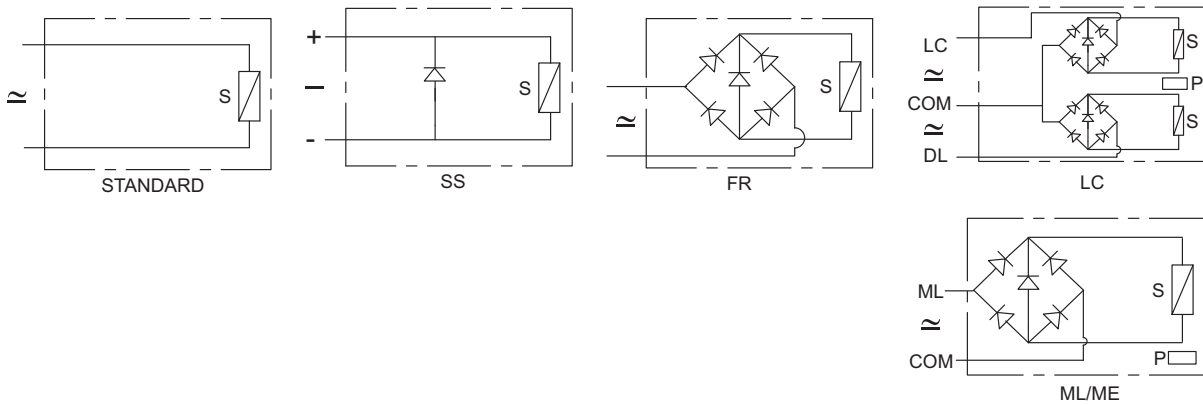


**EXPLOSION PROOF SOLENOID TYPE : 37 & 39**

**Ex d**

**CIRCUIT DIAGRAM**



**FEATURES**

- Designed for extreme environmental condition
- With Integrated terminal box and Horizontal cable entry
- Large terminals for easy connections
- Constructed for lowest temperature rise thus longer life
- 'O' Energiser for higher magnetic linkage
- Wider voltage variation
- Surger Suppressor Provided
- Dual gasket



**SPECIFICATION**

<b>Size</b>	I- 14 mm, II- 18 mm, III- 13 mm, III & IV - 14 mm
<b>Voltage</b>	6 V, 12 V, 24 V, 48 V, 110 V, 120 V, 220 V, 256 V
<b>Current</b>	50 Hz, 60 Hz, DC, 50/ 60/ DC
<b>Enclosure</b>	<b>Cable Entry</b> M25X1.5, Adopted to M20X1.5 or 1/2" NPT ((INDIAN Approval) M20X1.5, 1/2" NPT (37-01, 39-01) (Other than INDIAN Approval) <b>Material</b> Aluminum Cast, Polyster Powder coat, Colour Red Stainless Steel Cast, Painted Optionally Grey Polyster Powder coat
<b>Options</b>	Corrosive Envirnment (CO), Manual Reset ON (MR ON), Manual Reset OFF (MR OFF), Low Power (LW), Latch (LC), Surger Suppressor(SS), Fully Rectified (FR)
<b>Power</b>	Refer to table "Power" on page 428A
<b>Insulation Class</b>	Class F optionally Class H (INDIAN Approval) Class H (Other than INDIAN Approval)
<b>Weather Protection</b>	IP66, IP67, IP67M (Refer marking on page 429C)
<b>Approval</b>	INDIAN, ATEX, CU-TR, INMETRO, CCOE, DGMS, SIL
<b>Voltage Variation</b>	Refer to Voltage Variation table on page 429B
<b>Duty Cycle</b>	100% (ED)
<b>Ambient Temperature</b>	Refer to Ambient temperature table on page 429C

**WEIGHT IN kg**

Size	Al	SS
I	0.5	0.8
II	0.8	1.6
III	0.6	1.4
IV	0.8	1.6

**APPLICATION**



**EXPLOSION PROOF SOLENOID TYPE : 37**

Ex d

**POWER**

Voltage	Solenoid		Power (VA)							
	Size	Core Dia	0.4②	1.8②	3.5	5	8	12	13	30
6	I	14					▲			
	II	18					✓		▲	
	III	13	✓							
	III	14		✓	✓		▲			
	IV	14		✓						
12	I	14		✓③			▲	▲		
	II	18					✓		▲	✓
	III	13	✓							
	III	14		✓	✓		▲			
	IV	14		✓						
24	I	14		✓③			▲	▲		
	II	18					✓		▲	✓
	III	13	✓							
	III	14		✓	✓	✓	▲			
	IV	14		✓						
48	I	14		✓③			▲	▲		
	II	18							▲	✓
	III	14		✓	✓		▲			
	IV	14		✓						
110-120	I①	14				✓③		▲		
	II	18					✓		▲	✓
	III	14			✓	✓	▲			
220-240	I①	14		✓③				▲		
	II	18					✓		▲	✓
	III	13								
	III	14				✓	▲			
256②	II	18					✓		▲	✓
	III	14					▲			
440④	III	14						▲		

- ▲ Standard
- ✓ Optional Available

- ① Current 50 Hz or 60 Hz
- ② Only for DC Current
- ③ Should be Opted for 3/2 & 5/2 pilot operated valve
- ④ Current 50 Hz only

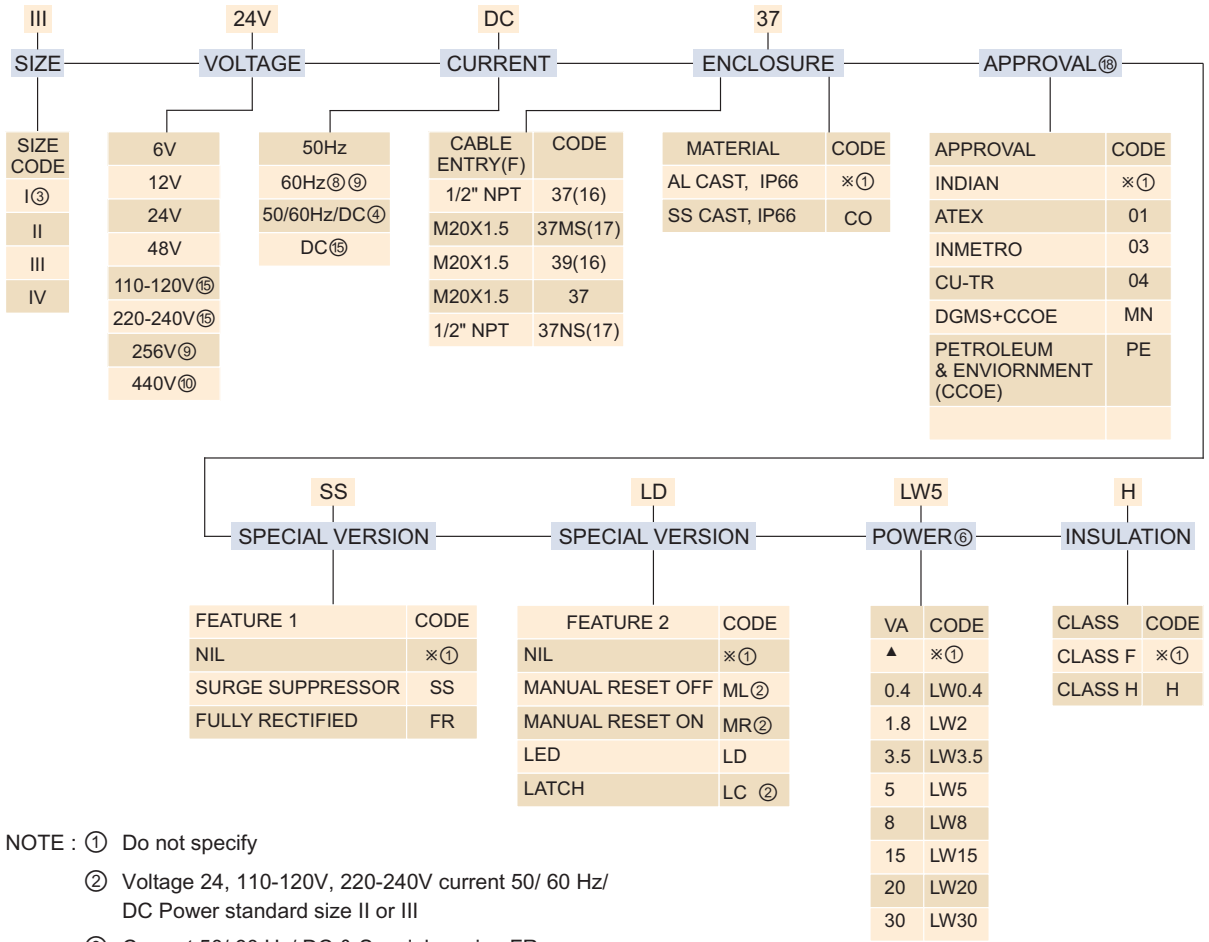
**STANDARD POWER**

Size	Current	Standard Power W, VA
I	AC	6, 12
	DC	8, 8
II	AC	13, 13
	DC	13, 13
III	AC	6, 12
	DC	8, 8

**EXPLOSION PROOF SOLENOID TYPE : 37**

**Ex d**

**SOLENOID ORDERING CODE III-24V-DC-37-CO-SS-LD-LW5-H**



- NOTE :**
- ① Do not specify
  - ② Voltage 24, 110-120V, 220-240V current 50/ 60 Hz/ DC Power standard size II or III
  - ③ Current 50/ 60 Hz/ DC & Special version FR can not be opted
  - ④ Select special version FR
  - ⑤ Refer Power table on page 429A
  - ⑥ 110-120V 50 Hz Solenoid can be used for 110V 50 Hz, 120V 60 Hz
  - ⑦ 220-240V 50 Hz Solenoid can be used for 240V 60 Hz, 220-240V 50 Hz
  - ⑧ 50 Hz current, Size III only
  - ⑨ Current DC size II, III
  - ⑩ Other than INDIAN approval
  - ⑪ INDIAN approval, supplied with Ex Adopter
  - ⑫ Add SL for SIL capable certified coil

**VOLTAGE VARIATION** (For Continuous Duty only)

Rated Voltage	Operating Voltage
6	4.8V to 7.2V
12	9.6V to 14.4V
24	19.2V to 28.8V
48	38.4V to 57.6V
110-120	88V to 132V
220-240	176V to 264V
256	205V to 280V
440	350V to 480V

**APPROVAL**

Approval	certifying Agencies	reference Number
INDIAN	CMRI	KLPL/Ex/R/12-007
	KLPL (Re-Validated)	CMRI/TC/P/H-1415
BIS INDIAN		7229976
CCOE/ PESO INDIAN		P-218046/1
DGMS INDIAN		230 of 2011
EUROPEAN/ ATEX	CESI, Italy	CESI 03 ATEX 344
		Extension No. 01/12
INMETRO	CEPEL	CEPEL 08-1717X
CU-TR		RU C-IN.ГБ08.В.01100



## EXPLOSION PROOF SOLENOID TYPE : 37 & 39

Ex d

### MARKING

Marking	Ambient Temperature
ATEX	
II 2GD Ex d IIC T6 Gb Ex tb IIIC T80 °C Db IP66	- 40 °C ≤ Ta < 35 °C
II 2GD Ex d IIC T5 Gb Ex tb IIIC T95 °C Db IP66	- 40 °C ≤ Ta ≤ 50 °C
II 2GD Ex d IIC T4 Gb Ex tb IIIC T130 °C Db IP66	- 40 °C ≤ Ta ≤ 60 °C
INDIAN, CCOE/PESO, DGMS Refer to Table for Ambient Temp.	
Ex d IIC Tx IP67	- 20 °C ≤ Ta ≤ AA °C
INMETRO	
II 2GD Ex d IIC T6 Gb Ex tb IIIC T85 °C Db IP66	- 40 °C ≤ Ta < 35 °C
II 2GD Ex d IIC T5 Gb Ex tb IIIC T100 °C Db IP66	- 40 °C ≤ Ta ≤ 50 °C
II 2GD Ex d IIC T4 Gb Ex tb IIIC T135 °C Db IP66	- 40 °C ≤ Ta ≤ 60 °C
CU-TR	
1 Ex d IIC T6 Gb X/Ex tb IIIC T80 °C Db	- 40 °C to 35 °C
1 Ex d IIC T5 Gb X/Ex tb IIIC T95 °C Db	- 40 °C to 50 °C
1 Ex d IIC T4 Gb X/Ex tb IIIC T130 °C Db	- 40 °C to 60 °C

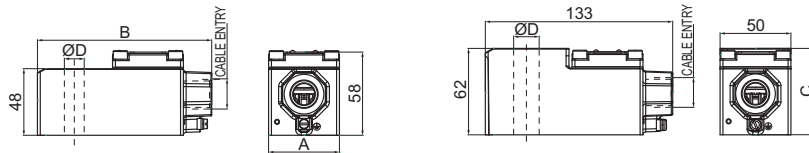
### AMBIENT TEMPERATURE

(INDIAN Approval)

SIZE	MAX. POWER	MAX. AMBIENT TEMP. °C		
		T6 (80)	T5 (95)	T4 (130)
I	5	65	70	-
	8	60	70	-
III	5	70	-	-
	8	60	70	-
	15	50	65	70
II	8	65	70	-
	10	60	70	-
	13	60	70	-
	20	55	70	-
	30	40	55	70
IV	5	70	-	-
	11	65	70	-

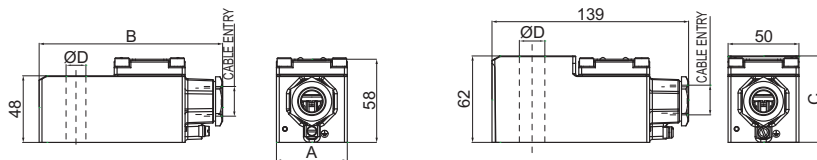
### DIMENSION

### SOLENOID TYPE : 37 & 39



SIZE	A	B	ØD	COIL TYPE	CABLE ENTRY	APPROVAL INDIAN	OTHER THAN INDIAN	SIZE	C	ØD
I	42	116	14	37	M25X1.5(F)	✓		II	61	18
III	50	124	14	37	1/2"NPT(F)		✓	IV	51	14
III	50	124	13	39	M20X1.5(F)		✓			
				37NS	1/2"NPT(F)	✓				
				37MS	M20X1.5(F)	✓				

### CABLE ENTRY M20X1.5, 1/2" NPT(F) (With Ex Adaptor) (INDIAN Approval)



SIZE	A	B	ØD	COIL TYPE	CABLE ENTRY	APPROVAL INDIAN	SIZE	C	ØD
I	42	122	14	37	1/2"NPT(F)	✓	II	61	18
III	50	130	14	39	M20X1.5(F)	✓	IV	51	14
III	50	130	13	37MS	M20X1.5(F)	✓			
				37NS	1/2"NPT(F)	✓			

### OBSELETE PRODUCTS AND ITS INTERCHANGEABILITY

<p>Replace Solenoid code 37 or 37MS along with Guide &amp; Plunger assembly</p>	<p>Replace Solenoid code 37 or 37MS along with Guide &amp; Plunger assembly</p>	<p>Solenoid code 39 replace with Solenoid code 37MS</p>		
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