

DESCRIPTION

External cage type level switches are completely self-contained units designed for side mounting to a tank or vessel with threaded or flanged pipe connections. These switches are engineered to customer specifications.

FEATURES

- Carbon or stainless steel welded float cages (other materials available at request)
- Process temperature up to 400 °C (750 °F)
- Up to 3 switch levels
- Standard anti corrosive protection

Flanged cages:

- Removable sensing unit from cage allows easy maintenance
- Specific gravity as low as 0,34
- Process pressure up to 62 bar (900 psi)

Sealed cages:

- Sensing unit and cage are self-containing
- Specific gravity as low as 0,35
- Process pressure up to 138 bar (2000 psi)

Optional:

- NACE construction (MR-01-75)
- Interface calibration
- Customized installation dimensions
- Special actuating levels
- Code compliance construction
- Special tank connections
- Extreme temperature modifications
- Class 1, Group B explosion proof electrical enclosure
- Special exterior surface preparation and finish

APPLICATIONS

- Foaming or surging liquids
- Agitated fluids
- Sewage handling
- Dirty liquids
- Paints
- Varnishes
- Heavy oils
- Liquids with solids

Standard & tailor made designs



AGENCY APPROVALS

Agency	Approval
ATEX	II 2G EEx d II C T6, explosion proof II 1G EEx ia II C T6, intrinsically safe
CENELEC	EEx d II C T6, explosion proof
CCE ①	R1 (1) 136/MI/433, explosion proof
FM	Class I, Div. 1, Groups C & D Class II, Div. 1, Groups E, F & G, Type NEMA 7/9
FM/CSA ②	Non-Hazardous area Explosion proof area – Groups B, C, D, E, F & G Type NEMA 4X/7/9
SAA ②	Explosion proof area
LRS	Lloyds Register of Shipment (marine applications)
GOST/ GOSGORTECHNADZOR ②	Russian Authorisation Standards
Other approvals are available, consult factory for more details	

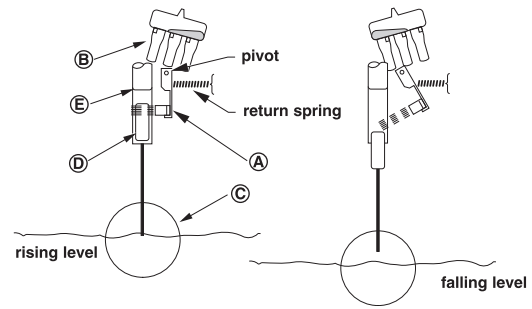
① For CCE approved units, use the ATEX explosion proof model numbers.

② Consult factory for proper model numbers.

PRINCIPLE OF OPERATION

A permanent magnet (A) is attached to a pivoted switch (B). As the float (C) rises following the liquid level, it raises the magnet attractor (D) into the field of the magnet, which in turn snaps against the non-magnetic barrier tube (E), tilting the switch. The barrier tube provides a static seal between the switch mechanism and the float, eliminating the need for a flexing bellows seal, packing gland or other failure prone sealing elements.

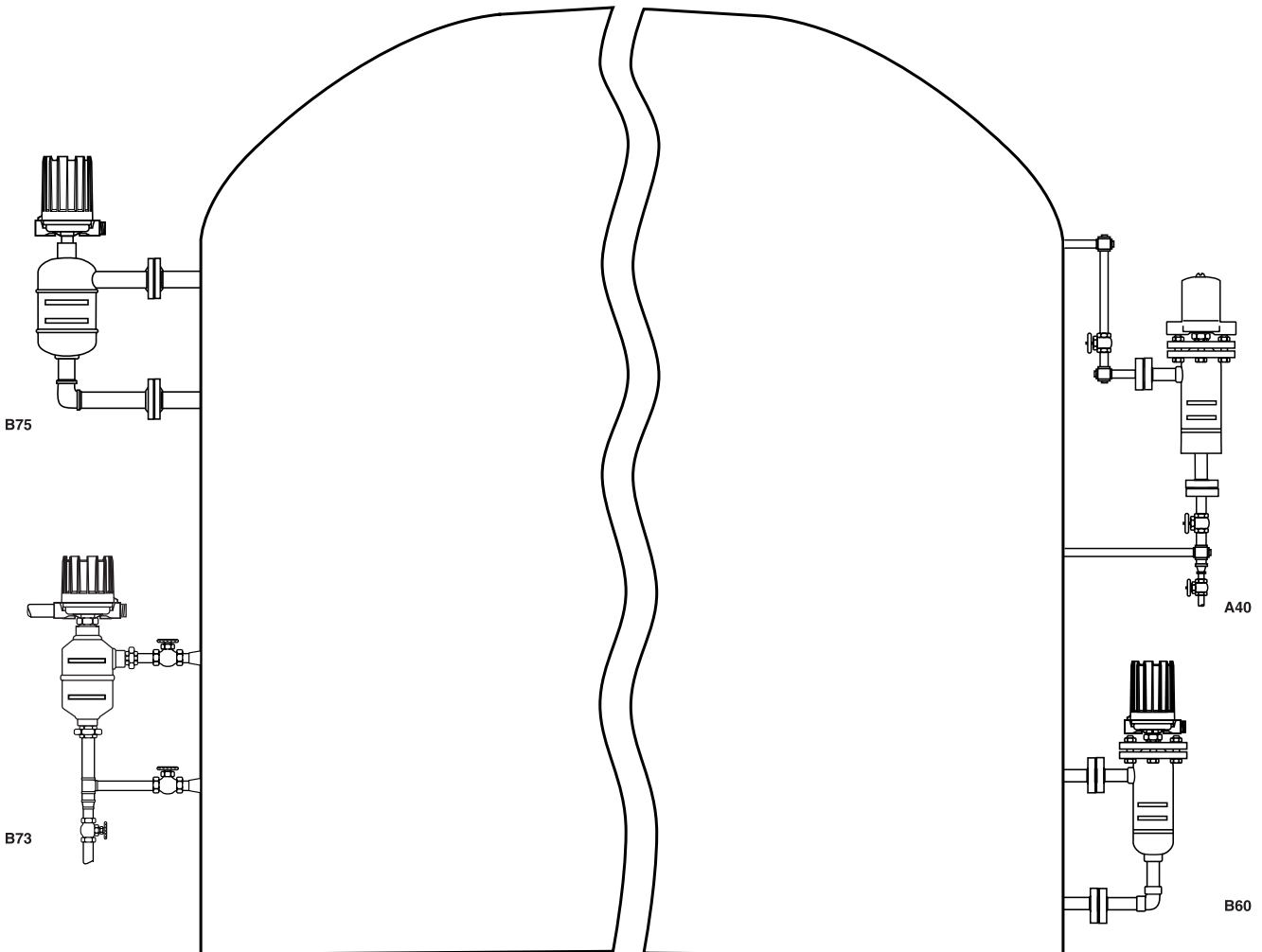
When the liquid level falls, the float draws the magnet attractor below the magnetic field. The magnet swings out and tilts the switch to the reverse position causing low level switch actuation (A).



MOUNTING

Sealed Cages

Flanged Cages



AVAILABLE SWITCH MECHANISMS

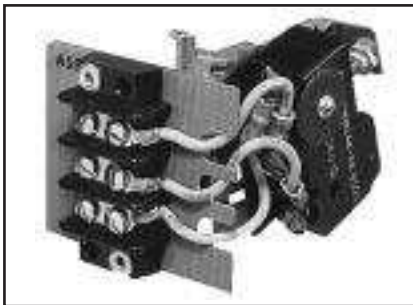
Type of switch module ^①	Max. Process Temp. ^②	Switch ratings – A res. ^③			Code
		24 V DC	240 V AC	120 V AC	
Micro switch	max 120 °C (250 °F)	6	15	15	B
Micro switch	max 230 °C (450 °F)	10	15	15	C
Micro switch - DC current	max 120 °C (250 °F)	10	–	10	D
Micro switch with gold alloy contacts	max 120 °C (250 °F)	1	–	1	U
Hermetically sealed micro switch	max 290 °C (550 °F)	5	5	5	HS ^④
Hermetically sealed micro switch with silver plated contacts	max 230 °C (450 °F)	3	1	1	W
Hermetically sealed micro switch with gold plated contacts	max 230 °C (450 °F)	0,5	0,5	0,5	X
Hermetically sealed micro switch	max 400 °C (750 °F)	4	–	2,5	F
Proximity switch - type SJ 3.5 SN	max 100 °C (210 °F)	NA	NA	NA	V
Mercury switch	max 290 °C (550 °F)	10	6,5	13	A
Mercury switch	max 400 °C (750 °F)	10	6,5	13	3
Pneumatic bleed type (open air)	max 200 °C (400 °F)	NA	NA	NA	J
Pneumatic non bleed type (closed circuit)	max 200 °C (400 °F)	NA	NA	NA	K

^① For applications with heavy vibration, consult factory for suited switch modules.

^② Max process temperature is specified at 40 °C (100 °F) ambient temperature and for non condensing applications.

^③ For more details - see bulletin BE 42-120.

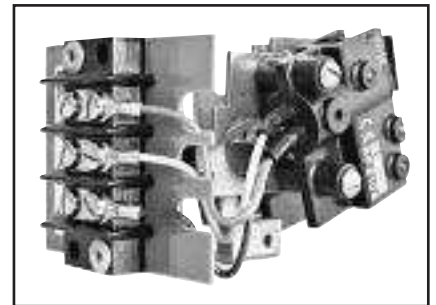
^④ For condensing applications, max process temperature is down-rated to 200 °C (400 °F) @ 40 °C (100 °F) ambient.



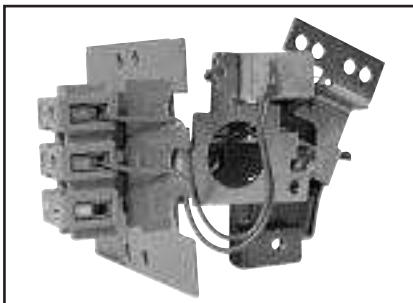
Type B, C, D & U



Type HS



Type F, W & X



Type V



Type A & 3



Type J & K

AVAILABLE HOUSINGS



- For Non Ex use
- IP 66
- Die cast Aluminium
- 2 Entries (one plugged)
- Standard blue anti corrosive coating
- Housing heater/drain available, consult factory



- For Exd/Exi use
- IP 66
- Die cast Aluminium
- 2 Entries (one plugged)
- Standard blue anti corrosive coating
- ATEX II 2G EEx d II C T6
- ATEX II 1G EEx ia II C T6



- For Exd use
- IP 66
- Cast Iron
- One entry (2 entries at request)
- Standard blue anti corrosive coating
- CENELEC EEx d II C T6



- For pneumatic switches
- IP 53 (NEMA 3R)
- IP 55 optional at request
- Alu base / cold rolled steel cover
- Standard blue anti corrosive coating



- For Exd use
- IP 66 (NEMA 7/9)
- Die cast Aluminium
- 2 Entries (one plugged)
- Standard blue anti corrosive coating
- FM, Class I, Div. 1, Groups C & D
- FM, Class II, Div. 1, Groups E, F & G

SELECTION DATA

Specific gravity and pressure limits – as per selected material of construction (see right page)

Sealed Cages		Carbon steel cages			Stainless steel cages	
Model Number	Process Temp °C (°F)	Min. S.G.		Pressure bar (psi)	Min. S.G.	Pressure bar (psi)
		Material code A	Material code B			
O75	40 (100)	Not available	Not available	-	0,83	27,6 (400)
	230 (450)			-		22,4 (325)
	400 (750)			-		19,6 (285)
B73	40 (100)	0,60	0,68	20,7 (300)	Not available	-
	230 (450)			19,0 (275)		-
	-			-		-
P75	40 (100)	Not available	Not available	-	0,71	27,6 (400)
	230 (450)			-		17,9 (260)
	400 (750)			-		15,5 (225)
B75	40 (100)	0,69	0,73	69,0 (1000)	0,73	69,0 (1000)
	230 (450)			58,6 (850)		58,6 (850)
	400 (750)			51,7 (750)		51,7 (750)
A75	40 (100)	0,64	0,68	69,0 (1000)	0,68	69,0 (1000)
	230 (450)			58,6 (850)		58,6 (850)
	400 (750)			51,7 (750)		51,7 (750)
C75	40 (100)	0,56	0,60	34,5 (500)	0,60	34,5 (500)
	230 (450)			25,5 (370)		22,4 (325)
	400 (750)			20,7 (300)		19,6 (285)
G75	40 (100)	0,54	0,56	51,7 (750)	0,56	51,7 (750)
	230 (450)			38,6 (560)		38,6 (560)
	400 (750)			32,7 (475)		32,7 (475)
-	-	-	-	-	-	-
	-			-		-
	-			-		-
J75	40 (100)	0,49	0,52	27,6 (400)	0,52	27,6 (400)
	230 (450)			20,3 (295)		17,9 (260)
	400 (750)			17,2 (250)		15,5 (225)

Flanged Cages		Carbon steel cages			Stainless steel cages	
Model Number	Process Temp °C (°F)	Min. S.G.		Pressure bar (psi)	Min. S.G.	Pressure bar (psi)
		Material code A	Material code B			
O30	40 (100)	Not available	Not available	-	0,84	27,6 (400)
	230 (450)			-		22,4 (325)
	400 (750)			-		19,6 (285)
B41	40 (100)	0,67	0,70	19,6 (285)	0,70	19,0 (275)
	230 (450)			12,7 (185)		12,4 (180)
	400 (750)			6,5 (95)		6,5 (95)
B43	40 (100)	0,72	0,77	27,6 (400)	0,77	27,6 (400)
	230 (450)			19,0 (275)		19,0 (275)
	400 (750)			15,1 (220)		15,1 (220)
B60	40 (100)	0,69	0,73	62,0 (900)	0,73	62,0 (900)
	230 (450)			52,4 (760)		52,4 (760)
	400 (750)			41,3 (600)		41,3 (600)
A40	40 (100)	0,65	0,69	51,0 (740)	0,69	49,6 (720)
	230 (450)			42,4 (615)		34,1 (495)
	400 (750)			34,8 (505)		29,3 (425)
-	-	-	-	-	-	-
	-			-		-
	-			-		-
G33	40 (100)	0,54	0,56	51,0 (740)	0,56	49,6 (720)
	230 (450)			38,6 (560)		34,1 (495)
	400 (750)			32,7 (475)		29,3 (425)
J31	40 (100)	0,50	0,52	19,6 (285)	0,52	19,0 (275)
	230 (450)			12,7 (185)		12,4 (180)
	400 (750)			6,5 (95)		6,5 (95)
J33	40 (100)	0,50	0,52	27,6 (400)	0,52	27,6 (400)
	230 (450)			20,3 (295)		20,3 (295)
	400 (750)			17,2 (250)		17,2 (250)

EXPEDITE SHIP PLAN (ESP)

Several mechanical switches are available for quick shipment, within max. 3 weeks after factory receipt of purchase order, through the Expedite Ship Plan (ESP).

Models covered by ESP service are conveniently grey coded in the selection data charts.

To take advantage of ESP, simply match the grey coded model number codes (standard dimensions apply).

ESP service may not apply to orders of ten units or more. Contact your local representative for lead times on larger volume orders, as well as other products and options.

SELECTION DATA

A complete measuring system consists of:

- Order code for **caged** models (each unit can be factory calibrated when specific level differentials are specified separately).
- Order code for **modified** models or adders: put an "X" in front of the closest matching order code and specify the modifications/adders separately
eg. XA40-AB20-AAA X = with material certification EN 10204 / DIN 50049-3.1.B

- Order code for liquid float level switches in an external cage

BASIC MODEL NUMBER

- Sealed cages

O 7 5	down to S.G. 0,83	up to 27,6 bar (400 psi)	min S.G. varies per material of construction max pressure varies per material of construction and temperature - select as per table on left page -
B 7 3	down to S.G. 0,60	up to 20,7 bar (300 psi)	
P 7 5	down to S.G. 0,71	up to 27,6 bar (400 psi)	
B 7 5	down to S.G. 0,69	up to 69 bar (1000 psi)	
A 7 5	down to S.G. 0,64	up to 69 bar (1000 psi)	
C 7 5	down to S.G. 0,56	up to 34,5 bar (500 psi)	
G 7 5	down to S.G. 0,54	up to 51,7 bar (750 psi)	
J 7 5	down to S.G. 0,49	up to 27,6 bar (400 psi)	

- Flanged cages

O 3 0	down to S.G. 0,84	up to 27,6 bar (400 psi)	min S.G. varies per material of construction max pressure varies per material of construction and temperature - select as per table on left page -
B 4 1	down to S.G. 0,67	up to 19,6 bar (285 psi)	
B 4 3	down to S.G. 0,72	up to 27,6 bar (400 psi)	
B 6 0	down to S.G. 0,69	up to 62 bar (900 psi)	
A 4 0	down to S.G. 0,65	up to 51 bar (740 psi)	
G 3 3	down to S.G. 0,54	up to 51 bar (740 psi)	
J 3 1	down to S.G. 0,50	up to 19,6 bar (285 psi)	
J 3 3	down to S.G. 0,50	up to 27,6 bar (400 psi)	

MATERIALS OF CONSTRUCTION

Code	Cage & process connection material	Float and trim	Magnetic sleeve
A	Carbon steel	316 SST (1.4401)	400 series SST
B			316 SST (1.4401)
D	316/316L (1.4401/1.4404)		

PROCESS CONNECTION – O75, B73 and O30 units are only available with 1"/DN 25 size connections

	Threaded NPT connection			Socket weld connection		
	upper side / bottom			upper side / bottom		
1"	B20			B30		
1 1/2"	C20			C30		
2"	D20			D30		
	ANSI Flanges					
	upper side / bottom			side / side		
	150 lbs RF	300 lbs RF	600 lbs RF	150 lbs RF	300 lbs RF	600 lbs RF
1"	N30	N40	N50	S30	S40	S50
1 1/2"	P30	P40	P50	T30	T40	T50
2"	Q30	Q40	Q50	V30	V40	V50
	DIN Flanges - Form to DIN 2526					
	upper side / bottom			side / side		
	PN 16 (DIN 2633) Form C	PN 25/40 (DIN 2635) Form C	PN 64 (DIN 2636) Form E	PN 16 (DIN 2633) Form C	PN 25/40 (DIN 2635) Form C	PN 64 (DIN 2636) Form E
DN 25	1FA	1HA	1JA	1FB	1HB	1JB
DN 40	2FA	2HA	2JA	2FB	2HB	2JB
DN 50	3FA	3HA	3JA	3FB	3HB	3JB

SWITCH MECHANISM & ENCLOSURE - for all units except B73 and B41 (see page 6)
- for B73 and B41 units (see page 6)
- for pneumatic switch mechanisms (see page 7)



complete order code for **caged** models

Select pneumatic switch mechanism & enclosure

Pneumatic switch type	Max supply pressure bar (psi)	Max liquid temperature °C (°F)	Bleed orifice Ø mm (inches)	NEMA 3R (IP 53)	
				material code A	material codes B & D
Series J (open air)	6,9 (100)	200 (400)	1,60 (0.063)	JDG	JDE
	4,1 (60)	200 (400)	2,39 (0.094)	JEG	JEE
	4,1 (60)	370 (700)	1,40 (0.055)	JFG	JFE
Series K (closed circuit)	6,9 (100)	200 (400)	–	KOE ^①	KOE
	2,8 (40)	200 (400)	–	KOG	–

① For all models except B73 and B41

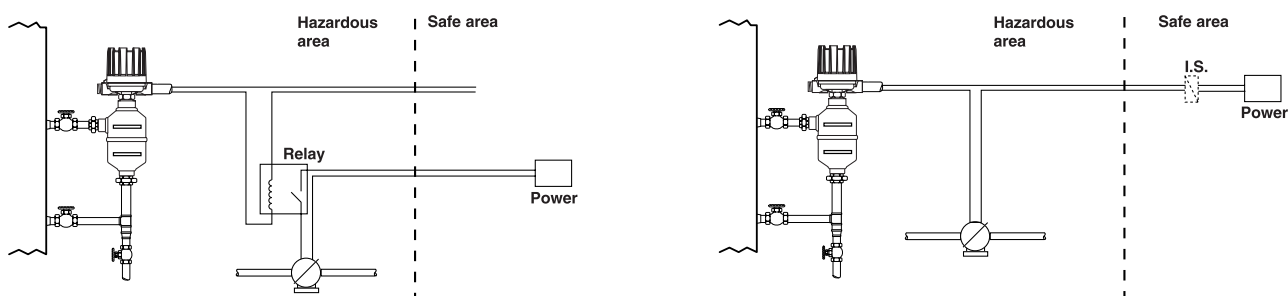
PHYSICAL SPECIFICATIONS

Description		Specification
Measured variable		Liquid level / interface level
Physical range		Standard models: min S.G. 0,49 (as low as min 0,34 at request)
Process temperature Process pressure (for higher ratings consult factory)	Flanged cage models	Up to 62 bar (900 psi) @ 40 °C (100 °F) Up to 400 °C (750 °F) @ 41,3 bar (600 psi)
	Sealed cage models	Up to 69 bar (1000 psi) @ 40 °C (100 °F) - optional 138 bar (2000 psi) Up to 400 °C (750 °F) @ 51,7 bar (750 psi)
Cage and process connection material		Carbon steel or stainless steel (others at request)
Wetted materials	Float and trim	316 SST (1.4401)
	Magnetic sleeve	316 SST (1.4401), or 400 series SST

ELECTRICAL SPECIFICATIONS

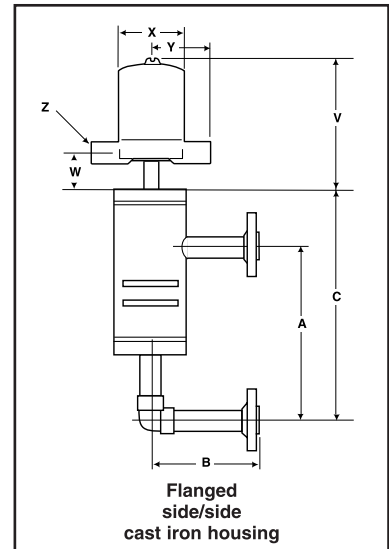
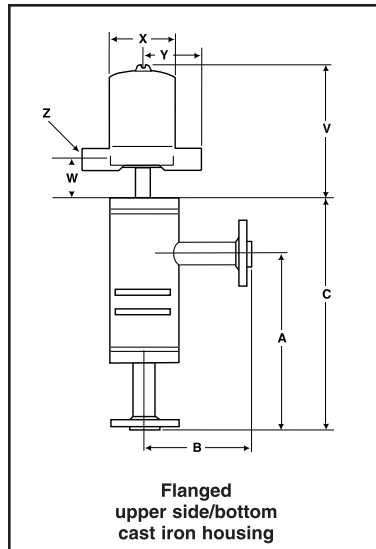
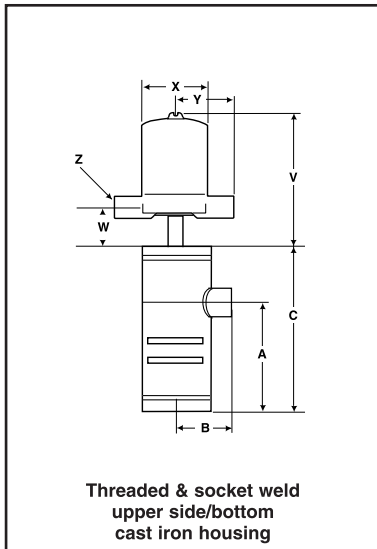
Description	Specification
Switch ratings	Up to 15 A @ 240 V AC (depending on switch mechanism) Up to 10 A @ 120 V DC (depending on switch mechanism)
Signal Output	Single, dual or triple SPDT or DPDT contacts (single contacts for B73/B41 models only) or single pneumatic
Switch Types (see table on page 3)	Dry contact with standard or gold alloy contacts, Mercury, Hermetically sealed, Hermetically sealed with gold or silver plated contacts, Proximity switch, or single pneumatic bleed and non bleed
Approvals (see table on page 1)	ATEX II 2G EEx d II C T6, explosion proof ATEX II 1G EEx ia II C T6, intrinsically safe CENELEC EEx d II C T6, explosion proof FM/CSA/SAA, explosion proof LRS, Lloyds Register of Shipment (marine applications) GOST/GOSGORTSEKHNADZOR, Russian Authorisation standards Other approvals are available, consult factory.
Cable entries	M20 x 1,5 ISO, 1" NPT and 3/4" NPT (or others at request)

ELECTRICAL CONNECTION

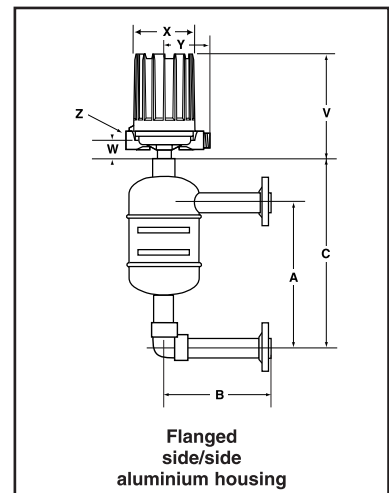
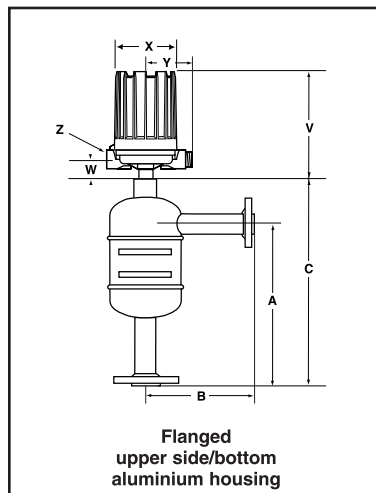
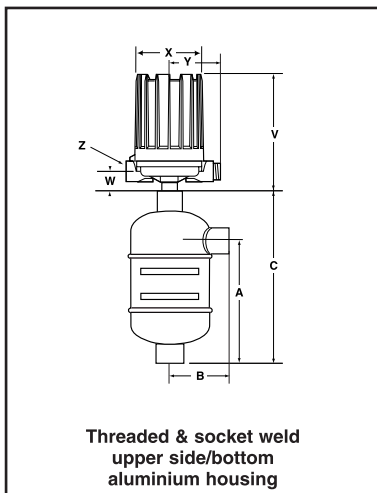


SEALED CAGE MODEL - dimensional specifications in mm (inches)

- Only A75 Model -



- All models except A75 -

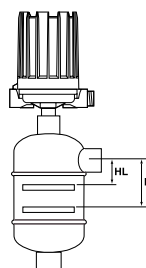


Housing type	Models	V		W		ø X		Y		Z
		mm	inches	mm	inches	mm	inches	mm	inches	
Weatherproof-FM (NEMA 7/9) - ATEX (Cast Alu)	B73/B41 with HS-switch All other models	257	10.12	42	1.66	151	5.93	109	4.29	M20 x 1,5 (*) or 1" NPT (2 entries - 1 plugged) (*) not for FM (NEMA 7/9)
	B73/B41 excl. HS-switch	202	7.94							
CENELEC (Cast Iron)	All	249	9.80	45	1.77	143	5.63	110	4.33	M20 x 1,5 or 3/4" NPT (single entry - 2 entries at request)
Pneumatics Switch Module J	All	165	6.50	39	1.54	118	4.65	110	4.33	1/4" NPT
Pneumatics Switch Module K								130	5.12	

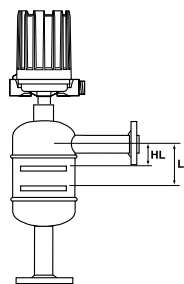
Allow 200 mm (7.87") overhead clearance / All housings are 360 ° rotatable

ACTUATING LEVELS

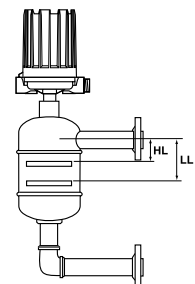
Actuating levels shown are for single switch units at minimum specific gravity only. Levels will change for multistage units. Consult factory for these units.



NPT & Socket weld



Upper side/bottom



Side/side

SEALED CAGE MODEL - dimensional specifications in mm (inches)

Process connection size	Mounting configuration	Model	Dimensions						Model	Dimensions						
			A		B		C			A		B		C		
			mm	inches	mm	inches	mm	inches		mm	inches	mm	inches	mm	inches	
1" - DN 25	threaded / socket welded	A75	222	8.74	82	3.23	347	13.66	B73	159	6.26	83	3.27	239	9.41	
	flanged upper side / bottom		356	14	185	7.28	481	18.94		250	9.84	160	6.30	330	12.99	
	flanged side/side		356	14	185	7.28	481	18.94		250	9.84	160	6.30	330	12.99	
1 1/2" - DN 40	threaded / socket welded		222	8.74	94	3.70	347	13.66								
	flanged upper side / bottom		356	14	200	7.87	481	18.94								
	flanged side/side		356	14	200	7.87	481	18.94								
2" - DN 50	threaded / socket welded		222	8.74	97	3.82	347	13.66								
	flanged upper side / bottom		356	14	200	7.87	481	18.94								
	flanged side/side		356	14	200	7.87	481	18.94								

1" - DN 25	threaded / socket welded	B75 C75	222	8.74	96	3.78	396	15.59	G75 J75	242	9.53	109	4.29	429	16.89
	flanged upper side / bottom		356	14	200	7.87	530	20.87		356	14	215	8.46	543	21.38
	flanged side/side		356	14	200	7.87	530	20.87		356	14	215	8.46	543	21.38
1 1/2" - DN 40	threaded / socket welded		222	8.74	107	4.21	406	15.98		242	9.53	121	4.76	439	17.28
	flanged upper side / bottom		356	14	215	8.46	540	21.26		356	14	230	9.06	553	21.77
	flanged side/side		356	14	215	8.46	540	21.26		356	14	230	9.06	553	21.77
2" - DN 50	threaded / socket welded		217	8.54	110	4.33	407	16.02		238	9.37	124	4.88	441	17.36
	flanged upper side / bottom		356	14	220	8.66	546	21.50		356	14	235	9.25	559	22.01
	flanged side/side		356	14	220	8.66	546	21.50		356	14	235	9.25	559	22.01

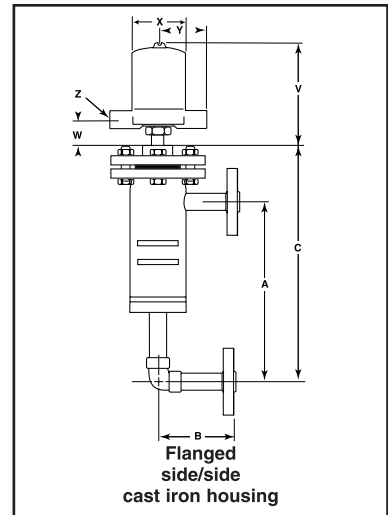
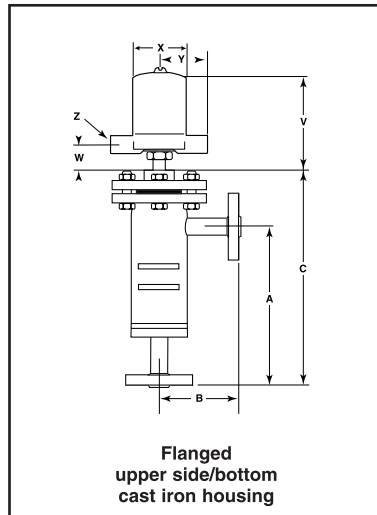
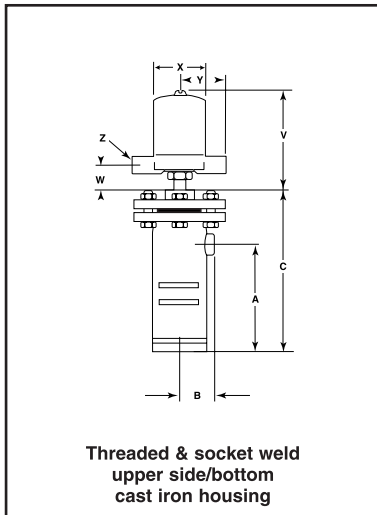
1" - DN 25	threaded / socket welded	P75	222	8.74	82	3.23	382	15.04	O75	222	8.74	70	2.76	347	13.66
	flanged upper side / bottom		356	14	185	7.28	516	20.31		356	14	165	6.50	481	18.94
	flanged side/side		356	14	185	7.28	516	20.31		356	14	165	6.50	481	18.94
1 1/2" - DN 40	threaded / socket welded		221	8.70	94	3.70	392	15.43							
	flanged upper side / bottom		356	14	200	7.87	527	20.75							
	flanged side/side		356	14	200	7.87	527	20.75							
2" - DN 50	threaded / socket welded		213	8.39	97	3.82	393	15.47							
	flanged upper side / bottom		356	14	200	7.87	536	21.10							
	flanged side/side		356	14	200	7.87	536	21.10							

Actuation levels in mm (inches) for minimum specific gravity and as per selected material of construction (see selection data)

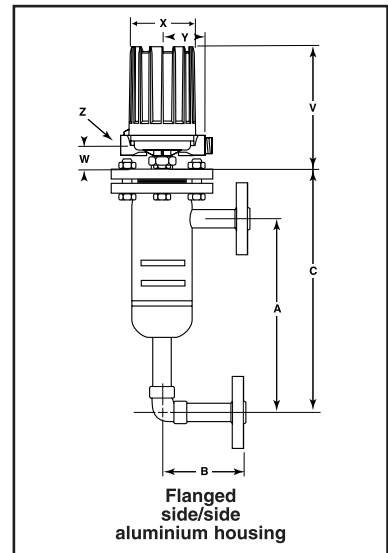
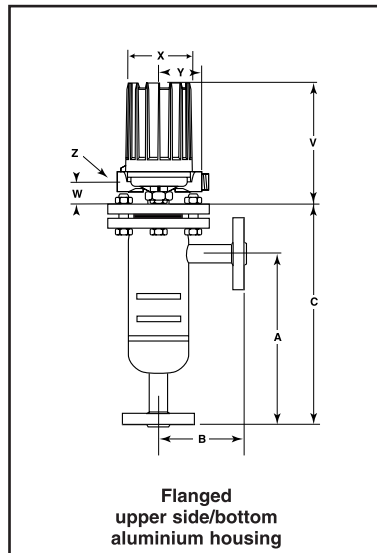
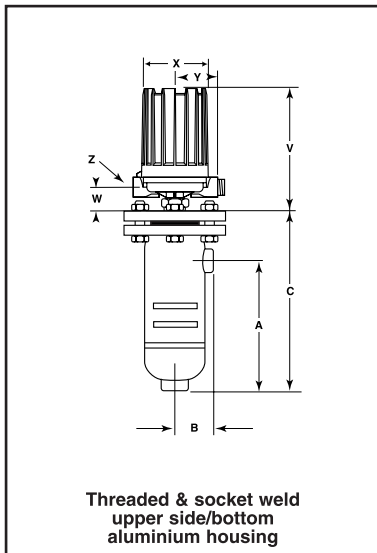
Model	1" / DN 25				1 1/2" / DN 40				2" / DN 50			
	Material code A		Material code B & D		Material code A		Material code B & D		Material code A		Material code B & D	
	High Level (HL)	Low Level (LL)	High Level (HL)	Low Level (LL)	High Level (HL)	Low Level (LL)	High Level (HL)	Low Level (LL)	High Level (HL)	Low Level (LL)	High Level (HL)	Low Level (LL)
A75	34 (1.34)	56 (2.20)	32 (1.26)	59 (2.32)	34 (1.34)	56 (2.20)	32 (1.26)	59 (2.32)	34 (1.34)	56 (2.20)	32 (1.26)	59 (2.32)
B73	30 (1.18)	53 (2.09)	-	-	-	-	-	-	-	-	-	-
B75	67 (2.64)	85 (3.35)	66 (2.60)	87 (3.43)	50 (1.97)	68 (2.68)	49 (1.93)	70 (2.76)	38 (1.50)	56 (2.20)	37 (1.46)	58 (2.28)
C75	69 (2.72)	88 (3.46)	68 (2.68)	91 (3.58)	52 (2.05)	71 (2.80)	51 (2.01)	74 (2.91)	40 (1.57)	59 (2.32)	39 (1.54)	62 (2.44)
G75	60 (2.36)	78 (3.07)	60 (2.36)	81 (3.19)	43 (1.69)	61 (2.40)	43 (1.69)	64 (2.52)	34 (1.34)	52 (2.05)	34 (1.34)	55 (2.17)
J75	75 (2.95)	94 (3.70)	75 (2.95)	98 (3.86)	58 (2.28)	77 (3.03)	58 (2.28)	81 (3.19)	50 (1.97)	69 (2.72)	50 (1.97)	73 (2.87)
O75	-	-	57 (2.24)	85 (3.35)	-	-	-	-	-	-	-	-
P75	-	-	57 (2.24)	83 (3.27)	-	-	40 (1.57)	66 (2.60)	-	-	28 (1.10)	54 (2.13)

FLANGED CAGE MODEL - dimensional specifications in mm (inches)

- Only A40 Model -



- All models except A40 -

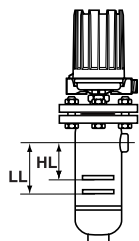


Housing type	Models	V		W		ø X		Y		Z
		mm	inches	mm	inches	mm	inches	mm	inches	
Weatherproof-FM (NEMA 7/9) - ATEX (Cast Alu)	B73/B41 with HS-switch All other models	257	10.12	42	1.66	151	5.93	109	4.29	M20 x 1,5 (*) or 1" NPT (2 entries - 1 plugged) (*) not for FM (NEMA 7/9)
	B73/B41 excl. HS-switch	202	7.94							
CENELEC (Cast Iron)	All	249	9.80	45	1.77	143	5.63	110	4.33	M20 x 1,5 or 3/4" NPT (single entry - 2 entries at request)
Pneumatics Switch Module J	All	165	6.50	39	1.54	118	4.65	110	4.33	1/4" NPT
Pneumatics Switch Module K								130	5.12	

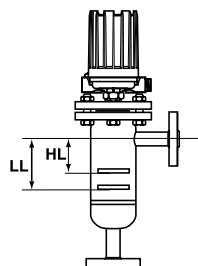
Allow 200 mm (7.87") overhead clearance / All housings are 360 ° rotatable

ACTUATING LEVELS

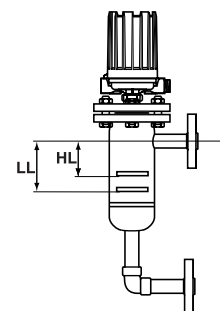
Actuating levels shown are for single switch units at minimum specific gravity only. Levels will change for multistage units. Consult factory for these units.



NPT & Socket weld



Upper side/bottom



Side/side

FLANGED CAGE MODEL - dimensional specifications in mm (inches)

Process connection size	Mounting configuration	Model	Dimensions						Model	Dimensions					
			A		B		C			A		B		C	
			mm	inches	mm	inches	mm	inches		mm	inches	mm	inches	mm	inches
1" - DN 25	threaded / socket welded	A40 (*)	222	8.74	82	3.23	391	15.39	B60 (*)	250	9.84	96	3.78	408	16.06
	flanged upper side / bottom		356	14	185	7.28	525	20.67		356	14	200	7.87	514	20.24
	flanged side/side		356	14	185	7.28	525	20.67		356	14	200	7.87	514	20.24
1 1/2" - DN 40	threaded / socket welded		222	8.74	94	3.70	391	15.39		260	10.24	107	4.21	418	16.46
	flanged upper side / bottom		356	14	200	7.87	525	20.67		356	14	215	8.46	514	20.24
	flanged side/side		356	14	200	7.87	525	20.67		356	14	215	8.46	514	20.24
2" - DN 50	threaded / socket welded		222	8.74	97	3.82	391	15.39		262	10.31	110	4.33	420	16.54
	flanged upper side / bottom		356	14	200	7.87	525	20.67		356	14	220	8.66	514	20.24
	flanged side/side		356	14	200	7.87	525	20.67		356	14	220	8.66	514	20.24

1" - DN 25	threaded / socket welded	B41	250	9.84	82	3.23	411	16.18	B43 (*)	250	9.84	82	3.23	419	16.50
	flanged upper side / bottom		356	14	185	7.28	517	20.35		356	14	185	7.28	525	20.67
	flanged side/side		356	14	185	7.28	517	20.35		356	14	185	7.28	525	20.67
1 1/2" - DN 40	threaded / socket welded		260	10.24	94	3.70	421	16.57		260	10.24	94	3.70	429	16.89
	flanged upper side / bottom		381	15	200	7.87	542	21.34		381	15	200	7.87	550	21.65
	flanged side/side		356	14	200	7.87	517	20.35		356	14	200	7.87	525	20.67
2" - DN 50	threaded / socket welded		261	10.28	97	3.82	422	16.61		261	10.28	97	3.82	430	16.93
	flanged upper side / bottom		381	15	200	7.87	542	21.34		381	15	200	7.87	550	21.65
	flanged side/side		381	15	200	7.87	542	21.34		381	15	200	7.87	550	21.65

1" - DN 25	threaded / socket welded	G33 J33	250	9.84	109	4.29	429	16.89	J31 (*)	250	9.84	109	4.29	418	16.46
	flanged upper side / bottom		356	14	215	8.46	535	21.06		356	14	215	8.46	524	20.63
	flanged side/side		356	14	215	8.46	535	21.06		356	14	215	8.46	524	20.63
1 1/2" - DN 40	threaded / socket welded		261	10.28	121	4.76	440	17.32		261	10.28	121	4.76	429	16.89
	flanged upper side / bottom		381	15	230	9.06	560	22.05		381	15	230	9.06	549	21.61
	flanged side/side		356	14	230	9.06	535	21.06		356	14	230	9.06	524	20.63
2" - DN 50	threaded / socket welded		262	10.31	124	4.88	441	17.36		262	10.31	124	4.88	430	16.93
	flanged upper side / bottom		381	15	235	9.25	560	22.05		381	15	235	9.25	549	21.61
	flanged side/side		381	15	235	9.25	560	22.05		381	15	235	9.25	549	21.61

1" - DN 25	threaded / socket welded	O30 (*)	222	8.74	70	2.76	353	13.90
	flanged upper side / bottom		356	14.02	165	6.50	487	19.17
	flanged side/side		356	14.02	165	6.50	487	19.17

(*) Add 33 mm (1.30") to **C-dimension** for cast iron EEx d II C T6 housings.

Actuation levels in mm (inches) for minimum specific gravity and as per selected material of construction (see selection data)

Model	1" / DN 25				1 1/2" / DN 40				2" / DN 50			
	Material code A		Material code B & D		Material code A		Material code B & D		Material code A		Material code B & D	
	High Level (HL)	Low Level (LL)	High Level (HL)	Low Level (LL)	High Level (HL)	Low Level (LL)	High Level (HL)	Low Level (LL)	High Level (HL)	Low Level (LL)	High Level (HL)	Low Level (LL)
A40	34 (1.34)	56 (2.20)	32 (1.26)	59 (2.32)	34 (1.34)	56 (2.20)	32 (1.26)	59 (2.32)	34 (1.34)	56 (2.20)	32 (1.26)	59 (2.32)
B41	23 (0.91)	45 (1.77)	25 (0.98)	51 (2.01)	23 (0.91)	45 (1.77)	25 (0.98)	51 (2.01)	23 (0.91)	45 (1.77)	25 (0.98)	51 (2.01)
B43	53 (2.09)	77 (3.03)	60 (2.36)	90 (3.54)	46 (1.81)	70 (2.76)	53 (2.09)	83 (3.27)	38 (1.50)	62 (2.44)	45 (1.77)	75 (2.95)
B60	76 (2.99)	94 (3.70)	81 (3.19)	102 (4.02)	57 (2.24)	75 (2.95)	62 (2.44)	83 (3.27)	49 (1.93)	67 (2.64)	54 (2.13)	75 (2.95)
G33	65 (2.56)	83 (3.27)	66 (2.60)	87 (3.43)	58 (2.28)	76 (2.99)	59 (2.32)	80 (3.15)	50 (1.97)	68 (2.68)	51 (2.01)	72 (2.83)
J31/J33	74 (2.91)	93 (3.66)	80 (3.15)	103 (4.06)	55 (2.17)	74 (2.91)	61 (2.40)	84 (3.31)	47 (1.85)	66 (2.60)	53 (2.09)	76 (2.99)
O30	-	-	57 (2.24)	85 (3.35)	-	-	-	-	-	-	-	-



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