

7 - ELECTRICAL FEATURES

7.1 - Solenoids

These are essentially made up of two parts: tube and coil. The tube is threaded into the valve body and includes the armature that moves immersed in oil, without wear. The inner part, in contact with the oil in the return line, ensures heat dissipation. The coil is fastened to the tube by a threaded ring, and can be rotated 360°, to suit the available space.

Protection from atmospheric agents IEC 60529

The IP protection degree is guaranteed only with both valve and connectors of an equivalent IP degree, correctly connected and installed.

electric connection	electric connection protection	whole valve protection
K1 EN 175301-803 (ex DIN 43650)	IP65	IP65
K2 AMP JUNIOR	IP65/67	
K7 DEUTSCH DT04 male	IP65/67	

SUPPLY VOLTAGE FLUCTUATION	± 10% Vnom
MAX SWITCH ON FREQUENCY	18.000 ins/hr
DUTY CYCLE	100%
ELECTROMAGNETIC COMPATIBILITY (EMC) (NOTE)	In compliance with 2014/30/EU
LOW VOLTAGE	In compliance with 2014/35/EU
CLASS OF PROTECTION : Coil insulation (VDE 0580) Impregnation: DC valve AC valve	class H class F class H

NOTE: In order to further reduce the emissions, with DC supply, use of type H connectors is recommended. These prevent voltage peaks on opening of the coil supply electrical circuit (see cat. 49 000).

7.2 - Current and absorbed power for DC solenoid valve

The table shows current and power consumption values of the DC coils.

Using connectors type "D" (see cat. 49 000) with embedded bridge rectifier it is possible to feed DC coils (starting from 48V voltage) with alternating current (50 or 60 Hz), considering a reduction of the operating limits (see diagram at section 6.4).

Coils for direct current (values ± 10%)

	Nominal voltage [V]	Resistance at 20°C [Ω]	Current consumpt. [A]	Power consumpt [W]	Coil code		
					K1	K2	K7
D12	12	4,4	2,72	32,7	1903080	1903100	1902940
D14	14	7,2	1,93	27	1903086		
D24	24	18,6	1,29	31	1903081	1903101	1902941
D28	28	26	1,11	31	1903082		
D48	48	78,6	0,61	29,5	1903083		
D110	110	423	0,26	28,2	1903464		
D125	125	550	0,23	28,6	1903467		
D220	220	1692	0,13	28,2	1903465		

7.3 - Current and absorbed power for AC solenoid valve

The table shows current and power consumption values at inrush and at holding, for AC coils.

Coils for alternating current (values ± 5%)

Suffix	Nominal Voltage [V]	Freq. [Hz]	Resistance at 20°C [Ω]	Current consumption at inrush [A]	Current consumption at holding [A]	Power consumption at inrush [VA]	Power consumption at holding [VA]	Coil Code K1
A24	24	50	1,69	5,81	1,32	139	32	1902830
A48	48		6,02	3,78	0,86	182	41	1902831
A100	100V-50Hz 100V-60Hz	50/60	23,3	2,11	0,48	211	48	1902836
				1,63	0,37	163	37	
A110	110V-50Hz 120V-60Hz		1,76	0,40	194	44	1902832	
			1,54	0,35	185	42		
A230	230V-50Hz 240V-60Hz		135	0,92	0,21	213	48	1902833
				0,79	0,18	190	43	
F110	110	60	28,5	1,45	0,33	160	36	1902834
F220	220		103	0,92	0,21	203	46	1902835