

TABLE SHOWING HOW TO ORDER & REPLACE COIL & ENCLOSURE (ORDER OUT REPLACEMENT COIL & ENCLOSURE).

 <p>SERIES : M50 RD GP GP-IP-20 (General Purpose enclosure) (Order out only coil, Ref. M50-RD-GP)</p>	 <p>SERIES : M45-1/6 RD GP GP-IP-20 (General Purpose enclosure) (Order out only coil, Ref. M45-1/6-RD-GP)</p>	 <p>SERIES : M35 SQ GP GP-IP-20 (General Purpose Square coil) (Order out coil, connector and gasket)</p>
 <p>SERIES : M50 RD WP-67 WP-67 (Weatherproof enclosure) (Order out only coil, Ref. M50-RD and Kit)</p>	 <p>SERIES : M45-1/6 RD WP-67 WP-67 (Weatherproof enclosure) (Order out only coil, Ref. M45-1/6-RD and Kit)</p>	 <p>SERIES : M35 SQ WP-65 WP-65 (Waterproof Square coil) (Order out coil, connector and gasket)</p>
 <p>SERIES : M50 FLP IIC (Dust tight, Dustproof, Waterproof, Flame/Explosionproof enclosure) (Order out complete enclosure)</p>	 <p>SERIES : M45-1/6 FLP IIC (Dust tight, Dustproof, Waterproof, Flame/Explosionproof enclosure) (Order out complete enclosure)</p>	 <p>SERIES : M22 SQ GP/WP (Order out coil, Ref. M22 SQ GP)</p>
 <p>SERIES : M50 SQ GP GP-IP-20 (General Purpose Square coil) (Order out coil, connector and gasket)</p>	 <p>SERIES : M45-1/6 SQ GP GP-IP-20 (General Purpose Square coil) (Order out coil, connector and gasket)</p>	 <p>SYSTEM 8 EXIB IIC-T6 (Order out coil, refer system 8 EXIB IIC-T6)</p>
 <p>SERIES : M50 SQ WP-67 WP-67 (Waterproof Square coil) (Order out coil, connector and gasket)</p>	 <p>SERIES : M45-1/6 SQ WP-67 WP-67 (Waterproof Square coil) (Order out coil, connector and gasket)</p>	
 <p>SERIES : M36 SQ WP-67 WP-67 (Waterproof Square Coil) (Order out coil, connector and gasket)</p>		 <p>SERIES : M45-1/6 SQ Eex "m" IIC-T6 (Eex "m" Encapsulated enclosure) (Order out complete enclosure)</p>

HAZARDOUS AREAS

Where a solenoid valve is required for a hazardous area, AVCON can supply valves with CIMFR approved flameproof or explosionproof solenoid enclosures which ensure that an electrical spark inside the solenoid enclosure is confined to the space inside the solenoid enclosure.

All AVCON valves for hazardous areas are marked with approval certificate number and the duty for which the equipment has been designed and certified.

1. International Hazardous Area Classification Apparatus Groups

Typical Hazard	UK/ CENELEC/ IEC/ IS 2148	BS 1259 (Obsolete)	North America
Acetylene	IIC	2I	Class I Group D
Hydrogen	IIC	2e	Group B
Ethylene	IIB	2d	Group C
Propane	IIA	2c	Group D
Ammonia	IIA	2a	
◆Methane	I	I	Group D
Dusts			Class II
Fibres			Class III

◆Mining Application

2. International Standards-Temperature Classification

IEC 79-8 & CENELEC		American NEC	
Class	Max. Surface Temp(0°C)	Class	Max. Surface Temp(0°C)
T1	450	T1	450
T2	300	T2	300
		T2A	280
		T2B	260
		T2C	230
		T2D	215
T3	200	T3	200
		T3B	165
		T3C	160
T4	135	T4	135
T5	100	14A	120
T6	85	T5	100
		T6	85

3. Gas and Vapour Grouping and Classification

UK+CENELEC BS 5501 Part1+ 5 EN 50014,EN50018 IS 2148	IEC	Germany VDE0117	USA NEC	Typical Gases & Vapour
IIA	IIA	1	Group D	Propane, Butane, Ethane, Acetic acid, Acetone Methanol, Toluene.
IIB	IIB	2	Group C	Ethylene, Coke Oven Gas, Ethylene Oxide
IIC	IIC	3a3b3c3d	GroupB+A	Hydrogen, Acetylene Carbon Disulphide

4. Zones and Division-Define the likelihood of the hazard being present in potentially explosive concentrations

UK/ CENELEC/ IEC		USA & CANADA	
Hazard Continuously Present(>1000 Hrs./Year)	Zone 0	Division 1	Hazard likely to be present NB. Where the hazard is continuously present, electrical apparatus is avoided if possible. Intrinsically safe equipment may be used if not.
Hazard likely to be present	Zone 1		
Hazard unlikely to be present typically only for short periods or Under fault conditions(<100 Hrs./Year)	Zone 2	Division 2	Hazard likely to be present-likely to be confined. An area adjacent to a Division 1 area.
Fully defined in BS 5345 and IEC 79-10(Guideline figures)		Fully described in Article 500 of the National electrical Cods.	

5. Area Classification

Zone	Definition	Type of Protection	American NEC	NEMA Standard
0	Explosive air/gas continuously present	Extr cr Exs -Zone 0	Class 1 Division 1	NEMA7(C+D)
1	Explosive air/gas likely to be present	Exd. Or VDE0171	Class Division 1	NEMA7 (C+D)
2	Explosive air/gas present for short periods	Any of the above	Class 1 Division 2	NEMA9(E,F+G)

Tables 1 to 5 - Source Alcon (UK) literature.

Standard Of Protection For Electrical Housings As per IS 12063-1987 IP-67.

The letters II degree of protection followed by 2 figures e.g. IP 54

The figures shows the standard of protection of the energised parts and internal moving parts against penetration by foreign object.

The second figure shows the standard of protection against penetration by liquids.

IP	1st figure	Abridged definition	2nd figure	Abridged definition	IP	1st figure	Abridged definition	2nd figure	Abridged definition
IP	0	No Protection.	0	No Protection.	IP	4	Protection against Solid bodies greater than 1 mm.	4	Protection against cascading water.
IP	1	Protection against Solid bodies greater than 50 mm.	1	Protection against vertical drops of water.	IP	5	Protection against dust.	5	Protection against water jets.
IP	2	Protection against Solid bodies greater than 12 mm.	2	Protection against drops of water upto 15°angle from vertical.	IP	6	Dust tight.	6	Protection against sea water or similar.
IP	3	Protection against Solid bodies greater than 2.5 mm.	3	Protection against rain.	IP	-	-	7	Protection against effect of immersion.
					IP	-	-	8	Can be operated under water.

Note:

Technical specifications, details & dimensions are subject to change without prior notice. Dimensions in the table are approximate subject to final confirmation by AVCON.