MAGNET-SCHULTZ
SOLENOIDS AND SOLUTIONS

QUALITY SINCE 1912

D.C. Open Frame Solenoid

Rectifier for A.C. supply
Stroke up to 10mm

10
Product group

Type 312

- Increasing force characteristic (Fig. 2)
- Pull or Push operation
- Armature options - clevis or tapped
- Coil insulation to class B, for voltages up to 250 volts
- Protection classification - DIN VDE0470/EN60529
  Tag connectors or flying leads - IP00
- UL listed materials of construction
- Suitable for operation in any attititude
- Spring return available
- Modifications and special designs on request
- General - purpose box frame solenoid for service on:

Machine tools	Office Machines
Automation	Remote control
Packaging and coin equipment	Textile Machinery

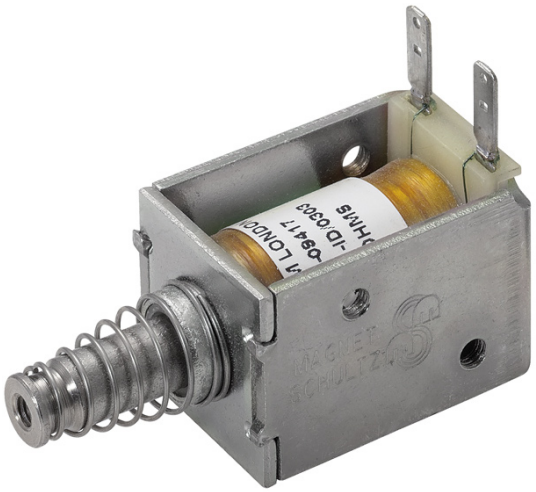

Fig. 1
Type 312

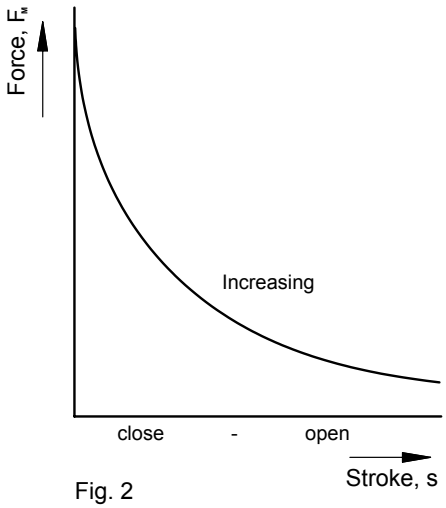

Fig. 2
Force characteristic

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Performance and dimensional data for type 312

Duty Rating	Continuous (CD) 100%	Intermittent (ID) 25%	Pulse (PD) 10%	Spring Return, Force, (N)	
Stroke s	*Magnetic force, F_M (N)			R1	R 2
0	10.7	12.5	13.4	0.57	2.0
1	1.1	2.8	9.7	0.51	1.7
2	0.7	1.7	7.8	0.45	1.5
3	0.5	1.3	6.0	0.40	1.3
4	0.3	0.9	4.5	0.34	1.1
6		0.3	2.5		0.8
8			1.5		
10			0.8		
Power Consumption P_{25} (Watts)	4	9	40		
Armature Weight m_A (g)	7				
Solenoid Weight m_M (g)	36				

*Gross force, without spring return. Note: 0mm is completion of energised stroke

TABLE BASIS

24V / Impulse - Intermittent - Continuous duty
Mounted on steel plate 152 x 152 x 3mm
Horizontal working
Tolerance +/- 10% (inherent and manufacture)

Ambient temperature 25°C
Free air mounted
Pull arrangement

Order code for Type 312 solenoid
312 - [add suffixes as required, see below], Voltage / Duty

- Push -rod if required - P
- Spring return if required - R1 or R2
  R1 (light) or R2 (heavy) Spring
- Connection type:
  Flying Leads or Quick Connect - FL or QC
- Armature type M3 or Clevis - M3 or CL

Order Example 312 - P/R1/QC/M3, 24V ID

MAGNETIC FORCE (F_M)

is listed in HOT condition at RATED voltage
Adjust for armature weight

POWER CONSUMPTION (P_{25})

is listed wth 25°C coil temperature (decrease/HOT)

DUTY RATING

The proportion of time that the solenoid is energised per operation cycle normally shown in %
Max. energised time/cycle: continuous (100%): intermittent (25%) - 60secs: impulse (10%) - 0.1secs

$$\frac{t\,(on)}{t\,(on) + t\,(off)} \times 100$$

SUPPLY VOLTAGE

Standard DC: 6V, 12V, 24V
Rectifier can be provided for AC Supply

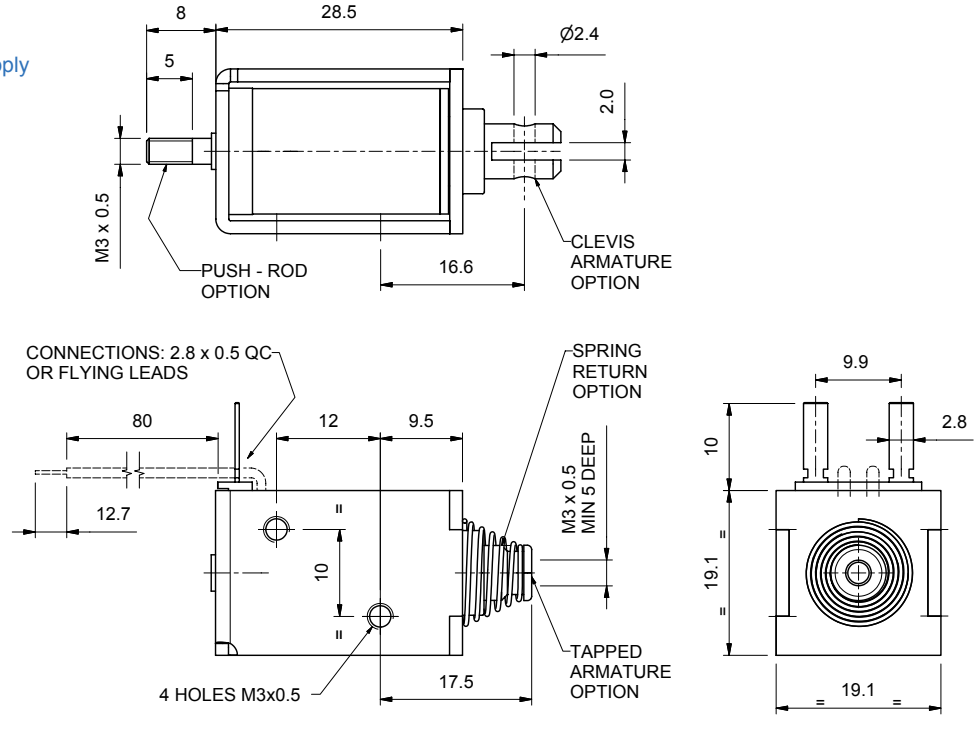

Fig 3. Type 312