

## Type DCI/DTM Double sensor for electrical position feedback



Double sensor DCI

Double sensor DTM

Double sensor, mounted on Butterfly Valve type 565

Double sensor, mounted on Ball Valve Type 546 Pro

### Product description

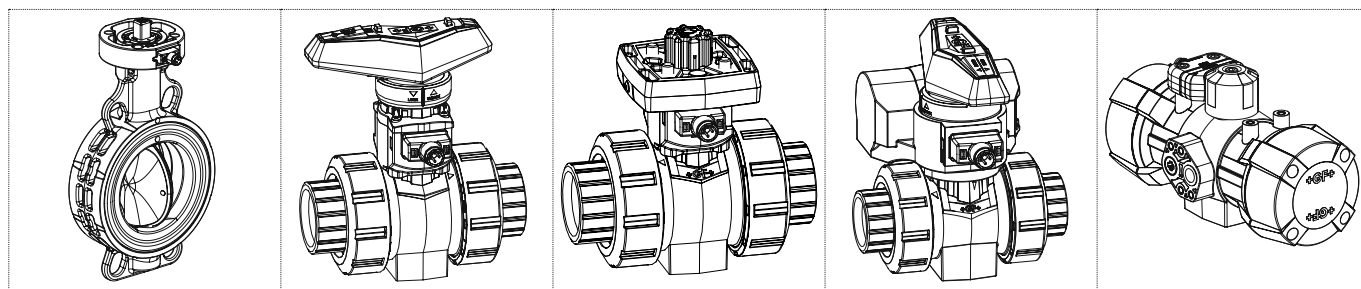
The double sensor is used to signal the closed or open position of a ball valve or a butterfly valve. The switching states are output via two integrated LEDs and forwarded as an electrical signal to a control unit or similar system provided by the customer.

ATEX version: The ATEX double sensor can be used in potentially explosive areas with flammable gas, vapor, mist and dust.

### Advantages

- Detection of two switching states open/closed
- Switching status indication via integrated LEDs
- Type DCI: Simple installation, without tools
- Various common versions PNP, NPN, NAMUR, opening and closing procedures available

### Application examples



Double sensor type DCI on butterfly valve Type 565W/Type 565L

Double sensor type DCI on ball valve Type 546 Pro/ Type 543 Pro with interface module, manually operated

Double sensor type DCI on ball valve type 546 Pro/ type 543 Pro with interface module, automatically actuated

Double sensor type DCI on ball valve type 546 Pro/ type 543 Pro with spring return unit

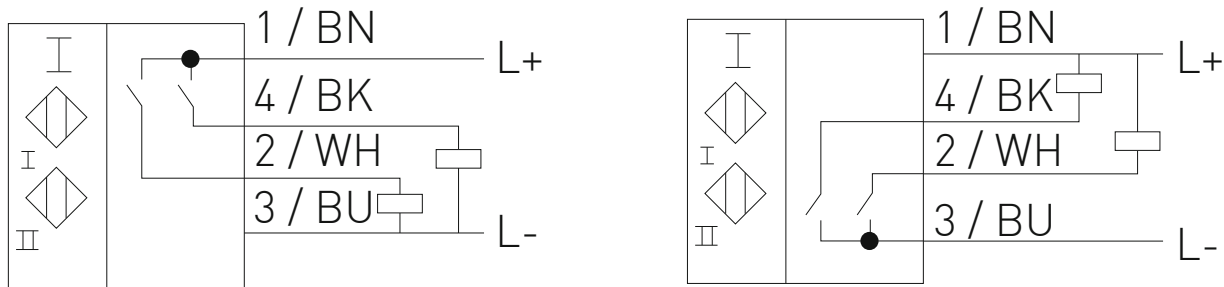
Double sensor type DTM on pneumatic actuator type PPA 08-80

## Technical data

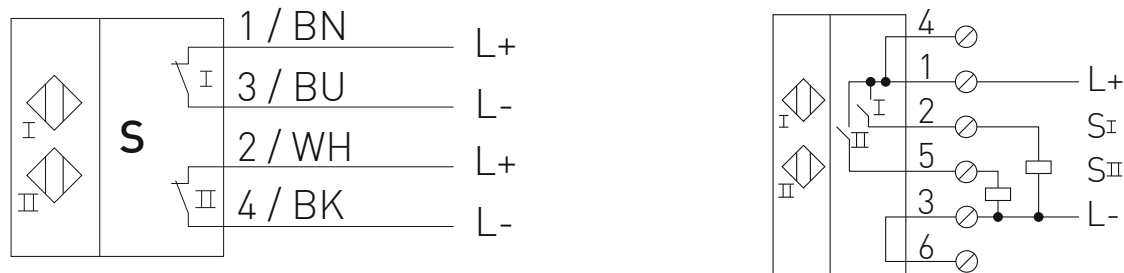
Specifications type	DCI 12	DCI 12	DTM 12	DTM CG
Output circuit	NAMUR	PNP, NPN	PNP	PNP
Output function	2x Normally Closed (NC)		2x Normally Open (NO)	
Technology	Inductive			
Hysteresis (typical)	10%		5%	
Switching frequency	<1000 Hz	<500 Hz	<1000 Hz	
Operating voltage indicator			LED green	
Valve position indicator	LED red/LED green		LED yellow	
Operating voltage range +Vs	8.2 V		10...30 VDC	
Operating current		0...150 mA	0...200 mA	
Voltage drop (Ud)		≤3 V	≤2.5 V	
DC current (Ir)			0...0.5 mA typ. 0.1 µA @25°C	
No-load current (I0)	≥ 3 mA	≤ 25 mA	≤ 22.5 mA	
MTTFd	2122 a	780 a	860 a	
Short-circuit proof		Cycling		
Reverse-polarity protected		Yes		
Protection class		IP67		
Housing material		PBT		
Operating temperature		-25...70 °C (-13...158°F)		
Connection		M12x1,4-pin	Screw terminal M20x1.5 cable gland	

### Connection diagrams

#### PNP NPN



#### NAMUR Cable terminal M20x1.5 cable gland

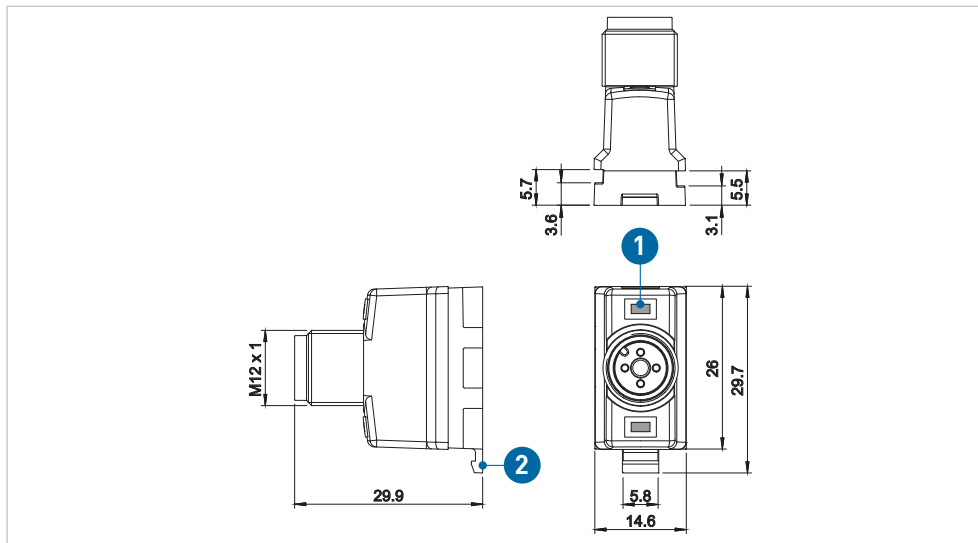


### Connector pin assignment

Pin	Color coding	Color	Connector diagram
1	BN	brown	
2	WH	white	
3	BU	blue	
4	BK	black	

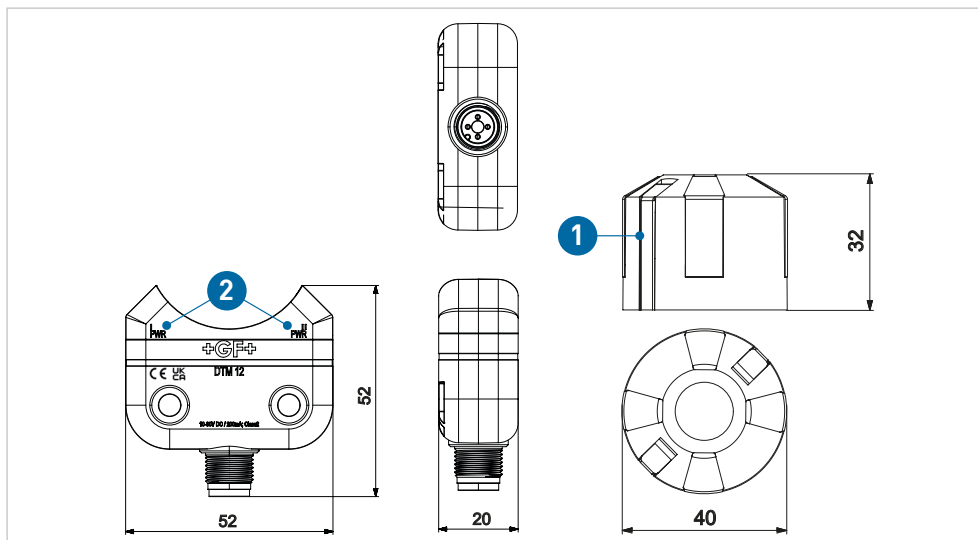
## Dimensions

### Type DCI 12



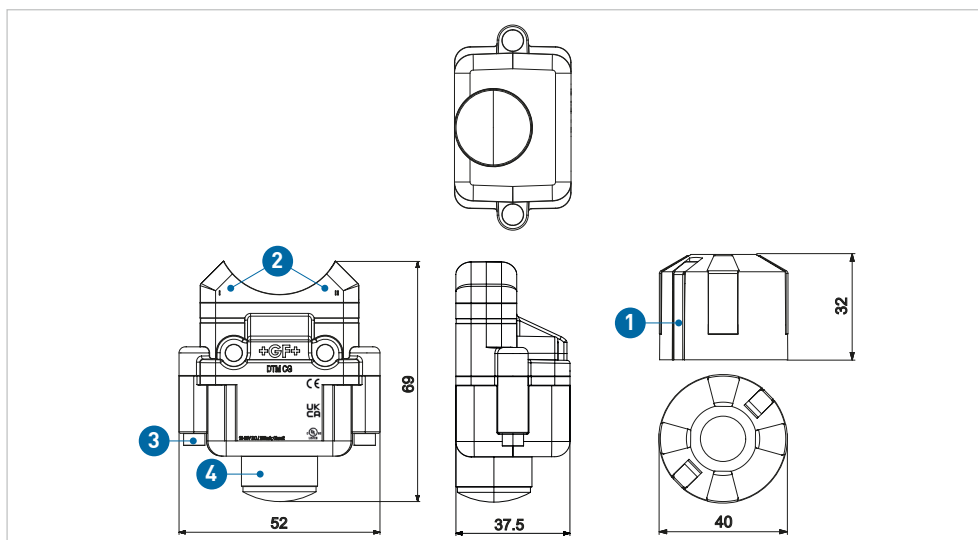
- 1 Status LED
- 2 Snapper

### Type DTM 12



- 1 Puck
- 2 Status/Output LED's

### Type DTM CG



- 1 Puck
- 2 Status/Output LED's
- 3 Housing Screws
- 4 Screw terminal, cable gland M20 x 1,5


## Article overview

### Compatibility overview


	Type		DCI	DTM
Butterfly valve	Type 565		X	
	Type 567/578*			
Ball valve	Type 546 Pro	DN10-DN50*	X	
	Type 543 Pro	DN10-DN50*		
Pneumatic actuator	PPA 08-80	FC/FO/DA		X
	PA 30-40	FC/FO		X
	PA 30-50	DA		X

\*Additional interface module or intermediate elements needed


### Typ DCI

Code	Output circuit	LED indicator output 1	LED indicator output 2	Connection	Product picture
198 546 001	PNP	LED red	LED green	M12x1, 4-pin	
198 546 002	PNP	LED green	LED red	M12x1, 4-pin	
198 546 005	NPN	LED red	LED green	M12x1, 4-pin	
198 546 006	NPN	LED green	LED red	M12x1, 4-pin	
198 546 003	NAMUR	LED green	LED red	M12x1, 4-pin	
198 546 004	NAMUR	LED red	LED green	M12x1, 4-pin	


### Typ DTM 12

Code	Output circuit	LED indicator output 1	LED indicator output 2	Connection	Product picture
198 546 007	PNP	LED yellow	LED yellow	M12x1, 4-pin	

### Typ DTM CG

Code	Output circuit	LED indicator output 1	LED indicator output 2	Connection	Product picture
198 546 008	PNP	LED yellow	LED yellow	Screw terminal, cable gland M20 x 1,5	

### Puck for type DTM

Code	Product picture
198 546 009	Puck (activator) for pneumatic actuators with double sensor type DTM incl. mounting screw. 

## Accessories

### Connection cables

Suitable connection cables are available as accessories:

DN (mm)	LED signal color
198546150	M12x1, 4-pin, plug, without cable
198546151	M12x1, 4-pin, PVC, 5m
198546152	M12x1, 4-pin, PVC, 10m
198546153	M12x1, 4-pin, PUR, 5m
198546154	M12x1, 4-pin, PUR, 10m

### Switching ring for double sensor (For manually operated type 565 butterfly valves)

DN (mm)	Code	Acc. to ISO 5211	SW (mm)	Wmax (mm)	Hmax (mm)	Dimensions	Product picture
50 - 80	199 565 900	F07	11	57.7	12.5		
100 - 125	199 565 901	F07	14	57.7	12.5		
150 - 200	199 565 902	F07	17	57.7	12.5		
250 - 300	199 565 903	F10	22.1	79.8	12.5		

**i** The additional switching ring is required for manually operated butterfly valves type 565. The switching ring is already pre-assembled for electrically or pneumatically actuated valves.

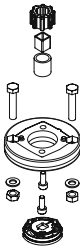
### Intermediate elements type 567/578

Intermediate elements are required as a connection between type 567/578 valve and Actuator. The intermediate elements include different screws, hexagon nuts, washer, switching rings, etc. (depends on actuator and dimension).


#### Intermediate elements for Reduction Gear

DN (mm)	Code	Reduction gear	Acc. to ISO 5211	Product picture example
50 - 80	198 000 621	161 483 471	F07	
100 - 125	198 000 622	161 483 471	F07	
150 - 200	198 000 599	161 483 471	F07	
250 - 300	198 000 732	161 483 472	F07	


## Intermediate elements for Electric Actuators EA45-250, dEA45-250

DN (mm)	Code	Actuator Type	Acc. to ISO 5211	Product picture example
50 - 65	198 000 943	EA45	F05/F07	
80	198 000 601	xEA120	F07	
100 - 125	198 000 602	xEA120	F07	
150	198 000 600	xEA120	F07	
200 - 250	198 000 603	xEA250	F07	
300	198 000 732	xEA250	F07/F10	

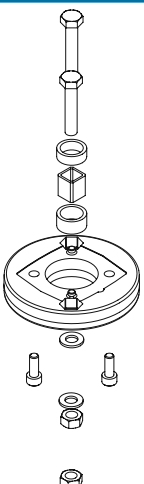
## Intermediate elements for Pneumatic Actuators PPA, function FC/F0

DN (mm)	Code	Typ	Acc. to ISO 5211	Product picture example
50 - 65	198 000 950	PPA40	F05/F07	
80	198 000 949	PPA80	F05/F07	
100 - 125	198 000 948	PPA80	F05/F07	

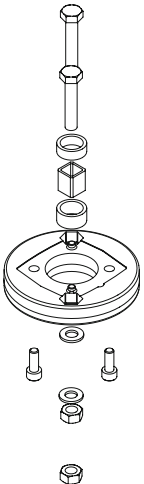
## Intermediate elements for Pneumatic Actuators PPA, function DA

DN (mm)	Code	Typ	Acc. to ISO 5211	Product picture example
50 - 65	198 000 950	PPA40	F05/F07	
80	198 000 950	PPA80	F05/F07	
100 - 125	198 000 948	PPA80	F05/F07	

## Intermediate elements for Pneumatic Actuators PA30-90, function FC/F0

DN (mm)	Butterfly valve type	Code	Type	Acc. to ISO 5211	Product picture example
50	567/578	198 000 791	PA30	F05/F07	
65	567/578	198 000 791	PA30	F05/F07	
80	567/578	198 000 793	PA35	F05/F07	
100	567/578	198 000 794	PA40	F07	
125	567/578	198 000 795	PA45	F07	
150	567/578	198 000 796	PA50	F07	
200	567/578	198 000 798	PA55	F07	
250	567	198 000 760	PA65	F10	
250	578	198 000 945	PA65	F10	
300	567	198 000 225	PA70	F10	
300	578	198 000 946	PA70	F10	

## Intermediate elements for Pneumatic Actuators PA30-90, function DA

DN (mm)	Butterfly valve type	Code	Type	Acc. to ISO 5211	Product picture example
50	567/578	198 000 595	PA35	F05/F07	
65	567/578	198 000 595	PA35	F05/F07	
80	567/578	198 000 791	PA40	F07	
100	567/578	198 000 794	PA45	F07	
125	567/578	198 000 797	PA45	F07	
150	567/578	198 000 796	PA55	F07	
200	567/578	198 000 796	PA55	F07	
250	567	198 000 731	PA65	F10	
250	578	198 000 944	PA65	F10	
300	567	198 000 731	PA65	F10	
300	578	198 000 944	PA65	F10	

## Type 543 Pro & type 546 Pro Interface module, manual actuated

The manually operated interface module can be used to transmit the open or closed position of the type 546 Pro or type 543 Pro ball valve to a customer control system via an electrical signal from the double sensor.

DN (mm)	Code
DN10/15	198546102
DN20/25	198546103
DN32/40	198546105
DN50	198546107



## Type 543 Pro & type 546 Pro Spring reset unit (dead man's switch)

The spring reset unit (dead man's switch) is installed onto the ball valve type 546 Pro or type 543 Pro and ensures that the ball valve is closed automatically as soon as the handle is released. It is opened against the spring force. The spring reset unit can be used to transmit the open or closed position of the type 546 Pro or type 543 Pro ball valve to a customer control system via an electrical signal from the double sensor.

DN (mm)	Code
DN10/15	198546082
DN20/25	198546083



## Type 543 Pro & type 546 Pro Interface module, automatic actuated

With the help of the automatically actuated interface module, electric or pneumatic actuators can be attached on the ball valve type 546 Pro or type 543 Pro, which allows the automation of the ball valve's change of position. In addition, an interface is available for the installation of the double sensor for electrical position feedback.

DN (mm)	Code Pneumatic GF actuators PPA	Code Electric GF actuators EA15/EA25/dEA	Code Ring for type 543 Pro
DN10/15	198546162	198546142	198543000
DN20	198546163	198546143	198543001
DN25	198546164	198546144	198543001
DN32	198546135	198546145	198543002
DN40	198546136	198546146	198543002
DN50	198546137	198546147	198543003



DN (mm)	SW	Code Norm actuators according to ISO 5211
DN10/15	SW09	198546122
DN10/15	SW11/14	198546123
DN20/25	SW09	198546124
DN20/25	SW11/14	198546125
DN32-40	SW11/14	198546126
DN50	SW11/14	198546127

