

**SPOOL VALVE ISLANDS**  
**to ISO 5599 sizes 1 and 2**  
designed for connection to a PLC  
by multiwire cable and connector  
**MULTIPOL - ISO**



P585-GB.R5

# MULTIPOL - ISO

## Spool valve islands to ISO 5599 sizes 1 and 2 designed for connection to a PLC by multiwire cable and connector

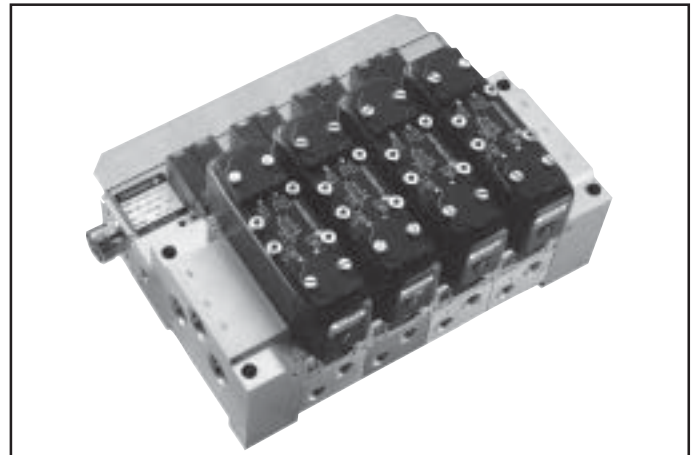
### ADVANTAGES

With its many capabilities, the Multipol system meets modern needs for automated installations :

- Wiring greatly simplified.
- Reduced electrical and pneumatic connection time.
- Visual display and quick disconnection for easy maintenance.
- Unit tested and equipped with spool valves and pilots at delivery.

### CHARACTERISTICS

- Island with built -in connection for 4 to 8 spool valves :
  - ISO 1, series 541/PH (G1/4) } monostable or bistable
  - ISO 2, series 542/PH (G1/2) }with solenoid valve pilots with CNOMO mounting surface E06.36.120N (size 15) regrouped on the **same side** to save space
- A given manifold can only receive **a single size** of spool valve
- Electric connection for all solenoid valves on an island by one multiwire cable with 19 conductors and coupled by a 19 pin Ø M23 connector. Cable and female connector are offered as accessories
- LED indicator for each pilot valve coil
- Common pressure and exhaust ports on both sides of the manifold, at the two ends
- Side pressure connection (1)
- Side exhaust connection (3, 5).
- Side outlet connection (2, 4) or combined connection (side and bottom) on request
- Pneumatic supply to pilot solenoid valves :
  - Standard : Internal supply taken from the main pressure channel (1)
  - Option n°35 : External G1/8 supply
- Unused stations can be closed off with blanking plates
- Possibility of integrated pneumatic wiring with selector plates supplying each subbase
- Impulse auxiliary manual override on solenoid valves-pilots and spool valves with or without manual tester



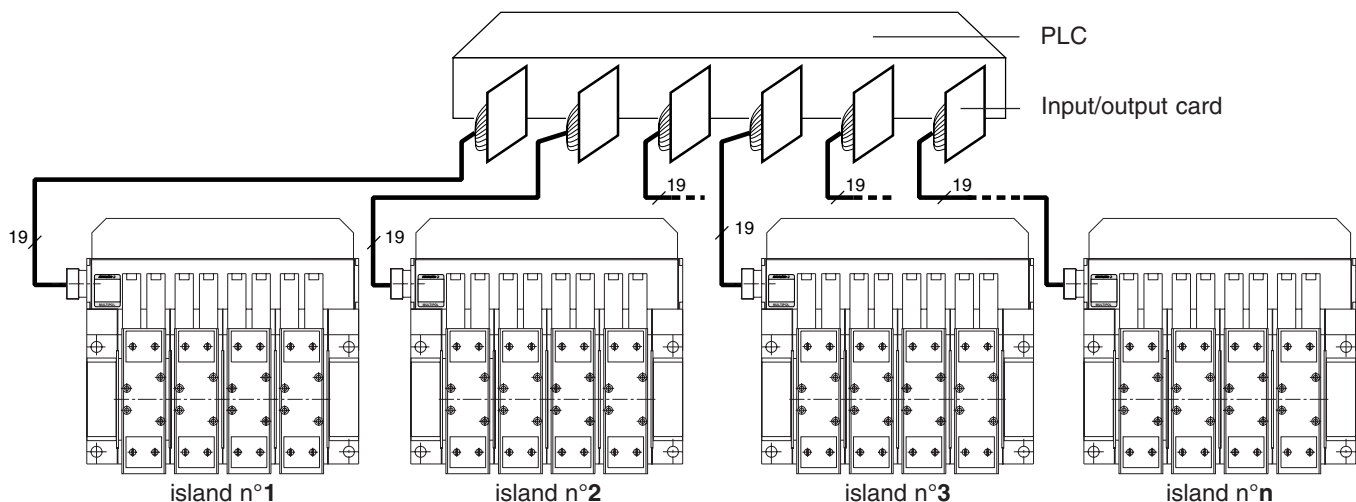
### PNEUMATIC AND ELECTRICAL CHARACTERISTICS

Fluid	: air or neutral gas, filtered 30µm, lubricated or dry
Operating pressure spool valves	: 3 to 8 bar (with internal supply to pilot) -1 to +12 bar (with external supply to pilot 3 - 8 bar)
Flow (Qv at 6 bar)	ISO 1 : 1400 l/min (ANR) ISO 2 : 2800 l/min (ANR)
Allowable temperature	: + 5°C to + 50°C
Voltage	: 24 V DC (-15%; +10%)
Consumption by pilot	: <b>2,2 W (with LED)</b>
Insulation class	: F
Degree of protection	: IP 65

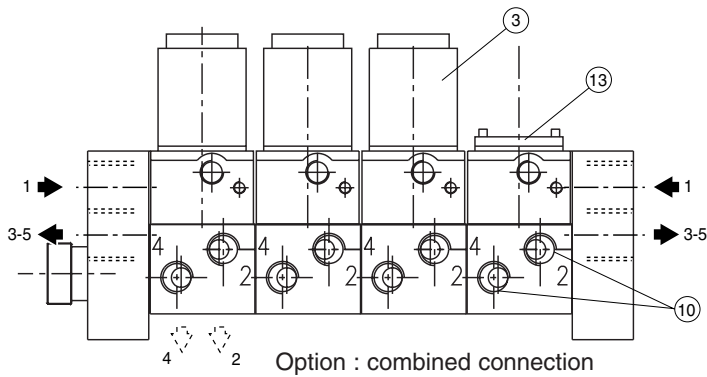
Complementary informations  
on spool valve : see P470

### ELECTRICAL CONNECTION

The maximum number of manifolds depends on the number of input/output cards that the PLC can receive

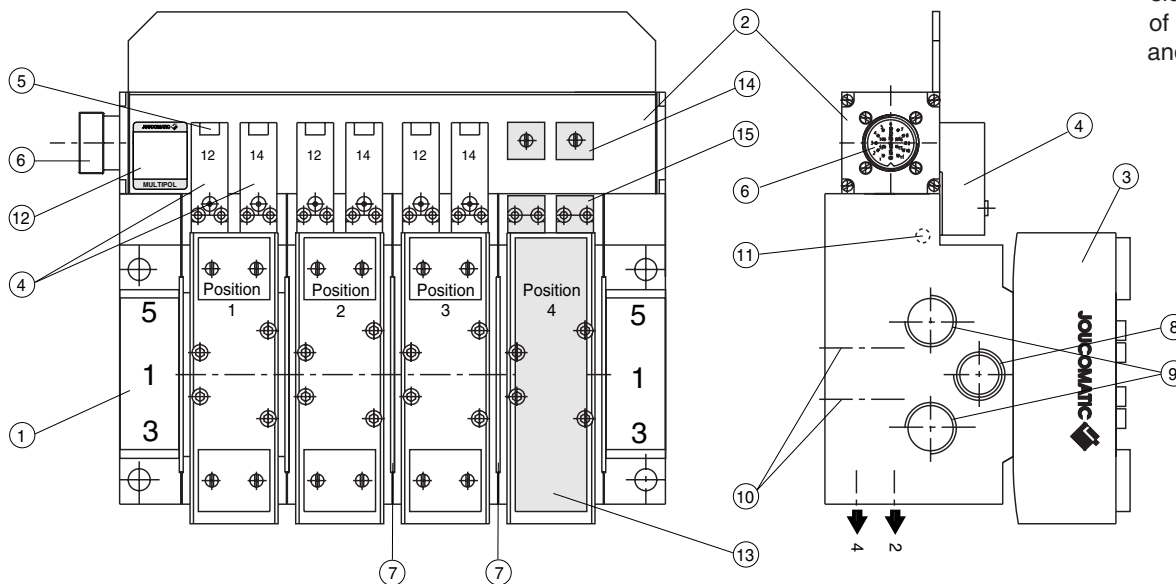


**DESCRIPTION OF MULTIPOL-ISO ISLAND**



CONNECTION		
Port n°	ISO 1	ISO 2
1	G 1/2	G 3/4
3-5	G 1/2	G 3/4
2-4	G 1/4	G 1/2

**Standard version**  
side connection  
of ports 1 - 3 - 5  
and outlets 2 - 4



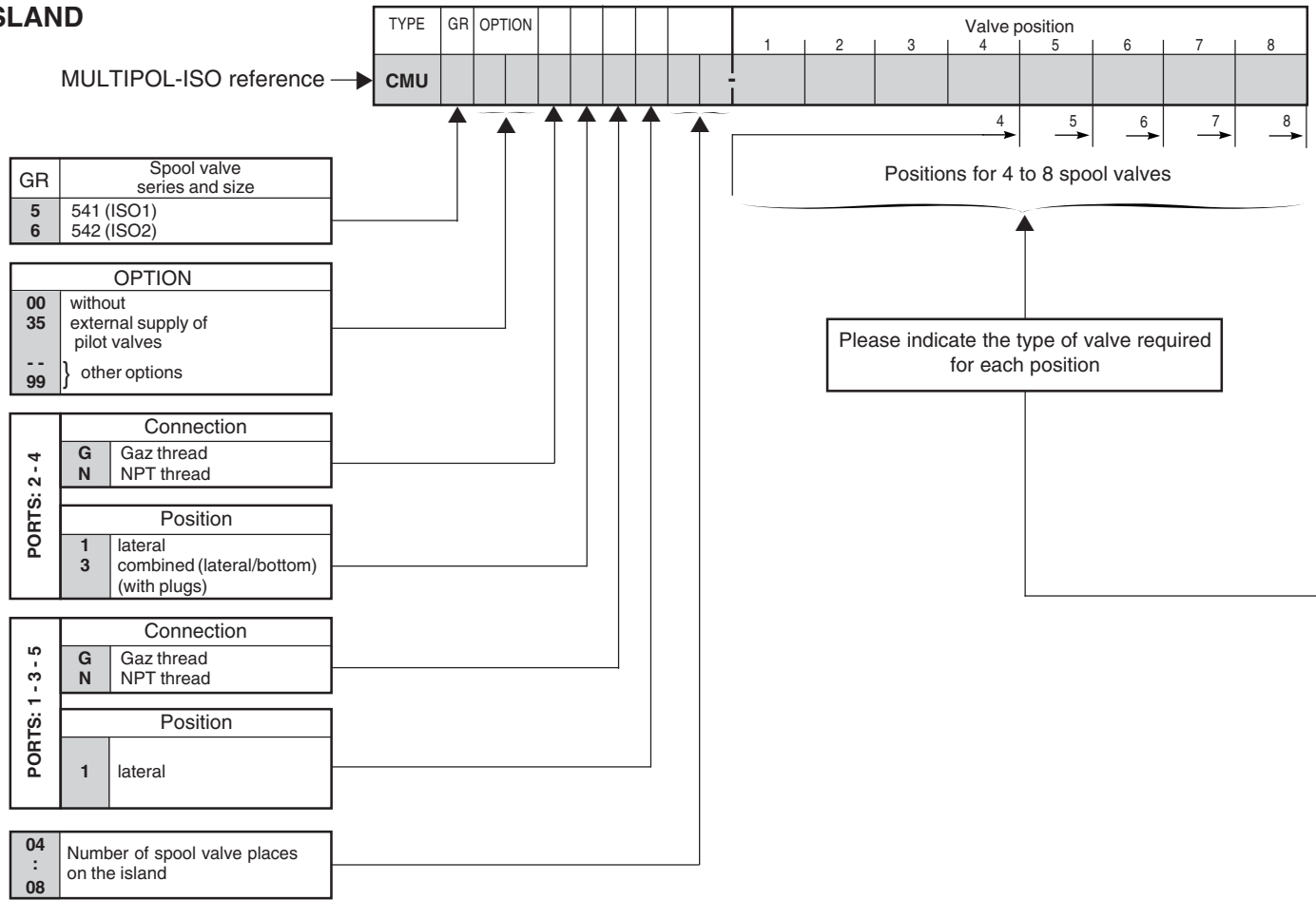
**5**

Item	Description
1	All pneumatically connected subbases and endplates for the manifold units with 4, 5, 6, 7 or 8 spool valves
2	Electrical connection module attached to the subbase
3	ISO 1 (series 541/PH) or ISO 2 (series 542/PH) air operated spool valve
4	3/2 NC CNOMO mini-pilot solenoid valve, size 15 to control spool valves (2 pilots placed on the same side for bistable functions)
5	Pilots "on" indicator LED
6	M23 connector with 19 male contacts to supply electricity to manifold unit through a multi-core cable
7	Selector plate for flow paths to main connections (see page 6)
8	Pressure port "1"
9	Side exhaust ports "3-5"
10	Side (combined on request) pneumatic load ports "2-4"
11	External pneumatic control inlet (see accessories)
12	Manifold unit signalling plate
13	Valve station blanking plate (see accessories)
14	Electrical pilot blanking plate (see accessories)
15	Pneumatic mating surface blanking plate for pilots (see accessories)

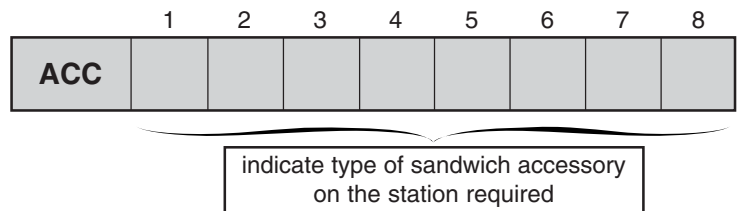
Combined connection (side/bottom) of outlets 2 and 4, on request

## MULTIPOL MANIFOLD CODES

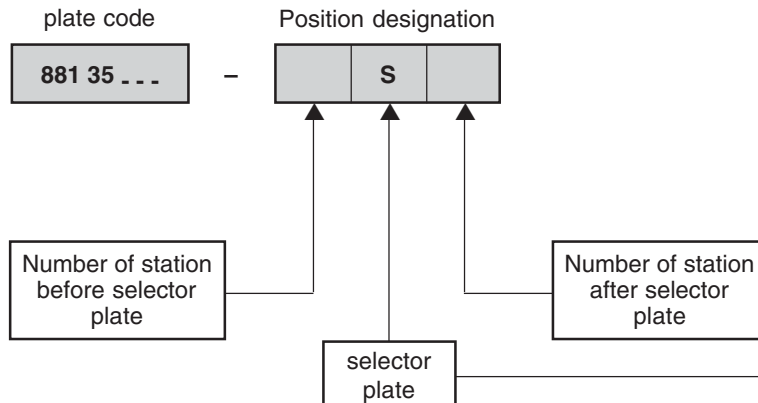
### ISLAND



### PNEUMATICS ACCESSORIES SANDWICH



### SELECTORS PLATES



### OTHER ACCESSORIES (see page 7)

ISO 1 (541/PH), ISO 2 (542/PH) SPOOL VALVES, ACCESSORIES AND SELECTORS PLATES

SPOOL VALVES  
ISO 1 (series 541/PH)  
and  
ISO 2 (series 542/PH)

REQUIRED FUNCTION (1)			= SPOOL VALVE		+ SOLENOID VALVE (s)			
Type	Function symbol	Actuators		Size ISO	CODE		QUANTITY and CODE solenoid valve (s) (with LED visual indication)	Signalling
		Operator (14)	Return (12)		air-operated spool valve ONLY			
					WITHOUT manual tester	WITH manual testers		
					General applications	Car industry specifications		
M	Function : 5/2 	solenoid/air	differential	ISO 1	541 01 018	541 01 002	+ 1 x 30215187--P	Led
				ISO 2	542 02 018	542 02 002	+ 1 x 30215187--P	Led
J	Function : 5/2 	solenoid/air	solenoid/air	ISO 1	541 01 019	541 01 003	+ 2 x 30215187--P	Led
				ISO 2	542 02 019	542 02 003	+ 2 x 30215187--P	Led
G	Function : 5/3 	solenoid air	centre closed W1	ISO 1	541 01 020	541 01 004	+ 2 x 30215187--P	Led
				ISO 2	542 02 020	542 02 004	+ 2 x 30215187--P	Led
B	Function : 5/3 	solenoid air	centre open to pressure W2	ISO 1	541 01 022	541 01 013	+ 2 x 30215187--P	Led
				ISO 2	542 02 022	542 02 013	+ 2 x 30215187--P	Led
E	Function : 5/3 	solenoid air	centre open to exhaust W3	ISO 1	541 01 021	541 01 005	+ 2 x 30215187--P	Led
				ISO 2	542 02 021	542 02 005	+ 2 x 30215187--P	Led
A	Pneumatic mating surface blanking plate			ISO 1	881 35 517			
				ISO 2	881 35 518			

(1) To obtain the equipment necessary to achieve one of the above basic functions, specify the code of the corresponding spool valve alone (solenoid/air operated) **without or with manual testers** and depending on the ISO size, one or two pilot solenoid valves with LED signalling (the solenoid valves have built-in interference suppressors)

PNEUMATIC ACCESSORIES SANDWICH

Type	DESCRIPTION	Diagram	ISO	CODES	E (mm)
RE	EXHAUST RESTRICTOR module sandwich This unit fitted between the subbase and a valve incorporates two exhaust restrictors, one for flow path 3 and one for flow path 5. These can be used to control the speed of a double-acting cylinder.		ISO 1	346 00 476	28
			ISO 2	346 00 477	30
AS	SEPARATE PRESSURE SUPPLY module sandwich This plate fitted between the subbase and the valve allows an individual valve to be supplied with a different pressure from that of the main manifold. Pressure feed within the subbases is not blocked by adding this plate. Port P connection: G 1/4 (ISO 1)		ISO 1	355 00 118	30
RP	PRESSURE CONTROL module sandwich This unit fitted between sub-base and the valve makes it possible to regulate the pressure supply to the latter (0,5 to 10 bar). (A) Port G 1/8 for a possible installation of a pressure gauge, code : 343 00 014 <i>Diagram see page P570-9</i>		On port 1 button side 12	ISO 1 346 00 474	45
			ISO 2 346 00 475	60	
RT			On port 1 button side 14	ISO 1 346 00 471	45
			ISO 2 346 00 472	60	
RU			On port 2	ISO 1 346 00 458	45
			ISO 2 346 00 461	60	
RV			On port 4	ISO 1 346 00 459	45
			ISO 2 346 00 462	60	
RW	On ports 2 & 4	ISO 1 346 00 460	45		
		ISO 2 346 00 463	60		

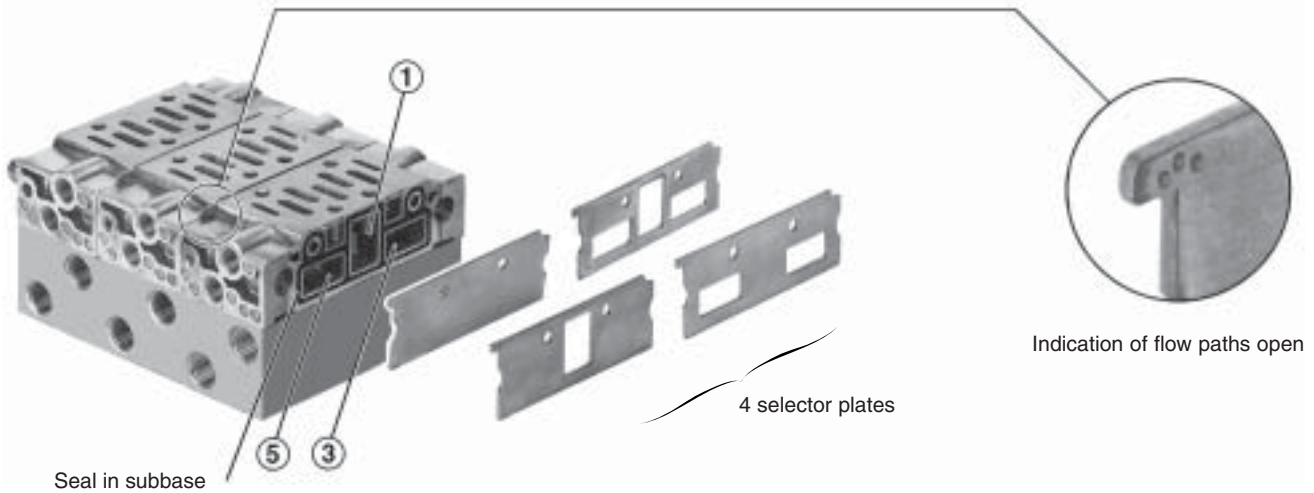
SELECTOR PLATES  
(see next page)

	ISO 1	ISO 2
Blank selector plate (no flow path open)	881 35 501	881 35 506
Selector plate (flow path 1 open)	881 35 512	881 35 513
Selector plate (flow paths 3 and 5 open)	881 35 510	881 35 511
Selector plate (flow paths 1, 3 and 5 open)	881 35 502	881 35 507

NOTE: All the above versions can be installed and combined in the same manifold assembly, **of the same size.**

## 1.2.2 POSSIBLE FLOW PATHS

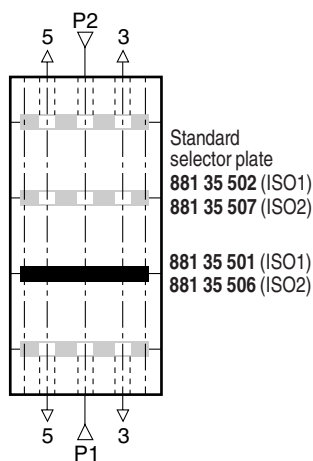
The sub-bases have 3 flow paths (1, 3 and 5), all of which can be connected through the endplates of each manifold assembly. Each sub-base is equipped with a selector plate which determines how the internal connections are made. In the standard configuration supplied, the plates allow flow via paths 1, 3 and 5 (see general documentation in air control equipment catalogue PNE, pages P570-16 and P570-27)



	ISO 1	ISO 2
Blank selector plate (no flow paths open)	<b>881 35 501</b>	<b>881 35 506</b>
Selector plate (flow path 1 open)	<b>881 35 512</b>	<b>881 35 513</b>
Selector plate (flow paths 3 and 5 open)	<b>881 35 510</b>	<b>881 35 511</b>
Selector plate (flow paths 1, 3 and 5 open) (standard)	<b>881 35 502</b>	<b>881 35 507</b>

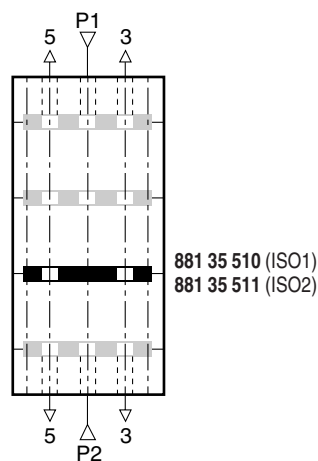
## EXAMPLES OF CONNECTION OF PRESSURE AND EXHAUST TO THE ENDPLATES

Configuration with two separate pressure inlets and exhausts.



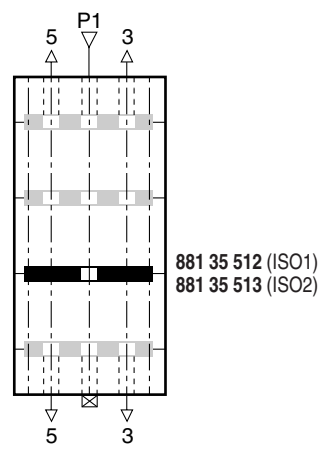
To obtain this configuration, it is necessary to procure one selector plate blanking flow paths 1, 3 and 5.

Configuration with two separate pressure inlets and common exhausts at the endplates.



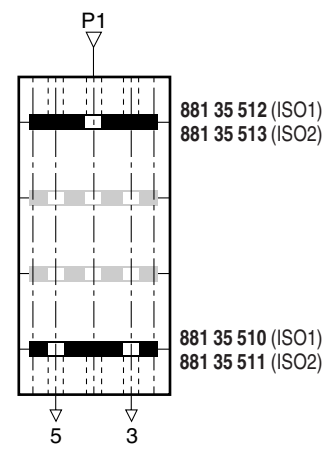
To obtain this configuration, it is necessary to procure one selector plate leaving flow paths 3 and 5 open.

Configuration with one pressure inlet at one endplate and exhaust at both endplates.



To obtain this configuration, it is necessary to procure one selector plate leaving flow path 1 open. This makes it possible to isolate the exhaust while retaining the common pressure supply. Fit a plug on the other end.

Configuration with one pressure inlet at one endplate and exhausts at the other endplate.



The use of one selector plate leaving flow path 1 open as well as one selector plate leaving flow paths 3 and 5 open at the endplates makes it possible (in the ISO 1 case) to obtain the above configuration without having to plug the ports.



**ACCESSORIES**

Accessories		For spool valves		CODES
		Number	Series	
General applications	<b>Straight</b> connector M23 with 19 female contacts for Multipol manifold	4...8	–	<b>881 64 102</b>
	<b>90° elbow</b> connector M23 with 19 female contacts for Multipol manifold	4...8	–	<b>881 64 105</b>
Car industry specifications	<b>Straight</b> connector M23 with 19 female contacts + IP67 moulded cable with 16 x 0.34 mm <sup>2</sup> cores and 3 x 1 mm <sup>2</sup> cores, class 6, resistant to cutting fluids (CNOMO E0340150N) and sparks. Cable length : <b>5 m</b>	4...8	–	<b>881 64 106</b>
	<b>90° elbow</b> connector M23 with 19 female contacts + IP67 moulded cable with 16 x 0.34 mm <sup>2</sup> cores and 3 x 1 mm <sup>2</sup> cores, class 6, resistant to cutting fluids (CNOMO E0340150N) and sparks. Cable length : <b>5 m</b>	4...8	–	<b>881 64 107</b>
<b>Electrical (1) and pneumatic (2) blanking plates for one pilot valve</b>				<b>881 64 110</b>
ISO spool valve pneumatic mating surface blanking plate (3)		–	ISO 1	<b>881 35 517</b>
			ISO 2	<b>881 35 518</b>
40 mm dia. pressure gauge (0 - 12 bar)		–	–	<b>343 00 014</b>
Pneumatic accessories sandwich ISO 1 - ISO 2		–	ISO 1 ISO 2	see page 5

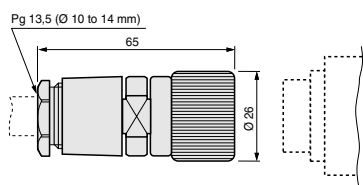
(1) (2) These plates can be adapted to islands to block the electrical and pneumatic mounting surfaces of an unused valve place (removable for further extension).

NOTE : The blanking plates (1) and (2) are required for **monostable functioning** of the spool valve

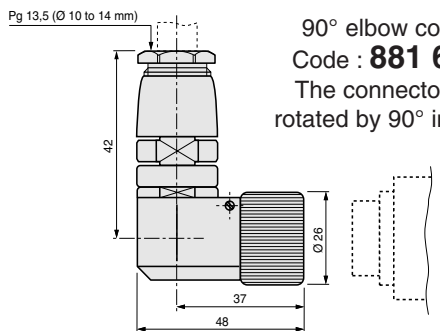
(3) This plate is fitted to the manifold to blank off the pneumatic mating surface of a spool valve station left free (for future extension).

**General applications**

Straight connector  
Code : **881 64 102**

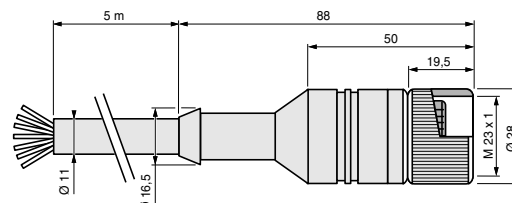


90° elbow connector  
Code : **881 64 105**  
The connector can be rotated by 90° increments



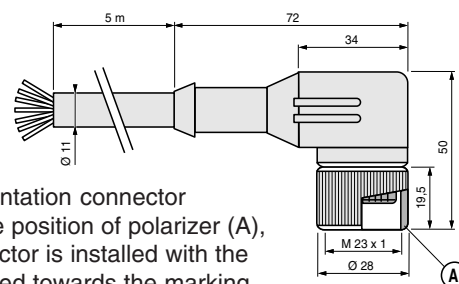
**Car industry specifications**

Straight connector + 5 m moulded cable  
Code : **881 64 106**



For flexible sleeving

90° elbow connector + 5 m moulded cable  
Code : **881 64 107**



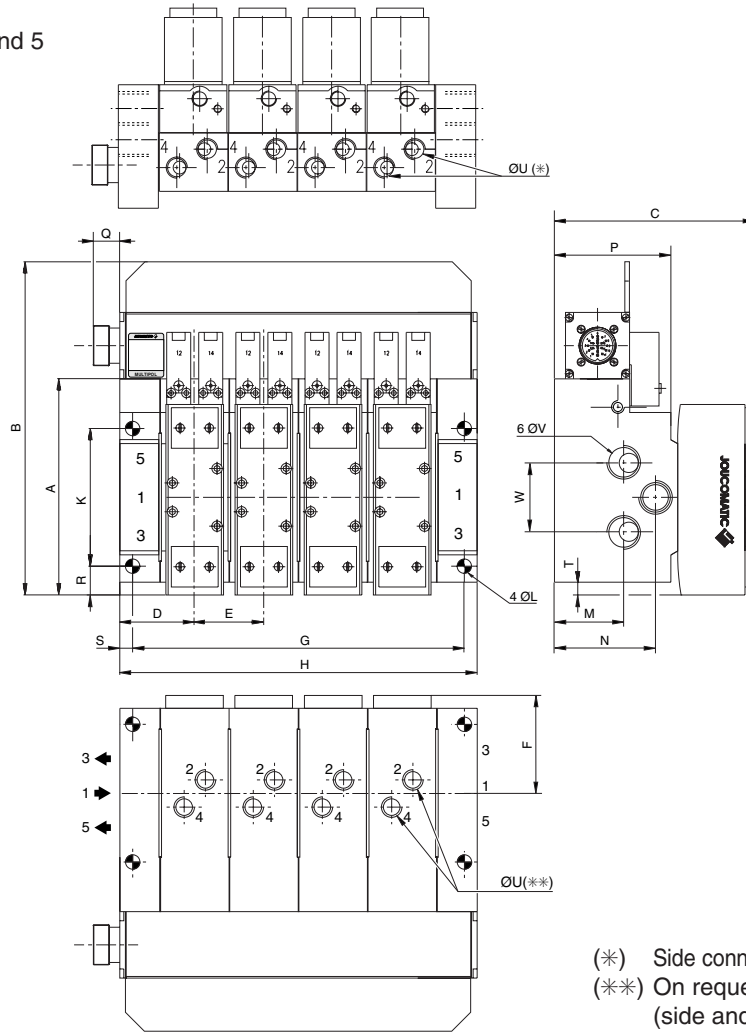
Fixed-orientation connector  
Due to the position of polarizer (A), the connector is installed with the cable turned towards the marking labels (see dimensions page)

Assignment of contacts and conductors : see installation manual

## DIMENSIONS AND WEIGHT

- Standard version :

Side connection of ports 1, 3 and 5



(\*) Side connection of ports 2 - 4 in standard  
 (\*\*\*) On request, combined connection (side and bottom) of ports 2 - 4

Series	Dimensions (mm)																	
	A	B	C	D	E	F	K	ØL	M	N	P	Q	R	S	T	ØU	ØV	W
ISO 1	135	202	126,5	56,5	43,1	61	86	8,5	63	31	73,2	16,5	18	7	8	G 1/4	G 1/2	48
ISO 2	170	237	150	70	56	84	111	8,5	42	82	92	16,5	22,5	7,5	21	G 1/2	G 3/4	61

Valve number →	G					H					Weight (Kg)				
	4	5	6	7	8	4	5	6	7	8	4	5	6	7	8
ISO 1	228,5	271,6	314,6	357,8	401	242,5	285,6	328,6	371,8	415	8,4	9,9	11,1	12,6	14
ISO 2	293	349,1	405,1	461,2	517,2	308	364,1	420,1	476,2	532,2	12,2	14,7	16,8	19,3	21,7

