


16mm miniature rocker solenoid valve with isolating diaphragm for special applications

- 2/2- and 3/2-way
- 10–32 UNF, and manifold mount
- Insensitive to contamination
- High pressure & back-pressure rating of 145 PSI
- Low internal volume
- Body materials: PPS, brass, stainless steel
- Seal materials: FKM or EPDM
- Normally closed, normally open and 3-way universal functions
-  Recognized

A unique rocker designed actuating mechanism operates an isolating diaphragm that separates the actuator and the coil from the fluid. The actuator is hermetically isolated from the coil by a stainless steel plate and the coil can be rotated or replaced without disturbing the process.

No friction, no risk of sticking and a strong, rugged diaphragm provide high reliability and long service life. The valve has a minimal internal volume that is easily purged. No cross-contamination occurs and the control of critical fluids with high accuracy is possible.

Heat transfer is virtually eliminated as the coil is not directly in contact with the diaphragm.

The valves are ideal for manifold mounting and are available with a simplified common wiring system. Custom manifolds are available to satisfy specific application requirements.

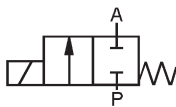
Applications

- Analytical instruments
- Ink jet
- Handling of slightly aggressive or contaminated media

Technical data

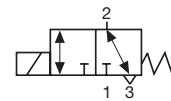
Circuit Function

A-2/2-way valve,
normally closed



2/2-way, normally open also available

T- 3/2-way valve, direct acting,
universal function, any flow direction



Valve specifications	
Pressure range max.	Vacuum – 145 PSI (see specifications)
Orifice sizes	0.8, 1.2 and 1.6 mm
Body material	PPS for sub-base body; brass, or 316L SS for 10–32 UNF valve body
Seal material	FKM or EPDM
Isolating plate body/coil	Stainless Steel
Fluids	Ink, difficult and slightly aggressive media
Fluid temperature	32°F – 122°F
Ambient temperature	Max. 130°F
Max. viscosity	Approx. 21 centistokes
Response time	Approx. 25 ms

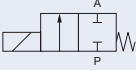
Solenoid specifications	
Nominal voltages	12, 24 V/DC 110, 230 V/DC and AC
Voltage tolerance	±10 %
Power consumption	3.4 W at 12 and 24 VDC 4 W at 110–120 VDC 4 W at 230–240 VDC
Cycling rate	Approx. 200/min.
Duty cycle	100% continuously rated
Protection class	NEMA 4 (IP 65) with leads or cable plug Type 2506, IP 20 without cable plug

Installation / accessories	
Installation	As required, but preferably with solenoid system upright.
Fixation	M2.5 from the top
Electrical connection	Side or top spade connector to DIN 43 650 Rectangular connector Flying lead wires
Cable plug	Type 2506, DIN 43650, form C (standard delivery with valve) Type 2505, rectangular plug (as accessory, order separately)

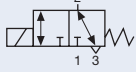
Materials

1 Sub-base:	Brass or 316L Stainless steel
2 O-Rings:	FKM or EPDM
3 Diaphragm:	FKM or EPDM
4 Isolating plate:	Stainless steel
5 Body:	PPS

Specifications – Ordering chart (other versions on request)

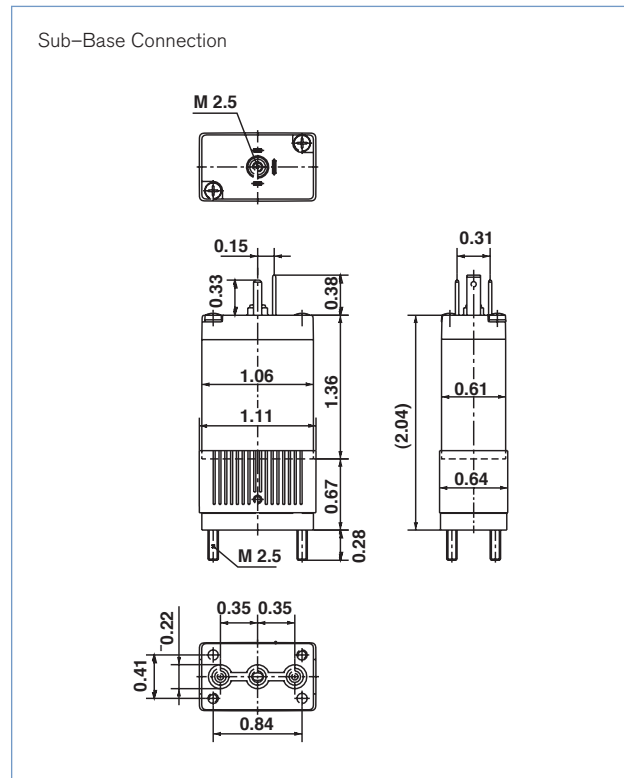
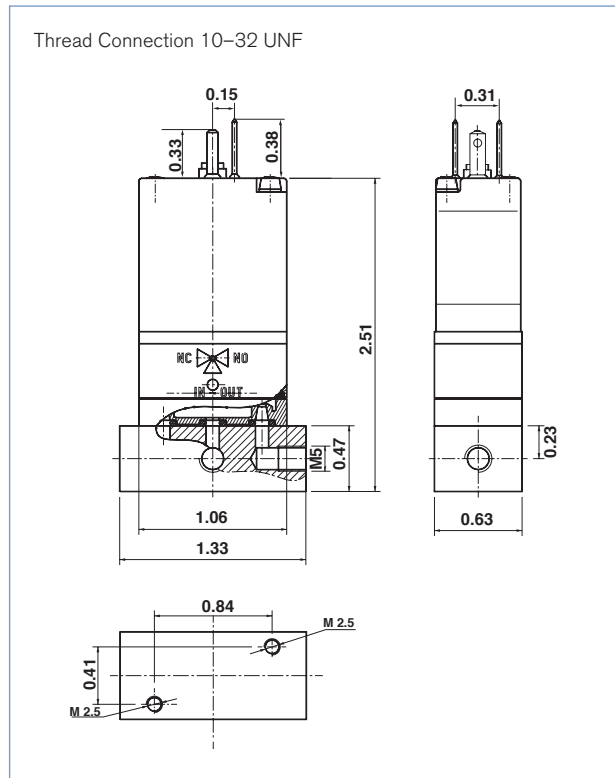
Circuit function	Port connection	Orifice [in]	C _v	SCFM (air)	Pressure range [PSI]	Back-pressure [PSI]	Seal material	Electrical connection	Weight [oz]	Item-No. Voltage / Frequency [V/Hz]			
										12/DC ¹⁾	24/DC ¹⁾	110/DC/AC ²⁾	230/DC/AC ²⁾
 <p>2/2-Way, direct acting, normally closed</p>	PPS valve body												
	Sub-base	1/32	0.012	0.39	0 – 145	145	FKM	cab. plug 2506	2.12	139 151 U	139 088 Z	139 152 V	139 153 W
								rect. plug 2505	2.12	–	139 236 Z	–	–
								EPDM cab. plug 2506	2.12	139 154 X	459 099 D	–	–
	Brass / PPS valve body												
	10-32 UNF	1/32	0.012	0.39	0 – 145	145	FKM	cab. plug 2506	2.0	–	431 745 U	431 571 N	431 572 P
	316L Stainless steel / PPS valve body												
	10-32 UNF	1/32	0.012	0.39	0 – 145	145	FKM	cab. plug 2506	2.0	–	431 746 V	431 578 V	431 579 W

¹⁾ Side tag connector, ²⁾ Top tag connector, universal coil (AC/DC) with integrated rectifier.

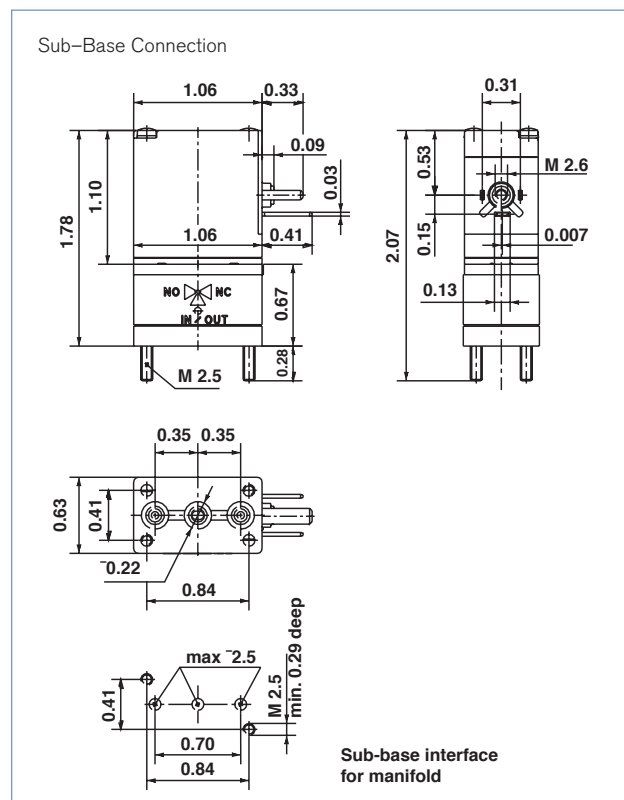
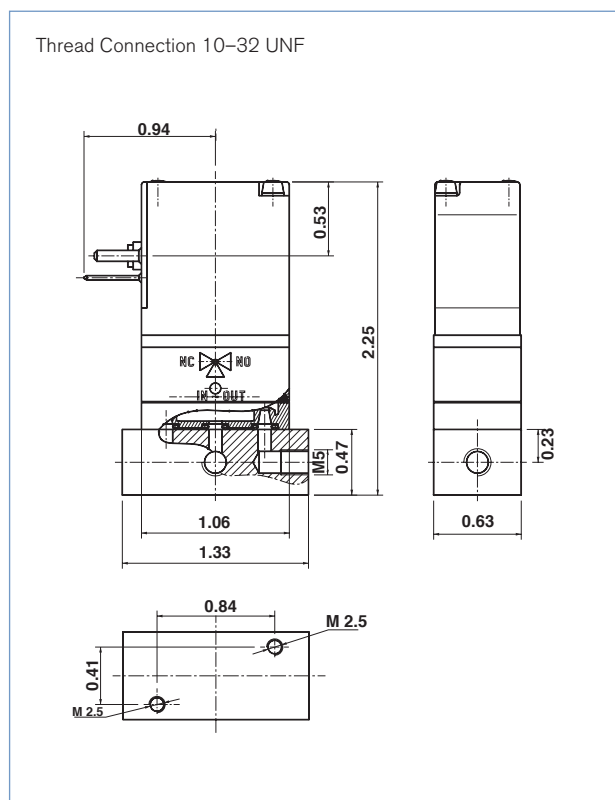
Circuit function	Port connection	Orifice [in]	C _v	SCFM (air)	Pressure range [PSI]	Back-pressure [PSI]	Seal material	Electrical connection	Weight [oz]	Item-No. Voltage / Frequency [V/Hz]			
										12/DC ¹⁾	24/DC ¹⁾	110/DC/AC ²⁾	230/DC/AC ²⁾
 <p>3/2-Way, direct acting universal functions, any flow direction</p>	PPS valve body												
	Sub-base	1/32	0.012	0.39	0 – 87	87	FKM	cab. plug 2506	2.12	139 158 B	459 103 E	458 120 HV	458 121 W
								rect. plug 2505	2.12	–	139 237 S	–	–
								EPDM cab. plug 2506	2.12	139 162 X	139 163 Y	139 164 Z	139 165 S
								FKM leads, 500mm	2.12	167 286 M	148 101 C	–	–
	Brass / PPS valve body												
	10-32 UNF	1/32	0.012	0.39	0 – 87	87	FKM	cab. plug 2506	2.0	–	431 747 W	431 585 D	431 586 E
	316L Stainless steel / PPS valve body												
	10-32 UNF	1/32	0.012	0.39	0 – 87	87	FKM	cab. plug 2506	2.0	–	431 748 F	431 592 C	431 709 W

¹⁾ Side tag connector, ²⁾ Top tag connector, universal coil (AC/DC) with integrated rectifier.

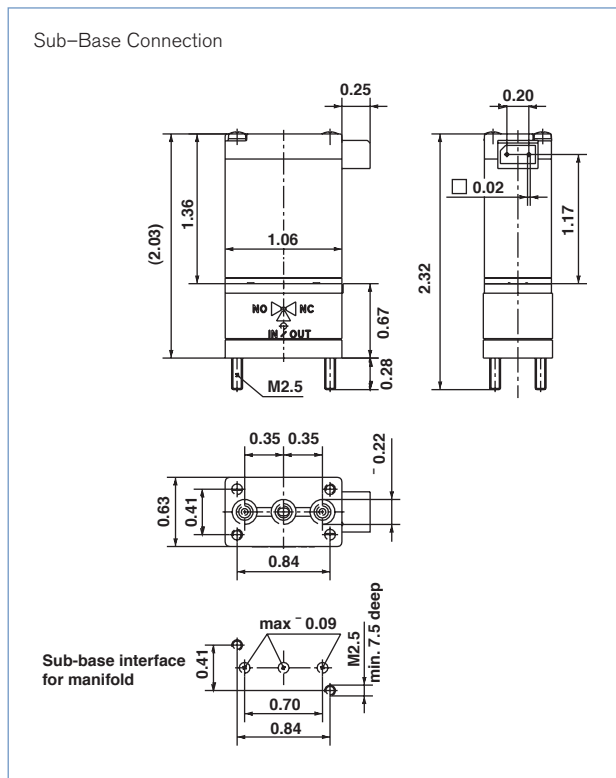
Coil with top plug Type 2506 – dimensions [inch]



Coil with side plug Type 2506 – Dimensions [inch]



Coil with rectangular plug Type 2505 – dimensions [inch]



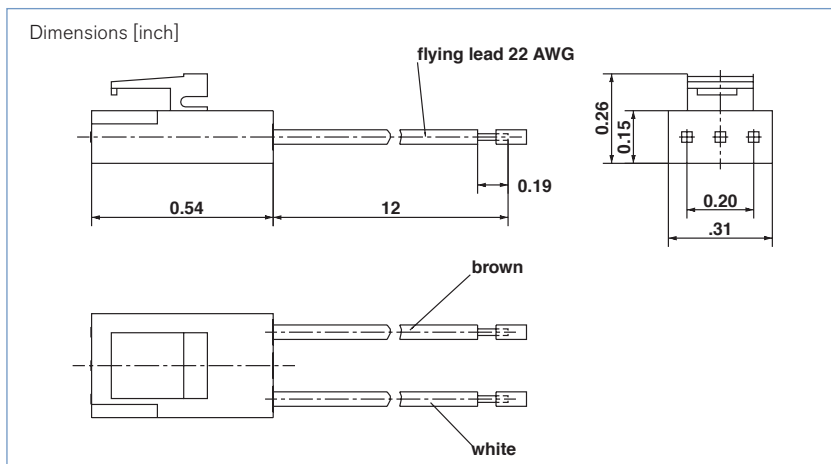
Type 2505 – rectangular cable plug

Technical Data

Protection class	IP 20
Operating voltage	24 V
Power consumption	3 W
Operating temperature	32°F – 122°F

Ordering ¹⁾	Item no.
Cable length 300 mm	644 068 N
Cable length 3 m	133 486 F
Cable length 500 mm	148 578 R

¹⁾ Please order separately (no standard delivery)



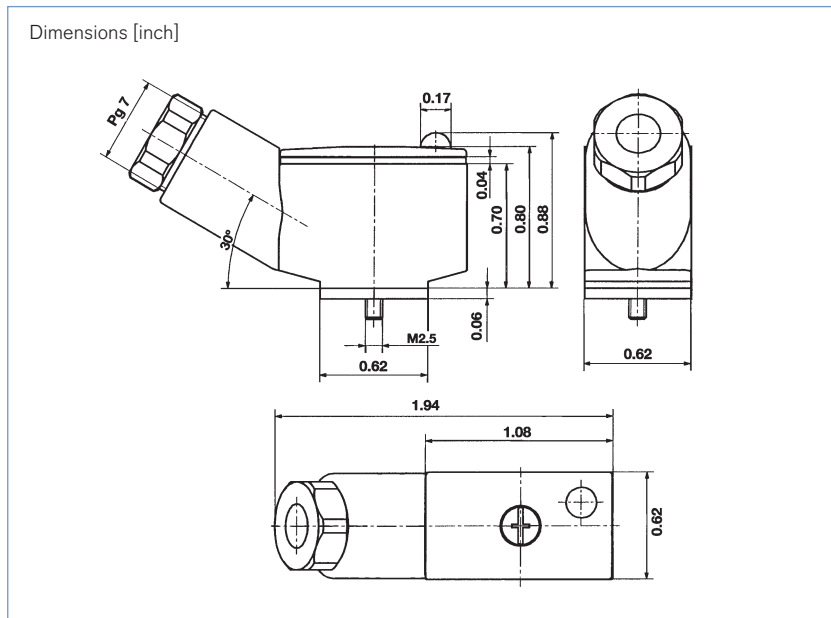
Type 2506 – cable plug DIN 43650, Form C

Technical Data

Body material	PA (polyamide)
Contact material	Brass, electro-silverplated
Isolation between cable plug and coil	Gasket 0.06"
Continuous limit temp.	259°F
Cable diameter	0.19" to 0.23"
Electr. connection	Terminal screws Max. 0.03 in ²
Poles	2-pole + ground
Nominal voltage	0–250 V

Ordering	Item no.
Cable plug 2506	006 353 P ²⁾

²⁾ Standard delivery with the valve



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Engineering Design and Contract Manufacturing services available for your micro-fluidic system needs. Specializing in Value added Design and Fabrication of manifolds, brackets, cable harnesses and more. Manufacturing services include complete documentation, CAD, assembly and testing of complete systems and sub-assemblies including: valve mounting, fitting and tubing installation, cable harnesses, power boards, sheet metal and more.

In case of special application conditions, please consult for advice.

We reserve the right to make technical changes without notice.

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