

### FEATURES

- Operators intended for use in potentially explosive dust atmospheres in compliance with ATEX-Directive 94/9/EC
- Compliance with the Essential Health and Safety Requirements has been assured by compliance with European Standards **EN 50014** and **EN 50281-1-1**
- The assembly consisting of the coil and connector has IP65 protection
- CM22/C22A coils are equipped with a size 22 spade plug connector with cable gland (cable diameter 6 to 8 mm) or a 2 m flying lead; CM25 and CM30 coils have size 30 spade plug connectors to ISO 4400 and a cable gland (cable diameter 6 to 10 mm) or a 2 m flying lead
- The coils can be fitted to the following valves:
  - Type CM22: series 108, 109, 189 189 banjo and 238 solenoid valves, series 551 solenoid spool valves
  - Type C22A: series 256, 356 and 238 solenoid valves (except 256-356 manifold versions)
  - CM25: series 190 and 238 solenoid valves, series 552-553 solenoid spool valves
  - Type CM30: series 192 solenoid valves



### CONSTRUCTION

<b>Coil</b>	CM22/C22A/CM25	Moulded epoxy resin or thermoplastic encapsulant
	CM30	Moulded epoxy resin encapsulant
<b>Connector enclosure</b>	All	Glass-filled polyamide
<b>Connector specification</b>	CM22/C22A	DIN 43650, 11 mm, industry standard B
	CM25/CM30	ISO 4400 / EN 175301-803, form A
<b>Spade plug connector</b>	CM22/CM22A	Cable diameter 6 to 8 mm or cable outlet
	CM25/CM30	Cable diameter 6 to 10 mm or cable outlet
<b>Wire cross-section</b>	All	1,5 mm <sup>2</sup>
<b>Electrical enclosure protection</b>	All	IP65 (EN 60529)
<b>Safety code</b>	All	⊕ II 3 D IP65 T 85°C to T 135°C

### ELECTRICAL CHARACTERISTICS

<b>Standard voltages</b>	DC (=) : 24V - 48V
(Other voltages and 60 Hz on request)	AC (-) : 24V - 48V - 115V - 230V / 50 Hz

### TEMPERATURE CLASSIFICATION TABLES

#### AC (~) Solenoids

Pn (watt)	solenoid size				maximum ambient °C <sup>(1)</sup> surface temperature			
	CM22	C22A	CM25	CM30	85°C	100°C	135°C	200°C
	insulation class F (155°C) 100% E.D.							
2,5	•				40	60		
3			•		40	60		
4	•				25	40	60 <sup>(2)</sup>	
4 <sup>(4)</sup>		•			25	40	60	
4			•			25	60	
5			•		25	40	60 <sup>(3)</sup>	

#### DC (=) Solenoids

Pn (watt)	solenoid size				maximum ambient °C <sup>(1)</sup> surface temperature			
	CM22	C22A	CM25	CM30	85°C	100°C	135°C	200°C
	insulation class F (155°C) 100% E.D.							
2,5/3	•				40	60		
3/3,5			•		40	60		
5/6,9	•					25	60 <sup>(2)</sup>	
4,5/5,5 <sup>(4)</sup>		•				25	60	
5/6			•		25	40	60	
5/6,9			•		25	40	60 <sup>(3)</sup>	

Check the wattage compatibility with the product selected.

<sup>(1)</sup> The minimum allowable ambient temperature is -25°C for the operator. Actual temperature range can be limited depending on valve operation limits.

<sup>(2)</sup> Only for series 238 and 551.

<sup>(3)</sup> Only for series 238, 552 and 553.

<sup>(4)</sup> Only for series 256, 356 and 238 (except manifold versions).

### SPECIFICATION

designation	option code <sup>(1)</sup>	
<b>With cable gland connector</b>	(Versions A and B) <b>DU</b>	
Complete solenoid valve equipped with a type CM22, C22A, CM25 or CM30 coil + spade plug connector with cable gland		
<b>With flying lead connector</b>	(Version A)	(Version B)
Complete solenoid valve equipped with:		
a type CM22/C22A coil and spade plug connector size 22 with lead (2 m lead)	<b>DU .. 660518</b>	<b>DUX .. TPL 20651</b>
a type CM25 or CM30 coil and spade plug connector size 30 with lead (2 m lead)	<b>DU .. 660519</b>	<b>DUX .. TPL 20651</b>

<sup>(1)</sup> Applicable for the complete catalogue number of a solenoid valve including coil and connector.

### ORDERING EXAMPLES:

version A Series 108, 109, 189, 189 banjo, 190, 192, 541 compact and 551		version B Series 238, 256, 356, 551, 552 and 553	
<b>With cable gland connector</b>			
<b>DU</b> 18900032 . 230V / 50 Hz <b>DU</b> 18900001 . 24V / DC <b>DU</b> 19200002 . 115V / 50 Hz <b>DU</b> 55102005 . 230V / 50 Hz	option code for ATEX compliance solenoid valve catalogue number	voltage	<b>SC DU</b> E238A001 . 230V / 50 Hz <b>SC DU</b> G256A002VMS . 115V / 50 Hz <b>SC DU</b> G356A001VMS . 230V / 50 Hz <b>SC DU</b> G551A001MS . 230V / 50 Hz
		option code for ATEX compliance (prefix)	voltage
<b>With flying lead connector</b>			
<b>DU</b> 18900032 . <b>660518</b> . 230V / 50 Hz <b>DU</b> 18900001 . <b>660518</b> . 24V / DC <b>DU</b> 19200002 . <b>660519</b> . 115V / 50 Hz <b>DU</b> 55102005 . <b>660518</b> . 230V / 50 Hz	option code for ATEX compliance solenoid valve catalogue number	voltage option code connector with lead	<b>SC DU X</b> E238A001 . <b>20651</b> . 230V / 50 Hz <b>SC DU X</b> G256A002VMS . <b>20651</b> . 115V / 50 Hz <b>SC DU X</b> G356A001VMS . <b>20651</b> . 230V / 50 Hz <b>SC DU X</b> G551A001MS . <b>20651</b> . 230V / 50 Hz
		option code for ATEX compliance (prefix)	voltage option code connector with lead

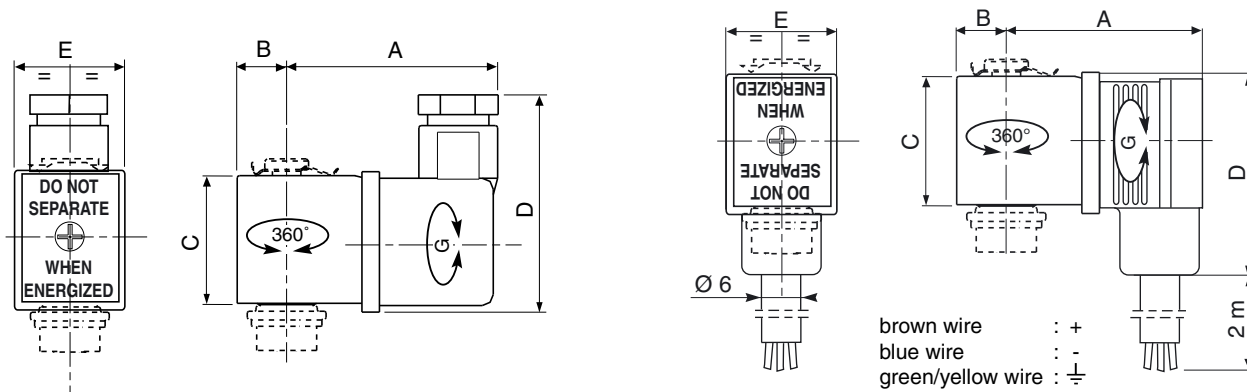
### INSTALLATION

- The package consists of the solenoid valve, the coil (installed) and the connector (not installed)
- The coil is provided with an earthing connection
- The operator can be rotated through 360° to select the most favourable position for cable entry
- Easy connection with spade plug connector
- Installation/maintenance instructions are included with each coil

### DIMENSIONS (mm), WEIGHT (kg)



**TYPE DU**  
 "DU" Solenoid  
 EN 50281-1-1  
 IP65 / II 3 D IP65 T 85°C to T 135°C



solenoid size + connector	A	B	C	D	E	G	weight <sup>(1)</sup>
CM22/C22A + cable gland connector	48,5	11,5	29	49	22	180°	0,077
CM22/C22A + flying lead connector	42	11,5	29	47	22	0°	0,207
CM25 + cable gland connector (3W/5W)	55/56,2	15	29,1/31,9	56,7	30	4 x 90°	0,135/0,140
CM25 + flying lead connector (3W/5W)	46,5/47,8	15	29,1/31,9	45,65	30	0°	0,260/0,265
CM30 + cable gland connector	55,4	15	38,5	60,7	30	4 x 90°	0,155
CM30 + flying lead connector	46,9	15	38	49,65	30	0°	0,275

<sup>(1)</sup> including coil and connector.

### FEATURES

- Operators intended for use in potentially explosive dust atmospheres in compliance with ATEX-Directive 94/9/EC
- Compliance with the Essential Health and Safety Requirements has been assured by compliance with European Standards **EN 50014** and **EN 50281-1-1**
- The assembly consisting of the coil and connector has IP65 protection
- Easy electrical installation by means of a spade plug connector
- The operator is available as both a push or pull type solenoid and can be supplied on a wide range of valves

### CONSTRUCTION

<b>Coil</b>	All	Moulded epoxy resin
<b>Connector enclosure</b>	All	Glass-filled polyamide
<b>Connector specification</b>	XM5	DIN 43650, 11 mm, industry standard B
	M6-MXX-M12	ISO 4400 / EN 175301-803, form A
<b>Cable diameter</b>	XM5	6 to 8 mm
	M6-MXX-M12	6 to 10 mm
<b>Wire cross-section</b>	All	1,5 mm <sup>2</sup>
<b>Electrical enclosure protection</b>	All	IP65 (EN 60529)
<b>Safety code</b>	All	⊕ II 3 D IP65 T 85°C to T 200°C

### ELECTRICAL CHARACTERISTICS

<b>Standard voltages</b>	DC (=) : 24V - 48V
(Other voltages and 60 Hz on request)	AC (~) : 24V - 48V - 115V - 230V / 50 Hz

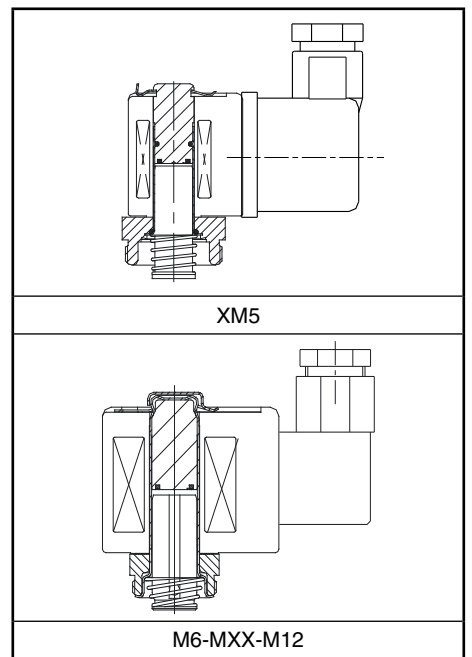
### TEMPERATURE CLASSIFICATION TABLES

#### AC (~) Solenoids

Pn (watt)	solenoid size				maximum ambient °C <sup>(1)</sup>			
	XM5	M6	MXX	M12	surface temperature			
					85°C	100°C	135°C	200°C
insulation class F (155°C) 100% E.D.								
1,2 <sup>(2)</sup>			•		60			
1,5 <sup>(2)</sup>			•		60			
1,85 <sup>(2)</sup>			•		60	75	100	
2,5	•				40	60		
3,7 <sup>(2)</sup>			•		60	75	100	
4,0	•				40	60		
5,8 <sup>(2)</sup>			•		50	75	100	
6,0		•					75	
6,3	•						40	75
9,0		•					40	50
10,0 <sup>(2)</sup>			•			40	75	
10,0 <sup>(2)</sup>			•		50	100		
10,5			•			40	75	
13,4 <sup>(2)</sup>			•			75		
14,1 <sup>(2)</sup>			•			75	90	
15,4			•				75	
16,5 <sup>(2)</sup>			•			75		
16,7			•				50	
20,0			•				50	
insulation class H (180°C) 100% E.D.								
6,0		•					75	100
9,0		•					40	75
10,5			•				40	100
15,4			•					100
16,7			•					75
20,0			•					60
insulation class F (155°C) 10% E.D.								
6,0		•			60	75		
10,0	•				60	75		
10,5			•		60	75		
16,7			•		60	75		

#### DC (=) Solenoids

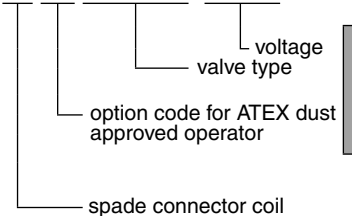
Pn (watt)	solenoid size				maximum ambient °C <sup>(1)</sup>			
	XM5	M6	MXX	M12	surface temperature			
					85°C	100°C	135°C	200°C
insulation class F (155°C) 100% E.D.								
1,3				•	60			
1,7			•		60			
1,8				•	60	75	100	
3,0	•				40	60		
3,6				•	60	75	100	
5,7				•	50	75	100	
6,9	•					40	75	
8,6	•							40
9,7		•				40	75	
10,0				•		50	100	
10,7				•		50	100	
11,0				•			40	75
11,2				•		40	75	
14,0				•			75	90
15,3		•					50	
16,8				•			75	
19,7				•			40	
23,0				•			40	
insulation class H (180°C) 100% E.D.								
9,7		•			40	75	100	
11,2			•		40	75	100	
13,3		•					60	
15,3		•					60	75
16,8				•			75	100
17,4				•			50	60
19,7				•			50	
20,8		•					40	
23,0				•			40	75
26,6				•			40	60
29,5				•				40
36,2				•				40
insulation class F (155°C) 10% E.D.								
11,2				•	60	75		
19,7				•	60	75		
20,8		•			60	75		
22,0	•				40	60	75	
30,0				•	40	60	75	



### ORDERING INFORMATION

A valve supplied with the explosionproof operator will be identified with prefix **SCDU** before the catalogue number.

Example: **SC DU** G327A001 . 24V/DC



Check the wattage compatibility with the product selected.

<sup>(1)</sup> The minimum allowable ambient temperature is **-40°C for the operator**. Actual temperature range can be limited depending on valve operation limits.

<sup>(2)</sup> AC (~) rectified coil construction.

### INSTALLATION

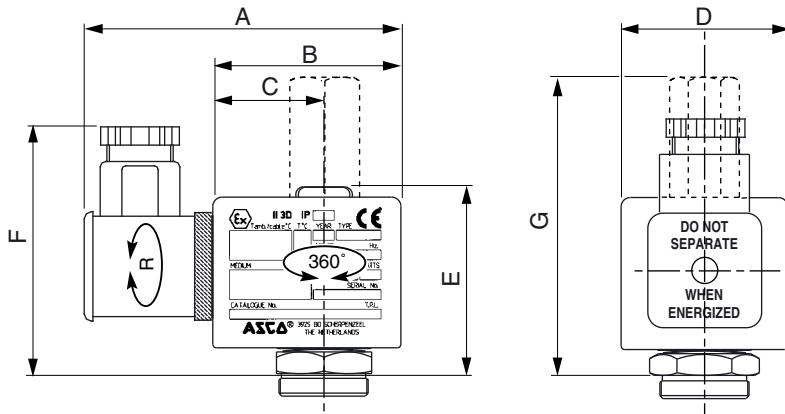
- The coil is provided with an earthing connection
- The operator can be rotated through 360° to select the most favourable position for cable entry
- Easy connection with spade plug connector
- Installation/maintenance instructions are included with each coil

### DIMENSIONS (mm), WEIGHT (kg)



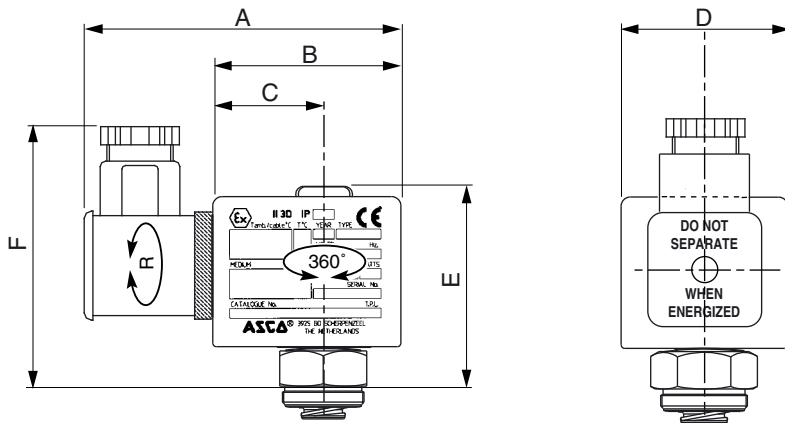
**TYPE SCDU**  
 "SCDU" Solenoid  
 EN 50281-1-1  
 IP65 / II 3 D IP65 T 85°C to T 200°C

### Pull type solenoid operators



size	A	B	C	D	E	F	G	R	weight <sup>(1)</sup>
M5	59	28	17	22	34	52	54	180°	0,1/0,15
M6	80	45	28	39	46	63	-	4 x 90°	0,2
MXX	85	50	30	45	53	67	78	4 x 90°	0,3/0,35
M12	91	56	33	50	57	58	-	4 x 90°	0,4

### Push type solenoid operators



size	A	B	C	D	E	F	R	weight <sup>(1)</sup>
MXX	85	50	30	45	61	74	4 x 90°	0,35
M12	91	56	33	50	68	65	4 x 90°	0,45

<sup>(1)</sup> including coil and connector.

### FEATURES

- Operators intended for use in potentially explosive dust atmospheres in compliance with ATEX-Directive 94/9/EC
- Compliance with the Essential Health and Safety Requirements has been assured by compliance with European Standards **EN 50014** and **EN 50281-1-1**
- Easy electrical installation by means of a screw terminal coil
- The solenoid enclosure has a cable gland with integral strain relief for cables with a diameter from 7 to 12 mm
- Ingress protection degree IP67
- The operator is available as both a push or pull type solenoid and can be supplied on a wide range of valves

### CONSTRUCTION

<b>Solenoid enclosure</b>	WPDU	Zinc plated steel (epoxy coated)
	WSDU	Stainless steel, AISI 316
<b>Cable gland</b>	All	PA
<b>Core, core tube &amp; plugnut</b>	All	Stainless steel
<b>Shading coil</b>	All	Copper or silver
<b>Electrical enclosure protection</b>	All	IP67 (EN 60529)
<b>Safety code</b>	All	⊕ II 3 D IP67 T 85°C to T 200°C

### ELECTRICAL CHARACTERISTICS

<b>Standard voltages</b>	DC (=) : 24V - 48V
(Other voltages and 60 Hz on request)	AC (~) : 24V - 48V - 115V - 230V / 50 Hz

### TEMPERATURE CLASSIFICATION TABLES

#### AC (~) Solenoids

Pn (watt)	solenoid size				maximum ambient °C <sup>(1)</sup>			
	XM5	M6	MXX	M12	surface temperature			
					85°C	100°C	135°C	200°C
insulation class F (155°C) 100% E.D.								
1,2 <sup>(2)</sup>			•		60			
1,5 <sup>(2)</sup>			•		60			
1,85 <sup>(2)</sup>			•		60	75	90	
3,7 <sup>(2)</sup>			•		60	75	90	
5,8 <sup>(2)</sup>			•		40	60	90	
6,0	•						50	75
9,0	•							50
10,0 <sup>(2)</sup>			•				75	
10,0 <sup>(2)</sup>			•					75
10,5			•					75
13,4 <sup>(2)</sup>			•				40	75
14,1 <sup>(2)</sup>			•				50	90
15,4			•					40
16,5 <sup>(2)</sup>			•				40	75
insulation class H (180°C) 100% E.D.								
6,0	•						50	90
9,0	•							75
10,5			•					90
15,4			•					40
16,7			•					40
insulation class F (155°C) 10% E.D.								
6,0	•				40	60	75	
10,5			•		40	60	75	
16,7			•		40	60	75	

Check the wattage compatibility with the product selected.

<sup>(1)</sup> The minimum allowable ambient temperature is -40°C for the operator. Actual temperature range can be limited depending on valve operation limits.

<sup>(2)</sup> AC (~) rectified coil construction.

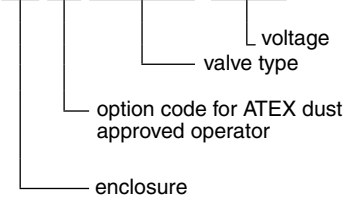
#### DC (=) Solenoids

Pn (watt)	solenoid size				maximum ambient °C <sup>(1)</sup>			
	XM5	M6	MXX	M12	surface temperature			
					85°C	100°C	135°C	200°C
insulation class F (155°C) 100% E.D.								
1,3			•		60			
1,7			•		60			
1,8			•		60	75	90	
3,6			•		60	75	90	
5,7			•		40	60	90	
9,7	•						60	75
9,7	•							90
9,7	•							75
10,0			•					75
11,0			•					75
11,2			•				60	75
14,0			•				50	90
15,3	•						40	50
16,8			•				40	75
19,7			•					40
23,0			•					50
insulation class H (180°C) 100% E.D.								
9,7	•						60	100
9,7	•						75	90
9,7	•							75
11,2			•				50	90
13,3	•						40	60
15,3	•						40	75
16,8			•				40	75
16,8			•				40	90
16,8			•					75
17,4			•					60
19,7			•					50
20,8	•							40
23,0			•					75
26,6			•					60
insulation class F (155°C) 10% E.D.								
11,2			•		60	75		
19,7			•		40	60	75	
20,8	•				40	60	75	
30,0			•		40	60	75	

### ORDERING INFORMATION

A valve supplied with the explosionproof operator will be identified with prefix **WPDU** or **WSDU** before the catalogue number.

Example: **WP DU** G327A001 . 24V/DC



### INSTALLATION

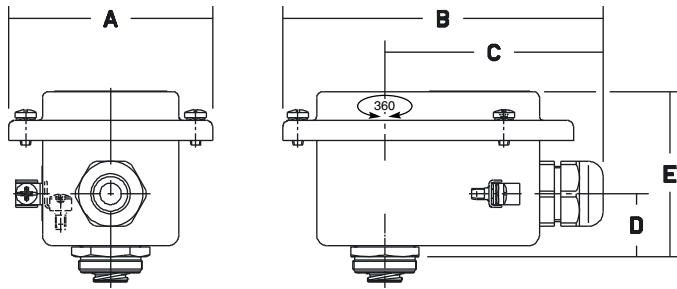
- The package consists of the solenoid valve and operator (installed)
- Internal and external earthing connection
- The operator can be rotated through 360° to select the most favourable position for cable entry
- Installation/maintenance instructions are included with each coil

### DIMENSIONS (mm), WEIGHT (kg)

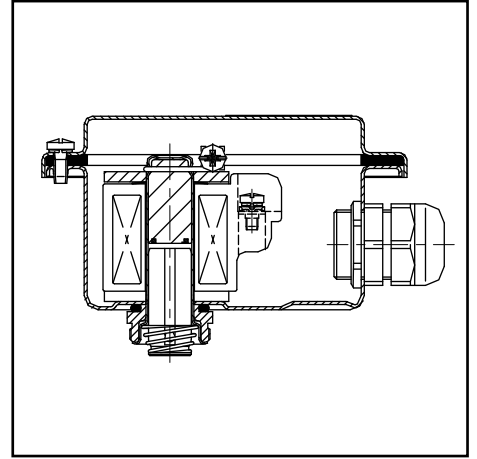


**TYPE WPDU/WSDU**  
 "WPDU", "WSDU" Solenoid  
 EN 50281-1-1  
 IP67 / II 3 D IP67 T 85°C to T 200°C

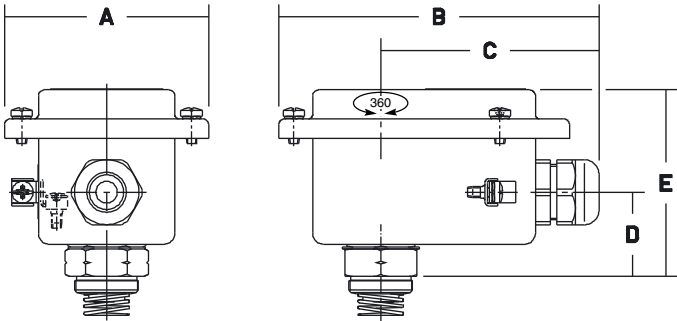
#### Pull type solenoid operator



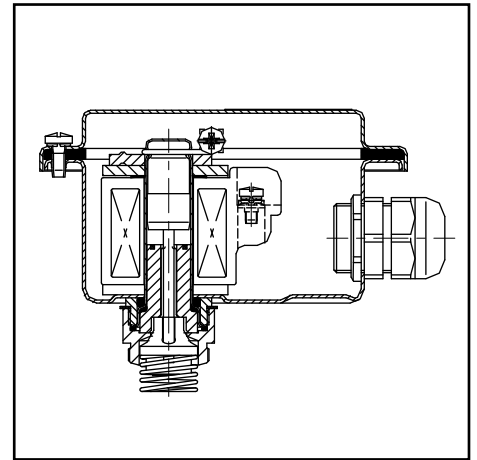
size	A	B	C	D	E	weight
WPDU/WSDU-M6	77	120	82	26	64	0,48
WPDU/WSDU-MXX	77	120	82	23	62	0,55
WPDU/WSDU-M12	77	120	82	21	65	0,67



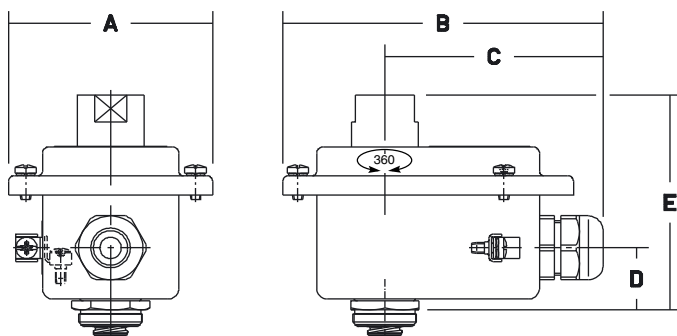
#### Push type solenoid operator



size	A	B	C	D	E	weight
WPDU/WSDU-M6	77	120	82	25	63	0,50
WPDU/WSDU-MXX	77	120	82	31	69	0,59
WPDU/WSDU-M12	77	120	82	30	73	0,70



#### Pull type solenoid operator



size	A	B	C	D	E	weight
WPDU/WSDU-MXX	77	120	82	23	80	0,68

