

COIL CHARACTERISTICS

Coils in the catalogue pages are identified by their electrical characteristics such as:

- "Coil insulation class", generally F or H;
- Type of "Connector", mostly with a spade plug or flying lead;
- "Connector specification" with applicable standards;
- "Electrical safety" to IEC 335 / EN 60730-1 standard
- "Electrical enclosure protection": epoxy moulded coil and ingress protection rating of, generally, IP65 or IP67 to EN 60529/ IEC 529
- Available "Standard voltages": for details see "Standard voltages" on the following page;

A table with:

- "power ratings" (Pn):

For alternating current (~),

. the **inrush** power expressed in VA (Volt-Amps),

. the **holding** power expressed in VA and W,

For direct current (~) coils,

. the power rating in the **hot** state (coil under continuous duty) and in the **cold** state (at inrush of power)

- The min./max. values of the solenoid **operator ambient temperature range** (including the influence of the fluid temperature within the minimum and maximum limits given on the catalogue pages).

Example:

prefix option	power ratings				operator ambient temperature range (TS) (C°)	replacement coil		type ⁽¹⁾
	inrush	holding	hot/cold	=		~	=	
	(VA)	(VA) (W)	(W)	(W)		230 V/50 Hz	24 V CC	
SC	34	15,6	6	7 / 9,7	-20 to + 75	400325-117	400325-142	01
	30	22,5	9	9,5/15,3	-20 to + 50	400325-217	400325-242	01

COIL IDENTIFICATION

ASCO offers coils in the following main sizes:

- **XM5, M6, MXX, M12**
- **CM22, C22, C22A, C25A, CM25, JMX, ANX, AMX, BMX**

Please note: Posiflow solenoid valves (Section B) have special coils, please contact us for details.

Coil sizes can be identified from the power ratings given in the table under "Electrical characteristics" on the catalogue pages.

For an example, see Section C, page V313:

prefix option	power ratings				operator ambient temperature range (TS) (C°)
	inrush	holding	hot/cold	=	
	(VA)	(VA) (W)	(W)	(W)	
SC	5	23	10,5	9/ 11,2	-20 to + 75
	78	35	16,7	-	-20 to + 50
	110	33,6	15,4	-	-20 to + 75
	240	43	20	16,8/ 23	-20 to + 50

See corresponding values in the table of AC nominal power ratings

See corresponding cold-state values in the table of DC nominal power ratings

The nominal power ratings (Pn) on the catalogue pages are indicated in bold letters (see tab. A). They allow you to identify the coil size.

power ratings (Pn)													tab. A														
holding power (W)						cold state (W)																					
alternating current (AC) ~						direct current (DC) =																					
Pn (W)	solenoid size								Ref. ⁽²⁾	Pn (W)	solenoid size								Ref. ⁽²⁾								
	XM5	M6	MXX	M12	CM22	C22A	C25A	CM25			JMX	ANX	AMX	BMX	XM5	M6	MXX	M12		C22	C22A	C25A	CM25	JMX	ANX	AMX	BMX
insulation class F (155°C)																											
1,2 ¹⁾													1,3														
1,5 ¹⁾													1,7														
1,5 ¹⁾													1,8														
2,5													3														
2,5 ⁷⁾													3 ⁷⁾														
3,5 ¹¹⁾													3 ¹⁰⁾														
3,7 ¹⁾													3,6														
4 ⁴⁾													5,5 ⁴⁾														
4													5,7														
4 ⁸⁾													6,9 ⁸⁾														
5 ⁹⁾													5 ⁹⁾														
5,8 ¹⁾													6,9														
6													7 ¹¹⁾														
6 ³⁾													8,6														
6 ³⁾													9 ⁶⁾														
6,3													9,7														
8 ⁶⁾													10,7														
8 ⁵⁾													10,8 ⁵⁾														
8,1 ¹²⁾													11														
9													11,2														
10 ¹⁾													11,6 ¹²⁾														
10,1 ¹²⁾													14														
10,5													15,3														
10,8 ¹⁾													16,8														
11,1 ¹²⁾													19,7														
13,4 ¹⁾													23														
15,4																											
16,5																											
16,7																											
17,1 ¹²⁾																											
20																											
insulation class H (180°C)													insulation class H (180°C)														
4 ⁴⁾													5,5 ⁴⁾														
6													9,7														
9													10,6 ¹²⁾														
10,5													11,2														
15,4													11,6 ¹²⁾														
16,7													13,3														
20													15,3														
													16,8														
													17,4														
													18,6 ¹²⁾														
													19,7														
													20,8														
													22,6 ¹²⁾														
													23														
													26,6														
													29,5														

- 1) Rectified coil construction.
- 2) Additional reference identification letter for coil types: XM5, M6, MXX, M12 (Example: FT, FB, FF, HT)
- 3) Section H, series 340, page V901-21
- 4) Series 238 (...C..., page V316) and 256/356 1/8-1/4
- 5) Section C/series 272 and Section E/series 374-370
- 6) Section C/series 238, page V316
- 7) Section C/series 108, page V295; Sect. D/series 189/banjo, page V439; Sect. E/series 189-109, pages V585-V590.
- 8) Section C/series 238, page V316 (type 01)
- 9) Series 256/356, 238, 552/553
- 10) Section E/series 189, page V585 (type 06): M12 connection
- 11) Series 238 (...C..., page V316) and 256/356 1/4
- 12) Series 262/263/314 (pages V223/V253/V542)

COIL IDENTIFICATION

238 0 10 - 0 0 0 - D

238 ← BASIC NUMBER

SIZE, SERVICE & CLASS

1	2	3	4	5	6	7	8	9
MXX AC class F	M6 AC class F	M6 DC class F	M6 AC class H	M6 DC class H	MXX/M12 AC class F	MXX DC class F	MXX/M12 AC class H	MXX DC class H

TYPE / CONSTRUCTION

0	1	2	3	4
leaded	-	spade terminal	spade plug (DIN / Europe)	leaded explosionproof (EF)

INSULATION CLASS / TEMPERATURE CLASS

0	1	2	3	4	5	6	7	8	9
FT, HT	FB, HB	FF, HF	HC	HP	-	-	-	foreign winding	(*)

02	06	10	12	14	16	27	29	31	33	35	37	51	53	55	57	59	63	81	83
12	24	32	36	42	48	100	110	115	120	125	127	200	208	220	230	240	277	380	400

50 Hz

01	05	09	11	13	15	26	28	30	32	34	36	50	52	54	56	58	62	80	82
12	24	32	36	42	48	100	110	115	120	125	127	200	208	220	230	240	277	380	400

60 Hz

02	03	04	05	06	08	10	12	13	15	17	18	20	21	31	32	33	34	50	52
6	9	12	15	24	28	32	36	38	42	48	50	60	64	100	110	115	120	220	230

DC (=) VOLTAGE

A	B	C	D	E	F	G	H	J	K
			457						1829
			18						72

CABLE LENGTH

(mm)

(inch)

Standard

(*) Customer special



CATALOGUE NUMBERS OF REPLACEMENT COILS

	24 V =	48 V =	24 V ~	48 V ~	115 V ~	230 V ~
M6-HT	238513-006	238513-017	-	-	-	-
M6-FT	-	-	238213-006	238213-016	238213-033 ^(b)	238213-059 ^(a)
M6-HB	238513-106	238513-117	-	-	-	-
M-6-FB	-	-	238213-106	238213-116	238213-133 ^(b)	238213-157
MXX-HT	238913-006	238913-017	-	-	-	-
MXX-FT	238713-006	238713-017	238613-006	238613-016	238613-033 ^(b)	238613-059 ^(a)
MXX-HB	238913-106	238913-117	-	-	-	-
MXX-FB	-	-	238613-106	238613-116	238613-133 ^(b)	238613-159 ^(a)

All 238 basic numbers are UL/CSA approved as standard and are marked with the relevant logos.

^(a) 230 V/50 Hz - 250 V/50 Hz

^(b) 115 V/50 Hz - 120 V/50 Hz

SPADE PLUG CONNECTION COIL Example: 238513-006 CM6-HT-24 DC	SPADE PLUG CONNECTION COIL Example: 238613-059 CMXX-FT-230 AC
	

All leaflets are available on: www.asco.com