*
32	– [2]	57 *[2.24]*

[1] With mating connector, 10 mm *[0.39 inch]* space to remove connector and minimum bending radius for the connection cable

[2] Mounting without adapter plate

For electrical data and pinout, see page 21.
For switching logic, see page 3.

Directional spool valve type WEH with inductive position switch type QM

Ordering code

		WEH					/						/								*		

Basic data sheet:
RE 24751

Further details in clear text

Directional spool valve, pilot operated, electrohydraulically operated

Size 10	**= 10**
Size 16	**= 16**
Size 25	**= 22**
Size 25	**= 25**
Size 32	**= 32**

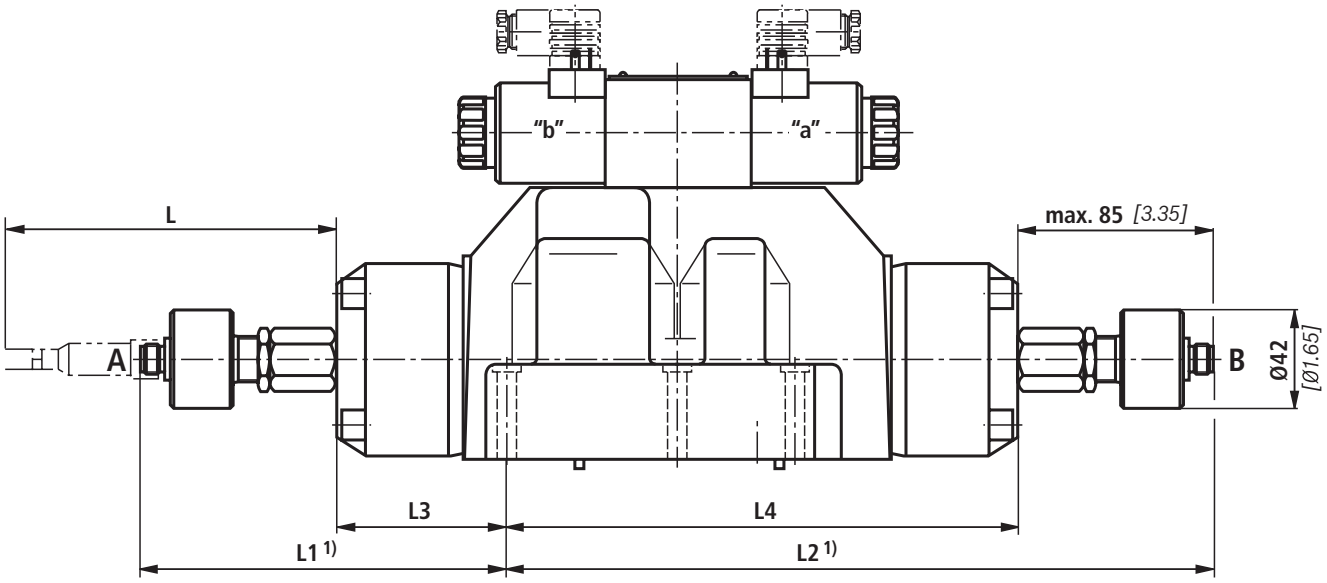
Inductive position switch

No code =	Without position switch
QMAG24 =	Monitored position “a“
QMBG24 =	Monitored position “b“
QMABG24 =	Monitored position “a“ and “b“
QM0G24 =	Monitored rest position

(see Mounting options on pages 16 and 17)

Order example:
4WEH 16 C7X/6EG24N9K4**QMAG24**/…

Unit dimensions (dimensions in mm *[inch]*)



Mating connector (separate order, see page 23)		
	Material no.	**L** in mm *[inch]* 2)
Mating connector, straight	R900031155	186 *[7.32]*
Mating connector, angled	R900082899	117 *[4.61]*
Mating connector with molded-on cable (3 m)	R900064381	156 *[6.14]*

1) Without mating connector

2) With mating connector, 10 mm *[0.39 inch]* space to remove connector and minimum bending radius for the connection cable

For mounting options, see page 16 and 17.
For electrical data and pinout, see page 22.
For switching logic, see page 3

Directional spool valve type WEH with inductive position switch type QM

Mounting options (dimensions in mm)

Monitored spool position	Ordering code		2-position valve											
			Hydraulic end position HC, HD, HK, HZ, HY				Spring end position C, D, K , Z				Spring end position Y			
		Size	L1 [5]	L2 [5]	L3	L4	L1 [5]	L2 [5]	L3	L4	L1 [5]	L2 [5]	L3	L4
Spool position "a" monitored (position switch on side B)	**QMAG24**	10		211	57			211	57			211	57	
		16		259	55							259	81	
		25 [1]		294	47			294	47			294	47	
		25 [2]		325	72							325	100	
		32		371	76							371	105	
Spool position "b" monitored (position switch on side A)	**QMBG24**	10	157			111	157			111	157			111
		16	159			155	159			181				
		25 [1]	149			192	149			192	149			192
		25 [2]	172			225	172			253				
		32	161			287	161			316				
Spool position "a" and "b" monitored (position switch on sides A and B)	**QMABG24**	10	157	211			157	211			157	211		
		16	159	259										
		25 [1]	149	294			149	294			149	294		
		25 [2]	172	325										
		32	161	371										
Zero position monitored (position switch on sides A and B) 2-position switch	**QM0G24** [3]	10												
		16												
		25 [1]												
		25 [2]												
		32												
Zero position monitored (position switch on side A or B) 1-position switch	**QM0G24** [4]	10												
		16												
		25 [1]												
		25 [2]												
		32												

[1] Type 4WEH 22..

[2] Type 4WEH 25..

[3] 3-position valve

[4] 2-position valve

[5] Without mating connector

3-position valve								3-position valve with one solenoid on											
							Side A (EA, FA…)				Side B (EB, FB…)				Side A (EA, FA…)			
Spring-centered				Pressure-centered				Spring-centered				Spring-centered				Pressure-centered			
L1 [5]	L2 [5]	L3	L4	L1 [5]	L2 [5]	L3	L4	L1 [5]	L2 [5]	L3	L4	L1 [5]	L2 [5]	L3	L4	L1 [5]	L2 [5]	L3	L4
	211	57							211	57									
	259	55			259	81			259	55							259	81	
	294	47							294	47									
	325	72			325	107			325	72							325	107	
	371	76			371	120			371								371	120	
157			111									157			111				
159			155									159			155				
149			192									149			192				
172			225									172			225				
161			287									161			287				
157	211																		
159	259																		
149	294																		
172	325																		
161	371																		
157	211																		
159	259																		
149	294																		
172	325																		
161	371																		
									211	57		157			111				
									259	55		159			155		259	81	
									294	47		149			192				
									325	72		172			225		325	107	
									371	76		161			287		371	120	

Directional spool valve type Z4WEH with inductive position switch type QM

Ordering code

Z4	WEH		–	/						/				*

Directional spool valve, pilot operated, electrohydraulically operated, sandwich plate

Size 10	**= 10**
Size 16	**= 16**
Size 25	**= 22**

Order example:
Z4WEH 10 D24-5X/4KEG24N9ETK4**QMAG24**/...

Basic data sheets:

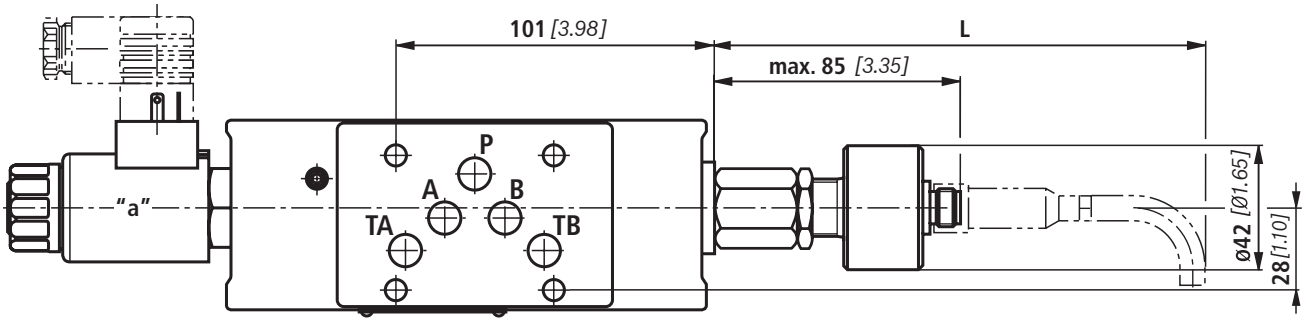
Size 10:	RE 24755
Size 16:	RE 24761
Size 25:	RE 24768

Further details in clear text

Inductive position switch

No code =	Without position switch
QMAG24 =	Monitored position “a“
QMBG24 =	Monitored position “b“
QMABG24 =	Monitored position “a“ and “b“
QM0G24 =	Monitored rest position (only sizes 16 and 25 and only with symbol “E62“)

Unit dimensions: Size 10 (dimensions in mm *[inch]*)

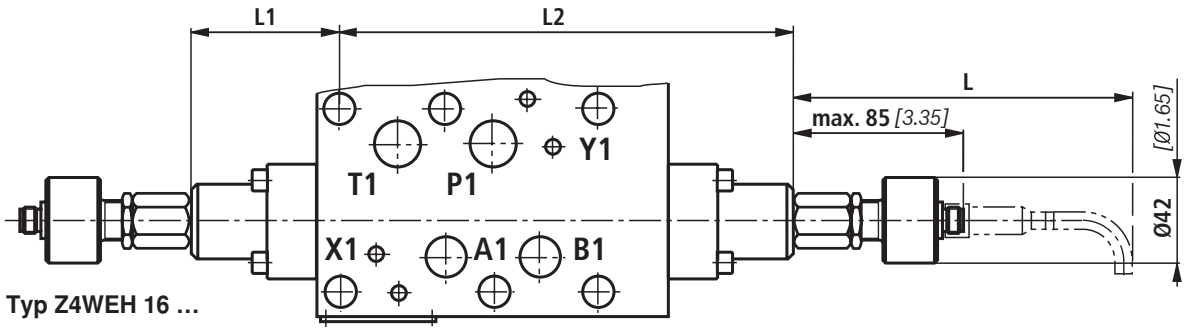


Mating connector (separate order, see page 23)	**Material no.**	**L** in mm *[inch]* [1)]
Mating connector, straight	R900031155	186 *[7.32]*
Mating connector, angled	R900082899	117 *[4.61]*
Mating connector with molded-on cable (3 m)	R900064381	156 *[6.14]*

[1)] With mating connector, 10 mm *[0.39 inch]* space to remove connector and minimum bending radius for the connection cable

For electrical data and pinout, see page 22.
For switching logic, see page 3.

Unit dimensions: Sizes 16 and 22 (dimensions in mm *[inch]*)



Mating connector (separate order, see page 23)		**L** in mm *[inch]* [1]
	Material no.	
Mating connector, straight	R900031155	186 *[7.32]*
Mating connector, angled	R900082899	117 *[4.61]*
Mating connector with molded-on cable (3 m)	R900064381	156 *[6.14]*

L1 in mm *[inch]*		**L2** in mm *[inch]*	
Size 16	Size 25	Size 16	Size 25
76 *[2.99]*	57 *[2.24]*	176 *[6.93]*	211 *[8.31]*

[1] With mating connector, 10 mm *[0.39 inch]* space to remove connector and minimum bending radius for the connection cable

For electrical data and pinout, see page 22.

For switching logic, see page 3.

Mounting options:

Monitored position	**Ordering code**	**Limit switch on side**		
		“a“	“b“	“a“ and “b“
“a“	**QMAG24**		**X**	
“b“	**QMBG24**	X		
“a“ and “b“	**QMABG24**			X
“0“	**QM0G24**			X

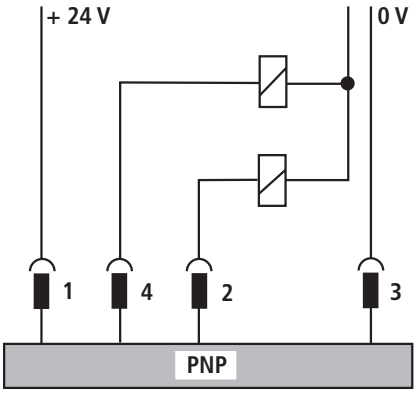
Pinout

Directional poppet valve type SED with inductive position switch type QM								
Solenoid on side	**Monitored position**	**Size**	**PIN 1**	**PIN 2**	**PIN 3**	**PIN 4**	**Max. load carrying capacity of outputs** in mA	**Maximum ambient temperature** in °C *[°F]*
"a"; "b"	QMA	6; 10	24 V	n.c.	0 V	n.o.	400	–20 to +50 *[–4 to +122]*
	QMB	6; 10	24 V	n.o.	0 V	n.c.	400	

Directional poppet valve type SEW with inductive position switch type QM								
Switch on side	**Monitored position**	**Size**	**PIN 1**	**PIN 2**	**PIN 3**	**PIN 4**	**Max. load carrying capacity of outputs** in mA	**Maximum ambient temperature** in °C *[°F]*
"b"	QMA	6; 10	24 V	n.c.	0 V	n.o.	400	–20 to +50 *[–4 to +122]*
	QMB	6; 10	24 V	n.o.	0 V	n.c.	400	

Directional poppet valve types SH, SP, SMM, SMR with inductive position switch type QM								
Switch on side	**Monitored position**	**Size**	**PIN 1**	**PIN 2**	**PIN 3**	**PIN 4**	**Max. load carrying capacity of outputs** in mA	**Maximum ambient temperature** in °C *[°F]*
"b"	QMA	6; 10	24 V	n.c.	0 V	n.o.	400	–20 to +50 *[–4 to +122]*
	QMB	6; 10	24 V	n.o.	0 V	n.c.	400	

Directional spool valve type WE with inductive position switch type QM and QR								
Solenoid on side	**monitored position**	**Size**	**PIN 1**	**PIN 2**	**PIN 3**	**PIN 4**	**Max. load carrying capacity of outputs** in mA	**Maximum ambient temperature** in °C *[°F]*
"a"	QMA	6; 10	24 V	n.c.	0 V	n.o.	400	–20 to +50 *[–4 to +122]*
	QMB	6; 10	24 V	n.o.	0 V	n.c.	400	
	QM0	6; 10	24 V	n.o.	0 V	n.c.	400	
"b"	QMA	6; 10	24 V	n.o.	0 V	n.c.	400	
	QMB	6; 10	24 V	n.c.	0 V	n.o.	400	
	QM0	6; 10	24 V	n.o.	0 V	n.o.	400	
–	QR0	6; 10	24 V	n.o. 1	0 V	n.o. 2	400	
	QRAB	6; 10	24 V	n.c. 1	0 V	n.c. 2	400	



Pinout

Directional spool valve type WE with inductive proximity sensor type QS							
Ordering code	**Size**	**PIN 1**	**PIN 2**	**PIN 3**	**PIN 4**	**Max. load carrying capacity of outputs** in mA	**Maximum ambient temperature** in °C *[°F]*
QS0G24W	6; 10	24 V	n.c.	0 V	n.o.	200	–20 to +50 *[–4 to +122]*
QSABG24W	6; 10	24 V	n.c.	0 V	n.o.	200	
QSAG24W	6; 10	24 V	n.c.	0 V	n.o.	200	
QSBG24W	6; 10	24 V	n.c.	0 V	n.o.	200	
OF…QSABG24W	6; 10	24 V	n.c.	0 V	n.o.	200	
OF…QSAG24W	6; 10	24 V	n.c.	0 V	n.o.	200	
OF…QSBG24W	6; 10	24 V	n.c.	0 V	n.o.	200	

Directional spool valve type Z4WE with inductive position switch type QM								
Solenoid on side	**Monitored position**	**Size**	**PIN 1**	**PIN 2**	**PIN 3**	**PIN 4**	**Max. load carrying capacity of outputs** in mA	**Maximum ambient temperature** in °C *[°F]*
“a“	QMA	6; 10	24 V	n.c.	0 V	n.o.	400	–20 to +50 *[–4 to +122]*
	QMB	6; 10	24 V	n.o.	0 V	n.c.	400	
“b“	QMA	6; 10	24 V	n.o.	0 V	n.c.	400	
	QMB	6; 10	24 V	n.c.	0 V	n.o.	400	

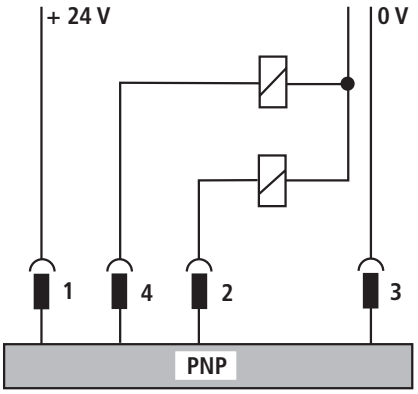
Directional spool valve types WMM, WMR with inductive position switch type QM								
Solenoid on side	**Monitored position**	**Size**	**PIN 1**	**PIN 2**	**PIN 3**	**PIN 4**	**Max. load carrying capacity of outputs** in mA	**Maximum ambient temperature** in °C *[°F]*
“a“	QMA	6; 10	24 V	n.c.	0 V	n.o.	400	–20 to +50 *[–4 to +122]*
	QMB	6; 10	24 V	n.o.	0 V	n.c.	400	
	QM0	6; 10	24 V	n.o.	0 V	n.c.	400	
“b“	QMA	6; 10	24 V	n.o.	0 V	n.c.	400	
	QMB	6; 10	24 V	n.c.	0 V	n.o.	400	
	QM0	6; 10	24 V	n.o.	0 V	n.o.	400	

Directional spool valve types WH, WP with inductive position switch type QM								
Solenoid on side	**Monitored position**	**Size**	**PIN 1**	**PIN 2**	**PIN 3**	**PIN 4**	**Max. load carrying capacity of outputs** in mA	**Maximum ambient temperature** in °C *[°F]*
“a“	QMA	6; 10	24 V	n.c.	0 V	n.o.	400	–20 to +50 *[–4 to +122]*
	QMB	6; 10	24 V	n.o.	0 V	n.c.	400	
	QM0	6; 10	24 V	n.o.	0 V	n.c.	400	
“b“	QMA	6; 10	24 V	n.o.	0 V	n.c.	400	
	QMB	6; 10	24 V	n.c.	0 V	n.o.	400	
	QM0	6; 10	24 V	n.o.	0 V	n.o.	400	

Pinout

Directional spool valve type WEH with inductive position switch type QM								
Switch on side	**Monitored position**	**Size**	**PIN 1**	**PIN 2**	**PIN 3**	**PIN 4**	**Max. load carrying capacity of outputs** in mA	**Maximum ambient temperature** in °C *[°F]*
“b“	QMA	10; 16; 25; 32	24 V	n.c.	0 V	n.o.	400	–20 to +50 *[–4 to +122]*
	QMB	10; 16; 25; 32	24 V	n.o.	0 V	n.c.	400	
	QM0	10; 16; 25; 32	24 V	n.o.	0 V	n.c.	400	
“a“	QMA	10; 16; 25; 32	24 V	n.o.	0 V	n.c.	400	
	QMB	10; 16; 25; 32	24 V	n.c.	0 V	n.o.	400	
	QM0	10; 16; 25; 32	24 V	n.o.	0 V	n.c.	400	
“a“	QMAB	10; 16; 25; 32	24 V	…	0 V	…	400	
“b“		10; 16; 25; 32	24 V	…	0 V	…	400	

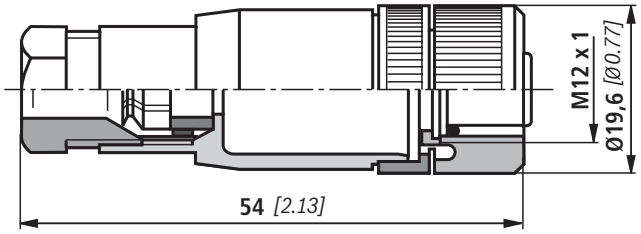
Directional spool valve type Z4WEH with inductive position switch type QM								
Solenoid on side	**Monitored position**	**Size**	**PIN 1**	**PIN 2**	**PIN 3**	**PIN 4**	**Max. load carrying capacity of outputs** in mA	**Maximum ambient temperature** in °C *[°F]*
“a“	QMA	10; 16; 25	24 V	n.c.	0 V	n.o.	400	–20 to +50 *[–4 to +122]*
	QMB	10; 16; 25	24 V	n.o.	0 V	n.c.	400	
	QM0	16; 25	24 V	n.o.	0 V	n.c.	400	



Mating connectors (dimensions in mm *[inch]*)

Mating connector suitable for K24 4-pin, M12 x 1
with threaded connection, cable gland Pg 9.

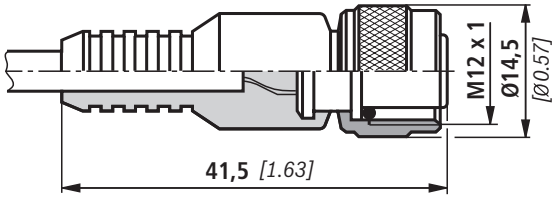
Material no. **R900031155**



Mating connector suitable for K24-3m 4-pin, M12 x 1
with molded-on PVC cable, 3 m long.

Cable cross-section:	4 x 0.34 mm^2	
Wire colour:	1	brown
	2	white
	3	blue
	4	black

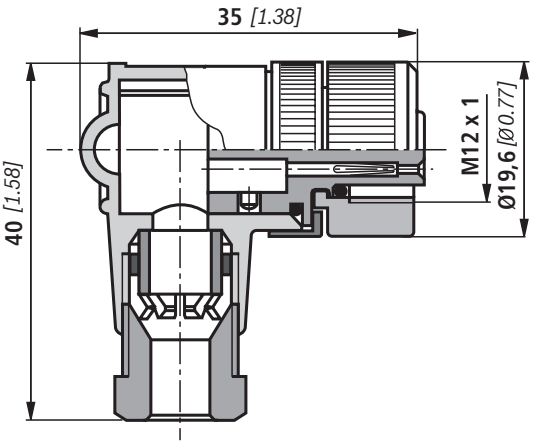
Material no. **R900064381**



Mating connector suitable for K24 4-pin, M12 x 1
with threaded connection, cable gland Pg 9, angled.

Housing can be rotated by 4 x 90° with regard to contact insert.

Material no. **R900082899**



For futher information, see data sheet RE 08006.

Notes

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