

# PNEUMATIC SPOOL VALVE ISLANDS

ØM5 - G1/8 - G1/4 or instant fittings

designed for connection to a PLC by multiwire cable

## MULTIPOL

Generation C



5

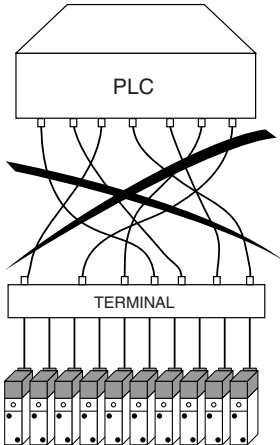
P581.GB.R5b

# MULTIPOL

GENERATION C

Pneumatic spool valve island designed for connection to a PLC by means of a multiwire cable (MULTIPOL)  
for  
**easy communication with PLC.**  
**Reduced time and costs for wiring,**  
**easy maintenance.**

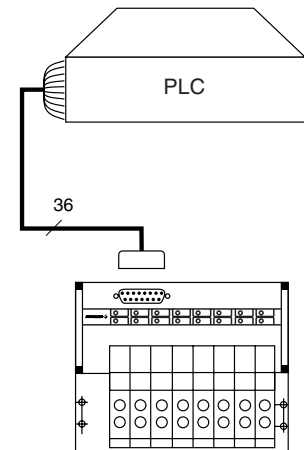
BEFORE



With the MULTIPOL system, wire assembly is no longer bulky or difficult and takes less time.

Pneumatic spool valve island for connection with a PLC by means of a multiwire cable (36 wires) and SUB-D connector (37 pins).

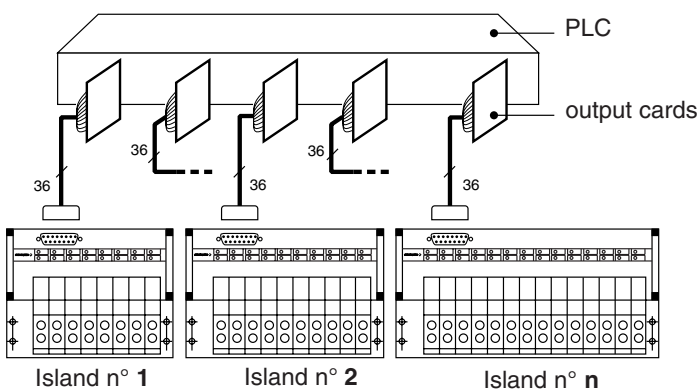
AFTER



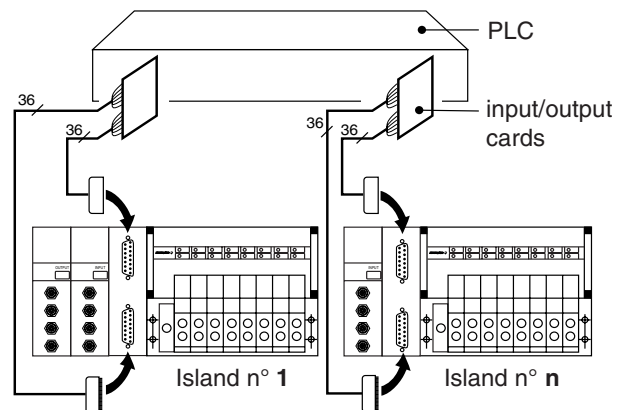
## CHARACTERISTICS

- Island of 4 to 16 monostable or bistable 3/2, 2x3/2, 5/2, 5/3 spool valves, Ø M5 - G1/8 - G1/4 or instant fittings
- Integrated connections
- Power supply: 24 V DC
- Visual indicator (LED) for each coil and each input/output
- Common pressure supply to all valves
- Built-in exhaust outlet in the subbase for environmental protection
- Versions with or without inputs for sensor status display or additional outputs

MULTIPOL connection structure **without** input



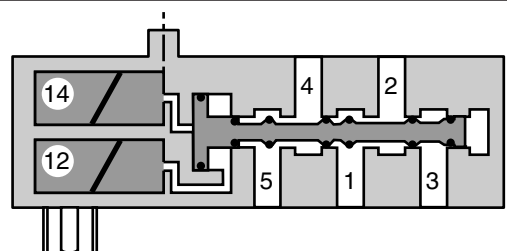
MULTIPOL connection structure **with** inputs



Spool valve island especially designed to receive the spool valves with **integrated push/pull pilot valves** placed with collected ports **on one side** of the island offering a compact solution as shown opposite.

Adaptable valves: monostable or bistable 2x3/2 - 5/2 - 5/3 spool valves with high flow rates and small dimensions. (2x3/2 NC, series 570 only)

- ØM5 (1) (series 569) - flow rate: **175** l/min
  - G1/8 (1) (series 570) - flow rate: **600** l/min (2)
  - G1/4 (series 571) - flow rate: **1050** l/min
- (1) or instant fittings for flexible hose  
(2) 550 l/min for function 2x3/2 NC



All leaflets available on: [www.ascojoucomatic.com](http://www.ascojoucomatic.com)

## MULTIPOL

**Pneumatic valve island for connection to a PLC by means of a multiwire cable and connector.**

The following two versions are available:

- MULTIPOL - Generation C **without** input/outputs
- MULTIPOL - Generation C **with** input/outputs

### ADVANTAGES

With the many advantages it offers, the Multipol system meets modern needs for automated installations.

- No bulky and difficult wiring.
- Time and money saved due to direct electric cabling and common air supply.
- Visual display and quick disconnection for easy maintenance.
- Unit tested and equipped with spool valves at delivery.

### FEATURES

- Island with built-in connections designed for 4 to 16 spool valves  $\varnothing$  M5 - G1/8 - G1/4 or instant fittings.
- All spool valves on one island are connected with a single multiwire cable (36 wires) and a 37-pin male SUB-D panel connector.
- LED visual indicator for each coil, each output and each input.
- Easy pneumatic connection:  
Common air supply and exhaust, connecting flange for ports 2 and 4 (accessory for series 569 and 570).
- Impulse manual override.

### COMBINATIONS

Multipol units can be grouped as follows:

- Islands with 4, 6, 8, 10, 12, 14 or 16 monostable or bistable 3/2, 2x3/2, 5/2, 5/3 spool valves; all functions adaptable on the same island.
- Different sized islands for spool valves series 569, 570, 571 (**only one valve size per island**).
- The maximum number of islands depends on the number of input/output cards which a PLC can receive.  
*Connection structure: see previous page.*
- Islands with input modules for sensor status display and/or with additional output modules. In this version the islands are fitted with a second SUB-D connector.

### OPTIONS (consult us)

- Island with air supplied at two different pressure rates.
- Island with external air supply for pilot pressure.

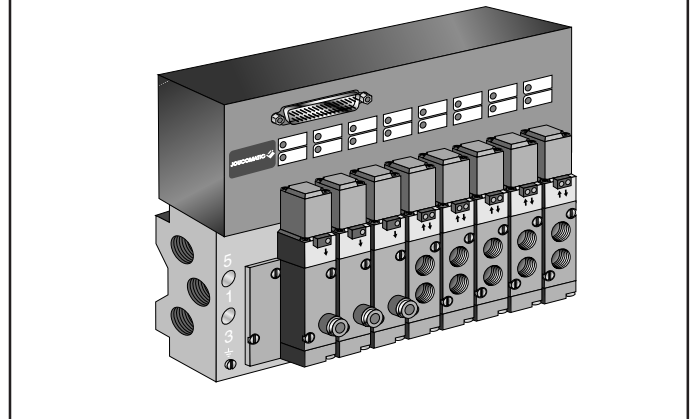
### ELECTRICAL CHARACTERISTICS

Supply voltage	: 24 V DC, $\pm 10\%$
Max. ripple ratio	: 10 %
Consumption	: 79 mA per valve and 9 mA per input
Coil insulation class	: F
Protection	: IP65
Spool valve supply connection	: 37-pin male SUB-D panel connector
Input connection	: 5-pin female panel connector M12 or screw terminals
Connection of additional outputs	: 5-pin female panel connector M12 or screw terminals
Input connection (output wire to PLC)	: 37-pin female SUB-D panel connector
Earth connection	: with supply connector and screw on the pneumatic subbase
Electromagnetic compatibility	: in accordance with EU directive EMC 89/336/EEC CE identification

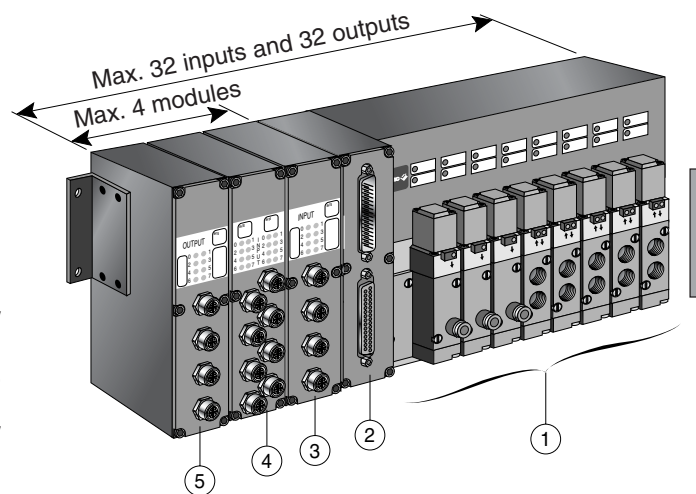
### PNEUMATIC CHARACTERISTICS

Fluid	: air or neutral gas, filtered at 30 $\mu$ m, lubricated or not
Operating pressure	: 1.5 to 8 bar (2.5 to 8 bar with spool valve series 569 functions 5/3)
Flow rate (Qv at 6 bar)	series 569 : 175 l/min series 570 : 600 l/min (3/2 : 400 l/min - 2x3/2 NC : 550 l/min) series 571 : 1050 l/min
Allowable temperature	: +5°C to +50°C

MULTIPOL - Generation C **without** input/outputs

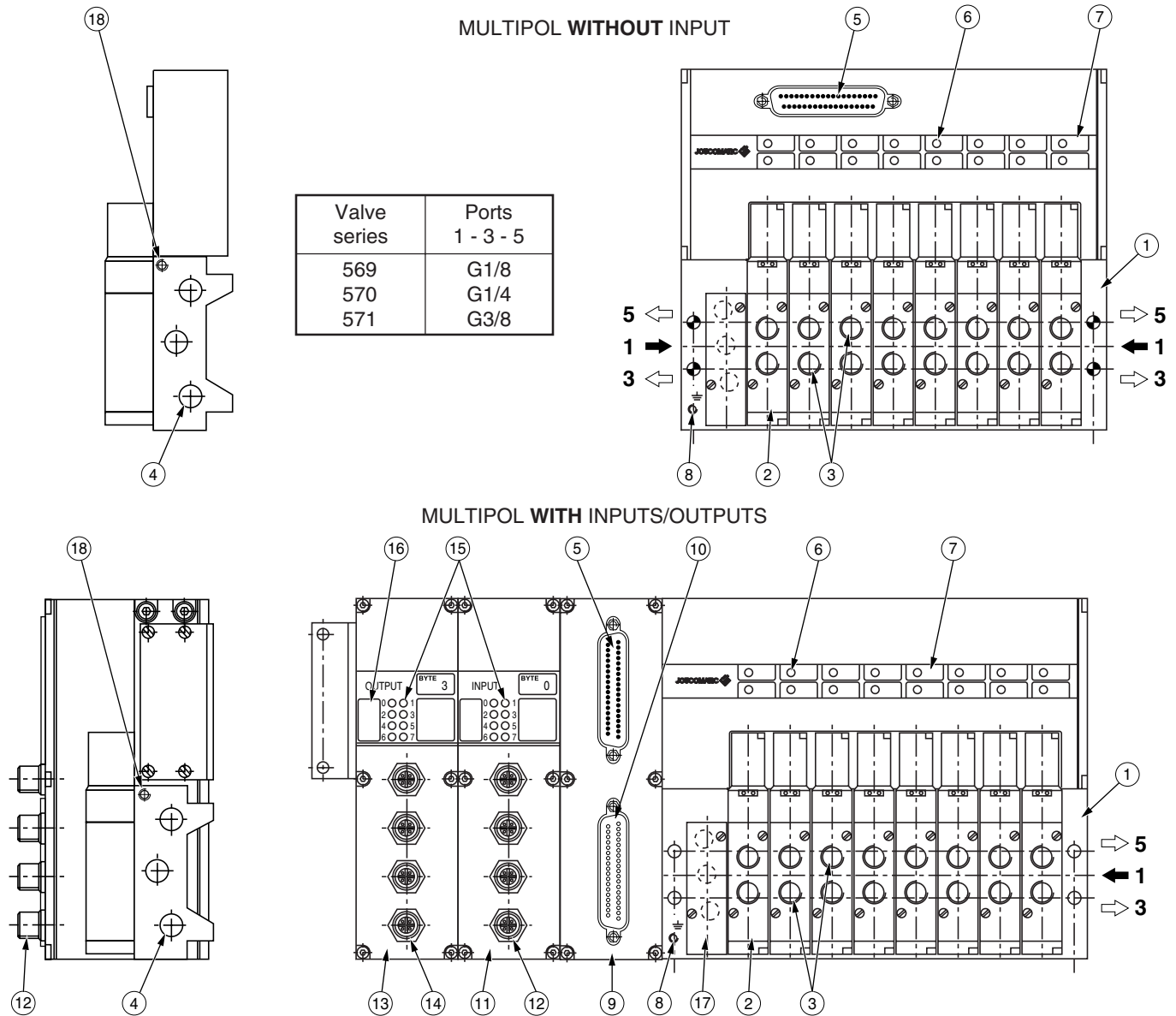


MULTIPOL - Generation C **with** inputs/outputs



- ① Spool valves
- ② Module for electrical connection
- ③ Module with 8 inputs
- ④ Module with 16 inputs
- ⑤ Module with 8 additional outputs

## MULTIPOL DESCRIPTION



No.	Description
1	Subbase for pneumatic connection of the Multipol island
2	Monostable or bistable 3/2, 2x3/2, 5/2 or 5/3 spool valves (max. 16)
3	Operating ports "2 and 4" with threaded connection or instant fitting (top side ports)
4	Pneumatic supply "1" and exhausts "3 and 5" with threaded connection (side ports)
5	37-pin male SUB-D panel connector for power supply to coils
6	LED visual indicator for pilot valves
7	Lettering field for pilot valves
8	Earth connection
9	Multipol connection module ( <b>with</b> inputs)
10	37-pin female SUB-D panel connector for inputs (return wire to PLC)
11	Module with 8 or 16 inputs
12	Input connection with female panel connector ØM12 or screw terminals (1 ØM12 for two sensor return wires)
13	Module with 8 additional outputs (max. 2 modules)
14	Output connection with female panel connector ØM12 or screw terminals (1 ØM12 for two outputs)
15	LED visual indicator for inputs and additional outputs
16	Lettering field for inputs/outputs
17	Connecting flange for supply of Multipol with inputs
18	Common exhaust pilot 82-84 (ØM5)

## ORDERING INFORMATION FOR A MULTIPOL VALVE ISLAND - Generation C

When ordering please specify the **electrical components (1)**, the **pneumatic components (2)**, and the optional accessories separately.

### 1 Electrical components

(version **with** inputs/outputs only)

				TYPE	OPTION	Electrical modules (max. 4)			
C	E	M	E			1	2	3	4

Generation C	
E	Electrical components
ME	MULTIPOL WITH INPUTS
OPTIONS	
00	without
..	} other options
99	

Please indicate the type of module required

Type	Function of the input/output modules
E1	8 PNP inputs, screw terminals (max. 4 modules)
E2	8 PNP inputs, female panel connector M12 (max. 4 modules)
E5	16 PNP inputs, female panel connector M12 (max. 2 modules)
S1	8 PNP outputs 0.2A, screw terminals (max. 2 modules)
S2	8 PNP outputs 0.2A, female panel connector M12 (max. 2 modules)

### 2 Pneumatic components

		GR	OPTION	No. of places	Valve position																
				0	1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Multipol <b>WITHOUT</b> inputs/outputs Generation C		C	M	U																	
Multipol <b>WITH</b> inputs/outputs Generation C		C	P																		
P	Pneumatic components																				
GR	Spool valve series and size																				
2	569 (ØM5 or instant fittings)																				
3	570 (G1/8 or instant fittings)																				
4	571 (G1/4)																				
OPTIONS																					
00	without option																				
..	} other options																				
99																					
PORTS : 2 - 4	Connection																				
	G	Gaz thread																			
	N	NPT thread																			
PORTS : 1 - 3 - 5	Position																				
	0	top side																			
PORTS : 1 - 3 - 5	Connection																				
	G	Gaz thread																			
PORTS : 1 - 3 - 5	Position																				
	1	lateral																			
04	Number of spool valve places on the island																				
16																					

Please indicate the type of valve required for each position

Type	Spool valve functions	
A	Blanking plates for electr./pneum. mounting surface	
Z		3/2 NC- Solenoid air operated pilot Spring/Differential return
K		2 x - Solenoid air operated pilot Differential return
M		5/2 - Solenoid air operated pilot Differential return
J		5/2 - Solenoid air operated pilot and return
G		5/3 - Pressure held (W1) Solenoid air operated pilot
B		5/3 - Pressure applied (W2) Solenoid air operated pilot
E		5/3 - Exhaust released (W3) Solenoid air operated pilot

For detailed information on spool valves see P586-25. 2x3/2 version exists only in GR3 (570)

### ORDERING EXAMPLE - Reference : CMU300G0G108 - JGJJEMJA

MULTIPOL valve island - Generation C **without** input, for spool valves series 570, G 1/8 threaded connection, including 8 valve places equipped as follows :

- Position n° 1 : 5/2 spool valve, type J
- Position n° 2 : 5/3 spool valve (W1), type G
- Position n° 3 : 5/2 spool valve, type J
- Position n° 4 : 5/2 spool valve, type J
- Position n° 5 : 5/3 spool valve (W3), type E
- Position n° 6 : 5/2 spool valve, type M
- Position n° 7 : 5/2 spool valve, type J
- Position n° 8 : 1 set of blanking plates for pneumatic and electrical mounting surface for subsequent extension.

ACCESSORIES : see following page

## MULTIPOL ACCESSORIES

Description		Valve series	Codes
Electrical <sup>(1)</sup> and pneumatic <sup>(2)</sup> blanking plates		569 570 571	881 66 905 881 67 001 881 67 101
Connecting flange for operating ports 2 and 4 with pressure indicator and instant fittings for flexible hose		569 570	881 35 525 881 35 532
Straight 37-pin female SUB-D connector for Multipol ( <b>without cable</b> ) (for outputs / spool valves)			881 61 911
Straight 37-pin female SUB-D connector, IP65, <b>with cable</b> , 36 wires x 0,22 mm <sup>2</sup> , mounted to connector		 2 m 5 m 10 m (3) m	881 00 367 881 00 370 881 00 375 881 00 350 <sup>(3)</sup>
Options for Multipol spool valve islands with sensor inputs	Straight 37-pin male SUB-D connector for Multipol ( <b>without cable</b> )		881 61 912
	Straight 37-pin male SUB-D connector, IP65, <b>with cable</b> , 36 wires x 0,22 mm <sup>2</sup> , mounted to connector	 2 m 5 m 10 m (3) m	881 00 387 881 00 390 881 00 395 881 00 351 <sup>(3)</sup>
	5-pin male duo connector M12 for 2 inputs/outputs Ø3-5 mm		881 00 253
	Straight 5-pin male mono connector M12 (1 cable) for input/output Ø4-6 mm		881 00 330

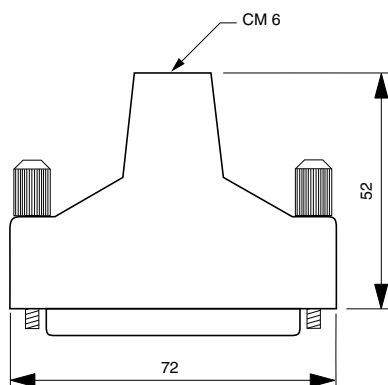
(1) This plate can be adapted to islands to block the electrical connection of an unused solenoid coil.

(2) This plate can be adapted to islands in order to block the pneumatic mounting surface of an unused valve place (removable for further extension).

(3) Other length, in metres, to be specified on order : max. 100 m (please consult us for longer cables).

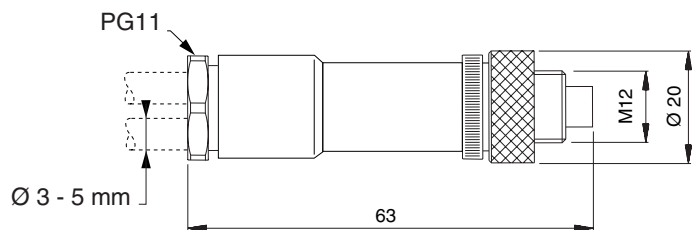
## DIMENSIONS OF MULTIPOL ACCESSORIES

37-pin connector  
for OUTPUTS : **881 61 911** (female connector)  
for INPUTS : **881 61 912** (male connector)

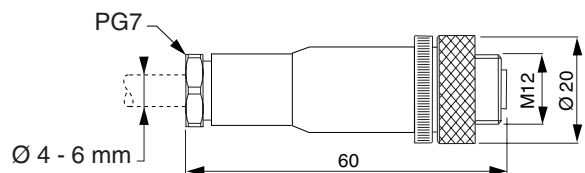


Thickness: 14 mm

INPUTS / OUTPUTS (ØM12 - straight connector)  
DUO connector : **881 00 253**



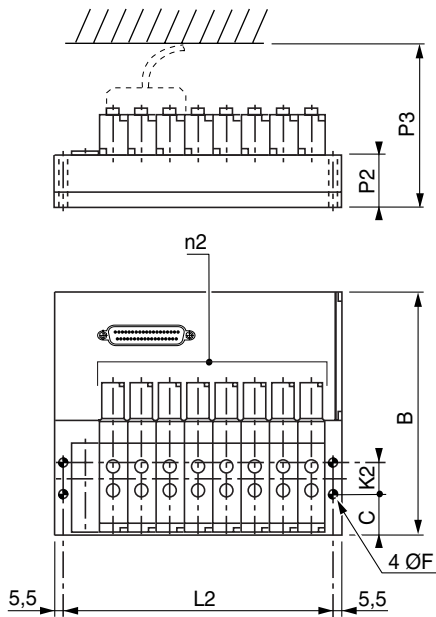
INPUTS / OUTPUTS (ØM12 - straight connector)  
MONO connector : **881 00 330**



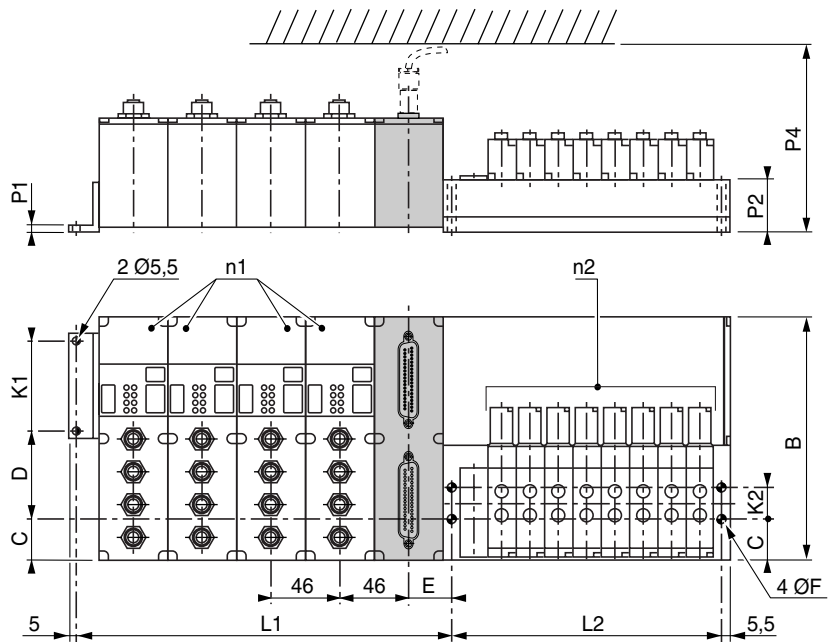


## DIMENSIONS - MOUNTING

MULTIPOL WITHOUT INPUT



MULTIPOL WITH INPUTS



Overall length of MULTIPOL

without input	with inputs
$L2 + 11$	$L1 + L2 + 10,5$

The island is provided with four mounting holes in the spool valve subbase and two mounting holes on the left side for the input/output modules. The centre distances L1 and L2 are dependent on the number and size of the spool valves (L2) and on the number of additional input/output modules (L1); see table below.

5

Valve series	L1					L2						
	n1 : number of input/output modules					n2 : number of spool valves						
	without	1	2	3	4	4	6	8	10	12	14	16
569 (M5)	66.5	112.5	158.5	204.5	250.5	91.5	123.5	155.5	187.5	219.5	251.5	283.5
570 (G1/8)	66.5	112.5	158.5	204.5	250.5	105	143	181	219	257	295	333
571 (G1/4)	66.5	112.5	158.5	204.5	250.5	126.5	172.5	218.5	264.5	310.5	356.5	402.5

Valve series	B	C	D	E	ØF	K1	K2	P1	P2	P3 (1)	P4 (1)
569 (M5)	163	23	47.5	28.5	4.5	60.4	15	3	35	150	190
570 (G1/8)	163.5	28.3	59	28.5	5.5	60.4	21	3	33		
571 (G1/4)	181.5	34.7	70.5	28.5	5.5	60.4	26	3	31		

mm

(1) Heights P3 and P4 are minimum dimensions for connector and cable mounting.

## WEIGHTS

Weight of the Multipol island <b>without</b> electrical connection module or input/output module (kg)							
Valve series	n2 : number of valves						
	4	6	8	10	12	14	16
569	0.9	1.32	1.73	2.16	2.58	3	3.42
570 (2x3/2)	1.18	1.66	2.14	2.62	3.1	3.58	4.06
570 (5/2-5/3)	1.18	1.66	2.14	2.62	3.1	3.58	4.06
571	1.61	2.31	3.01	3.71	4.41	5.11	5.81

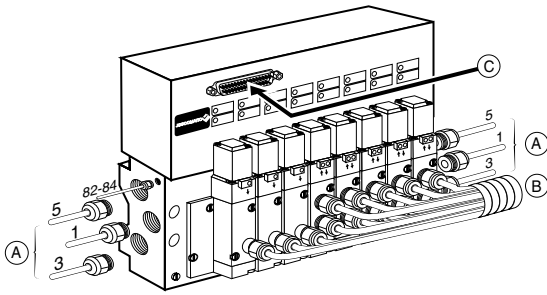
Weight of electrical connection module (for version with inputs): 0.550 kg

Weight of an input or output module: 0.545 kg

Total weight of a MULTIPOL spool valve island - generation C - with inputs: define the weight of the pneumatic components from the spool valve series and number of valves required (see above table) + the weight of the electrical connection module + the weight of any I/O module required (0.545 kg x n1 modules).

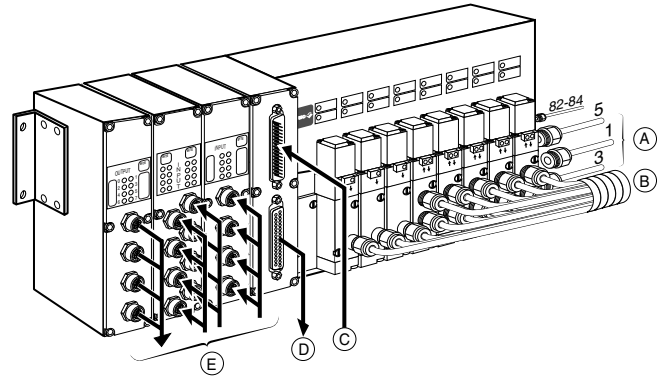
## PNEUMATIC AND ELECTRICAL CONNECTION

### MULTIPOL WITHOUT INPUT



- (A) Pressure supply 1 and exhausts 3 - 5
- (B) Operating ports 2 - 4
- (C) Cable connection to PLC for power supply of coils

### MULTIPOL WITH INPUTS / OUTPUTS



- (A) Pressure supply 1 and exhausts 3 - 5
- (B) Operating ports 2 - 4
- (C) Cable connection to PLC for power supply of coils
- (D) Return of input signals to PLC
- (E) Sensor inputs and additional outputs (upon request)

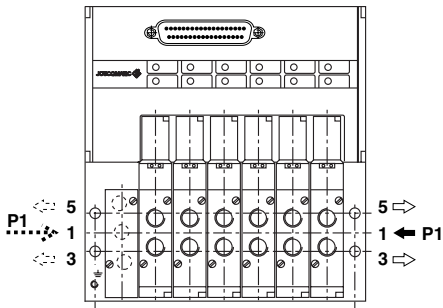
## CONNECTION OF PRESSURE SUPPLY

### Supply with 1 pressure (P1)

Valve series	1 - 3 - 5
569	G1/8
570	G1/4
571	G3/8

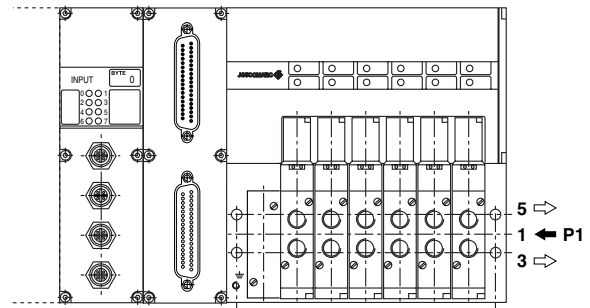
### MULTIPOL WITHOUT INPUT

- Islands without inputs can be supplied at choice from the left or right or from both sides.



### MULTIPOL WITH INPUTS / OUTPUTS

- An island with 4 to 6 spool valves must be supplied from the **right side**.



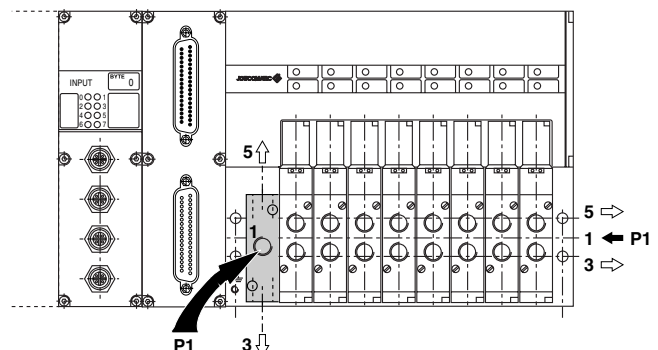
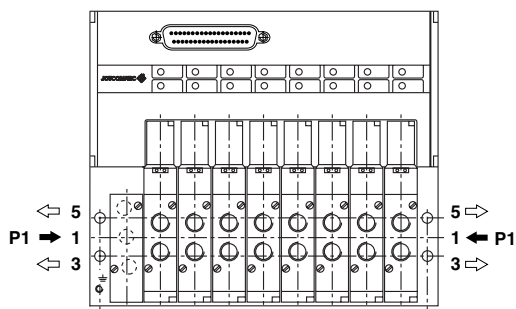
### Mounting recommendations

A maximum of **five** spool valves can be operated **at the same time** without pneumatic malfunction.

When using more than 6 valves, the island must be supplied from both sides.

- Island with 8 to 16 spool valves

These islands are provided with a connecting flange on the left of the valves.



### Supply with 2 different pressures (P1 - P2)

For supply of 1 to 4 spool valves with pressure P2 consult us.



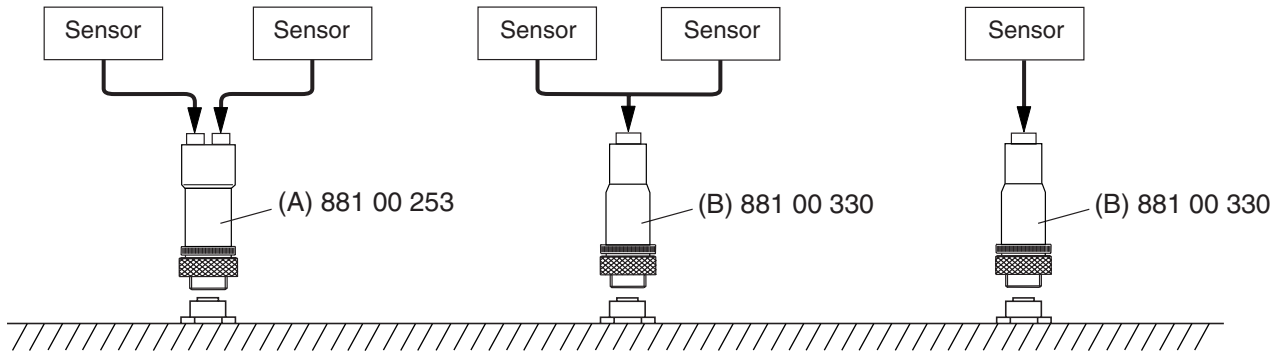
### CONNECTION OF INPUTS

- The two following connections are recommended:
  - detachable M12 connector with protection to IP65,
  - detachable screw terminals with protection to IP20.
- Possibility of connecting sensors with 2 or 3 wires.

#### ■ Connection with M12 connector

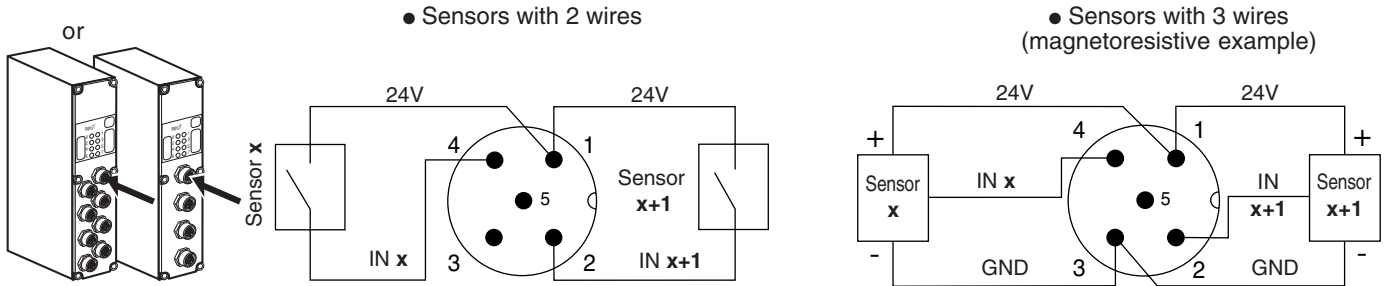
The two following M12 connectors are recommended:

- Straight duo connector (A) for the connection of 2 separate cables (one for each sensor).
- Straight mono connector (B) for the connection of a sensor or cable bundle.

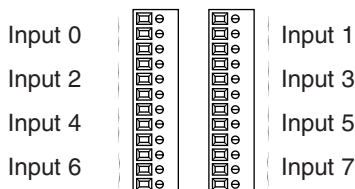
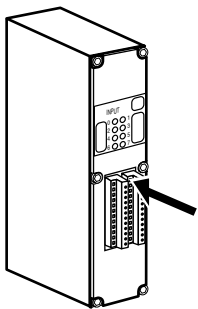


#### Wiring diagram of inputs

View from screw side of male connector

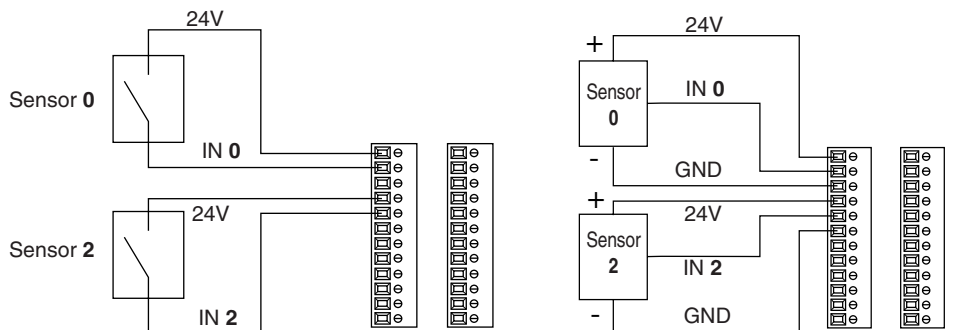


#### ■ Connection with detachable screw terminals (IP20)



#### Wiring diagram of inputs

- Sensors with 2 wires 2 fils
- Sensors with 3 wires



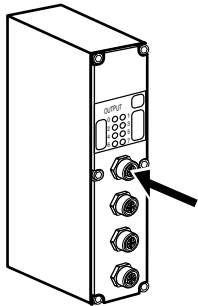
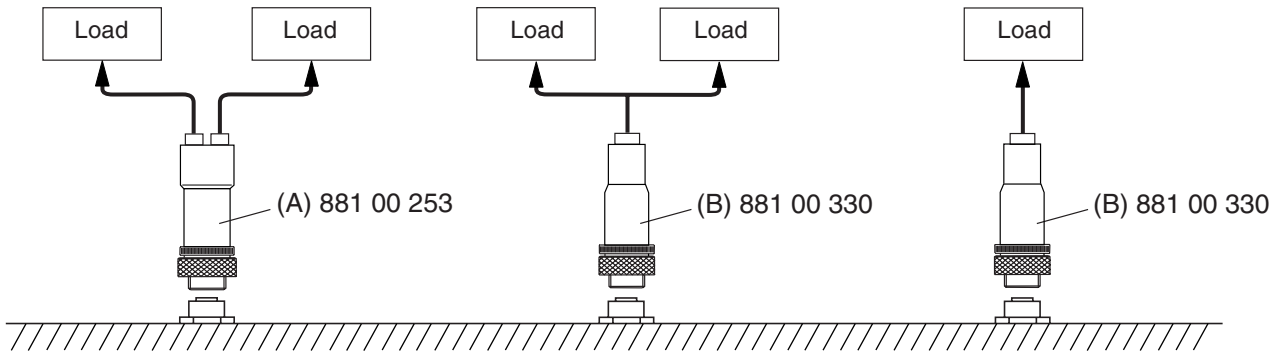
## CONNECTION OF ADDITIONAL OUTPUTS

- The two following connections are recommended:
  - detachable M12 connector with protection to IP65,
  - detachable screw terminals with protection to IP20.

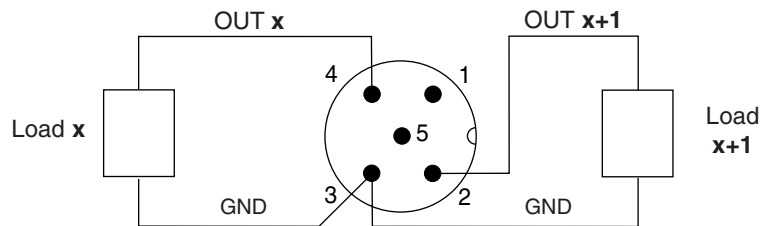
### ■ Connection with M12 connector

The two following M12 connectors are recommended:

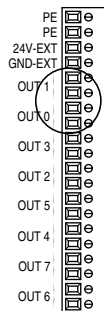
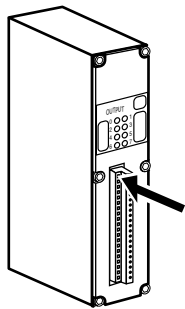
- Straight duo connector (A) for the connection of 2 separate cables (one for each load).
- Straight mono connector (B) for the connection of a component or cable bundle.



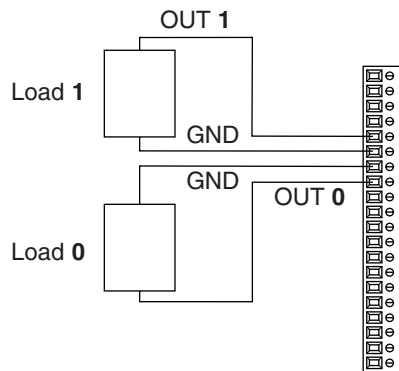
**Wiring diagram of outputs**  
View from screw side of male connector



### ■ Connection with detachable screw terminals (IP20)



**Wiring diagram of outputs**



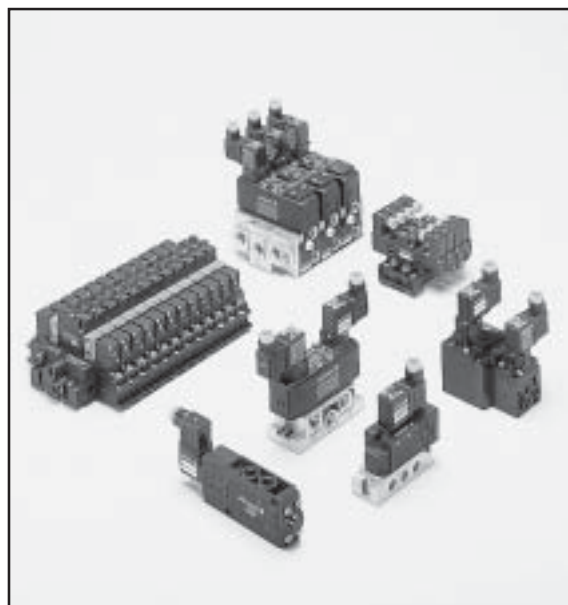
## PNEUMATIC OPERATORS

- Single or double acting cylinders equipped or non-equipped for magnetic position detectors
- Micro and mini cylinders  $\varnothing$  2,5 to 16 mm
- Short stroke cylinders  $\varnothing$  8 to 100 mm
- ISOCLAIR cylinders ISO 6432  $\varnothing$  8 to 25 mm
- ISOCLAIR cylinders ISO 6431  $\varnothing$  32 to 63 mm
- Cylinders complying with ISO/CETOP/VDMA/AFNOR standards
- PES/PIS/PCN types  $\varnothing$  32 to 250 mm
- Anti-rotation / anti-corrosion cylinders stainless steel
- Rodless magnetic cylinders  $\varnothing$  6 to 40 mm
- Rodless band cylinders  $\varnothing$  25 to 63 mm
- Ball bearing guide operators
- 2, 3 and 4 position rotative cylinders



## SOLENOID VALVES AND PILOT VALVES

- air and solenoid air operated
- Solenoid valves, tapped G 1/8 to G 2
- Solenoid valves with CNOMO interface G 1/8
- Micro-pilot valves, MICRO 10,  $\varnothing$  M3
- Pilot valves 3/2 - 4/2 tapped G 1/8 to G 1 1/2 or subbase mounted AFNOR G 1/4 to G 1 1/2
- Pilot valves subbase mounted ISO 5599 - sizes 1 to 4
- Pilot valve G 1/4 - NAMUR
- All these pilot valves can be equipped with EEx solenoid heads for explosive atmospheres, CENELEC certified.



## SENTRONIC SERVOVALVE

- proportional pneumatic pilot G 1/8 to G 1

## AIR SERVICE EQUIPMENT PNEUMATIC ACCESSORIES AND VACUUM LIFTING

- Filters - regulators - lubricators G 1/8 to G 1 1/2
- Emergency stop valve
- Time-delay starter
- Submicronic filters
- Exhaust port regulator
- Silencer and exhaust silencer filter
- Flow regulators, quick exhaust valve
- Pressure indicator lamps, pressure switches
- Pneumatic and electronic timers
- Vacuum generator - manometers
- Flat and bellow suction cups





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