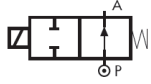


B297 Series, Automation – 2/2 Normally Closed

Specifications	
Function (single acting)	 <p>Flow direction overseat 1 → 2</p>
Maximum Viscosity	Max. 21cST (3 °E)
Body Material (Std)	Low lead content Brass CW719R (EN 12165)
Orifice Material	Stainless Steel 1.4305 EN 10088 (AISI 303)
Tube	Stainless Steel AISI 304
Flange	Stainless Steel 1.4305 EN 10088 (AISI 303)
Plunger and Top Stop	Stainless Steel 1.4105 EN 10088 (AISI 430F) or equivalent
Springs	Stainless Steel AISI 302
Seal Material (Std)	Foodgrade FKM
Connection Type (Std)	G parallel thread (ISO 228-1)
Shading Ring	Copper
Electrical Characteristics	
Standard Coil Voltage DC (=)	24 V
Standard Coil Voltage AC 50 Hz (-)	24 V, 110 V, 200 V, 230 V
Standard Coil Voltage AC 60 Hz (-)	24 V, 120 V, 220 V, 240 V
Voltage Tolerance	+10% to -15% (AC)
	+10% to -5% (DC)
Duty Cycle	100% ED
Protection Class	IP65 (EN 60529) with plug and gasket correctly fitted *
Electrical Connection	to industrial form B
Coil Insulation	Class F 155 °C
Power Rating (Standard)	AC 10 VA (holding) AC 16 VA (inrush) DC 7W

Features and Benefits

- Direct Acting
- Robust construction for industrial applications
- Stainless steel AISI 430F operators with low residual magnetism
- Coils tested 100% in compliance to RoHS directive and to relevant international standards
- High quality seal materials
- Valve suitable for contact with food media as per the EEC Directives and Regulations. Please consult supplier for more details
- Response time 5 to 25 ms



Pipe Size	Cv (gpm)	Kv (m³/h)	OPD (bar)		Orifice (mm)	Seal Material	Valve Code
			AC Voltages	DC Voltages			
1/8"	0.04	0.03	0 - 30	0 - 28	1.0	FKM EPDM	B297DVA B297DEA
1/8"	0.05	0.04	0 - 25	0 - 22	1.2	FKM EPDM	B297DVB B297DEB
1/8"	0.07	0.06	0 - 22	0 - 18	1.5	FKM EPDM	B297DVC B297DEC
1/8"	0.12	0.10	0 - 18	0 - 9	2.0	FKM EPDM	B297DVE B297DEE
1/8"	0.16	0.14	0 - 13	0 - 3	2.5	FKM EPDM	B297DVG B297DEG
1/8"	0.21	0.18	0 - 8	0 - 1	3.0	FKM EPDM	B297DVH B297DEH

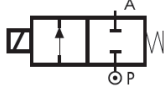
Options Available

Valve Options (see coding chart)
NPT threads (minimum batch may be required)
Manual Override
Electroless nickel plating treatment

Seal Material ¹ and Media Temperature Range	Media	Ambient Temperature Range	
		Min	Max
FKM (-10 °C to +130 °C)	Water, oil, air	-10 °C	+50 °C
EPDM (-10 °C to +120 °C)	Water, hot water	-10 °C	+50 °C

¹ See corrosion reference guide and sealing solutions for material compatibility.

D237/238/239 Series, Automation – 2/2 Normally Closed

Specifications	
Function (single acting)	 <p>Flow direction overseat 1 → 2</p>
Maximum Viscosity	Max. 21cST (3 °E)
Body Material (Std) ¹	Brass CW617N (EN 12165)
Orifice Material ²	Stainless Steel 1.4305 EN 10088 (AISI 303)
Flange ³	Stainless Steel 1.4305 EN 10088 (AISI 303)
Tube	Stainless Steel AISI 304
Plunger	Stainless Steel 1.4106 EN 10088 (AISI 430F)
Top Stop	Stainless Steel 1.4105 EN 10088 (AISI 430F)
Springs	Stainless Steel AISI 302
Seal Material (Std)	Foodgrade FKM
Connection Type (Std)	G parallel thread (ISO 228-1)
Shading Ring	Copper
Electrical Characteristics	
Standard Coil Voltage DC (=)	24 V
Standard Coil Voltage AC 50 Hz (~)	24 V, 110 V, 200 V, 230 V
Standard Coil Voltage AC 60 Hz (~)	24 V, 120 V, 220 V, 240 V
Voltage Tolerance	+10% to -15% (AC)
	+10% to -5% (DC)
Duty Cycle	100% ED
Protection Class	IP65 (EN 60529) with plug and gasket correctly fitted *
Electrical Connection	to EN 175301 - 803 - A (ex DIN 43650)
Coil Insulation	Class F 155 °C
Power Rating (Standard)	AC 18 VA (holding) AC 36 VA (inrush) DC 14 W

¹ Body as D264/265/266 (on pages 16 - 17).

² Not for D237D-U, D238D-U and D239D-U.

³ D237D-U, D238D-U and D239D-U carries an additional flange HEX 30 in Brass CW614N (EN 12164) between body and flange tube, see dimensional drawing on the right.

Features and Benefits

- Direct Acting
- Robust construction for industrial applications
- Stainless steel AISI 430F operators with low residual magnetism
- Coils tested 100% in compliance to RoHS directive and to relevant international standards
- Choice of high quality seal materials
- Response time 5 to 25 ms



Pipe Size	Cv (gpm)	Kv (m³/h)	OPD (bar)		Orifice (mm)	Seal Material	Valve Code
			AC Voltages	DC Voltages			
¼"	1.47	1.26	0 - 0.4	0 - 0.2	10.5	FKM	D237DVU
						EPDM	D237DEU
						NBR	D237DBU
⅜"	1.76	1.50	0 - 0.4	0 - 0.2	10.5	FKM	D238DVU
						EPDM	D238DEU
						NBR	D238DBU
½"	1.76	1.50	0 - 0.4	0 - 0.2	10.5	FKM	D239DVU
						EPDM	D239DEU
						NBR	D239DBU
⅜"	0.42	0.36	0 - 8	0 - 5	4.0	FKM	D238DVL ⁴
						EPDM	D238DEL ⁴
						NBR	D238DBL ⁴
⅜"	0.53	0.45	0 - 5	0 - 2	5.0	FKM	D238DVN ⁴
						EPDM	D238DEN ⁴
						NBR	D238DBN ⁴
⅜"	0.60	0.51	0 - 3.5	0 - 1.1	6.0	FKM	D238DVP ⁴
						EPDM	D238DEP ⁴
						NBR	D238DBP ⁴
½"	0.32	0.27	0 - 17	0 - 12	3.0	FKM	D239DVH ⁴
						EPDM	D239DEH ⁴
						NBR	D239DBH ⁴
½"	0.42	0.36	0 - 8	0 - 5	4.0	FKM	D239DVL ⁴
						EPDM	D239DEL ⁴
						NBR	D239DBL ⁴
½"	0.53	0.45	0 - 5	0 - 2	5.0	FKM	D239DVN ⁴
						EPDM	D239DEN ⁴
						NBR	D239DBN ⁴
½"	0.60	0.51	0 - 3.5	0 - 1.1	6.0	FKM	D239DVP ⁴
						EPDM	D239DEP ⁴
						NBR	D239DBP ⁴

⁴ Same flange tube as D262/263 (on pages 12 - 13) see dimensional drawing on the right.

Options Available

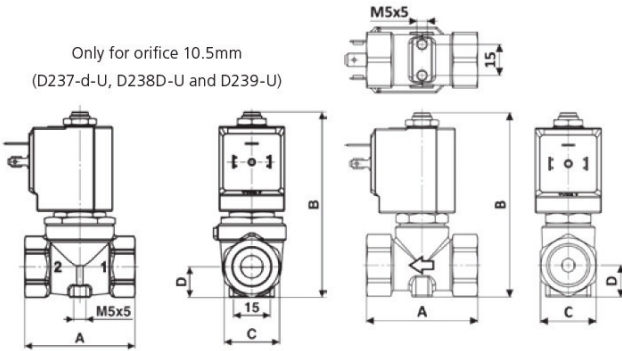
Seal Material ¹ and Media Temperature Range	Media	Ambient Temperature Range	
		Min	Max
FKM (-10 °C to +130 °C)	Water, oil, air	-10 °C	+50 °C
EPDM (-10 °C to +120 °C)	Water, hot water	-10 °C	+50 °C
NBR (-10 °C to +90 °C)	Water, oil, air	-10 °C	+50 °C

¹ See corrosion reference guide and sealing solutions for material compatibility.

Coil Rotation



Only for orifice 10.5mm
(D237-d-U, D238D-U and D239-U)



Preferred Valve Mounting Options



Pipe Size	Orifice (mm)	A	B	C	D	Weight (kg)
¼" - ⅜" - ½"	10.5	54	89	HEX 27	15	0.45
¼" - ⅜" - ½"	from 3 to 6	54	89.35	HEX 27	15	0.45

Dimensions (mm)

Solenoid enclosures

7--0 Type Coil - Insulation class F

- External material: PBT (reinforced fiberglass 30%)
- Electrical connection: DIN EN 175301-803 form A
- Winding insulation: Class H (E180)
- Enclosure classification: Conforms to IP65 (according to EN 60529) with plug and gasket correctly fitted*



Type 600 011- Plug

- Rated Voltage (max.): 250 VAC / 300 VDC
- Nominal Current: 10A (rated) / 16A (max)
- Wire cross-section: 1.5 mm² max
- Cable Entry: PG9 (6 to 8 mm)
- Enclosure classification: Conforms to IP65 (according to EN 60529) with supplied gasket
- Insulation class: group C- VDE 0110
- Housing colour: black
- UL approved, file No: E538



* Plug and gasket not supplied as standard, must be ordered separately.

Coding chart

Main Valve Assembly

Pipe Size	Seals	Orifice	Option
7 ¼"	V FKM	U 10.5	w/o option
8 ⅜"	E EPDM	H 3.0	
9 ½"	B NBR	L 4.0	
		N 5.0	
		P 6.0	

Coil options

Voltage / Frequency - Class F	
7250	24 VDC
7200	24 V / 50/60 Hz
7400	110 V / 50 Hz - 120 V / 60 Hz
7600	200 V / 50 Hz - 220 V / 60 Hz
7700	230 V / 50 Hz - 240 V / 60 Hz

Plug

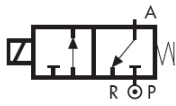
Plug
w/o plug
0A1 c/w plug

D	2	3	.	D
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Product coding example:

D237DVU 7250
¼" G, auto operation, brass body, FKM seals, 10.5 mm orifice, 24 VDC, without plug.

D301 Series, Automation – 2/2 Normally Closed

Specifications	
Function (single acting)	 <p>Flow direction underseat 2 → 1</p>
Maximum Viscosity	Max. 21cST (3 °E)
Body Material (Std)	Brass CW617N (EN 12165)
Orifice Material	Stainless Steel 1.4305 EN 10088 (AISI 303)
Flange	Stainless Steel 1.4305 EN 10088 (AISI 303)
Tube	Stainless Steel AISI 304
Plunger	Stainless Steel 1.4106 EN 10088 (AISI 430F)
Top Stop	Stainless Steel 1.4105 EN 10088 (AISI 430F)
Springs	Stainless Steel AISI 302
Seal Material (Std)	Foodgrade FKM
Connection Type (Std)	Flanged 26x26 mm
Shading Ring	Copper
Electrical Characteristics	
Standard Coil Voltage DC (=)	24 V
Standard Coil Voltage AC 50 Hz (~)	24 V, 110 V, 200 V, 230 V
Standard Coil Voltage AC 60 Hz (~)	24 V, 120 V, 220 V, 240 V
Voltage Tolerance	+10% to -15% (AC)
	+10% to -5% (DC)
Duty Cycle	100% ED
Protection Class	IP65 (EN 60529) with plug and gasket correctly fitted *
Electrical Connection	to EN 175301 - 803 - A (ex DIN 43650)
Coil Insulation	Class F 155 °C
Power Rating (Standard)	AC 18 VA (holding) AC 36 VA (inrush) DC 14 W

Features and Benefits

- Direct Acting
- Zero pressure rated
- Robust construction for industrial applications
- Stainless steel AISI 430F operators with low residual magnetism
- Coils tested 100% in compliance to RoHS directive and to relevant international standards
- High quality seal materials
- Response time 5 to 25 ms



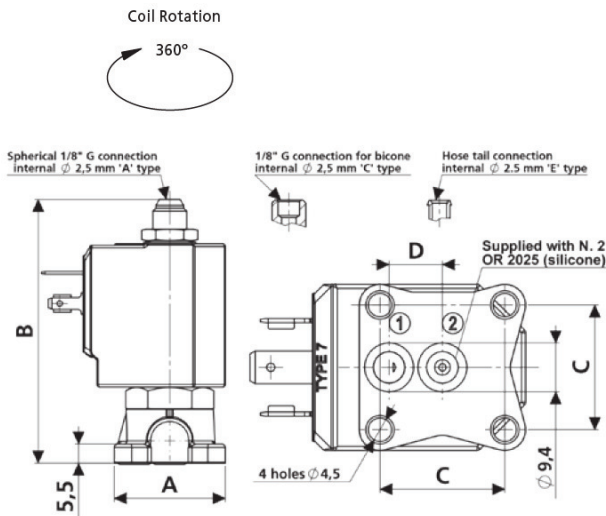
Pipe Size	Cv (gpm)	Kv (m³/h)	OPD (bar)		Orifice (mm)	Seal Material	Valve Code
			AC Voltages	DC Voltages			
Flanged	0.09	0.08	0 - 18	0 - 18	1.5	FKM	D301CVC
Flanged	0.15	0.13	0 - 10	0 - 10	2.0	FKM	D301CVE
Flanged	0.24	0.20	0 - 7	0 - 7	2.5	FKM	D301CVG
Flanged	0.32	0.27	0 - 5	0 - 5	3.0	FKM	D301CVH

Options Available

Seal Material ¹ and Media Temperature Range	Media	Ambient Temperature Range	
		Min	Max
FKM (-10 °C to +130 °C)	Water, oil, air	-10 °C	+50 °C

¹ See corrosion reference guide and sealing solutions for material compatibility.

Preferred Valve Mounting Options



Pipe Size	A	B	C	D	Weight (kg)
Flanged	32	77	24	10.25	0.25

Dimensions (mm)

Solenoid enclosures

7--0 Type Coil - Insulation class F

- External material: PBT (reinforced fiberglass 30%)
- Electrical connection: DIN EN 175301-803 form A
- Winding insulation: Class H (E180)
- Enclosure classification: Conforms to IP65 (according to EN 60529) with plug and gasket correctly fitted*



Type 600 011- Plug

- Rated Voltage (max.): 250 VAC / 300 VDC
- Nominal Current: 10A (rated) / 16A (max)
- Wire cross-section: 1.5 mm² max
- Cable Entry: PG9 (6 to 8 mm)
- Enclosure classification: Conforms to IP65 (according to EN 60529) with supplied gasket
- Insulation class: group C- VDE 0110
- Housing colour: black
- UL approved, file No: E205538



* Plug and gasket not supplied as standard, must be ordered separately.

Coding chart

Main Valve Assembly

Top Port	
C	G 1/8" conn
A	spherical G 1/8"
E	with hose tail

Orifice	
C	1.5
E	2.0
G	2.5
H	3.0

Option	
	w/o option

Coil options

Voltage / Frequency - Class F	
7250	24 VDC
7200	24 V / 50/60 Hz
7400	110 V / 50 Hz - 120 V / 60 Hz
7600	200 V / 50 Hz - 220 V / 60 Hz
7700	230 V / 50 Hz - 240 V / 60 Hz

Plug

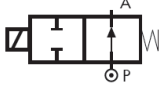
Plug	
	w/o plug
0A1	c/w plug



Product coding example:

D301CVC 7250
Flanged, auto operation, brass body, FKM seals, 1.5 mm orifice, 24 VDC, without plug.

RB297 Series, Automation – 2/2 Normally Open

Specifications	
Function (single acting)	 <p>Flow direction overseat 1 → 2</p>
Maximum Viscosity	Max. 21cST (3 °E)
Body Material (Std)	Low lead content Brass CW719R (EN 12165)
Orifice Material	Stainless Steel 1.4305 EN 10088 (AISI 303)
Flange Tube ¹	Brass CW614N (EN 12164)
Plunger and Top Stop	Stainless Steel 1.4105 EN 10088 (AISI 430F) or equivalent
Springs	Stainless Steel AISI 302
Seal Material (Std)	Foodgrade FKM
Connection Type (Std)	G parallel thread (ISO 228-1)
Shading Ring	Copper
Electrical Characteristics	
Standard Coil Voltage DC (=)	24 V
Standard Coil Voltage AC 50 Hz (~)	24 V, 110 V, 200 V, 230 V
Standard Coil Voltage AC 60 Hz (~)	24 V, 120 V, 220 V, 240 V
Voltage Tolerance	+10% to -15% (AC)
	+10% to -5% (DC)
Duty Cycle	100% ED
Protection Class	IP65 (EN 60529) with plug and gasket correctly fitted *
Electrical Connection	to industrial form B
Coil Insulation	Class F 155 °C
Power Rating (Standard)	AC 10 VA (holding) AC 16 VA (inrush) DC 7W

¹ With special nut for NO operator (different from Standard).

Options Available

Valve Options
NPT threads (minimum batch may be required)
Electroless nickel plating treatment

Features and Benefits

- Direct Acting
- Robust construction for industrial applications
- Stainless steel AISI 430F operators with low residual magnetism
- Coils tested 100% in compliance to RoHS directive and to relevant international standards
- High quality seal materials
- Response time 5 to 25 ms
- Valve suitable for contact with food media as per EEC Directives and Regulations. Please consult supplier for more details.

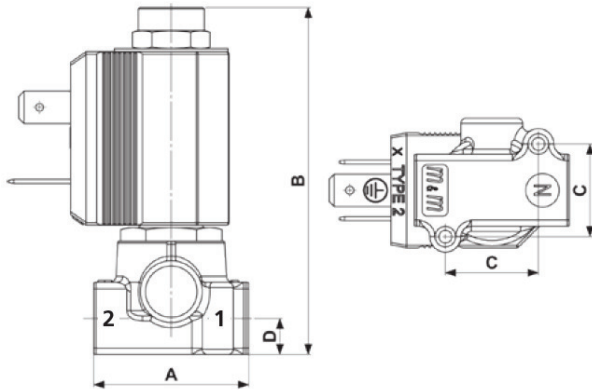


Pipe Size	Cv (gpm)	Kv (m ³ /h)	OPD (bar)		Orifice (mm)	Seal Material	Valve Code
			AC Voltages	DC Voltages			
1/8"	0.04	0.03	0 - 25	0 - 25	1.0	FKM EPDM	RB297DVA RB297DEA
1/8"	0.05	0.04	0 - 20	0 - 20	1.2	FKM EPDM	RB297DVB RB297DEB
1/8"	0.07	0.06	0 - 15	0 - 15	1.5	FKM EPDM	RB297DVC RB297DEC
1/8"	0.12	0.10	0 - 10	0 - 10	2.0	FKM EPDM	RB297DVE RB297DEE
1/8"	0.16	0.14	0 - 5	0 - 5	2.5	FKM EPDM	RB297DVG RB297DEG
1/8"	0.21	0.18	0 - 4.5	0 - 4.5	3.0	FKM EPDM	RB297DVH RB297DEH

Seal Material ¹ and Media Temperature Range	Media	Ambient Temperature Range	
		Min	Max
FKM (-10 °C to +130 °C)	Water, oil, air	-10 °C	+50 °C
EPDM (-10 °C to +120 °C)	Water, hot water	-10 °C	+50 °C

¹ See corrosion reference guide and sealing solutions for material compatibility.

Coil Rotation



Preferred Valve Mounting Options



Pipe Size	A	B	C	D	Weight (kg)
1/8"	30	67.5	18	7	0.15

Dimensions (mm)

Solenoid enclosures

2--0 Type Coil - Insulation class F

- External material: PBT (reinforced fiberglass 30%)
- Electrical connection: Industrial form B
- Winding insulation: Class H (E180)
- Enclosure classification: Conforms to IP65 (according to EN 60529) with plug and gasket correctly fitted*



Type 600 001- Plug

- Rated Voltage (max.): 250 VAC / 300 VDC
- Nominal Current: 10A (rated) / 16A (max)
- Wire cross-section: 1.5 mm² max
- Cable Entry: PG9 (6 to 8 mm)
- Enclosure classification: Conforms to IP65 (according to EN 60529) with supplied gasket
- Insulation class: group C- VDE 0110
- Housing colour: black
- UL approved, file No: E205538



* Plug and gasket not supplied as standard, must be ordered separately.

Coding chart

Main Valve Assembly

Coil options

Plug

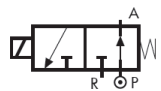
Seals		Orifice		Option		Voltage / Frequency - Class F		Plug	
V	FKM	A	1.0	N	NPT	2250	24 VDC		w/o plug
E	EPDM	B	1.2	K	Electroless nickel plating	2200	24 V / 50/60 Hz	0B1	c/w plug
		C	1.5		w/o option	2400	110 V / 50 Hz - 120 V / 60 Hz		
		E	2.0			2600	200 V / 50 Hz - 220 V / 60 Hz		
		G	2.5			2700	230 V / 50 Hz - 240 V / 60 Hz		
		H	3.0						

RB	2	9	7	D
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Product coding example:

RB297DEE 2250
1/8" G, auto operation, brass body, EPDM seals, 2.0 mm orifice, 24 VDC, without plug.

RD301 Series, Automation – 2/2 Normally Open

Specifications	
Function (single acting)	 <p>Flow direction underseat 2 → 1</p>
Maximum Viscosity	Max. 21cST (3 °E)
Body Material (Std)	Brass CW617N (EN 12165)
Orifice Material	Stainless Steel 1.4305 EN 10088 (AISI 303)
Flange Tube	Stainless Steel 1.4305 EN 10088 (AISI 303)
Plunger	Stainless Steel 1.4106 EN 10088 (AISI 430F)
Top Stop	Stainless Steel 1.4105 EN 10088 (AISI 430F)
Springs	Stainless Steel AISI 302
Seal Material	Foodgrade FKM
Connection Type (Std)	Flanged 26x26 mm
Shading Ring	Copper
Electrical Characteristics	
Standard Coil Voltage DC (=)	24 V
Standard Coil Voltage AC 50 Hz (-)	24 V, 110 V, 200 V, 230 V
Standard Coil Voltage AC 60 Hz (-)	24 V, 120 V, 220 V, 240 V
Voltage Tolerance	+10% to -15% (AC)
	+10% to -5% (DC)
Duty Cycle	100% ED
Protection Class	IP65 (EN 60529) with plug and gasket correctly fitted *
Electrical Connection	to EN 175301 - 803 - A (ex DIN 43650)
Coil Insulation	Class H 180 °C
Power Rating (Standard)	AC 18 VA (holding) AC 36 VA (inrush) DC 14 W

Features and Benefits

- Direct Acting
- Zero pressure rated
- Robust construction for industrial applications
- Stainless steel AISI 430F operators with low residual magnetism
- Coils tested 100% in compliance to RoHS directive and to relevant international standards
- High quality seal materials
- Response time 5 to 25 ms



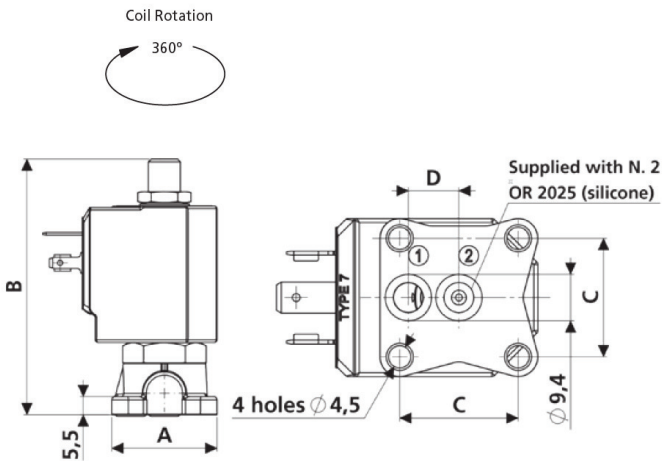
Pipe Size	Cv (gpm)	Kv (m ³ /h)	OPD (bar)		Orifice (mm)	Seal Material	Valve Code
			AC Voltages	DC Voltages			
Flanged	0.09	0.08	0 - 15	0 - 15	1.5	FKM	RD301CVC
Flanged	0.15	0.13	0 - 10	0 - 10	2.0	FKM	RD301CVE
Flanged	0.32	0.27	0 - 4	0 - 4	3.0	FKM	RD301CVH

Options Available

Seal Material ¹ and Media Temperature Range	Media	Ambient Temperature Range	
		Min	Max
FKM (-10 °C to +130 °C)	Water, oil, air	-10 °C	+50 °C

¹ See corrosion reference guide and sealing solutions for material compatibility.

Preferred Valve Mounting Options



Pipe Size	A	B	C	D	Weight (kg)
Flanged	32	77.7	24	10.25	0.26

Dimensions (mm)

Solenoid enclosures

7--1 Type Coil - Insulation class H

- External material: PPS (glass fiber & mineral filled)
- Electrical connection: DIN EN 175301-803 form A
- Winding insulation: Class H (E180)
- Enclosure classification: Conforms to IP65 (according to EN 60529) with plug and gasket correctly fitted*



Type 600 011- Plug

- Rated Voltage (max.): 250 VAC / 300 VDC
- Nominal Current: 10A (rated) / 16A (max)
- Wire cross-section: 1.5 mm² max
- Cable Entry: PG9 (6 to 8 mm)
- Enclosure classification: Conforms to IP65 (according to EN 60529) with supplied gasket
- Insulation class: group C- VDE 0110
- Housing colour: black
- UL approved, file No: E205538



* Plug and gasket not supplied as standard, must be ordered separately.

Coding chart

Main Valve Assembly

Orifice		Option	
C	1.5		w/o option
E	2.0		
H	3.0		

Coil options

Voltage / Frequency - Class H	
7251	24 VDC
7201	24 V / 50/60 Hz
7401	110 V / 50 Hz - 120 V / 60 Hz
7601	200 V / 50 Hz - 220 V / 60 Hz
7701	230 V / 50 Hz - 240 V / 60 Hz

Plug

Plug	
	w/o plug
0A1	c/w plug



Product coding example:

RD301CVC 7251
Flanged, auto operation, brass body, FKM seals, 1.5 mm orifice, 24 VDC, without plug.