

Features

- Standardize all IS operations around one basic module
- Can easily be applied to any type of air pilot device
- Stud base input: 1/8 NPT (F) or 1/4" Push-in port
- Standard swivel 1/8 NPT stud
- Eight standard coil positions
- Place up to five IS valves on a single manifold



The Polyconn pilot module's unique design permits the advantages of Intrinsic Safety to be applied to any air operated (piloted) device. A single style of valve operator (module) can be threaded into the pilot port of any air piloted device, regardless of manufacturer or type.

The 3-way module can be applied not only to directional control valves but also to other types of direct devices such as cylinders, dispense nozzles, air operated ball valves and process valves just to mention a few.

One of the most outstanding features of the Intrinsically Safe (IS) Pilot Module is the ability of the end user to standardize all IS operations around one basic module. Only one device need be kept in the spares to cover a broad assortment of operating elements, not to mention the time saved on installation gained from dealing with only one IS element.

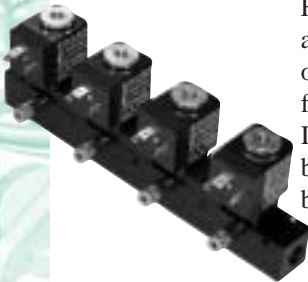
Specifications

Product	Operating Pressure (psi)	Temp. Range	Electrical	Max. Flow Rate (scfm) @100 psi	Orifice Diameter
Intrinsically Safe Operator	115 psi Max.	+15° to +125°F	24 VDC, 1.1 watts voltage tolerance ±10% duty factor 100% insulation class F, IP 65 degree of protection	1.45	.032" (0.8mm)

Mounting Versatility

For convenience the IS solenoid valve can be mounted on a black anodized aluminum manifold. Solenoid manifolds are available with output options: 10-32 (F), 5/32 Push-ins, or 1/8 Push-in fittings (contact factory for dimensional information).

IS solenoid valves must be installed on manifold with a cover plate blank between each station (due to coil size)- contact factory for assembly information.



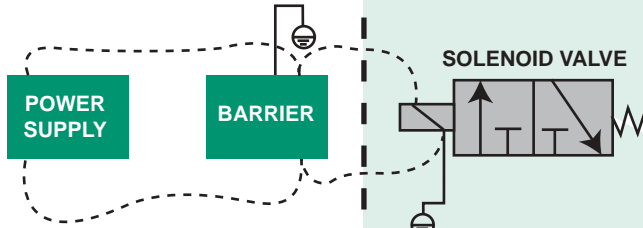
Installation

FM approval for Intrinsically Safe operation only when connected to a certified FM approved zener barrier rated 24 VDC Class I, II, III; Groups A, B, C, D, E, F, and G. Hazardous indoor location Permit 1259 06 450

FM requires installation per the NEC and local codes (-coils cannot be purchased as separate replacement items)

Non-Hazardous

Hazardous



Factory Mutual Entity Approved Barrier used in an approved configuration with V_{max} greater than V_t or V_{oc} and I_{max} greater than I_t or I_{sc}

Suggested Barriers

- Stahl** 9004/01-2P0-050-00
- P & F** KFD2-SD-EX 1.48.90A
- MTL** MTL3021

This information is published only as a guide- the customer must contact the appropriate manufacturer for application assistance.

Hazardous Location Class I, II, and III. Div I
Groups A, B, C, D, E, F, and G.

- $V_{max} = 28\text{ V}$
- $I_{max} = 115\text{ mA}$
- $C_i = O_uF$
- $L_i = O_uH$

Ordering Information

Intrinsically Safe Operators

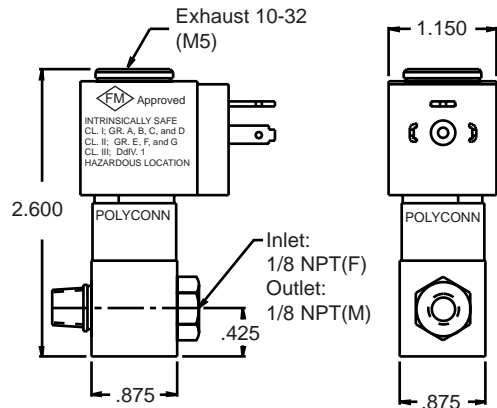
Part No.	Description
PCIS-1/4-24	PILOT MODULE, 1/4 PI
PCIS-124-24	PILOT MODULE, 1/8 NPT
PCIS-30-3W	VLV/COIL/CONN(LESS BODY)

Valve/Manifold Assembly	
PCISM-1/8-2	1/8 PI, 2 VALVES
PCISM-1/8-3	1/8 PI, 3 VALVES
PCISM-1/8-4	1/8 PI, 4 VALVES
PCISM-1/8-5	1/8 PI, 5 VALVES

PCISM-10-32-2	10-32 (F), 2 VALVES
PCISM-10-32-3	10-32 (F), 3 VALVES
PCISM-10-32-4	10-32 (F), 4 VALVES
PCISM-10-32-5	10-32 (F), 5 VALVES

PCISM-5/32-2	5/32 PI, 2 VALVES
PCISM-5/32-3	5/32 PI, 3 VALVES
PCISM-5/32-4	5/32 PI, 4 VALVES
PCISM-5/32-5	5/32 PI, 5 VALVES

- To order standard product use part number listing.
- Additional base configurations -contact factory.



Intrinsically safe solenoid dimensions
PCIS-1/4-24 shown

Features

- Six coil options,
Four DIN connector options,
Three armature options,
Forty manifold/base options
- Manual Override
- 2 & 3-Way normally closed, 3-Way normally open (use with PCNOTP refer to page 40)
- Four to Eight standard coil positions



2WNC, 3WNO, 3WNC

Lubrication is not required

Materials: Black thermoplastic coil, brass and stainless steel internals, black thermoplastic body, Viton® spring compensated seat

Specifications: Valve Armatures

Part Number	Working Pressure (psi)	Temp. Range	Media
PCSN-*	28 in-Hg to 150 psig	+5° to +122°F	Air and inert gases

Orifice	Exhaust 1-2	Filtration 2-3	Flow Rate @ 90 psig (scfm)		Cv	
			1-2	2-1	1-2	2-3
Ø 1.5 mm	M5 Thd	to 50 micron level or less	2.65	3.04	.074	.083

Flow rating per ANSI / (NFPA) T3.21.3

- Mounting screws and O-ring seals included.



Degree of protection according to IEC 529 in attached state: IP 65

Cable outlet can be turned 180°

Surge suppression available with LED light (refer to Ordering Information page 41)

Specifications: DIN Connectors

Part Number	Conductor Wire Diameter	Silicone Seal	Cable Diameter	Poles
PC90-*	.118 x .060	-40°F to +257°F	.235 to .315	2 + ground

- Mounting screws and gasket included.

All measurements are in inches



Insulation class F
 Flying leads available
 Black thermoplastic encapsulation

Specifications: Coils

Part Number	Max. Pressure (psig)	Ambient Temp.	Media
PC80-*	150	+5° to +120°F	Air and inert gases

Voltage Tolerance	Duty Factor	Class	Rated Power	Holding Power
-10% to +10%	100%	F	DC/6.0 W	AC 50 Hz/9.3 ¹ VA AC 60 Hz/9.3 VA

*When manifold mounted the **final** coil temperature can be 50°F to 68°F higher requiring a lower ambient temperature to off-set the heating effect.

Power data is valid for the standard voltages 24 V DC and 220 V AC; the power consumptions may be higher with different nominal voltages.



Manifolds are manufactured from aluminum with black anodizing

Push-in ports expedite assembly and are brass with electroless nickel plating

Specifications: Manifolds and Bases

Part Number	Input	Operating Pressure	Temp. Range	Media
PCSM-*	1/4 NPT (F)	limited by pressure rating	-10° to +200°F	Air and liquids compatible with materials of construction

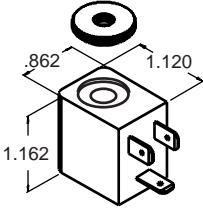
Part No.	Description	OAL	Part No.	Description	OAL
PCSM-*-2	2 station	3.5	PCSM-*-9	9 station	10.5
PCSM-*-3	3 station	4.5	PCSM-*-10	10 station	11.5
PCSM-*-4	4 station	5.5	PCBS-*	1 station 1/8 NPT stud base	1.0 x.875
PCSM-*-5	5 station	6.5	PCBS-*-S	1 station same side porting	1.0 x1.70
PCSM-*-6	6 station	7.5	PCBS-*-P	1 station opposed side porting	1.0 sq
PCSM-*-7	7 station	8.5	PCCP	Blanking plate	1.0 sq
PCSM-*-8	8 station	9.5			

* See **Ordering Information** for output indicator

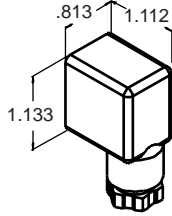
All measurements are in inches

Dimensional Information

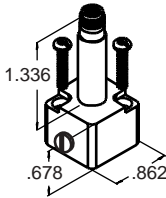
Coil



DIN Connector



Solenoid Valve Assembly with Manual Override



How to Plumb a Normally Open Valve using a Transition Plate Kit



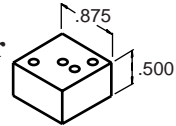
Polyconn Normally Open Transfer Plate shown in green

PCNOTP

Kit includes

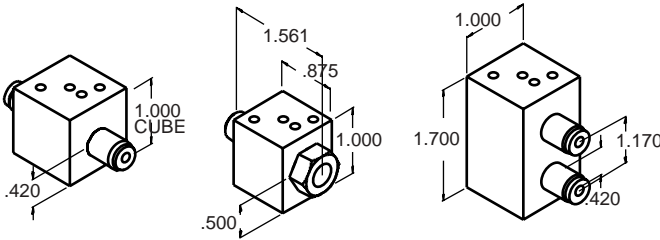
- Plate
- Fittings
- Tubing

Adapter Plate

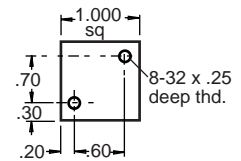


All measurements in inches. When design makes a dimension critical- contact factory for confirmation. All dimensions are subject to change without notice.

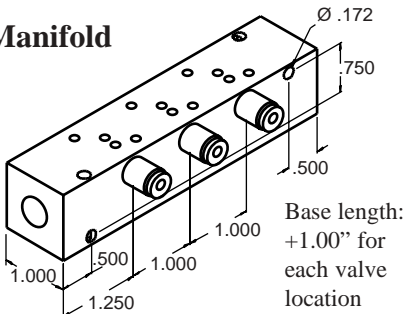
Base: Single Station



Single Station Base Mounting

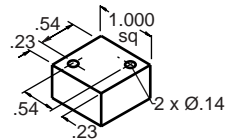


Base: Manifold



Base length: +1.00" for each valve location

Blanking Plate



Ordering Information

- To order standard product use part number listing.
- All components are sold individually.
- Contact factory for assembly information.
- Two mounting screws included with solenoid valve.

DIN Connector

Part No.	Description
PC90	WITHOUT LIGHT*
PC90-120	MAX 120VAC/DC W/LIGHT
PC90-24	MAX 24VAC/DC W/LIGHT
PC90-240	MAX 240VAC/DC W/LIGHT

*No surge protection

Solenoid Coils (ONLY)

PC80-12VDC	SIZE 8 12 VOLT DC
PC80-24VDC	SIZE 8 24 VOLT DC
PC80-24VAC	SIZE 8 24 VOLT AC
PC80-120VAC	SIZE 8 120 VOLT AC
PC80-240VAC	SIZE 8 240 VOLT AC
PC80-24VDC-18"	24 VOLT DC W/ 18" LEAD
PCWK-100	SYSTEM 8 WEATHER KIT

Solenoid Valve Assembly with Override

PCSN-20-2W	ASSEMBLY 2WNC
PCSN-30-3W	ASSEMBLY 3WNC
PCSN-31-3W	ASSEMBLY 3WNO

Assembly Adapters

PCNOTP	ADAPTER /N.O. PLATE KIT
PCCP	COVER PLATE MANIFOLD STATION

Solenoid Bases and Manifolds

Part No.	Description
PCBS-1/4	STUD BASE MNT 1/4 PI
PCBS-125	STUD BASE MNT 1/8 NPT

Same Side Porting

PCSB-125-S	SINGLE BASE 1/8 NPT
PCSB-1/4-S	SINGLE BASE 1/4 PI
PCSB-1/8-S	SINGLE BASE 1/8 PI
PCSB-5/32-S	SINGLE BASE 5/32 PI

Opposed Side Porting

PCSB-125-P	SINGLE BASE 1/8 NPT
PCSB-1/4-P	SINGLE BASE 1/4 PI
PCSB-1/8-P	SINGLE BASE 1/8 PI
PCSB-5/32-P	SINGLE BASE 5/32 PI

Threaded Output Ports

PCSM-10-32-2	10-32, 2 STATION
PCSM-10-32-3	10-32, 3 STATION
PCSM-10-32-4	10-32, 4 STATION
PCSM-10-32-5	10-32, 5 STATION
PCSM-10-32-6	10-32, 6 STATION
PCSM-10-32-7	10-32, 7 STATION
PCSM-10-32-8	10-32, 8 STATION
PCSM-10-32-9	10-32, 9 STATION
PCSM-10-32-10	10-32, 10 STATION

Push-in Output Ports

PCSM-1/8-2	1/8 PI, 2 STATION
PCSM-1/8-3	1/8 PI, 3 STATION
PCSM-1/8-4	1/8 PI, 4 STATION
PCSM-1/8-5	1/8 PI, 5 STATION
PCSM-1/8-6	1/8 PI, 6 STATION
PCSM-1/8-7	1/8 PI, 7 STATION
PCSM-1/8-8	1/8 PI, 8 STATION
PCSM-1/8-9	1/8 PI, 9 STATION
PCSM-1/8-10	1/8 PI, 10 STATION
PCSM-5/32-2	5/32 PI, 2 STATION
PCSM-5/32-3	5/32 PI, 3 STATION
PCSM-5/32-4	5/32 PI, 4 STATION
PCSM-5/32-5	5/32 PI, 5 STATION
PCSM-5/32-6	5/32 PI, 6 STATION
PCSM-5/32-7	5/32 PI, 7 STATION
PCSM-5/32-8	5/32 PI, 8 STATION
PCSM-5/32-9	5/32 PI, 9 STATION
PCSM-5/32-10	5/32 PI, 10 STATION

Quick Guide

Coil can be sealed from moisture penetration with the **Weather Kit (PCWK-100)**



Outdoor applications or in highly humid environments