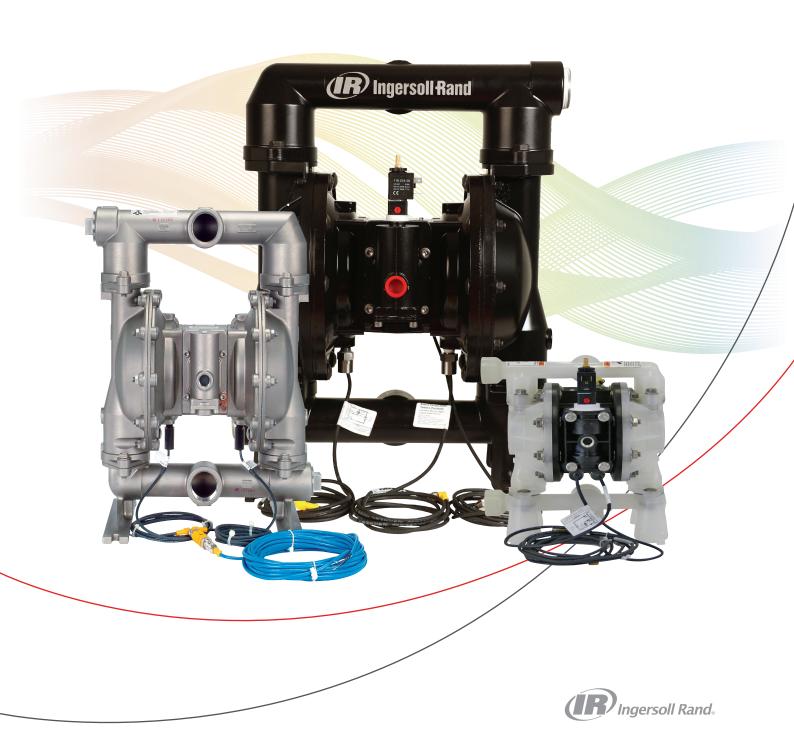# ARO®

ELECTRONIC INTERFACE CONFIGURATION GUIDE

INTELLIGENT DIAPHRAGM PUMP ACCESSORIES AND RETROFIT INFORMATION

Ingersoll Rand®

ARO® is pleased to present this selection guide to provide a convenient and informative reference point for PE pump accessory selection.

Please scan the QR code or go to our Youtube channel for a detailed video guide on how to convert an ARO® diaphragm pump to an Electronic Interface "Process Ready" Pump.

https://www.youtube.com/watch?v=M81fcExoqyI

This information was compiled from information provided by material suppliers and manufacturers.

The information listings are intended as a guide only.
The user should contact the Customer Management team to ensure the accuracy of information listed.

STANDARD DUTY ACCESSORIES

Available accessories to convert standard EXP pumps (PD) to electronic interface (PE) for standard duty (Non-ATEX- safe area) environments.

TAB A - CYCLE SENSOR / All sensors in this table are provided with M12 connector			
Pump Size	Description	CPN	Reference
1/4"	Cycle Sensor/Muffler[1]	24110934	24110934
3/8"	Cycle Sensor/Muffler[1]	47533509001	97048
1/2" and 3/4"	Cycle Sensor[2]	47533511001	97053
1"	Cycle Sensor (Plug Type)	47533513001	97119
1 ½"	Cycle Sensor (Plug Type)	47534493001	97396
2" and 3"	Cycle Sensor (Plug Type)	47533515001	97121

TAB B - LEAK DETECTION / Two sensors required for one pump			
Pump Size	Description	CPN	Reference
All	Leak Detection Sensor (Qty 1) w/ PSW 3M -2/90 BNPIN Connector	15208739	96270-1
All	Leak Detection sensor (Q.ty 1)[9] - no connector	46736534	96270-2
All	Leak Detection Kit[3]	99853202	67237

TAB C - SOLENOID ACTUATION / Both Major Valve conversion kit [tab C.1] and coil [tab C.2] are required				
Pump Size	Center Body Material	Description	CPN	Reference
1/4"	Black Polypropylene		637371-3-N	637371-3-N
3/8", 1/2", 3/4"	Black Polypropylene		637540-3-N	637540-3-N
1"	Aluminum		637541-1-N	637541-1-N
1"	Stainless Steel		637541-2-N	637541-2-N
1"	Black Polypropylene		637541-3-N	637541-3-N
1"	White Polypropyl-ene		637541-4-N	637541-4-N
1 ½"	Aluminum	Major Valve Block	637542-1-N	637542-1-N
1 ½"	Stainless Steel		637542-2-N	637542-2-N
1 ½"	Black Polypropylene		637542-3-N	637542-3-N
2" and 3"	Aluminum		637543-1-N	637543-1-N
2" and 3"	Stainless Steel		637543-2-N	637543-2-N
2" and 3"	Black Polypropylene		637543-3-N	637543-3-N
2" and 3"	White Polypropylene		637543-4-N	637543-4-N
Tab C.2 - Solenoid Coils[4]				
All	All	12 VDC Coil[5]	81350340	116218-38
All	All	24 VDC Coil[6]	81350357	116218-39
All	All	120 VAC Coil	81350316	116218-33
All	All	220 VAC Coil	81350324	116218-35

▼ IMPORTANT NOTES:

1. Cycle sensor for this pump size is part of the Muffler Cover

2. Cycle sensor for this pump size replaces standard Muffler Cover, the installation of Optional Muffler 93110 (metallic) or 93110-1 (plastic) is highly recommended

3. Kit includes two sensors and one additional connecting cable that allow to connect the two sensors to one single input channel

4. Coils are provided without connector if you are not buying ARO controller, please foresee to buy a connector (connection standards: Industrial Standard 11mm)

5. Could also be operated at 24 VAC

6. Could also be operated at 48 VAC

ATEX PE ACCESSORIES

Available accessories to convert standard EXP pumps (PD) to electronic interface (PE) for hazardous duty (ATEX Group II 2GD X) environments.

Pump Size	Description	CPN	Reference
TAB D - CYCLE SENSOR[9] / for ATEX conformity one Sensor [Tab D.1] and one Barrier Amplifier [Tab D.2] are required for one pump			
Tab D.1 - Cycle Sensor - no connector			
1/4"	Cycle Sensor/Muffler[7]	47537000001	97404
3/8"	Cycle Sensor/Muffler[7]	47537001001	97405
1/2" and 3/4"	Cycle Sensor[8]	47537002001	97406
1"	Cycle Sensor (Plug Type)	47537003001	97408
1 ½"	Cycle Sensor (Plug Type)	47537004001	97410
2" and 3"	Cycle Sensor (Plug Type)	47537005001	97411
Tab D.2 - Barrier Amplifier / To be placed in SAFE AREA			
All	Barrier Amplifier	97491	97491

Pump Size	Description	CPN	Reference
TAB E - LEAK DETECTION / for ATEX conformity two sensors [tab E.1] and one barrier kit [tab E.2] are required for one pump			
Tab E.1 - Leak detection sensor			
All	Leak Detection Sensor (Q.ty 1)[9] - no connector	46736534	96270-2
Tab E.2 - Zener Barrier (kit below includes two identical Zener Barriers to be placed in SAFE AREA + connected as per PE Operator Manual)			
All	Zener Barrier Kit	47540506001	97414

Pump Size	Center Body Material	Description	CPN	Reference
TAB F - SOLENOID ACTUATION / Both Major Valve conversion kit [tab C.1] and coil [tab C.2] are required				
Tab F.1 - Major Valve Conversion kit without Coil				
1/4"	Black Polypropylene		637371-3-N	637371-3-N
3/8", 1/2", 3/4"	Black Polypropylene		637540-3-N	637540-3-N
1"	Aluminum		637541-1-N	637541-1-N
1"	Stainless Steel		637541-2-N	637541-2-N
1"	Black Polypropylene		637541-3-N	637541-3-N
1"	White Polypropyl-ene		637541-4-N	637541-4-N
1 ½"	Aluminum		637542-1-N	637542-1-N
1 ½"	Stainless Steel	Major Valve Block	637542-2-N	637542-2-N
1 ½"	Black Polypropylene		637542-3-N	637542-3-N
2" and 3"	Aluminum		637543-1-N	637543-1-N
2" and 3"	Stainless Steel		637543-2-N	637543-2-N
2" and 3"	Black Polypropylene		637543-3-N	637543-3-N
2" and 3"	White Polypropylene		637543-4-N	637543-4-N
Tab F.2 - Solenoid Coils[4]				
All	All	12 VDC Coil[5]	46736518	116218-38
All	All	24 VDC Coil[6]	46736526	116218-39
All	All	220 VAC Coil	46736500	116218-35

IMPORTANT NOTES:

7. Cycle sensor for this pump size is part of the Muffler Cover

8. Cycle sensor for this pump size replaces standard Muffler Cover, the installation of Optional Muffler 93110 (metallic) or 93110–1 (plastic) is highly recommended

9. These items are provided with 2m long cables and no connector

HOW TO RE-NUMBER A PD PUMP AFTER PE UPGRADE

With the part number upgraded we can ensure:

� Warranty

▸ Maintenance

▸ Traceability

P D X X X - X X X - X X X - **X**

P E X X X - X X X - X X X - **X** X X

Revision Letter		
If the digit is not occupied, an "A" must be used. Example: PD10A-BAP-AAA becomes PE10A-BAP-AAA-AXX		

Solenoid System Specialty Code			
X	Code description		**X**
A	Solenoid 120 VAC	Accessories PNs Tab C.1 and Tab C.2	A
B	Solenoid 12 VDC and 24 VAC		B
C	Solenoid 240 VAC		C
D	Solenoid 24 VDC and 48 VAC		D
G	Solenoid 12 VDC ATEX certified	Tab C.1 and Tab C.3	G
H	Solenoid 12 VDC ATEX certified		H
K	Solenoid 220 VAC ATEX certified		K
N	No Coil (solenoid major valve block only)	Tab C.1	N
0	Standard Block Valve		0

Sensor Specialty Code			
X	Code description	Accessories PNs	**X**
E	Cycle Sensor + Leak Detection	Tab A and Tab B	E
F	Cycle Sensor	Tab A	F
G	Cycle Sensor ATEX Certified	Tab D[1]	G
H	Cycle Sensor + Leak Detection ATEX Certified	Tab D[1] and Tab E[1]	H
L	Leak Detection	Tab B	K
M	Leak Detection ATEX certified	Tab E[1]	N
0	No sensors		0

▸ **NOTE:**

1. Tab D.2 and Tab E.2 are related to Barriers, those items are not necessary for pump configuration but are mandatory for installing pump in Hazardous Area (ATEX)

Distributed by:

ARO®

ARO® is a brand of Ingersoll Rand. Ingersoll Rand (NYSE:IR) advances the quality of life by creating comfortable, sustainable and efficient environments. Our people and our family of brands—including Club Car®, Ingersoll Rand®, Thermo King® and Trane®—work together to enhance the quality and comfort of air in homes and buildings; transport and protect food and perishables; and increase industrial productivity and efficiency. We are a $12 billion global business committed to a world of sustainable progress and enduring results.