2/2 way; DN 10 - 13 mm; 1 up to 7 bar

Advantages / Benefits

▶ **Reduction of Cost of Ownership up to 60%**

▶ **Modular system design**

▶ **Block assembly by lock technology**

▶ **Easy change between distributing and collecting function by turn of valve insert**

▶ **Free combination of valve sizes DN10 and DN13**

▶ **High flexibility with different port connections also with integrated check valve**

▶ **Flexibility with additional functions (integrable sensors, separation of fluids, additional inputs)**

▶ **Low weight by thermo-plastic technology**

▶ **Waterhammer free**

Design/Function

The servo-assisted solenoid valve with servo diaphragm is normally closed (NC).
In this condition, a pressure is being built up above the diaphragm - the valve holds tight.
When energized, the space above the servo diaphragm is pressure relieved and lifted up by the medium - the valve opens.

The modular extendable valve system can be built up in all possible combinations with up to 12 valves each as distributor or collector in two sizes with different port connection modules. The valve can be put together in collecting function or distributing function by easily twisting the valve insert.

Any kind of combination of functions in one block is possible.

Additional functions as e.g. temperature indication or flow measurement can be added by integrating a corresponding sensor directly into the valve block.

In order to be as flexible as possible, a variety of port connections is available as standard. The inner thread port connections are at the bottom, pointing downwards while the outer thread port connections and the plug-on connection for hoses are pointing sideways.

The block material is Polyamide glass-fiber reinforced.

The advantages are: Low weight and a certain chemical resistance.

Applications

Fluids

Neutral liquids, i.e. water, hydraulic oil, oils and fat (without additions) up to 60°C

Applications

- Distributing and collecting functions in water / sewage treatment
- HEVAC
- Hydraulic circuits
- Car wash devices
- Chemical industry
- Machine industry

บริษัท ฟลูเทค จำกัด
FLU - TECH CO., TD

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Modular Water Valve System
servo-assisted; variable and extendable

Type 6227

Technical data type 6227

Circuit function

A 2/2 way flow valve,
normally closed,
with 2 way pilot control
and coupled solenoid
system

Symbol
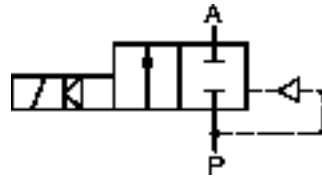
Valve specifications

| Pressure range | Collector | 1.0 up to 7.0 bar |
| | Distributor | 0.5 up to 7.0 bar |

Port connection	
Block	G 1/2 and G 3/4
Valve	G 3/8 inner-thread
	G 3/4 outer-thread
	Plug-on ø 13 mm

Seal material	NBR (FPM / EPDM on request)
Fluids	Neutral liquids, e.g. water, hydaulic oil, oils and fat without additives
Media temperature	0 up to +70°C
Ambient temperature	max. +55°C
Viscosity	max. 21 mm²/s

Response times [3] [4]	DN10	DN13
Opening	30 ms	70 ms
Closing	200 ms	300 ms

Flow rate	Kv-value (m³/h)	
	Distributor	Collector
DN10	1.4	1.5
DN13	2.4	2.7

Installation	as required, preferably with solenoid system upright

Width per valve	DN10	33 mm
	DN13	44 mm

Solenoid specifications

Operating voltages	AC 24, 110, 230 V / 50 Hz DC 12 and 24 V / =
Voltage tolerance	±10 %

Electr. power consumption		
Voltage (AC)	Inrush	20 VA
	Hold	13 VA / 5 W
Voltage (DC)	Inrush	5 W
	Hold	5 W

Duty cycle	100 % continuously rated
Cycling rate	up to 60 c.p.m.
Rating with cable plug	IP 65
Electr. connection	Delivery standard: Cable plug acc. DIN 43 650 A, 0 - 250 V (other versions see accessories)

[3] Measured at connection 2; time from electrical switching to pressure increase to 90 % (opening) or pressure drop to 10 % (closing) of operational pressure of 6 bar. The valves given apply for DC and AC.
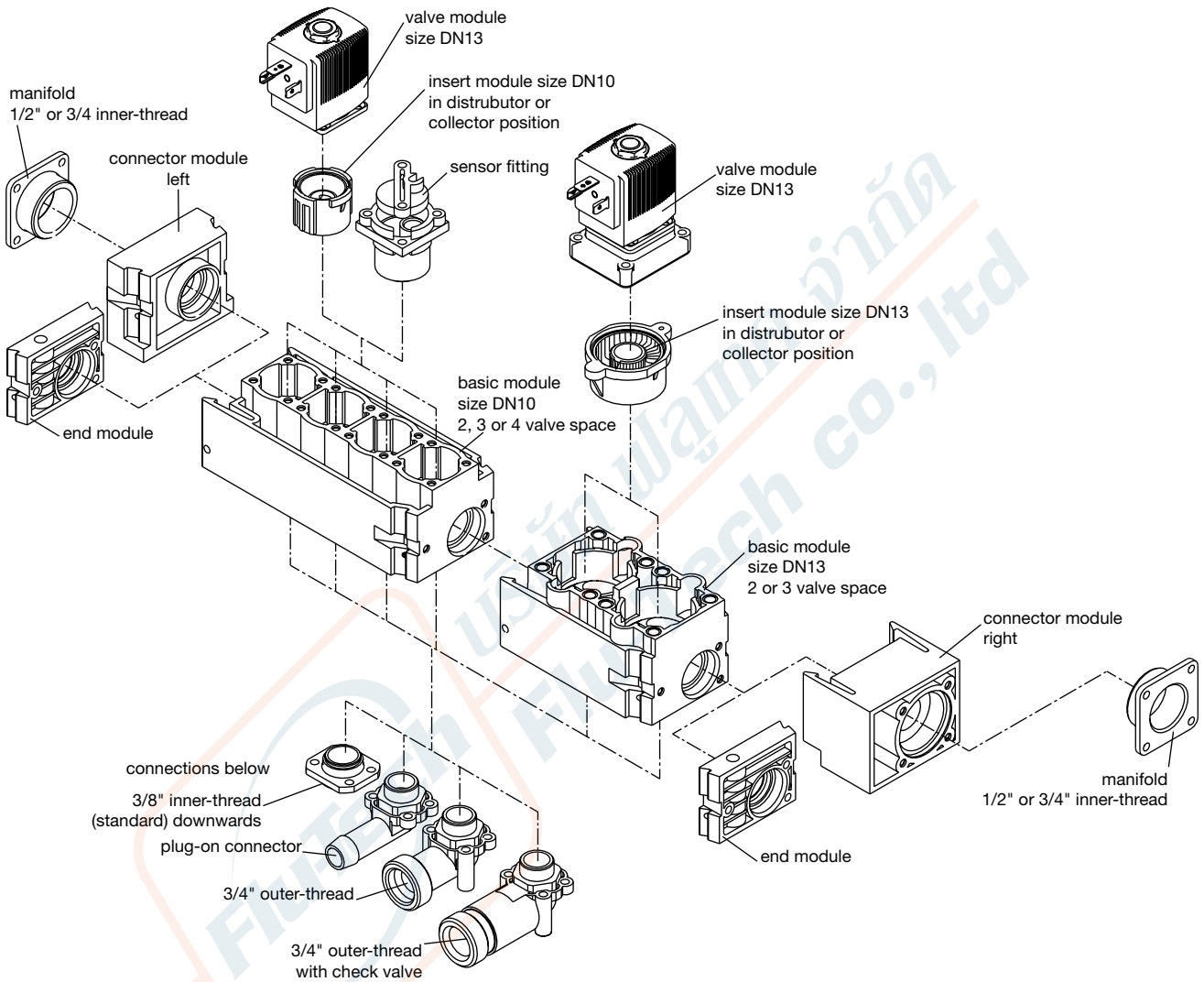[4] When using electronics (diodes for controlling LEDs or for rectifying), the closing time is delayed 8 up to 10 ms.
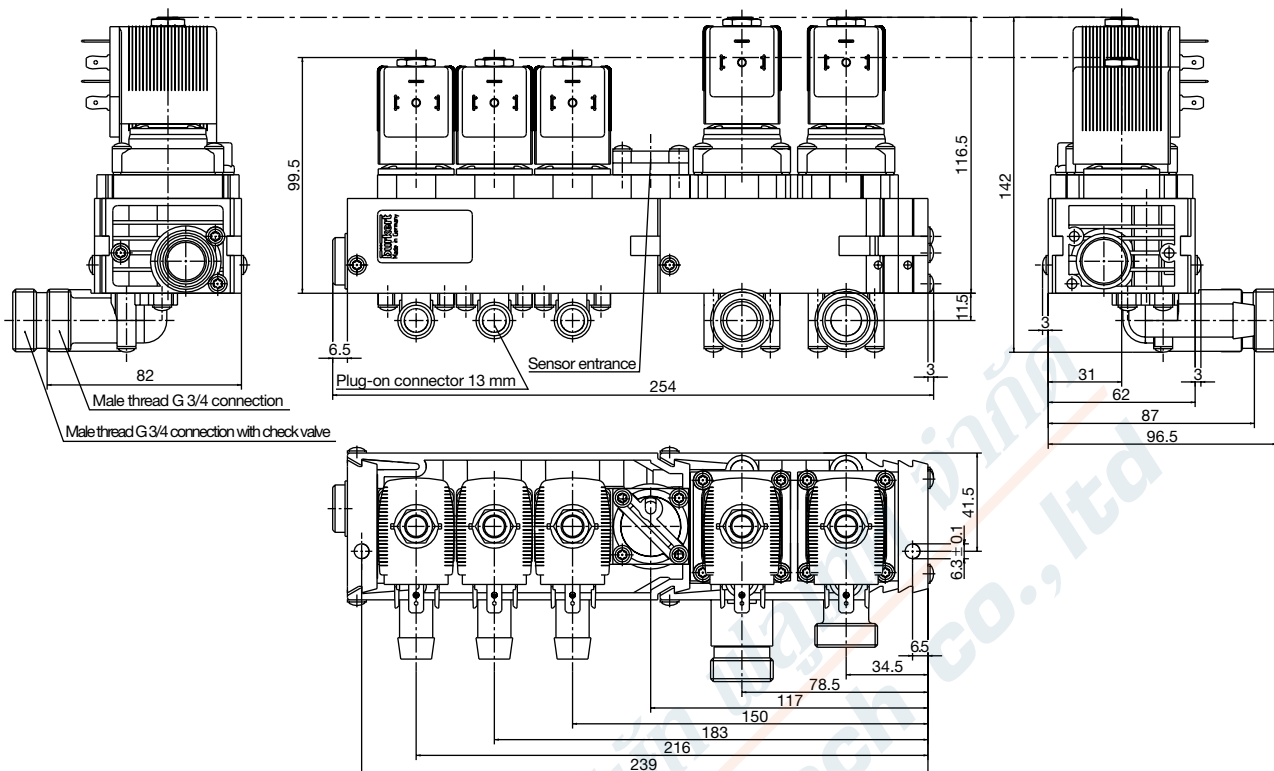
Installation
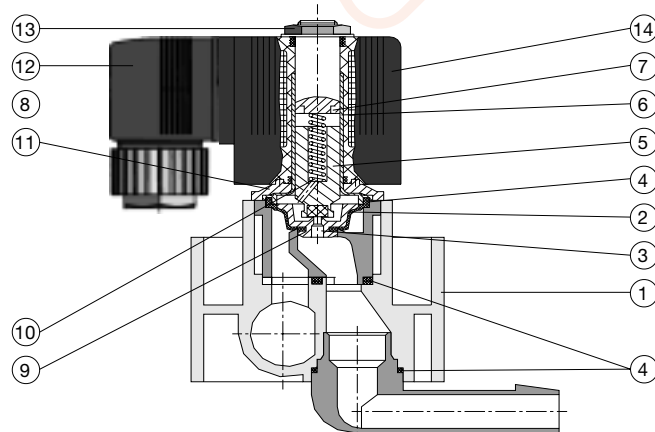
1	Valve body	Polyamid glass fiber reinforced
2	Diaphragm	NBR
3	Plunger-seal	NBR
4	O-rings	NBR
5	Plunger	1.4105
6	Armature guide tube	1.4301
7	Shading ring	Cu (copper)
8	Stopper	1.4105
9	Diaphragm support	PPSGF40
10	Spring	1.4310
11	Bonnet	Steel ST3
12	Cable plug	PA (Polyamide)
13	Locknut	9SMnPb28K (surface Zm5glcA)
14	Coil	Polyamid

Modular Water Valve System
servo-assisted; variable and extendable

System overview with all available modules

valve module
size DN13

insert module size DN10
in distrubutor or
collector position

sensor fitting

valve module
size DN13

manifold
1/2" or 3/4 inner-thread

connector module
left

insert module size DN13
in distrubutor or
collector position

end module

basic module
size DN10
2, 3 or 4 valve space

basic module
size DN13
2 or 3 valve space

connector module
right

connections below

3/8" inner-thread
(standard) downwards

plug-on connector

3/4" outer-thread

3/4" outer-thread
with check valve

end module

manifold
1/2" or 3/4" inner-thread

Modular Water Valve System

servo-assisted; variable and extendable

Dimensions on a block sample [mm] (without cable plug type 2508)

99.5
116.5
142
11.5
6.5
82
Male thread G 3/4 connection
Male thread G 3/4 connection with check valve
Plug-on connector 13 mm
Sensor entrance
254
3
31
62
87
96.5
3
3

41.5
0.1
6.3
6.5
34.5
78.5
117
150
183
216
239

Dimensions of valve modules [mm] (without cable plug type 2508)

Valve module, size DN10

Valve module, size DN13

30,4
48,8
21
47,4
65,8
21,2
separating level
module / valve set

24,5
20,3
34
24,5
28
41

Modular Water Valve System
servo-assisted; variable and extendable
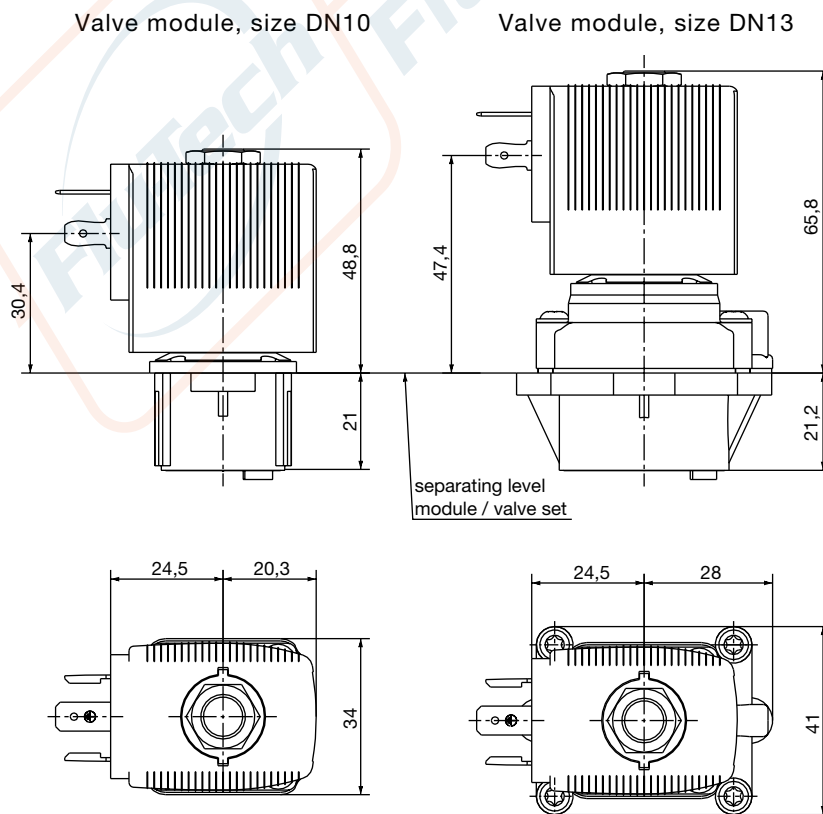
Operating modes

Distributor mode:
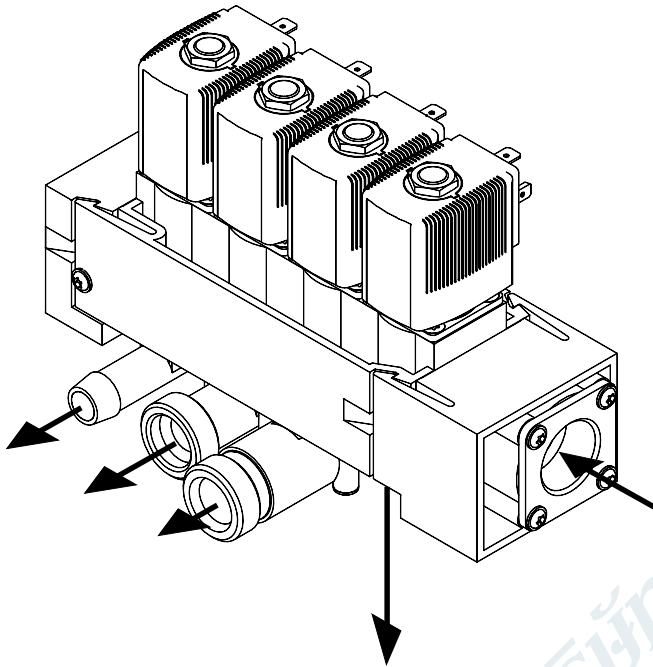
Distributor mode (scheme):

Valve module

Insert module
in distributor
position

Block module

Port module

Flow direction
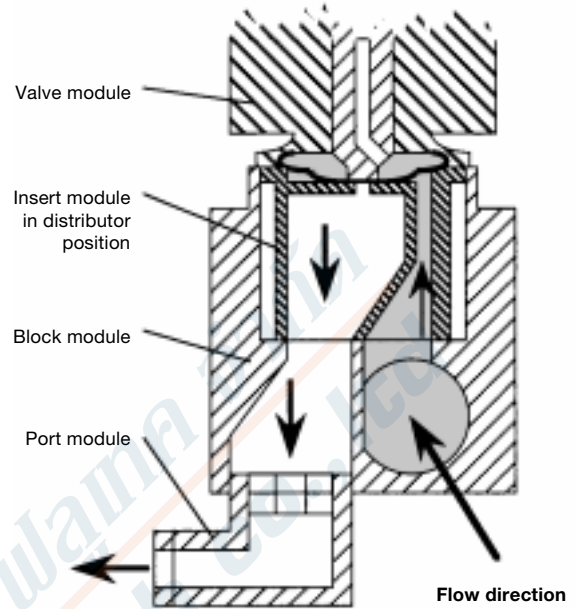
Collector mode:

Collector mode (scheme):

Valve module

Insert module
in collector
position

Block module

Port module

Flow direction

Modular Water Valve System

servo-assisted; variable and extendable

Type 6227
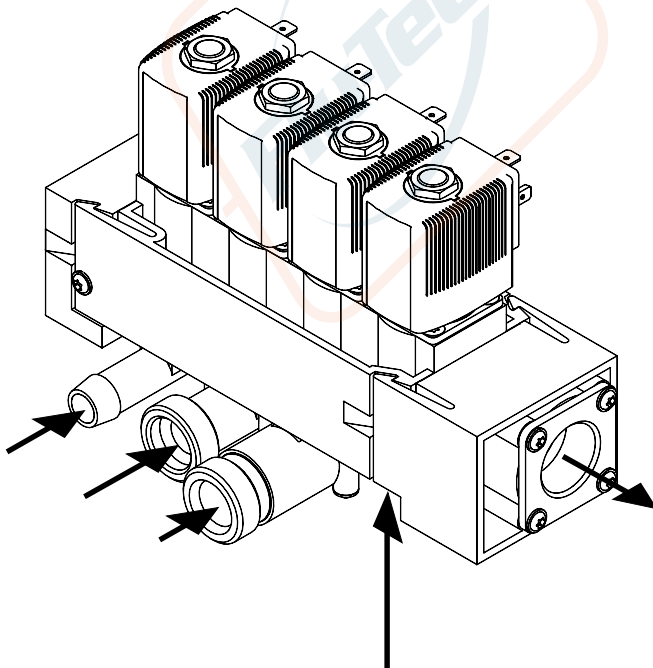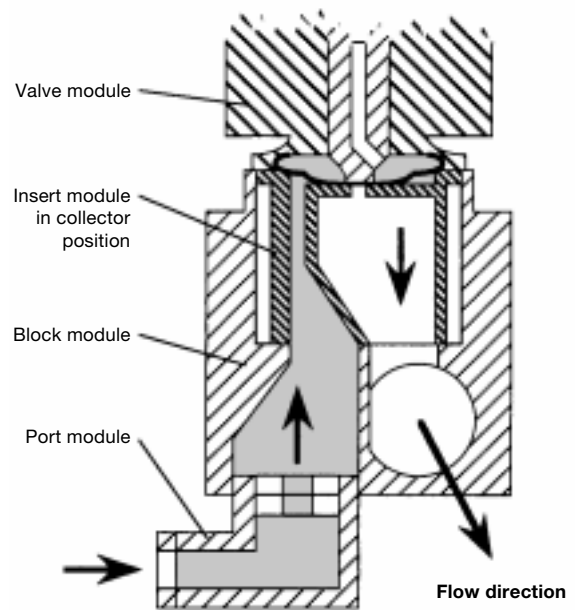
Fax order form: Individual system configuration (max. 12 valves):		Part 1

Select modules according specific application from right to left:

Mark: Voltage, Cable Plug, Block Modules, End Modules Left & Right, Port Modules ▶ **X**		Configuration number:	▶	....
Mark: Valve as **C**ollector Function ▶ **C**		Quantity:	▶	....
Mark: Valve as **D**istributor Function ▶ **D**				
Mark: **S**ensor Insert with ▶ **S** (only block modules DN10 possible				
Mark: **B**lind plate ▶ **B**				

Voltage:

12 V/DC	
24 V/DC	
24 V/50 Hz	
110 V/50 Hz	
230 V/50 Hz	

Cable plug:

Standard	
with LED	
with LED and varistor	

End modules left:

Terminate	G 3/4	G 1/2

Any combination of mentioned space modules up to 12 valves per system possible

Block modules with valve modules

DN 10 - 2 valve space modules

DN 13 - 2 valve space modules

DN 10 - 3 valve space modules

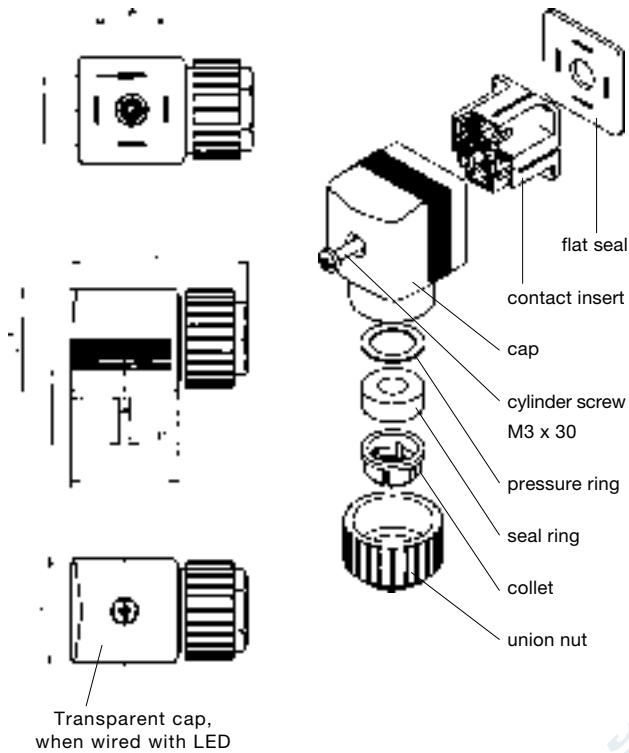DN 13 - 3 valve space modules

DN 10 - 4 valve space modules

End modules right:

G 1/2	G 3/4	Terminate

Port modules

Plug-on connection 13 mm											(with configuration left)
External thread G 3/4											
External thread G 3/4 with check valve											
Internal threaded port G 3/8											

Dimensions accessories [mm]

flat seal

contact insert

cap

cylinder screw
M3 x 30

pressure ring

seal ring

collet

union nut

Transparent cap,
when wired with LED

Ordering chart accessories

Device / Accessory	Features	Item-No.
Cable plugs [1] type 2508	Standard cable plug, 0 – 250 V AC/DC (standard-delivery) [1]	008 376 N
	with LED, 12 – 24 V AC/DC	008 360 S
	with LED, 100 – 120 V AC/DC	008 361 P
	with LED and varistor, 12 – 24 V AC/DC	008 367 M
	with LED and varistor, 100 – 120 V AC/DC	008 368 W
	with LED and varistor, 200 – 240 V AC/DC	008 369 X
	(optional wirings and connection specifications see data sheet type 2508)	

[1]The standard cable plug (0 – 250 V AC/DC), Item-No. 008 376 N
is part of the standard delivery.
Ordering of optional cable plugs with separate ordering number.

A wide selection of further cable plugs is available.
(see special data sheet type 2508)