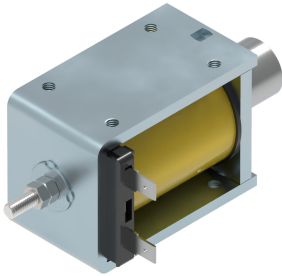


● ER 60-20/C TYPE



**Cables version:**  
● ER60-20/CC

s = 1x1mm<sup>2</sup>  
L = 250mm

Protection rate: **IP00**  
Insulation class: **B (130°C)**  
Reference cycle: **5 minutes**  
Standard stroke (s): **20 mm**  
Temperature rise "ΔV<sub>31</sub>": **70°C**  
Working temperature: **-10 to 45°C**  
Work: **Push / Pull**

**Release spring** will be incorporated by defect

Standard spring force:  
Fs(s=0mm) = 4.3N  
Fs(s=20mm) = 2.1N

(ED) Duty-cycle ED(%)	100	40	25	15	5
(P20) Power at 20°C (W)	18	45	70	110	280
(Fm) Solenoid force (N) 1)	9.2	16.7	21.6	28.5	50
Max time under voltage(s)	Inf	120	75	45	15
Opening time (ms) 2)	196	143	135	120	117
Release time (ms) 3)	126	95	90	81	80
Plunger weight (Kg)	0.117				
Solenoid weight (Kg)	0.650				

1) Fm Solenoid force is given according to VDE0580 without deducting the spring force or the plunger weight if vertical mounting.

2) Time is given on these conditions: Coil supplied under nominal voltage ; Stabilized in it's working temperature ; Load 70% of the solenoid force ; Horizontal assembly ; Standard stroke initial position; 20°C ambient temperature.

3) Time is given on these conditions: Standard spring ; without load on shaft ; Horizontal assembly ; Standard stroke initial position.

Duty-cycle ED%	Standard voltages								Under demand				
	VDC								VDC		VAC		
	6	12	24	48	100	125	205	110	230	Min	Max	Min	Max
100	x	o	o	o	o	o	o	o	o	7	230	48	230
40	x	o	o	o	o	o	o	x	o	11	230	125	230
25	x	x	o	o	o	o	o	x	o	13	230	200	230
15	x	x	o	o	o	o	o	x	x	16	230	x	x
5	x	x	o	o	o	o	o	x	x	24	230	x	x

Layout: o = Available ; x = Unavailable

- Voltage under demand: They can be manufactured at voltages between the maximum and minimum voltage values shown in the chart.

- To feed in alternating current the solenoid will have a rectifier incorporated in the coil.

- The duty cycles described in the chart are standard, they can be manufactured in any intermediate value.

- If any customization from the original is needed, please ask us.

- Earthing is recommended if the metallic parts are accessible.

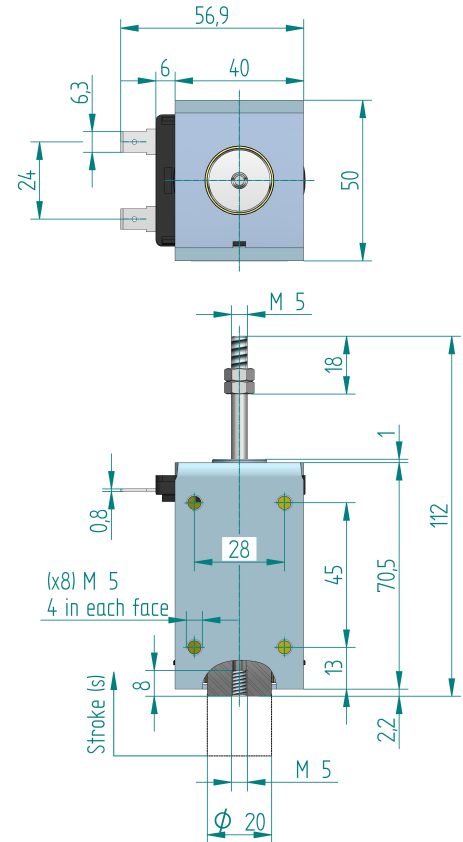
**Ordering code:** ER60-20/C --V ED---% - Spring

Voltage: 24Vdc; Duty cycle: ED100%; With spring:  
ER60-20/C 24Vdc ED100% RS

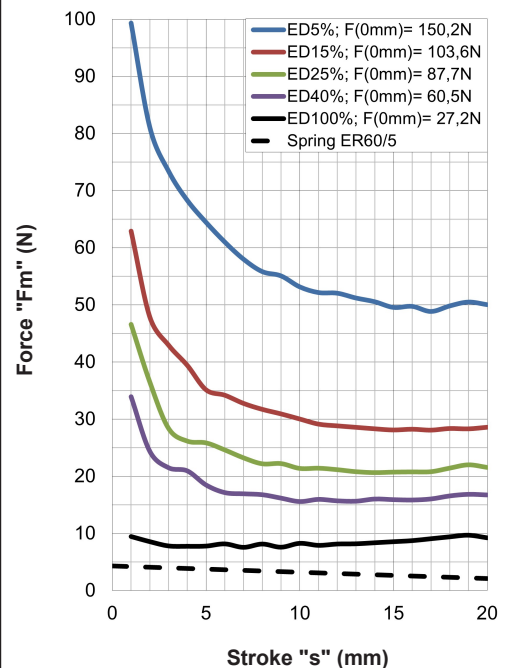
Voltage: 48Vdc; Duty cycle: ED15%; Without spring:  
ER60-20/C 48Vdc ED15% RN

Spring yes: RS ; Spring no: RN

Solenoid under voltage (s=0mm position)



Force-stroke curve



Calculation of the effective force: see pages 1 and 10

For fixation and mounting positions: see page 10