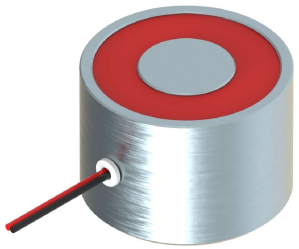
• VM/ND SERIE

The attraction and holding of the magnetic pieces are made by permanent magnets mounted in the solenoid. With these kind of products, we avoid the risk of load falling due to sudden power supply failure. The power supply on the coil allows to loose the load, when this power supply stops, the product recovers its initial force.

When working with suspended loads, security norms must be respected.

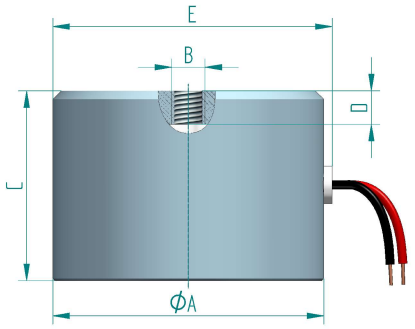


Protection rate: **IP65**
Insulation class: **Y (90ºC)**
Standard voltage: **24VDC**
Standard duty cycle: **See chart**
Different voltage, ED or size: **Consult**

Supply possibilities:

Flying leads for every size:
VM20/ND, VM30/ND, VM40/ND: 1x0.25mm2
VM50/ND, VM65/ND, VM100/ND: 1x0.5mm2
VM150/ND: 2x0.75mm2
Under demand: any size, voltage, duty cycle etc can be manufactured

Flying leads



Feeding mode to take off the workpiece:
Voltage: 24Vdc
Polarization:
Red lead +VDC / Black lead -VDC

Important: the clamping screw does not have to exceed measure D

Table 1

TYPE	øA (-0,3)	B	C(±0,1)	D	E	Weight(Kg)
VM 20/ND	20	M-3	25	5	26	0.04
VM 30/ND	30	M-4	32.5	6	35.2	0.13
VM 40/ND	40	M-5	41.7	6	42.7	0.28
VM 50/ND	50	M-5	42.8	6	52.5	0.45
VM 65/ND	65	M-8	45.5	8	67	0.74
VM 100/ND	100	M-10	67	10	102	3.00
VM 150/ND	150	M-16	65	15	152	7.10

TYPE	P (W)	ED (%)	Minimum pulse (ms)	Resting time (ms)	e (mm)	Air gap (mm) δL 0	0.2	0.5	Magnetic force Fm (N)
VM20/ND	10	20	24	180	1 3 10	22 39 39	7 7 7	1,7 1,7 1,7	
VM30/ND	25	20	110	825	1 3 10	46 181 181	34 74 74	22 22 22	
VM40/ND	42	15	75	743	1 3 10	51 205 270	36 89 89	23 38 38	
VM50/ND	48	15	120	1188	1 3 10	60 304 607	41 200 225	34 95 110	
VM65/ND	80	15	225	2228	1 3 10	70 374 1220	50 340 750	40 260 400	
VM100/ND	75	25	150	1500	1 3 10	83 421 2205	61 365 1254	49 338 686	
VM150/ND	77	40	285	1070	1 3 10	78 615 2254	46 475 1490	32 401 1100	

e (mm): Thickness of the piece to hold

The table 2 gives for each type of holding magnet, the values of the minimum pulse time and resting time measured in the following conditions:
- With a weight of 5% of the maximum magnetic force made by each model
-Coil working on its regime temperature.
The table 2 gives for each type of holding magnet, the values of the force of maintenance (Fm) based on the air gap, measured in the following conditions:
-Holding magnet without voltage.
-Flat piece (3μm rugosity) in AºSt37, thickness as shown in the table 2 and dimensions are similar or bigger than the attraction face.
-Room temperature 35ºC.
-Coil working on its regime temperature.
At different conditions, the magnetic force(Fm) may decrease.
The value of the magnetic remanence after the power supply stops is 5% of the holding force.
.Earthing is recommended if the metallic parts are accessible.
.Technical explanation: see pages 4 & 5.
.Under demand: any size, voltage, duty cycle etc can be manufactured.

Under demand an **internal protection** can be added to the coil to protect it of the overheating, generated by the no respecting of the times given by the duty cycles, this overheating can demagnetize the internal magnet or destroy the coil changing the proper working of holding magnet.

⚠ **When lifting or handling heavy loads a minimum security margin of 3 must be respected, the weight of the load cannot exceed 33% of the magnetic force.**

Ordering code : *VM(size)/ND --V ED---%*
VM50/ND; Voltage : 24Vdc ; Duty cycle : ED15% ; Ref.: *VM50/ND 24Vdc ED15%*
VM50/ND with protection ; Voltage : 24Vdc ; Duty cycle : ED15% ; Ref.: *VM50/ND_WP 24Vdc ED15%*