

840 Series



High performance compact solenoid valve | 2/2 NC
PNEUMATIC DIVISION

MATRIX
mechatronics

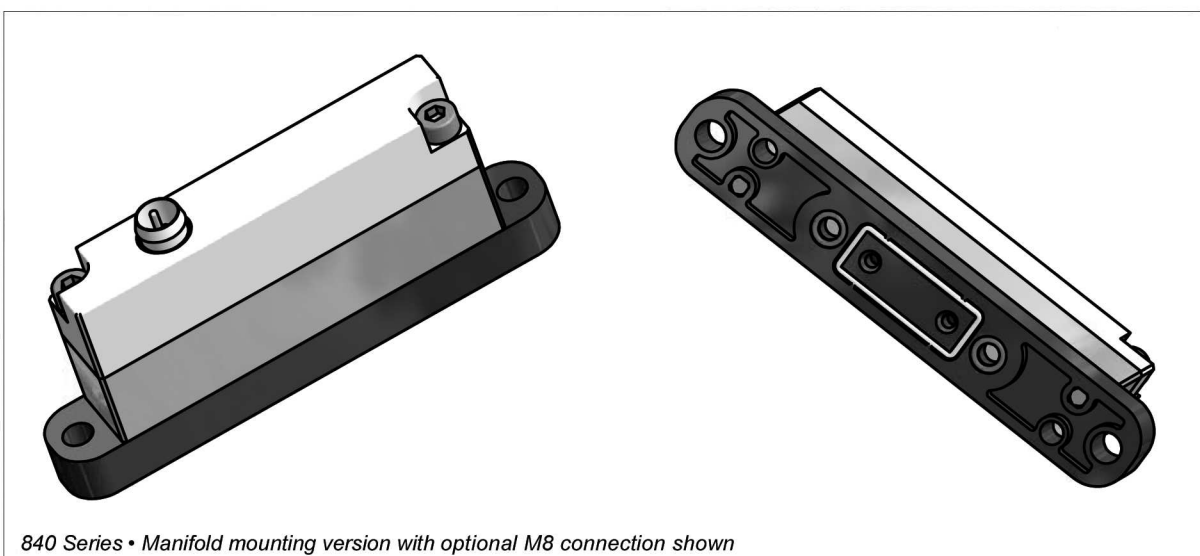
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The 840 Series Pneumatic Solenoid Valves are 2/2 NC type.

The research about materials and new technological solutions allowed the realization of a shutter solenoid valve with an extremely simple operation principle and with avant-garde dynamic characteristics. The mass of the moving elements has been reduced to the minimum and every inner friction has been eliminated: in this way, we obtained response times of milliseconds and an operation life over 500 million cycles. Due to the possibility of controls of speed-up type, their dynamic characteristics are even more improved. Standard solenoid valves with 24 VDC control have a response time lower than 5 ms in opening and 2 ms in closing, with a maximum operation frequency of 200 Hz. On the contrary, solenoid valves with speed-up control have a response time lower than 1 ms, both in opening and in closing, with a maximum operation frequency of 500 Hz.

Besides high-speed characteristics, solenoid valves 840 Series offers flow rate values up to 300 NI/min., with feeding pressure from 0 to 8 bar.

Controlling the valve through either PWM (Pulse Width Modulation) or PFM (Pulse Frequency Modulation) technique, it is possible to vary the passing flow rate and to obtain, in this way, a solenoid valve, having a proportional flow rate. The 840 Series is available both in-line assembly and sub-plate version, equipped with such accessories as multi-position manifolds or speed-up integrated driver boards.



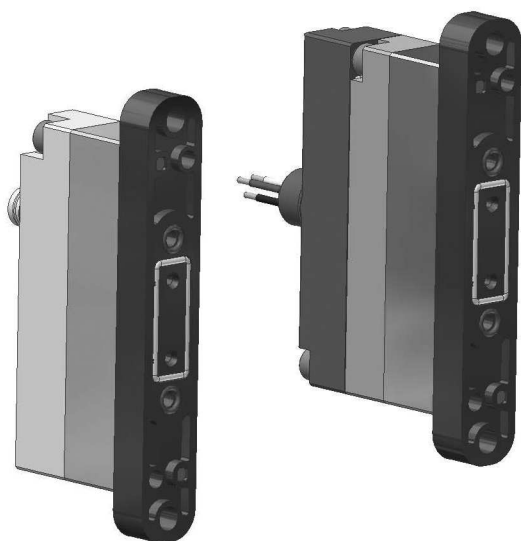
840 Series • Manifold mounting version with optional M8 connection shown

Advantages

- Compact dimensions (12mm footprint)
- High flowrate up to 300 l/min @ 6 bar (modular)
- Fast response times down to 2 ms
- Insensitivity to high frequency and vibrations
- Low power consumption
- Extreme precision and flexibility
- Extra long operating life (up to 500 M cycles)

Typical applications

- Process and precision instrumentation
- Pressure and flowrate control systems
- Positioning systems
- Sorting and recycling applications
- Metering systems
- Biomedical equipments



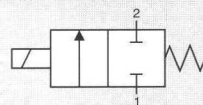
CONTROL:

DIRECT

PFM

PWM

N. 1 NC



GENERAL CHARACTERISTICS

FLUID	Non-lubricated dry air, neutral gases(-10 + 50°C)	
FILTRATION RATING	Min 40 micron	
TEMPERATURE	- 10 + 50°C (Standard version)	
RESPONSE TIME IN OPENING	XX / KK < 1 ms	YY < 1,5 ms
RESPONSE TIME IN CLOSING	XX / KK < 1 ms	YY < 2 ms
MAXIMUM FREQUENCY	XX / KK 250 Hz	YY 250 Hz
WEIGHT	XX / KK 95 g	YY 100 g
PRODUCT LIFE EXPECTANCY	≥ 500 M/s cycles	
IP RATING	IP62 ÷ IP65	

IDENTIFICATION CODE

D	R	X	8	4	1	1	0	8	C	2	XX
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• OUTLETS

1	1 Outlet
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• FLOW RATE (at 6 bar)

R	300 NI/min (150 NI/min + 150 NI/min)

• VERSION

	Body ported
D	Manifold mounting

• No. ELECTRICAL CONTROLS

1	1 Control
2	2 Controls
H	1 Control (with integrated YY speed-up driver only)

• PORT CONNECTION

0	Integrated cables IP 62 L = 500 mm
E	M8 connection IP 65

• FUNCTION

C	NC
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• TYPE

2	2/2
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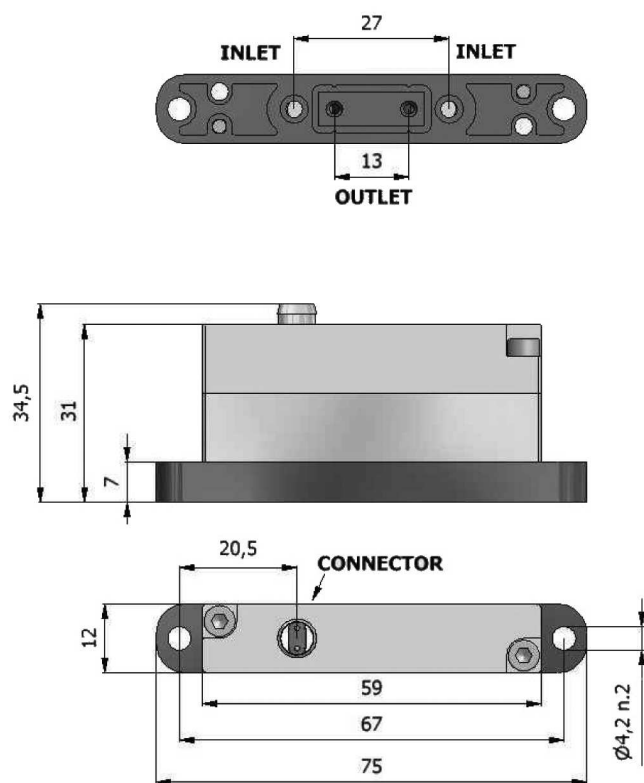
• CONTROL TENSION

XX	Speed-up in current (24 VDC)	2,1 W
KK	Speed-up in tension (24 VDC)	1,2 W
YY	Integrated speed-up driver	3,2 W

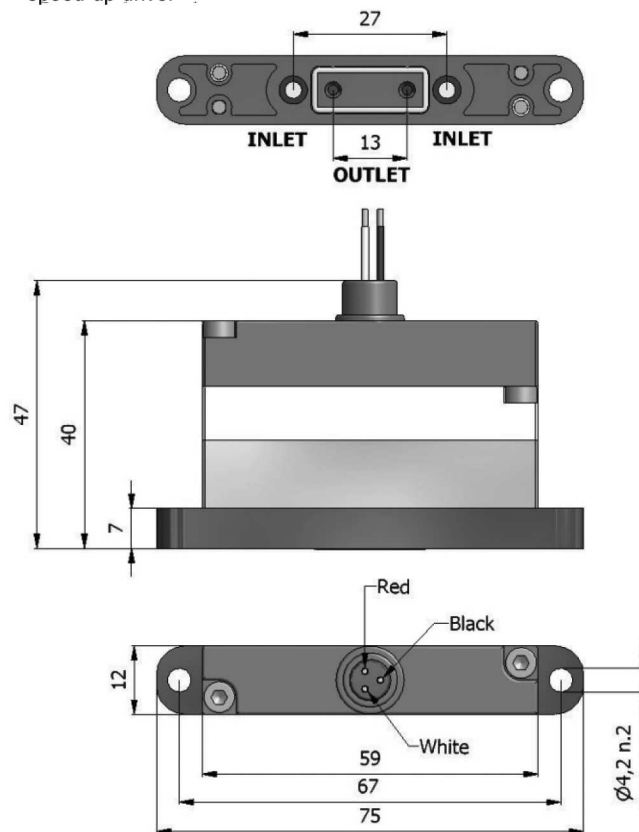
• OPERATING PRESSURE

	RANGE	MODELS
0	2 - 8 bar	XX
4	0 - 6 bar	XX
8	2 - 6 bar	XX / KK / YY

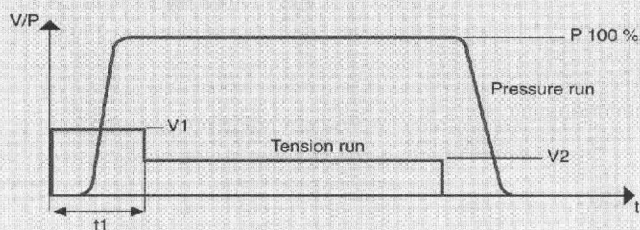
Manifold mounting version (DRX841) with optional M8 connection



Manifold mounting version (DRX841) with optional integrated speed-up driver



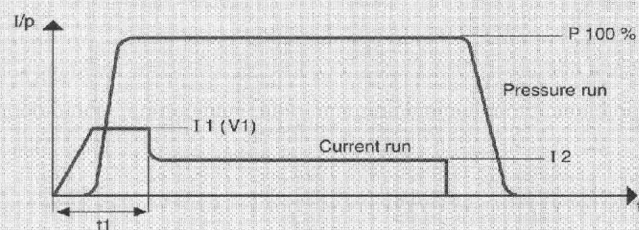
CHARACTERISTICS OF THE ELECTRICAL CONTROL - MODELS KK



N.B. KK MODELS ARE CONTROLLED IN TENSION

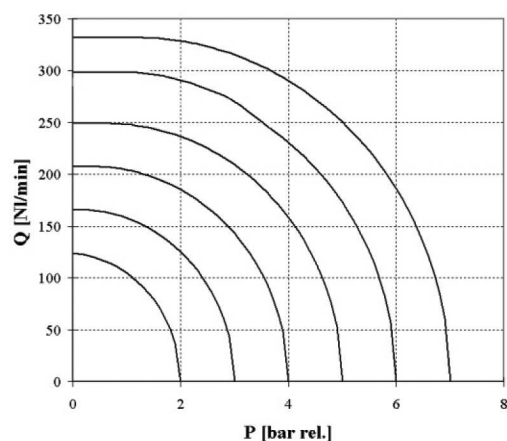
R	V 1 = 24 VDC	t 1 = 5 ms	V 2 = 4 VDC
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CHARACTERISTICS OF THE ELECTRICAL CONTROL - MODELS XX



N.B. XX MODELS ARE CONTROLLED IN CURRENT

R	I 1 = 3,2 A	t 1 = 3 ms	I 2 = 0,53 A
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FLOW RATE R

Qn = 300 Nl/min