

ROTEX DNLF AND DXLW SERIES LIMITSWITCH



ROTEX VERSATILE LIMIT SWITCH

Trusted Tested Certified



ATEX CE



ERC



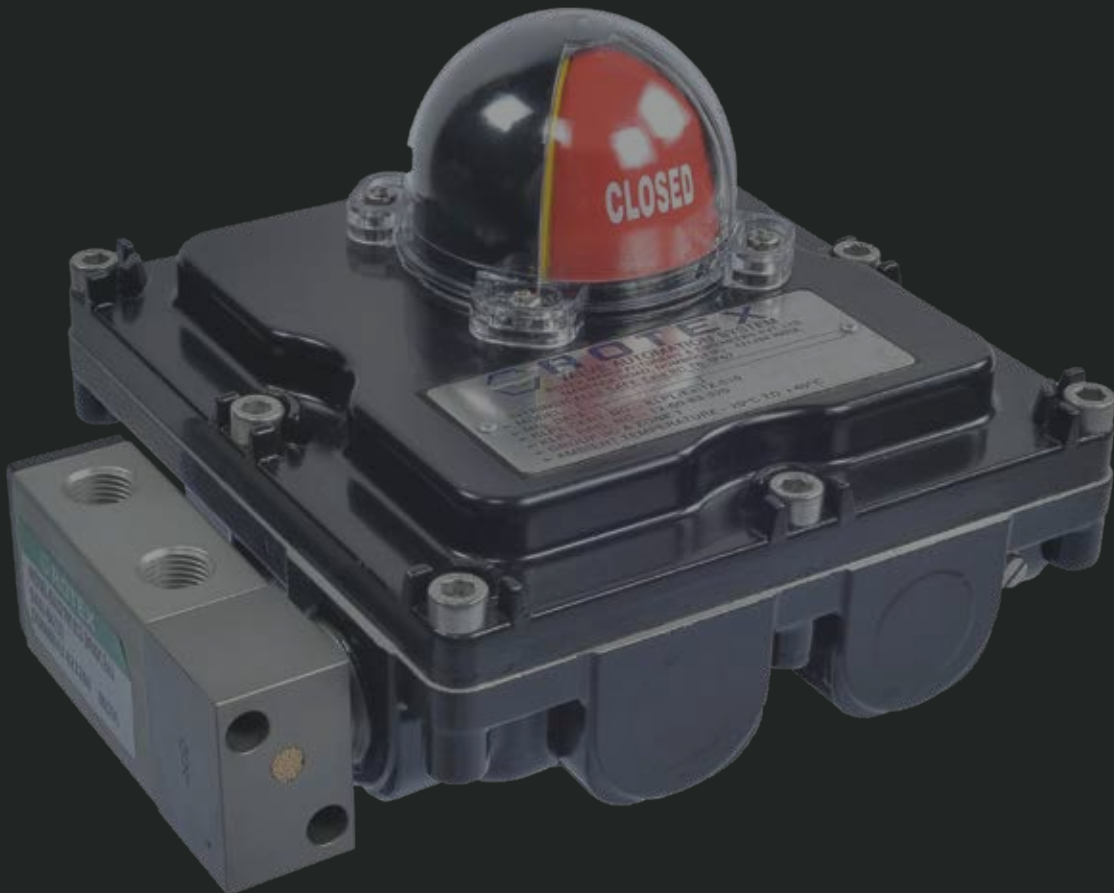
 **ROTEX**

Engineering For The Future

In continuation with the tradition of constant innovation and excellence in valve automation, Rotex introduces a new generation of highly reliable and versatile limit switches, engineered for precise valve position indication and dependable performance in demanding industrial environments.

ROTEX DNLF & DXLW SERIES VERSATILE LIMIT SWITCH

Reliable Position Indication. Rugged Protection. Intelligent Design.



WHY ROTEX ?



Do you struggle with corrosion and harsh outdoor conditions?

Rotex Limit Switches feature aluminium die-cast construction with a protective powder coating, providing enhanced corrosion resistance for demanding industrial environments



Do you have difficulty clearly identifying valve position from a distance?

The high-visibility dome indicator provides clear visual indication of valve position, while the colour-coded configuration helps operators quickly identify the valve status



Are you concerned about indicator damage in demanding operating environments?

Rotex features a shatterproof polycarbonate dome, providing robust protection while maintaining clear visibility of the valve position.



Do you need secure and repeatable position settings?

The easily adjustable, colour-coded cam mechanism with locked serrated cams helps maintain secure switch settings and prevents unwanted movement during operation.



Do you need a limit switch suitable for hazardous-area applications?

Rotex offers configurations with ATEX, IECEx and other applicable certifications, enabling the limit switch to be specified for demanding hazardous-area applications, depending on the selected configuration.



Do you need flexibility when selecting switches and mounting arrangements?

Rotex provides a wide range of switch options and mounting accessories, offering compatibility with various actuator manufacturers and valve automation requirements.

ROTEX DNLF & DXLW SERIES designed to deliver reliable valve position indication, robust protection and installation flexibility for demanding valve automation applications!

SEE MORE

X LAUNC (OPTIONAL) HES THE NEW HIGHLY RELIABLE, ADVANCED VALVE POSITION LIM

DXLW

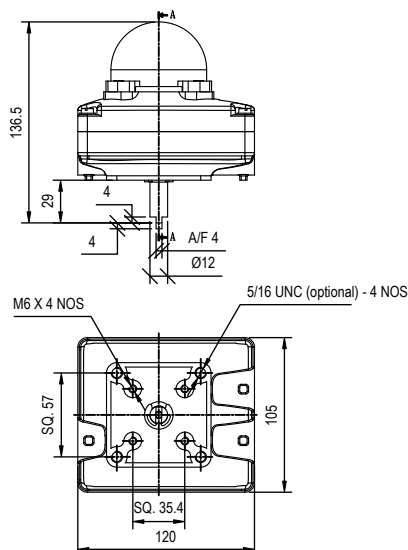
WEATHER PROOF

FEATURES

- Aluminium Diecast, Housing and cover with powder coating, for superior corrosion resistance
- Shatterproof Polycarbonate Dome
- Easily settable colour coded cam
- The locked serrated cams, ensure the secured settings against any vibration
- A special PCB, eliminates all the wiring from the switch element to the terminals. Complete protection against short circuit.
- Three cable entries are provided as standard
- Cable entries M20X1.5, 1/2" NPT
- Complies with NAMUR Mounting standards
- Solenoid termination provided inside the switch box
- Additional mounting holes are threaded as per the UNC (optional) series
- Range of Mounting Accessories having the compatibility with the various Actuator manufacturers available
- A stainless steel bracket is available as an option
- Temperature range -20 °C to +80 °C
On request -40 °C to +120 °C, -60 °C to +80 °C
- IP67 : Water, Rain and Dust Proof
- IP68 : Up to 100m on request

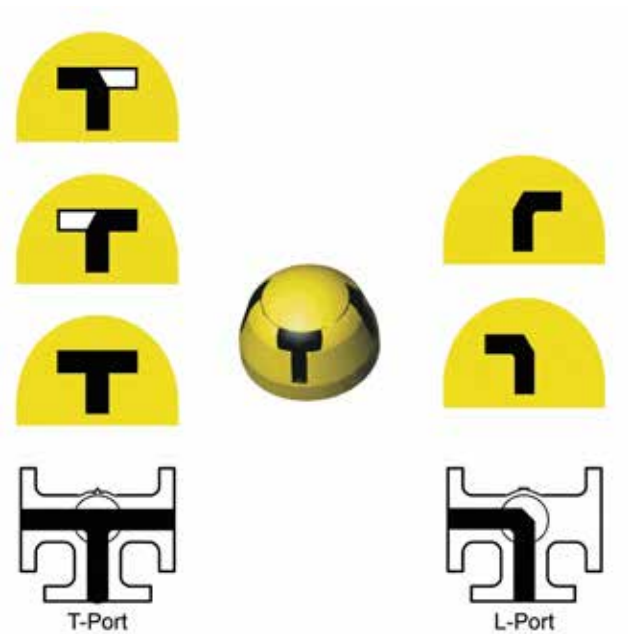


DIMENSIONS



INDICATOR

The two piece unique indicator, ensures a life long visibility



Standard Red and Yellow

Optional Red and Green

DOME

The Dome is a unique "two-piece" arrangement. The Black transparent plastic is an integral part of the dome, ensuring an extra longlife



Standard dome



3 Way dome

Only 90 segment is transparent
rest 270 all is black

ORDERING CODE

01 LIMITSWITCH TYPE	
Code	LIMITSWITCH TYPE
DXLW	WEATHERPROOF

02 MODEL CODE	
Code	Description
1A	ROLLER LEVER TYPE MICROSWITCHES (SPDT SWITCH)
2A	CYLINDRICAL PROXY SENSOR
3A	FLAT TYPE PROXY SENSOR
4A	SLOT TYPE PROXY SENSOR
5A	ROLLER LEVER TYPE MICROSWITCHES (DPDT SWITCH)
6A	HERMITICALLY SEALED REED SWITCH
PTR-01	POSITION TRANSMITTER
PTR-02	SMART POSITIONER

03 No Of Switch	
Code	Description
1	1
2	2
3	3
4	4
*	COUNTER CLOCKWISE
CW	CLOCKWISE

04 PTR	
Code	Description
*	WITHOUT PTR
PT ①	WITH PTR

05 Cable Entry Size	
Code	Description
4R	1/2" NPT
6R	3/4" NPT
3M	M20x1.5

06 Body Cover Material	
Code	Description
*	ALUMINIUM
B5	CF8M
B6	CF3M
B11	PLASTIC

07 Colour	
Code	Description
*	BLACK
B	BLUE
Y	YELLOW

08 Indicator	
Code	Description
*	WITHOUT INDICATOR
Y	RED AND YELLOW
G	RED AND GREEN
3L	3 WAY L PORT
3T	3 WAY T PORT

09 Temperature	
Code	Description
*	-20°C to +80°C
LTHT	-40°C to +120°C
LTL	-60°C to +80°C

10 Cable Entry	
Code	Description
*	DUAL
Q	4 ENTRY

11 CERTIFICATE	
Code	Description
*	IP67
W	IP68
S	SIL3

12 SPECIAL CUSTOMIZATION	
Code	Description
SUXX	--

NOTE:

① Option applicable with limit switch with PT.

SWITCH LIST

SWITCH LIST ①			
1A SERIES SWITCHES (ROLLER LEVER TYPE MICROSWITCHES)			
Code	Description	MAKE	Rating
1A	MICROSWITCH - V15S05-CZ100A05-01	HONEYWELL	5A 125VAC/250VAC, 0.1A 48VDC, 0.03A 250VDC
11A	MICROSWITCH - V7-1C17E9-201		15A 125/250VAC, 0.5A 125VDC, 0.25A 250 VDC
2A SERIES SWITCHES (CYLINDRICAL PROXY SENSOR)			
Code	Description	MAKE	Rating
2A	NJ2-12GM-N (EEx ia)	P&F	8 VDC, NC
12A	NCB2-12GM35-NO (EEx ia)		8 VDC, NC
22A	NBN4-12GM40-ZO		5-60 VDC, 100mA, NO
32A	NCN4-12GM35-NO (EEx ia)		8 VDC, NC
82A	NJ5-18GM-N (EEx ia)		8 VDC, NC
292A	NJ4-12GK-N (EEx ia)		8 VDC, NC
302A	NJ4-12GM50-WS (EEx ia)		20-253V AC, 200mA, 50/60Hz , NO
2C	NF5003	IFM	8 VDC, NC
12C	IF5718		10-36 V DC, 150mA, NO
3A SERIES SWITCHES (FLAT TYPE PROXY SENSOR)			
Code	Description	MAKE	Rating
3A	NJ-2-V3N / NCB2-V3-N0	P & F	8 VDC, 3mA, NC
13A	NBB3-V3-Z4		10-60V DC, 100mA, NO
183A	NCB2-V3-N0		8 VDC, 3mA, NC
3C	IS5026	IFM	5-36V DC, 200mA, OPTIONAL NO/NC
13C	NS5002		8V DC, NC
23C	IN0073		20-250V AC/DC,NO
4A SERIES SWITCHES (SLOT TYPE PROXY SENSOR)			
Code	Description	MAKE	Rating
4A	SJ-3.5-N (EEx ia)	P & F	8 VDC, NC
5A SERIES SWITCHES (ROLLER LEVER TYPE MICROSWITCH)			
Code	Description	MAKE	Rating
5A	V15S05-CZ100A05-01	HONEYWELL	5A 125VAC/250VAC, 0.1A 48VDC, 0.03A 250VDC
15A	V7-1C17E9-201		15A 125/250VAC, 0.5A 125VDC, 0.25A 250 VDC
6A SERIES SWITCHES (REED SWITCH)			
Code	Description	MAKE	Rating
6A	REED SWITCH (SPDT)	HERMETIC INC.	2 A, 220 VAC/VDC
16A	COBRA GOLD SWITCH (SPDT)		0.2A, 24VDC
56A	REED SWITCH (DPDT)	HERMETIC INC.	2 A, 220 VAC/VDC
156A	COBRA GOLD SWITCH (DPDT)		0.2A, 24VDC

NOTE:

① For any other Limit Switch Models, Contact ROTEX.

SWITCH BOXES TO ENHANCE THE PERFORMANCE OF THE VALVE AUTOMATION SYSTEMS

DNLF

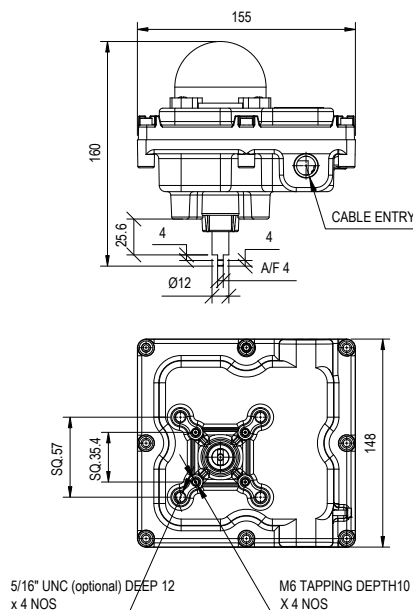
EXPLOSION PROOF

FEATURES

- Aluminium Diecast, with powder coating, for superior corrosion resistance
- Shatterproof Polycarbonate Dome
- Easily settable colour coded cam
- The locked serrated cams, ensure the secured settings against any vibration
- Switch Box conforms to Ex d IIC, T6 Highest level of safety
- Cable Entry M20, 1/2" NPT or 3/4" NPT
- A special PCB, eliminates all the wiring from the switch element to the terminals. Complete protection against short circuit.
- All fasteners are in stainless steel
- Additional mounting holes are threaded as per the UNC (optional) series
- ATEX certified by Baseefa United Kingdom Certification no. Baseefa09ATEX0126
- Temperature range -20 °C to +80 °C
On request -40 °C to +120 °C, -60 °C to +80 °C
- Cable entry
Dual cable entry
Optional 4 cable entry
- IP67 : Water, Rain and Dust Proof
- IP68 : Up to 100m on request



DIMENSIONS



POSITION TRANSMITTER

PTR01/ PTR02



FEATURES

- Weather-Proof
- Explosion-Proof
- Explosion-proof and weather-proof position transmitter
- Accuracy 0.3% FS
- Repeatability 0.2% FS
- Hysteresis 0.3% FS
- Field adjustment available
- Zero and span adjustable
- 2 wire system
- Spring loaded resistive feedback
- Visual percentage indicator provided
- Temperature range -20 °C to +80 °C
On request -40 °C to +120 °C, -60 °C to +80 °C
- NAMUR mounting dimensions

ORDERING CODE

01 LIMITSWITCH TYPE	
Code	LIMITSWITCH TYPE
DNLF	FLAMEPROOF

02 MODEL CODE ①	
Code	Description
1A	ROLLER LEVER TYPE MICROSWITCHES (SPDT SWITCH)
2A	CYLINDRICAL PROXY SENSOR
3A	FLAT TYPE PROXY SENSOR
4A	SLOT TYPE PROXY SENSOR
5A	ROLLER LEVER TYPE MICROSWITCHES (DPDT SWITCH)
6A	HERMITICALLY SEALED REED SWITCH
PTR-01	POSITION TRANSMITTER
PTR-02	SMART POSITIONER

03 No Of Switch	
Code	Description
1	1
2	2
3	3
4	4
*	COUNTER CLOCKWISE ②
CW	CLOCKWISE ②

04 PTR	
Code	Description
*	WITHOUT PTR
PT ③	WITH PTR

05 Cable Entry Size	
Code	Description
4R	1/2" NPT
6R	3/4" NPT
3M	M20x1.5

06 Body Cover Material	
Code	Description
*	ALUMINIUM
B5	CF8M
B6	CF3M

07 Colour	
Code	Description
*	BLACK
B	BLUE
Y	YELLOW

08 Indicator	
Code	Description
*	WITHOUT INDICATOR
Y	RED AND YELLOW
G	RED AND GREEN
3L	3 WAY L PORT
3T	3 WAY T PORT

09 Temperature	
Code	Description
*	T6 (-20°C to +60°C) T5 (-20°C to +70°C)

10 Cable Entry	
Code	Description
*	DUAL
Q	4 ENTRY

11 CERTIFICATE	
Code	Description
*	BIS
CC	CCOE/PESO (IIB)
A	ATEX/ IECEX (IIB)
I	INMETRO (IIB)
S ④	SIL
CCC	CCOE/PESO (IIC)
AC	ATEX/ IECEX (IIC)
IC	INMETRO (IIC)
AE	ATEX/ IECEX (Ex-i)
IE	INMETRO (Ex-i)
W ⑤	IP68

12 SPECIAL CUSTOMIZATION	
Code	Description
SUXX	--

NOTE:

- ① Refer to the switch list for the switch rating.
- ② Option applicable for PTR-01 and PTR-02.
- ③ Option applicable with limit switch with PT.
- ④ 'S', SIL Certification can be combined with any other certification.
- ⑤ 'W', IP68 Certification can be combined with any other certification.

SWITCH LIST

SWITCH LIST ①			
1A SERIES SWITCHES (ROLLER LEVER TYPE MICROSWITCHES)			
Code	Description	MAKE	Rating
1A	MICROSWITCH - V15S05-CZ100A05-01	HONEYWELL	5A 125VAC/250VAC, 0.1A 48VDC, 0.03A 250VDC
11A	MICROSWITCH - V7-1C17E9-201		15A 125/250VAC, 0.5A 125VDC, 0.25A 250 VDC
2A SERIES SWITCHES (CYLINDRICAL PROXY SENSOR)			
Code	Description	MAKE	Rating
2A	NJ2-12GM-N (EEx ia)	P&F	8 VDC, NC
12A	NCB2-12GM35-NO (EEx ia)		8 VDC, NC
22A	NBN4-12GM40-ZO		5-60 VDC, 100mA, NO
32A	NCN4-12GM35-NO (EEx ia)		8 VDC, NC
82A	NJ5-18GM-N (EEx ia)		8 VDC, NC
292A	NJ4-12GK-N (EEx ia)		8 VDC, NC
302A	NJ4-12GM50-WS (EEx ia)		20-253V AC, 200mA, 50/60Hz , NO
2C	NF5003	IFM	8 VDC, NC
12C	IF5718		10-36 V DC, 150mA, NO
3A SERIES SWITCHES (FLAT TYPE PROXY SENSOR)			
Code	Description	MAKE	Rating
3A	NJ-2-V3N / NCB2-V3-N0	P & F	8 VDC, 3mA, NC
13A	NBB3-V3-Z4		10-60V DC, 100mA, NO
183A	NCB2-V3-N0		8 VDC, 3mA, NC
3C	IS5026	IFM	5-36V DC, 200mA, OPTIONAL NO/NC
13C	NS5002		8V DC, NC
23C	IN0073		20-250V AC/DC,NO
4A SERIES SWITCHES (SLOT TYPE PROXY SENSOR)			
Code	Description	MAKE	Rating
4A	SJ-3.5-N (EEx ia)	P & F	8 VDC, NC
5A SERIES SWITCHES (ROLLER LEVER TYPE MICROSWITCH)			
Code	Description	MAKE	Rating
5A	V15S05-CZ100A05-01	HONEYWELL	5A 125VAC/250VAC, 0.1A 48VDC, 0.03A 250VDC
15A	V7-1C17E9-201		15A 125/250VAC, 0.5A 125VDC, 0.25A 250 VDC
6A SERIES SWITCHES (REED SWITCH)			
Code	Description	MAKE	Rating
6A	REED SWITCH (SPDT)	HERMETIC INC.	2 A, 220 VAC/VDC
16A	COBRA GOLD SWITCH (SPDT)		0.2A, 24VDC
56A	REED SWITCH (DPDT)		2 A, 220 VAC/VDC
156A	COBRA GOLD SWITCH (DPDT)		0.2A, 24VDC

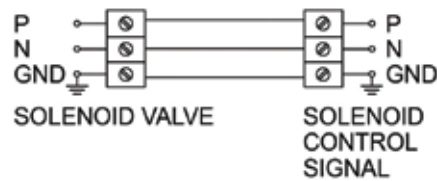
NOTE:

① For any other Limit Switch Models, Contact ROTEX.

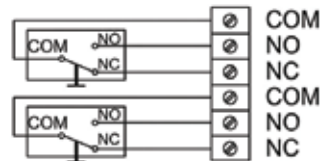
WIRING DIAGRAM

LIMIT SWITCH 1A,2A,3A SERIES

LIMIT SWITCH 1A SERIES



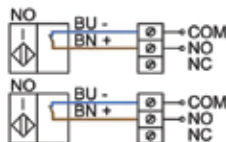
Valve open Yellow cam BOTTOM SWITCH
Valve closed Red cam TOP SWITCH



LIMIT SWITCH 2A SERIES

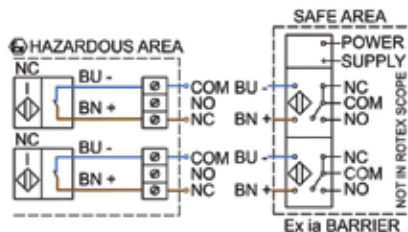
2 WIRE PROXIMITY - NO

Valve open Yellow cam BOTTOM SWITCH
Valve closed Red cam TOP SWITCH



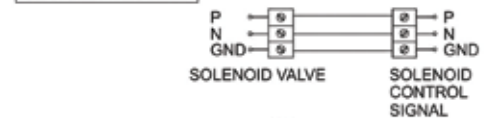
2 WIRE PROXIMITY - NC

Valve open Yellow cam BOTTOM SWITCH
Valve closed Red cam TOP SWITCH

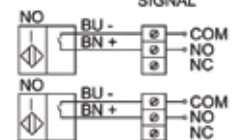


LIMIT SWITCH 3A SERIES

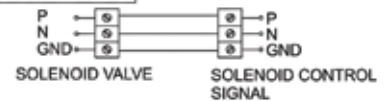
2 WIRE PROXIMITY-NO



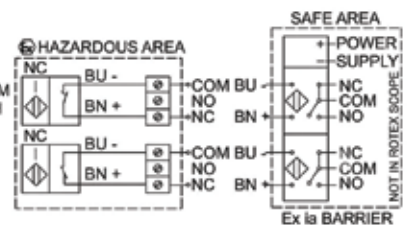
Valve open Yellow cam BOTTOM SWITCH
Valve closed Red cam TOP SWITCH



2 WIRE PROXIMITY-NC



Valve open Yellow cam BOTTOM SWITCH
Valve closed Red cam TOP SWITCH

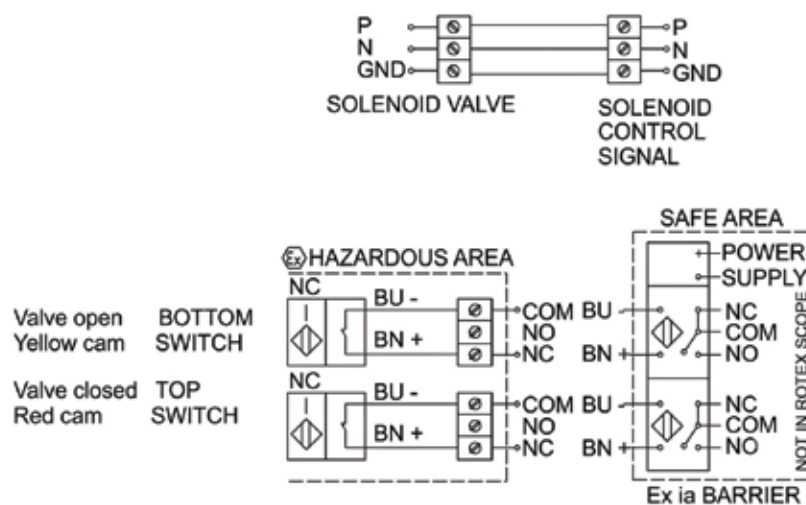


WIRING DIAGRAM

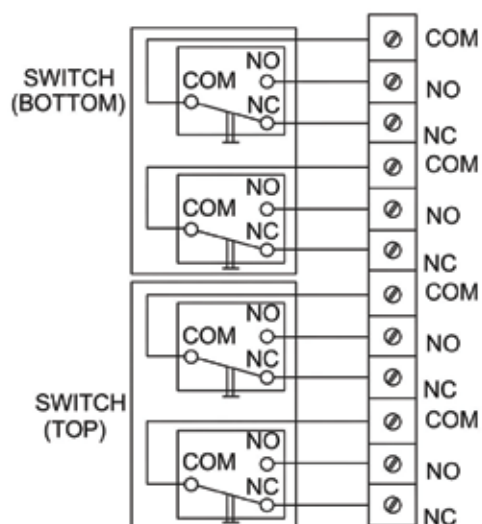
LIMIT SWITCH 4A,5A,6A SERIES

LIMIT SWITCH 4A SERIES

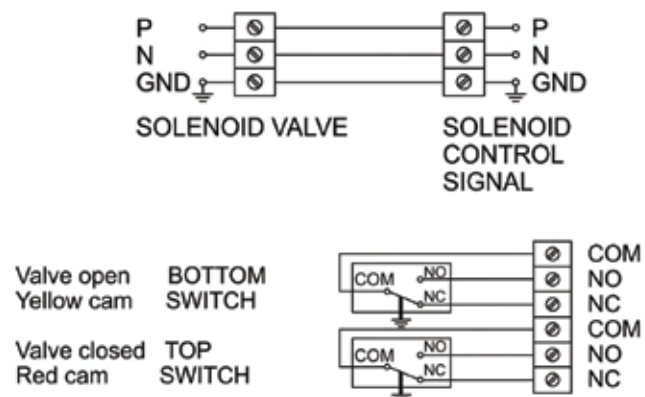
2 WIRE PROXIMITY - NC



LIMIT SWITCH 5A SERIES



LIMIT SWITCH 6A SERIES



VALVE CONTROL BOX WITH 3/2 & 5/2 SOV CONTROL

VALVE CONTROL BOX

FEATURES

- Explosion proof I, IIA, IIB and IIC
- Maximum current permissible 2 Amp AC/ DC resistance
- Shatterproof Polycarbonate Dome
- Easily settable colour coded cam
- The locked serrated cams, ensure the secured settings against any vibration
- Switch Box conforms to Ex d IIC, T6 Highest level of safety
- Cable Entry M20, 1/2" NPT, or 3/4" NPT
- Special PCB eliminates all wiring from the switch element to the terminals. Complete protection against short circuit
- All fasteners are in stainless steel
- Additional mounting hole to the UNC (optional) series
- ATEX, certified by Baseefa United Kingdom,
- The Valve Automation System is suitable for ON/ OFF application
- Solenoid valve is designed with the threaded cover to suit the limit switch box tapping
- Manual override on the SOV are available as an option



VALVE CONTROL BOX WITH DRIBBLE CONTROL

FEATURES

- The Actuator is suitable for coarse-fine adjustment, typically for batching operations or processes
- The Actuator has to be spring return
- The operation sequences fixed from full open, partial open to full close
- Infinite intermediate positions are possible with the limit switch
- It can be fine tuned to the application easily
- The settings can be changed at site with ease, by simply adjusting the third cam provided
- It is applicable for 90° or 180° any ROTEK spring return Actuator can be converted into this arrangement by adding ROTEK valve Control Box with Dribble control



VALVE CONTROL BOX

DLNF

FEATURES

- Valve control box with 3/2 solenoid valve
- Solenoid valve is designed with the threaded cover to suit the limit switch box tapping
- Explosion proof to I, IIA, IIB, and IIC
- Shatterproof Polycarbonate Dome
- Easily settable colour coded cam
- The locked serrated cams, ensures the secured settings against any vibration
- Switch Box conforms to Ex d IIC, T6 Highest level of safety
- Cable entries M20, 1/2" NPT, or 3/4" NPT
- All fasteners are in stainless steel
- Additional mounting hole is threaded as per the UNC (optional) series
- The customer can choose any other V3 mounting micro switch. Current above 10 Amp PCB will not be provided
- ATEX, certified by Baseefa United Kingdom, Certification no. Baseefa09ATEX0126
- Temperature range -20 °C to +80 °C
On request -40 °C to +120 °C, -60 °C to +80 °C
- Cable entry
Dual cable entry
Optional 4 cable entry
- IP67 : Water, Rain and Dust Proof
- IP68 : Up to 100m on request



FEATURES VALVE CONTROL BOX DRIBBLE

DLNF

FEATURES

- Valve control box with Dribble control
- Dribble control valve is designed with the threaded cover to suit the limit switch box tapping
- Explosion proof to I, IIA, IIB, and IIC
- Shatterproof Polycarbonate Dome
- Easily settable colour coded cam
- The locked serrated cams, ensures the secured settings against any vibration
- Switch Box conforms to Ex d IIC, T6 Highest level of safety
- Cable entries M20, 1/2" NPT, or 3/4" NPT
- All fasteners are in Stainless Steel
- Additional mounting hole is threaded as per the UNC (optional) series
- The customer can choose any other V3 mounting micro switch. Current above 10 Amp PCB will not be provided
- ATEX, certified by Baseefa United Kingdom, Certification no. Baseefa09ATEX0126
- Temperature range -20 °C to +80 °C
On request -40 °C to +120 °C, -60 °C to +80 °C
- Cable entry
Dual cable entry
Optional 4 cable entry
- IP67 : Water, Rain and Dust Proof
- IP68 : Upto 100m on request



VALVE CONTROL BOXES-5/2 SOLENOID VALVES

VALVE CONTROL BOX WITH 5/2 SINGLE SOLENOID VALVE

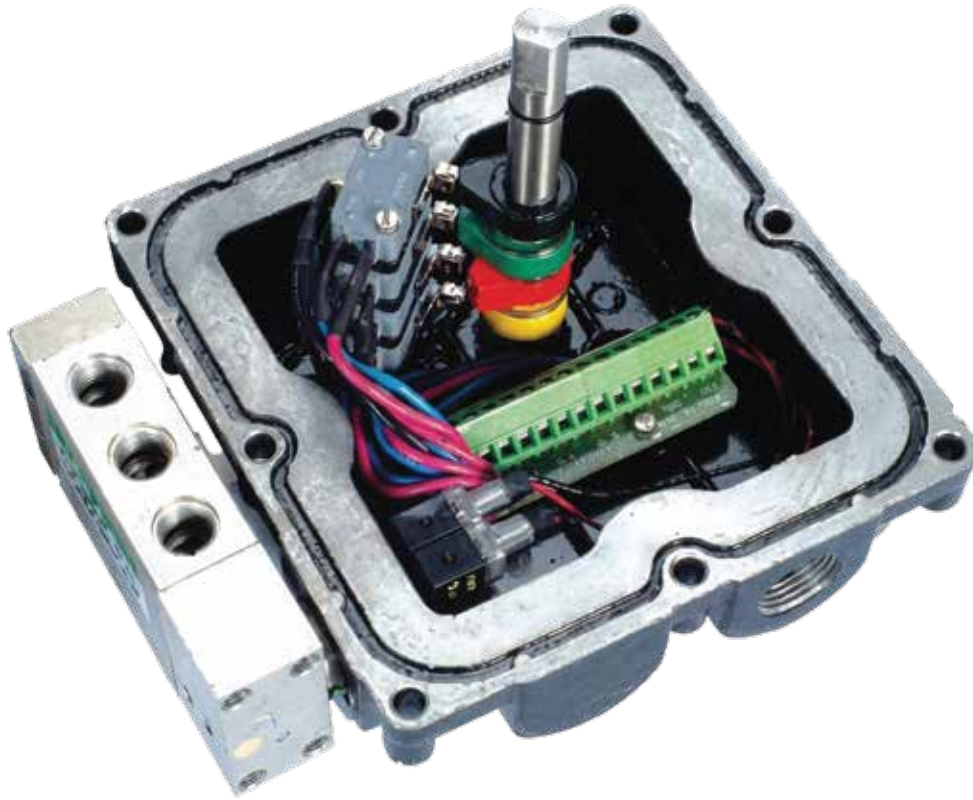
FEATURES



FEATURES

- Valve control box with 5/2 single solenoid valve
- Solenoid valve is designed with the threaded cover to suit the limit switch box tapping
- Explosion proof to I, IIA, IIB, and IIC
- Shatterproof Polycarbonate Dome
- Easily settable colour coded cam
- The locked serrated cams, ensures the secured settings against any vibration
- Switch Box conforms to Ex d IIC, T6 Highest level of safety
- Cable entries M20, 1/2" NPT, or 3/4" NPT
- All fasteners are in stainless steel
- Additional mounting hole is threaded as per the UNC (optional) series
- The customer can choose any other V3 mounting micro switch. Current above 10 Amp PCB will not be provided
- ATEX, certified by Baseefa United Kingdom, Certification no. Baseefa09ATEX0126
- Temperature range -20 °C to +80 °C
On request -40 °C to +120 °C, -60 °C to +80 °C
- Cable entry
Dual cable entry
Optional 4 cable entry
- IP67 : Water, Rain and Dust Proof
- IP68 : Up to 100m on request

VALVE CONTROL BOX WITH 5/2 DOUBLE SOLENOID VALVE



FEATURES

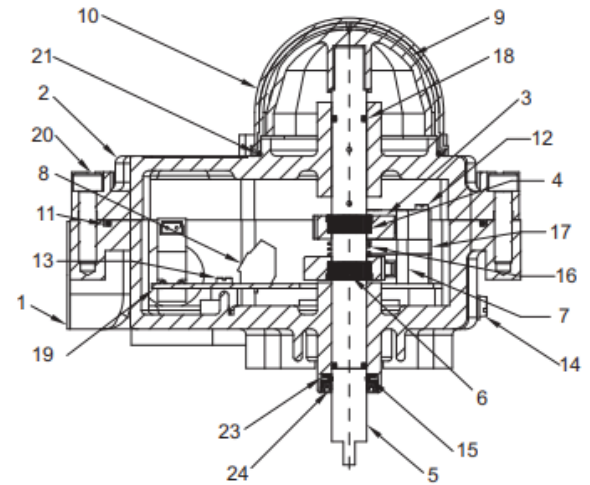
- Valve control box with 5/2 Double solenoid valve
- Solenoid valve is designed with the threaded cover to suit the limit switch box tapping
- Valve control box with 5/2 single solenoid valve
- Solenoid valve is designed with the threaded cover to suit the limit switch box tapping
- Explosion proof to I, IIA, IIB, and IIC
- As per UL1203 and UL508, File no. E246615
- Shatterproof Polycarbonate Dome
- Easily settable colour coded cam
- The locked serrated cams, ensures the secured settings against any vibration
- Switch Box conforms to Ex d IIC, T6 Highest level of safety
- Cable entries M20, 1/2" NPT, or 3/4" NPT
- All fasteners are in stainless steel
- Additional mounting hole is threaded as per the UNC (optional) series
- The customer can choose any other V3 mounting micro switch. Current above 10 Amp PCB will not be provided
- ATEX, certified by Baseefa United Kingdom, Certification no. Baseefa09ATEX0126
- Temperature range -20 °C to +80 °C
On request -40 °C to +120 °C, -60 °C to +80 °C
- Cable entry
Dual cable entry
Optional 4 cable entry
- IP67 : Water, Rain and Dust Proof
- IP68 : Up to 100m on request

VALVE CONTROL BOX

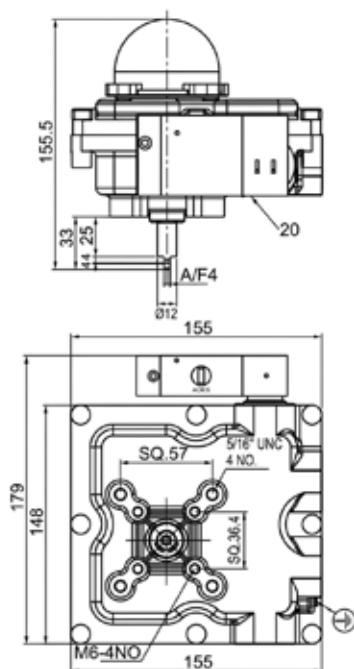
MATERIAL OF CONSTRUCTION

S.NO.	DESCRIPTION	QTY.	MATERIAL
1	HOUSING	1	ALUMINIUM ALLOY LM-6
2	COVER	1	ALUMINIUM ALLOY LM-6
3	CAM	2	POLYAMIDE
4	CAM-LOCK	2	DELRI N
5	SHAFT	1	STAINLESS STEEL
6	SPRING DOWEL	2	SPRING STEEL
7	MICROSWITCH (SPDT)	2	HONEYWELL
8	THREE WAY TERMINAL BLOCK	4	POLYAMIDE
9	INDICATOR	1	ABS PLASTIC
10	INDICATOR COVER	1	POLYCARBONATE
11	GASKET	1	NBR
12	SCREW FOR MICROSWITCH	2	STAINLESS STEEL
13	SCREW FOR PCB	2	STAINLESS STEEL
14	SCREW FOR EARTH CONN.	2	STAINLESS STEEL
15	EXTERNAL CIRCLIP	1	STAINLESS STEEL
16	SPRING	1	STAINLESS STEEL
17	PAD	1	POLYAMIDE
18	O-RING	2	NBR
19	PRINTED CIRCUIT BOARD	1	-
20	NON FALLING SCREW	8	STAINLESS STEEL
21	O-RING	1	NBR
22	3/2 SOLENOID VALVE	1	-
23	WASHER	1	SS304
24	CUP SEAL	1	NBR

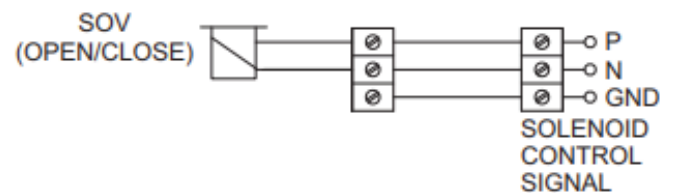
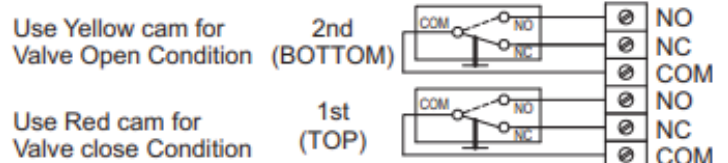
CROSS SECTION



DIMENSIONS



WIRING DIAGRAM

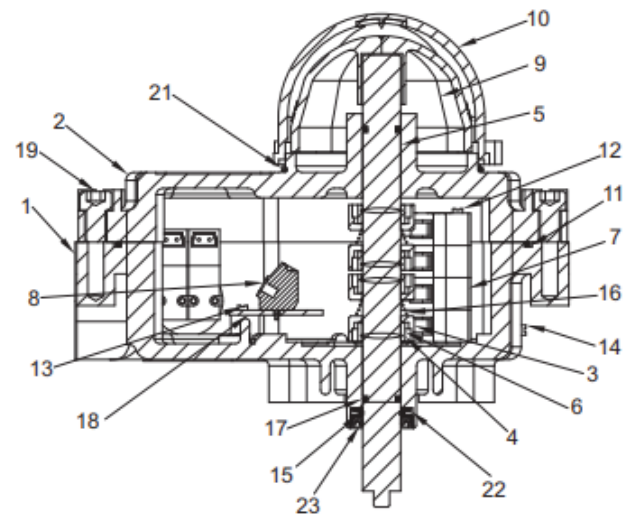


VALVE CONTROL BOX DRIBBLE

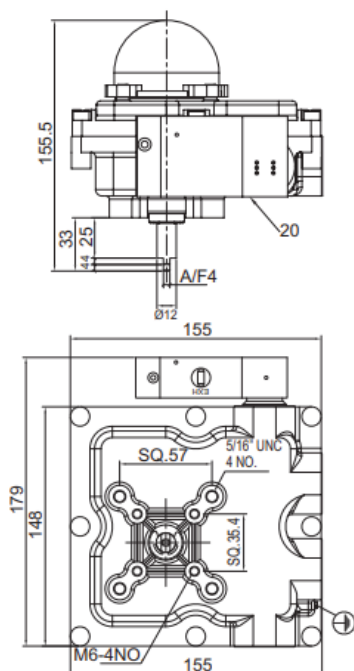
MATERIAL OF CONSTRUCTION

S.NO.	DESCRIPTION	QTY.	MATERIAL
1	HOUSING	1	ALUMINIUM ALLOY LM-6
2	COVER	1	ALUMINIUM ALLOY LM-6
3	CAM	2	POLYAMIDE
4	CAM-LOCK	2	DELRI N
5	SHAFT	1	STAINLESS STEEL
6	SPRING DOWEL	2	SPRING STEEL
7	MICROSWITCH (SPDT)	2	HONEYWELL
8	THREE WAY TERMINAL BLOCK	4	POLYAMIDE
9	INDICATOR	1	ABS PLASTIC
10	INDICATOR COVER	1	POLYCARBONATE
11	GASKET	1	NBR
12	SCREW FOR MICROSWITCH	2	STAINLESS STEEL
13	SCREW FOR PCB	2	STAINLESS STEEL
14	SCREW FOR EARTH CONN.	2	STAINLESS STEEL
15	EXTERNAL CIRCLIP	1	STAINLESS STEEL
16	SPRING	1	STAINLESS STEEL
17	PAD	1	POLYAMIDE
18	O-RING	2	NBR
19	PRINTED CIRCUIT BOARD	1	-
20	NON FALLING SCREW	8	STAINLESS STEEL
21	O-RING	1	NBR
22	3/2 SOLENOID VALVE	1	-
23	WASHER	1	SS304
24	CUP SEAL	1	NBR

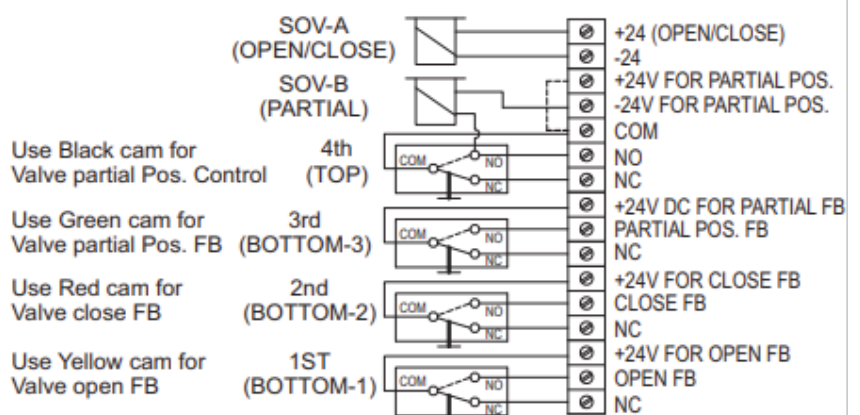
CROSS SECTION



DIMENSIONS



WIRING DIAGRAM



DAK 213/ VAK 213

ORDERING OPTIONS

FDXLW	A	B	C	D	E
	TYPE	SWITCH SELECTION	CABLE ENTRY	BODY AND COVER	COLOUR
	Ex PROOF ※	CODE* TYPE PAGE NO	1/2" NPT (F) 4R	ALUMINIUM ※	BLACK ※
	INTRINSICALLY SAFE 67	1A2 MICRO SWITCH 8	3/4" NPT (F) 6R	CF8M B5	BLUE B
	INTRINSICALLY SAFE WITH CIRCUIT 63	2A2 CYLINDRICAL PROXIMITY 12	M20X1.5 (F) 3M		
		3A2 FLAT TYPE PROXIMITY 16			
		4A2 SLOT TYPE PROXIMITY 18			
		5A2 DPDT 20			
		6A2 HERMETICALLY SEALED 22			

F	G	H	I	J	K
INDICATOR	TEMPERATURE RANGE	CABLE ENTRY	BRACKET	CERTIFICATES	SOLENOID VALVE
RED AND YELLOW ※	-20 °C to +80 °C ※	SINGLE ※	REFER	CMRI ※	MODEL CODE
RED AND GREEN G	-40 °C to +120 °C LTHT	2 ENTRY 2Q		ATEX A	3/2 SINGLE COIL-1/4" DAK213
3 WAY L PORT 3L	-60 °C to +80 °C LTL	3 ENTRY 3Q		CCOE CC	3/2 SINGLE COIL-3/8" DAK313
3 WAY T PORT 3T				Ex ia IS	3/2 DOUBLE COIL-1/4" DAK214
					3/2 DOUBLE COIL-3/8" DAK314
					DRIBBLE CONTROL-1/4" DB213
					DRIBBLE CONTROL-3/8" DB313
					5/2 SINGLE COIL-1/4" VAK213
					5/2 SINGLE COIL-3/8" VAK313
					5/2 DOUBLE COIL-1/4" VAK214
					5/2 DOUBLE COIL-3/8" VAK314

L	M
SOV. PORT CONN.	COIL VOLTAGE
MODEL CODE	MODEL CODE
BSP G"	12VDC 12
NPT R"	24VDC 24
	24VDC Ex ia 24Exia
	110VAC 110
	220VAC 220

Note: (1) The range is not limited to ones listed above.
Other versions can be offered as per the requirement

ORDERING EXAMPLE

- Select complete code from respective pages choosing ordering option (B) (C) e.g. page 8, 2 nos. Honeywell Microswitch choose 1A2
- DNLF-67-3A2-4R-M1-A-VAK214-G-24Ex ia
- Intrinsically safe box with NJ2-V3-N 2 Nos switch with Double solenoid valve 1/4"BSP, 24VDC Ex ia type, 1/2"NPT 2 Nos ports (One will be used for solenoid valve and one available to customer)

FIELDBUS

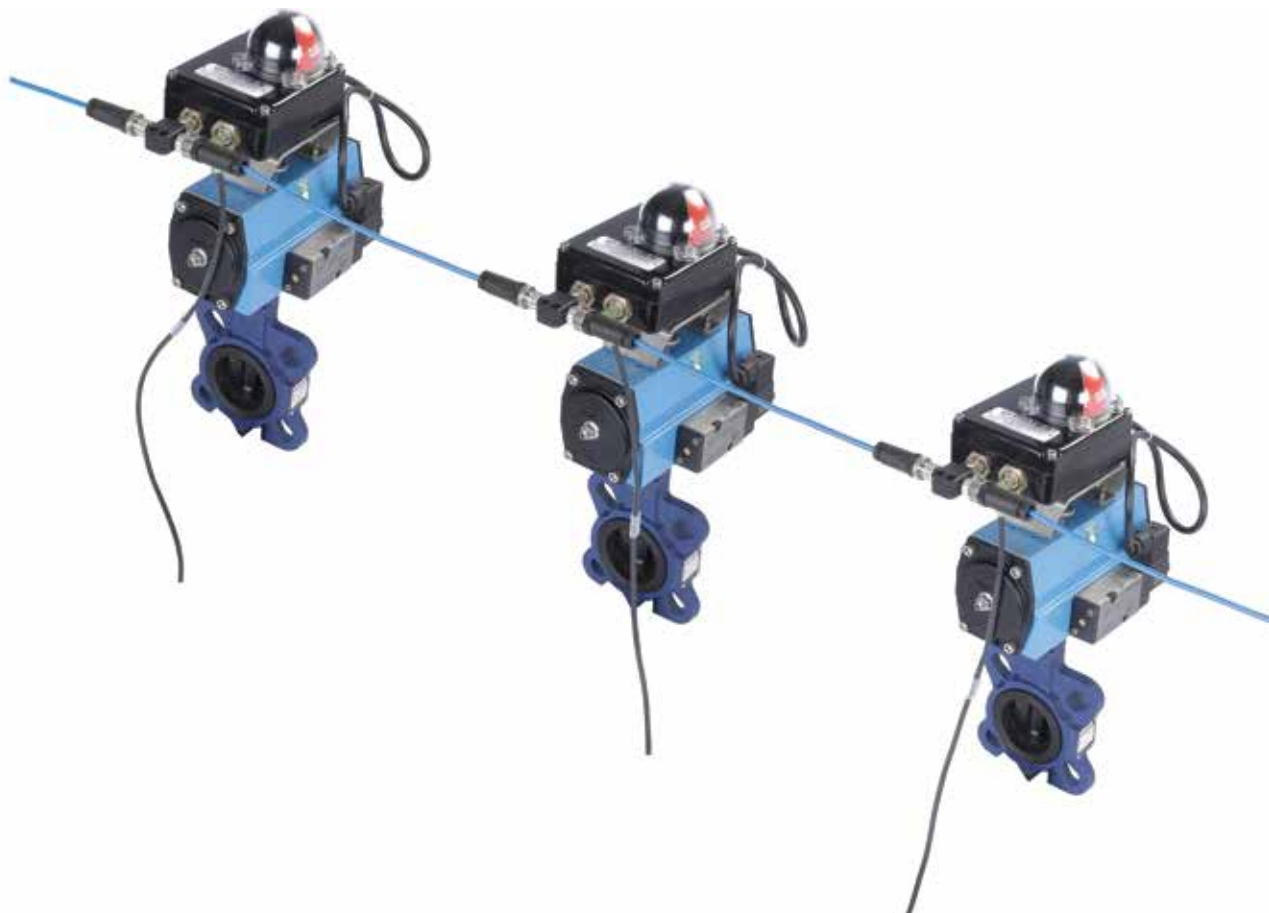
CATEGORY 1 AS-INTERFACE

The first category is at a relatively simple level where the requirement is to distribute digital I/O (inputs and outputs) to monitor inputs from switches or sensors (level, travel limit, fault alarms etc.) and/or control outputs to ON/OFF devices such as solenoid valves or relays. In such applications, the requirement for high speed data transmission is not critical and the need to process significant amounts of data at the node does not exist. Generally, the control function (optional) is ON/OFF and the speed at which the related equipment operates, is far slower than the electronic data transfer rate. Electronic hardware cost is an important factor, and local nodes need to be relatively simple, generally, with a maximum I/O count of 4 DO/DI for AS-interface is a typical system in this category

CATEGORY 3 PROFIBUS OR FOUNDATION FIELDBUS

The third category is by far the largest with systems transmitting process control data at high speed to a potentially large number of nodes. The functionality of nodes can range from distributing discrete digital and analogue I/O, providing gateway to lower level systems (like AS-interface), through remote processing and local loop control. Systems in this third category are full function fieldbus capable of handling cyclic data, events and messages. Examples include PROFIBUS or FOUNDATION fieldbus (FF)

NETWORKING



PROFIBUS-DP/ PA, DEVICE NET, CAN OPEN

TYPE 'F' LIMITSWITCH BOX WITH PROFIBUS-DP/PA

- The 'F' limitswitch box, has been designed, to overcome lengthy wiring. It is easy to operate, maintain and control
- The box is configured to exchange data through field bus using PROFIBUS-DP protocol
- The Field bus connectivity is achieved, by using RS 485 interface with 5 core cable

COMMUNICATION CHARACTERISTICS

Protocol Features	Profibus-DP (Device Bus)	Profibus - PA (Process Control Network)
Transmission	Shielded and Twisted pair	Twisted pair, Fiber
Bus Structure	Line or tree, Using repeater	Bus, Ring, Star
Maximum No of slaves	126	32 Nodes/ Segment 4-6 per repeated segment depending on power requirements of devices and the type of IS Barrier used
Input/ Output per Box	2 Inputs/ 2 Outputs 4 Inputs/ 4 Outputs optional	2 Inputs/ 2 Outputs 4 Inputs/ 4 Outputs optional
Bus cable length	1200m at 9.6 kbps 100m at 12 mbps	1900M Maximum Distance 9500m with Repeater (Maximum 9 Repeaters)
Slave addressing	Slave addressing	Dip switch/ Handheld/ Software

ELECTRICAL CHARACTERISTICS

- Supply voltage : 24V DC +/- 10% with max 15% ripple
- Bus consumption : < 150 mA
- Solenoid consumption : Up to 8W
- Protection : IP55
- Supply connection (24V) : M8 Socket 4 pin male
- Bus connection : IN 5 pin M12-B male
- Earthing : On the box
- Electromagnetic compatibility : CE, directive EMC 89/ 336/ EEC

STANDARD INPUTS/ OUTPUT

- Microswitch : V15S05-CZ100A05-01 (5A) Honeywell
- Proximity : NJ2-V3-N (NAMUR sensor for Intrinsically safe application) P & F
NBB3-V3-Z4 (24V, 100 mA) P & F
- Solenoid valves : 24V DC, 300 mA (8W max)



PROFIBUS-DP/ PA, DEVICE NET, CAN OPEN

TYPE 'F' LIMITSWITCH BOX WITH DEVICE NET AND CAN OPEN

- The type "F" limitswitch box has been designed to overcome lengthy wiring. It is easy to operate, maintain and control
- The Limitswitch box is configured to exchange data through the fieldbus using DEVICENet or CANopen protocol
- The fieldbus connectivity is achieved by using 2(signal) X 2(data) with shield, 5 core cable

COMMUNICATION CHARACTERISTICS

▪ Protocol	:	DEVICENet or CANopen
▪ Transmission	:	2X2 twisted and shielded cable
▪ Bus Structure	:	Line or tree Structure
▪ Max. no. of slaves	:	63
▪ Input/ Output per box	:	2 Inputs/2 Outputs (4 Inputs/ 4 Outputs optional)
▪ Bus cable length	:	500m at 125k bit/s and 100m at 500k bit/s
▪ Slave addressing	:	Rotary or DIP switch

ELECTRICAL CHARACTERISTICS

▪ Supply voltage	:	24V DC +/- 10% with max 15% ripple (Condition power supply to protect the Digital communication)
▪ Bus consumption	:	< 100 mA
▪ Solenoid consumption	:	Up to 8W
▪ Protection	:	IP55
▪ Supply connection (24 V)	:	M8 Socket 3/4 pin male
▪ Bus connection	:	5 Pin M12-A male
▪ Electromagnetic	:	CE, directive EMC 89/ 336/ EEC

STANDARD INPUTS/ OUTPUT

▪ Microswitch	:	V15S05-CZ100A05-01 (5A) Honeywell
▪ Proximity	:	NJ2-V3-N (NAMUR sensor for Intrinsically safe application) P & F NBB3-V3-Z4 (24V DC, 100mA) P & F
▪ Solenoid valves	:	24V DC, 300mA (8W max)



PROFIBUS-DP/ PA, DEVICE NET, CAN OPEN

TYPE 'F' LIMITSWITCH BOX WITH AS-INTERFACE

- The 'F' limitswitch box has been designed to overcome lengthy wiring. It is easy to operate, maintain and control
- The limitswitch is configured to exchange data through the fieldbus using Actuator Sensor Interface
- The fieldbus connectivity is achieved by using 2-wire interface depending upon network topology

COMMUNICATION CHARACTERISTICS

- | | | |
|-------------------------|---|--|
| ▪ Protocol | : | AS-Interface using V2.1/3.0 profile insert : 4I/4O simple addressing |
| ▪ Transmission | : | ASI flat cable/ unshielded 2-wire |
| ▪ Bus Structure | : | Line/ Star/ tree using repeaters |
| ▪ Max. No. of slaves | : | 31 |
| ▪ Input/ output per box | : | 2 Inputs/ 2 Outputs (4 Inputs/ 4 Outputs optional) |
| ▪ Bus cable length | : | 100m/ 300m with repeaters |
| ▪ Slave addressing | : | Hand held addressing unit |

ELECTRICAL CHARACTERISTICS

- | | | |
|---------------------------------|---|---|
| ▪ Supply voltage | : | 24V DC+/- 10% with max 15% ripple |
| ▪ Bus consumption | : | < 250 mA |
| ▪ Solenoid consumption | : | Up to 1W |
| ▪ Protection | : | IP55 |
| ▪ Supply connection (24V) | : | Flat with vampire type connector 5 pin male |
| ▪ Earthing | : | On the box |
| ▪ Electromagnetic compatibility | : | CE, directive EMC 89/ 336/ EEC |

STANDARD INPUTS/ OUTPUT

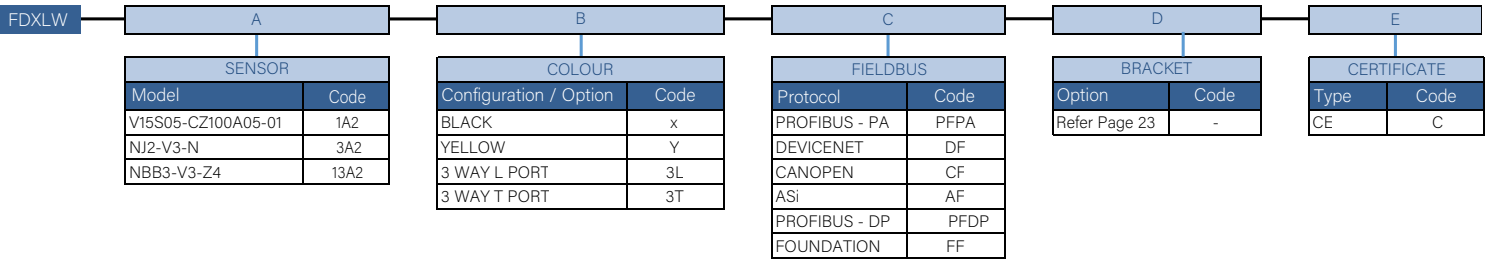
- | | | |
|-------------------|---|-----------------------------------|
| ▪ Microswitch | : | V15S05-CZ100A05-01 (5A) Honeywell |
| ▪ Solenoid valves | : | 24V DC, 40 mA (1W max) |



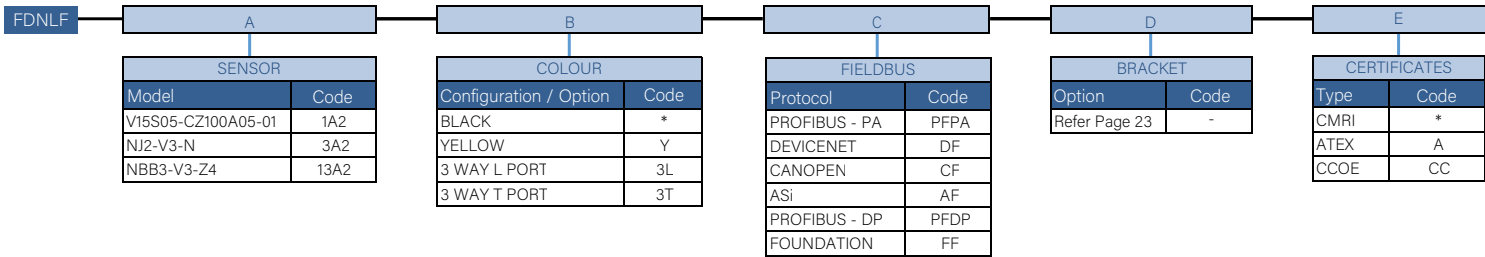
PROFIBUS-DP/ PA, DEVICE NET, CAN OPEN

ORDERING EXAMPLE

WEATHER PROOF



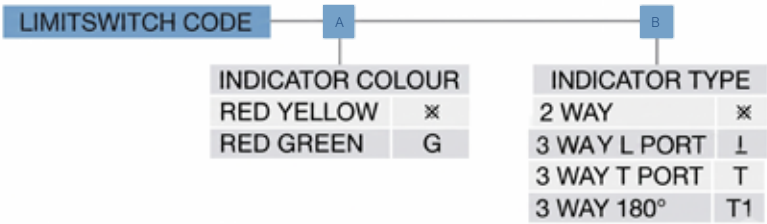
EXPLOSION PROOF



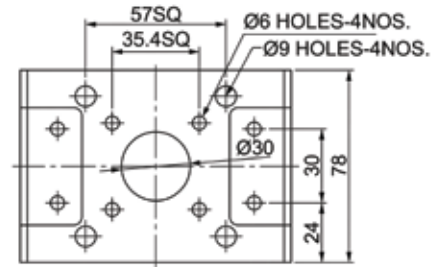
ORDERING EXAMPLE

MODEL : FDNLF13A2 - Y - PFDP - B1
Explosion proof housing with profibus-DP interface Digital input with PEPPERL+FUCHS Proximity, Sensor NBB3-V3-Z4 200 mAmp, 24V DC with 2 built in Solenoid Driver 24V DC, max 300 mA

ORDERING CODE FOR INDICATOR

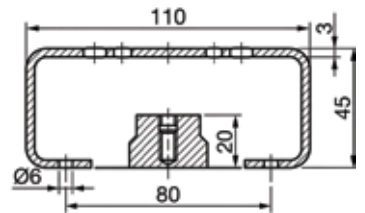


MOUNTING BRACKET



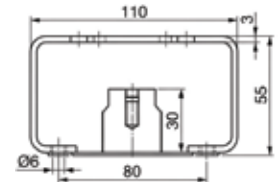
ORDERING CODE	
MATERIAL OF BRACKET	CODE
SS 304	B1
MS	M1

ACCESSORY	
M5 X 10 - HEXAGON BOLT	
M6 X 12 - HEXAGON BOLT	



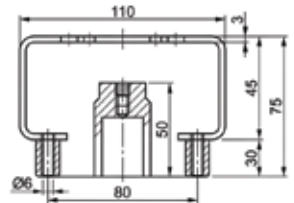
ORDERING CODE	
MATERIAL OF BRACKET	CODE
SS 304	B21
MS	M21

ACCESSORY	
M5 X 10 - HEXAGON BOLT	
M6 X 12 - HEXAGON BOLT	



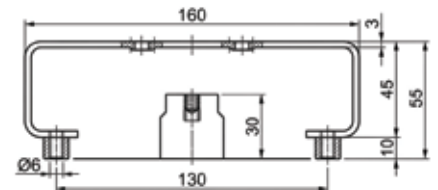
ORDERING CODE	
MATERIAL OF BRACKET	CODE
SS 304	B3
B3	M3

ACCESSORY	
M5 X 40 - HEXAGON BOLT	
M6 X 12 - HEXAGON BOLT	
MS/ ALUMINIUM BUSH, 30mm HEIGHT	



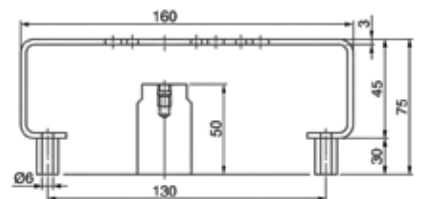
ORDERING CODE	
MATERIAL OF BRACKET	CODE
SS 304	B132
MS	M132

ACCESSORY	
M5 X 20 - HEXAGON HEAD BOLT	
M6 X 12 - HEXAGON HEAD BOLT	
MS/ ALUMINIUM BUSH, 10mm HEIGHT	



ORDERING CODE	
MATERIAL OF BRACKET	CODE
SS 304	B133
MS	M133

ACCESSORY	
M5 X 40 - HEXAGON HEAD BOLT	
M6 X 12 - HEXAGON HEAD BOLT	
MS/ ALUMINIUM BUSH, 30mm HEIGHT	



NOTES

[illegible]

OVERSEAS OFFICES

Middle East & North Africa

Rotex Flow Control Marketing Services L.L.C

Office No. 2403-01, The One Tower, Al Thanyah First,
Dubai, United Arab Emirates

Phone: +971 543126161

Email: Rotexmena@rotexautomation.com

EUROPE

Rotex Automation Europe

Bierstraat 117, 3011 XA Rotterdam,
The Netherlands

Phone: +31 10 210 5331

Email: europe@rotexautomation.com

Manufacturing Units

Rotex Manufacturers & Engineers Pvt Ltd

Unit I

Plot No-R-852/853, TTC Industrial Area, Rabale,
Navi Mumbai-400701, Maharashtra, India

Phone: +91 22 2087 1065

Email: sales.rabale@rotexautomation.com

Rotex Manufacturers & Engineers Pvt Ltd

Unit II

PAP/SH-102, Chakan, Ind.Area, Phase II, Shinde Village
Khed Taluka, Pune-410501, Maharashtra, India

Phone: +91 22 2087 1065

Email: sales.rabale@rotexautomation.com

Rotex Industrial Company Ltd

Unit III

93 Street, Building No 6722, Postal Code 34334,
Dammam, Kingdom of Saudi Arabia

Email: sales.ksa@rotexksa.com

Web address: www.rotexksa.com



Engineering For The Future



@rotexautomation

www.rotexautomation.com