

# Giotto-Top TEACH

TECHNICAL CATALOGUE

06-2024



## GIOTTO TOP TEACH: Digital 24V, AS-i Bus, IO-Link

### Snap in connectors

Snap in connectors for 1...3 solenoid valves (9V coil)

### PCB

Printed Circuit Board, available in Digital 24V, AS-i Bus 3.0, IO-Link port class A

### 360° Visibility

Efficient monitoring of valves status (4 RGB LEDs).

### External PNP

Terminal blocks for external proximity (double seat valves, PMO double seat valves, pressure relief valves)

### Power supply

#2-pin AS-i Bus  
#3-pin IO-Link port class A  
#5-pin IO-Link port class B  
#9-pin Digital 24V

### Teach-in

Teach-in buttons for quick set up and programming



### CERTIFICATIONS

2014/30/EU-EMV 2011/65/  
EU-RoHS  
ANSI/UL 94

TECHNICAL DATA	
Casing material	PA66 + PA6 (GF+GB)30X,PA6I/6T
Gaskets material	NBR
Protection class	IP67
Air inlet and discharge connections diameter	1/8" BSP
Air hoses connections	Ø6 mm std. / Ø6,35 (1/4") su richiesta Ø6 mm std. / Ø6.35 (1/4") on request
Air supply pressure	Da 6 bar (87 psi) a 7 bar (101,5 psi) From 6 bar (87 psi) to 7 bar (101.5 psi)
Vibrations/Shocks	Vibration (sinusoidal) test according to IEC 60068-2-6 Handling shocks according to IEC 60068-2-31
Storage temperature	-10...+25 °C
Air supply	Classe 2, 4, 3 ISO 8573-1 Class 2, 4, 3 ISO 8573-1
Venting system	Snap-in Protective vent

To check the configuration of electrical connections of the various accessories available for the control unit, Bardiani Valvole recommends to refer to Use and maintenance manual. For more information about control unit configuration, please to get in touch with Bardiani Valvole technical department.

## GIOTTO TOP TEACH: 24V

TECHNICAL DATA	
Power supply	18 to 28 V DC
Residual ripple	max. 10%
Max. power consumption	less than 5 W

## GIOTTO TOP TEACH: AS-i INTERFACE

TECHNICAL DATA	
Power supply	29.5 to 31.6 V DC
Max. current consumption	less than 160 mA
I/O configuration	7 hex (4 inputs / 4 outputs)
ID code	A hex
Extended ID code 1	7 hex
Extended ID code 2	E hex (see note below)
Profile	S-7.A.E

Bit configuration table				
Data bit	D3	D2	D1	D0
Input	External sensor S4	Position S3	Position S2	Position S1
Output	Not used	Solenoid valve UL	Solenoid valve LL	Solenoid valve MS
Parameter bit	P3	P2	P1	P0
Output	Not used	Not used	Not used	Not used

### Legenda

MS = main stroke, LL = lower lift, UL = upper lift

## GIOTTO TOP IO-LINK

TECHNICAL DATA	
Power supply	18 to 30 V DC
Max. current consumption port class A	typ. 170 mA at 18 V, for 3 solenoid valves
IO-Link specification	V1.1.2
SIO-Mode	No
Vendor ID	0x0743 (=1859)
Devide ID	Port class A 0xBADA01 (12245505)
Trasmission rate	230.4 kbit/s
Frame type in operation	TYPE_2_V
Min. Cycle time	5ms
Data storage	Yes
Max. cable lenght	20 m

FUNCTION	VERSION		
	24 V DC	AS-Interface	IO-Link
<b>Basic functions</b>			
Teach function of the position measuring system	✓	✓	✓
Manual override solenoid valves (mechanical)	✓	✓	✓
Position feedback process valve via S1...S4	✓	✓	✓
Feedback signal current valve position (intermediate position) in 0.1 mm resolution			✓
Optical position feedback	✓	✓	✓
Change of the colours of the optical position feedback possible	✓	✓	✓
Locating function (for AS-i profile S-7.A.7 on request)			✓
BüS communication interface (for Bürkert COMMUNICATOR)	✓	✓	✓

FUNCTION	VERSION		
	24 V DC	AS-Interface	IO-Link
<b>Parametrisation</b>			
Definable safety position in case of bus error			✓
Fail-safe positions are defined in the event of power and compressed air failure	✓	✓	✓
Deactivation of local operation (Lock function)			✓
Factory reset function (reset to factory setting)	✓	✓	✓
Output	Not used	Not used	Not used

FUNCTION	VERSION		
	24 V DC	AS-Interface	IO-Link
Diagnosis			
Counter switching cycles of solenoid valves	✓	✓	✓
Counter operating hours	✓	✓	✓
Maintenance/service notification (feedback when limit value for MS is exceeded)	✓	✓	✓
Active diagnostic messages (via Bürkert COMMUNICATOR)	✓	✓	✓
Maintenance reset (to reset counter values)	✓	✓	✓
Feedback Teach error	✓	✓	✓
Feedback over-temperature			✓
Feedback communication error		✓	✓
Tolerance band of end position detection	✓	✓	✓
Tolerance for switching time overrun			✓
Detection of under-voltage and over-voltage of the power supply	✓	✓	✓
Trigger maintenance function			✓
Log function for error cases (via Bürkert COMMUNICATOR)	✓	✓	✓

FEEDBACK / COLORS	YELLOW	YELLOW	GREEN	WHITE	WHITE	WHITE
S1	1	0	0	1	0	0
S2	0	0	1	0	0	0
S3	0	1	0	0	1	0
S4	0	1	0	1	0	1

### SINGLE MOVEMENT ACTUATOR (i.e. single seat valves, butterfly valves, bal valves, etc).

POSITION	COLOR	FEEDBACK SIGNAL
Valve closed	Yellow	S1
Valve open	Green	S2

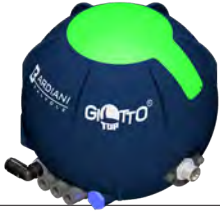




### DOUBLE SEAT MIX PROOF VALVES

POSITION	COLOR	FEEDBACK SIGNAL
Valve closed	Yellow	S1
Valve open	Green	S2
Upper lift	Yellow	S1
Lower lift	White	S3

### DOUBLE SEAT MIX PROOF VALVES WITH EXTERNAL UPPER LIFT SENSOR

POSITION	COLOR	FEEDBACK SIGNAL
Valve closed	Yellow	S1
Valve open	Green	S2
Upper lift	White	S1+S4
Lower lift	White	S3



COLOR		POSITION SENSOR INSTALLED
		Open
		Closed
Only for double seat valves		Upper lift
		Lower lift
		Error

The association of LEDs colours with valve positions complies with standards EN60204 and EN61310.

	CONNECTIONS TYPE	24V	AS-i	IO-Link Port Class A	IO-Link Port Class B
	Threaded coupling for cable gland PG11	✓			
	Threaded coupling for cable gland M20x1.5	✓			
	7-poles wiring connector	✓ 1 / 2 sensors + 1 / 2 / 3 solenoid valves			
	M12 4-poles wiring connector		✓	✓	
	M12 5-poles wiring connector	✓ 1 sensor + 2 solenoid valves / 2 sensors + 1 solenoid valves	✓		✓
	M12 8-poles wiring connector	✓ 1 / 2 / 3 sensors + 1 / 2 / 3 solenoid valves			
	M12 12-poles wiring connector	✓ 1/2/3/4 sensors + 1/2/3 solenoid valves			

# RECOMMENDATIONS

- Consultation of the “Instruction, Use and Maintenance Manual” is mandatory prior to the installation, use and maintenance of the products of all Products. All the information, indications, specifications, technical details provided herein are based on test data which the Manufacturer Bardiani Valvole S.p.A. holds to be reliable nevertheless the above is not deemed to be assumed as fully exhaustive inasmuch as not every possible use has been envisaged.
- All the illustrations and drawings provided are to be intended as indicative and therefore not binding, the illustrations being for presentation purposes only.
- It is the Buyer’s duty to assess the suitability of the Products for the use he intends to make of the same prior to placing the order as he/she will take the risks and accept liability in case of incorrect choice and use of the Products.
- The Manufacturer strongly recommends the Buyer to contact their sales team and request any information that might be needed in relation to the specifications and uses of the Products.
- The information provided in this manual refers to the standard products manufactured by Bardiani Valvole S.p.A. and therefore cannot be assumed to apply to customized products as well.
- Bardiani Valvole S.p.A. reserves the right to amend and/or integrate and/or update the data and/or information and/or technical details relative to Products at any time and without prior notice. Please visit the website [www.bardiani.com](http://www.bardiani.com), where the latest updated of the “Instruction, Use and Maintenance Manual” can be found”.
- The content and validity of the warranty covering the Products of Bardiani Valvole S.p.A are dealt with in the relevant section in the “Instruction, Use and Maintenance Manual” which constitutes an integral part of the Products themselves.
- Bardiani Valvole S.p.A., shall not in any way be held liable for immaterial, indirect and consequential damages, such as (by way of example only), damages or loss of business, contracts, opportunities, time, production, profits, goodwill, image etc..

