

## Immersion fittings

### 202820 series

#### Brief description

Immersion fittings are used for holding electrochemical sensors (e.g. pH and redox electrodes, glass conductivity cells, compensation thermometers etc.) with a Pg 13.5 screw-in thread and a fitting length of 120 mm.

Fitting types for up to 3 sensors are available.

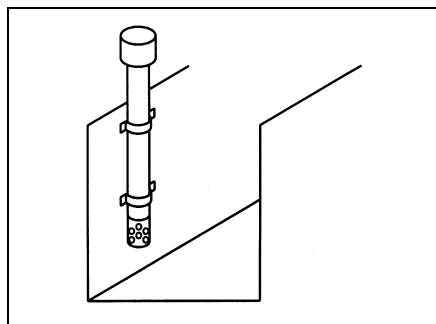
The fittings are mounted in open sluices or containers. They protect the installed sensor from breaking and enable measurement in different immersion depths. Thanks to various options and accessories, the fittings can be optimally adjusted to the conditions on site. Two pipe clips for wall mounting are provided for the standard versions, but sliding flanges, which are available as an option, also permit installation in container lids, for example.

#### The following points have to be taken into account:

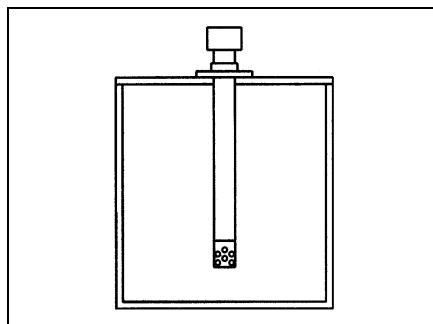
- The fittings must be readily accessible, to ensure that the sensor can be cleaned and serviced at regular intervals.
- pH and redox electrodes must not be allowed to remain dry for a prolonged period - this can be prevented by using a wetting cup.
- The suitability of the materials (e.g. chemical compatibility) has to be tested by the system designer.

#### Installation options

##### Standard

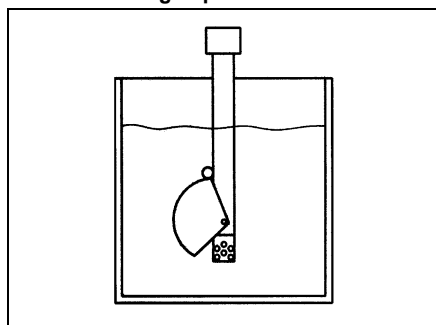


Fixing with pipe clips in the inlet channel

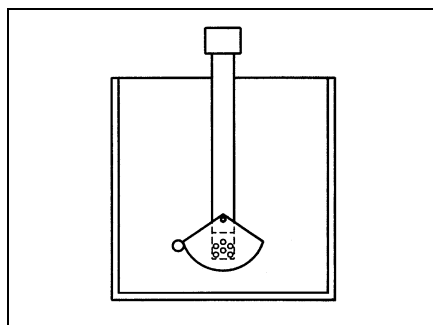


Fixing with a flange on a container

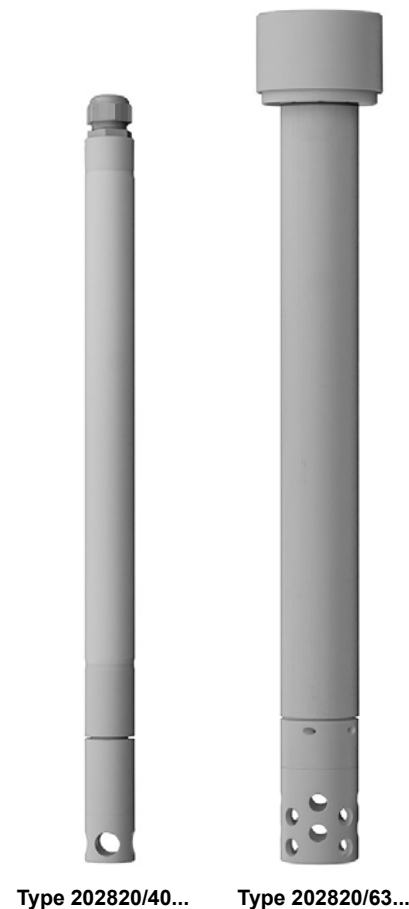
##### Use of a wetting cup



with the container filled



with empty container  
(residual liquid in the cup prevents the sensor from running dry)



#### Additional fittings

Fitting type	Data sheet
Flow-through fittings	202810
Process immersion fittings	202821
Manual quick-change fittings	202822
Stainless steel process fittings	202825

## Type 202820/40...

For installing one sensor with a Pg 13.5 thread<sup>1</sup>

An impedance converter, type 202995/00... (Data sheet 202995), or a 2-wire transmitter, type 202701 (Data Sheet 202701) can be incorporated.

## Technical data

Material	Polypropylene (PP), seals FPM (others to special order)
Permissible temperature	0 to 95 °C
Safe pressure	1 bar, up to 90 °C
Electrode holder	Pg 13.5 thread
Immersion tube length	Normally 500 mm and 1000mm, up to 2000 mm can be implemented, standard lengths 500, 800, 1000, 1300, 1500 and 2000 mm
Mounting	Normally with pipe clips, other mounting forms (flange, etc.) are optionally available
Protection	IP65, EN 60529
Weight	Depending on length



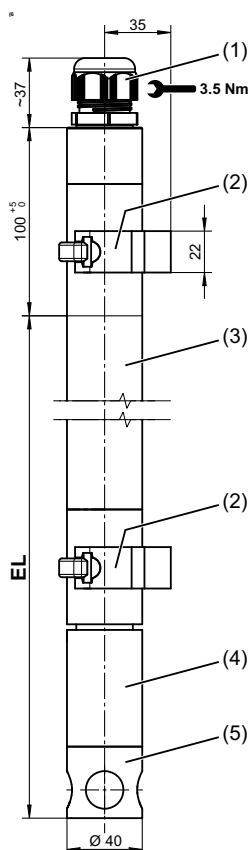
Type 202820/40-0500-87

### Note:

An external KCl reservoir can be used with all immersion fittings.

<sup>1</sup> Not suitable for pH/redox combination electrodes with liquid-KCl-feeder (Typ 201020/76)

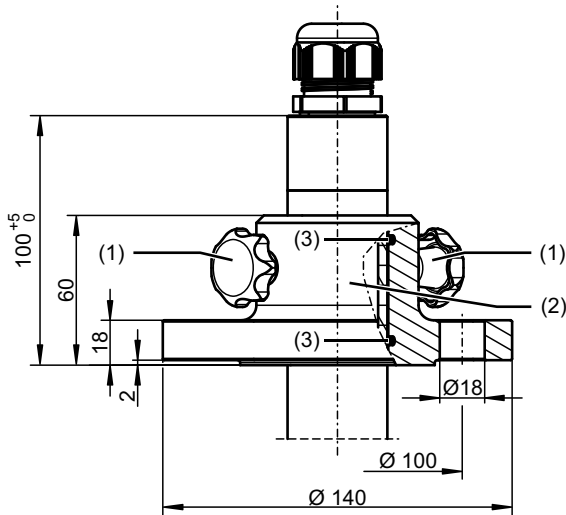
## Dimensions



- (1) Cable fitting M25 x 1,5 with a clamping range from 3 to 8 mm
- (2) Pipe clip
- (3) Protection tube
- (4) Electrode holder
- (5) Protection basket
- (6) Immersion tube length (EL)

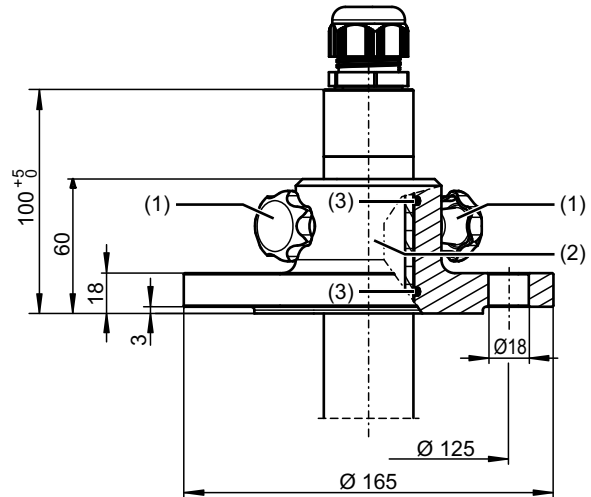
Typ 202820/40...

## Extra codes/accessories



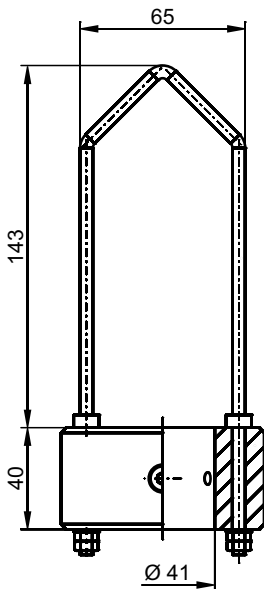
**Flange DN 32, part no. 00083375**

- (1) 2 Fixing screws
- (2) Flange (slidable)
- (3) 2 O-Rings (inside)

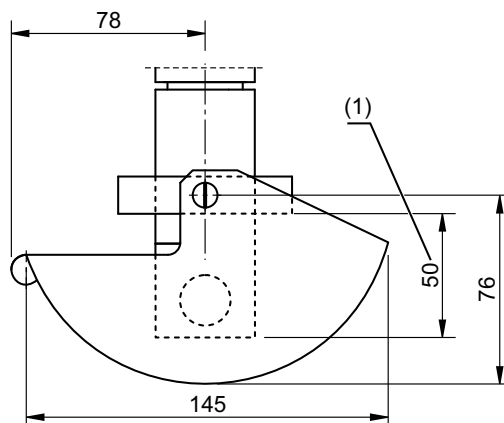


**Flange DN 50, part no. 00083376**

- (1) 2 Fixing screws
- (2) Flange (slidable)
- (3) 2 O-Rings (inside)

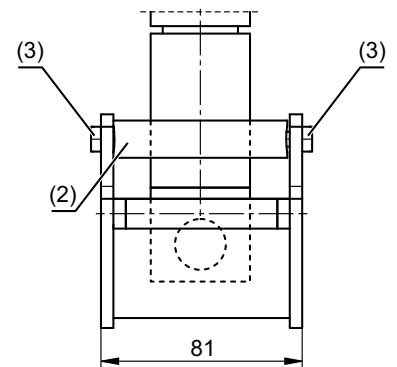


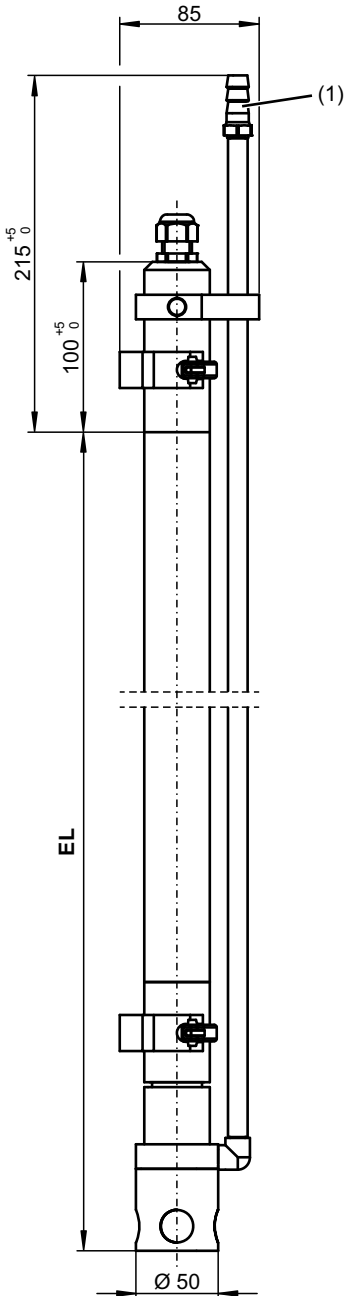
**Shackle, part no. 00453191**



**Wetting cup, part no. 00083372**

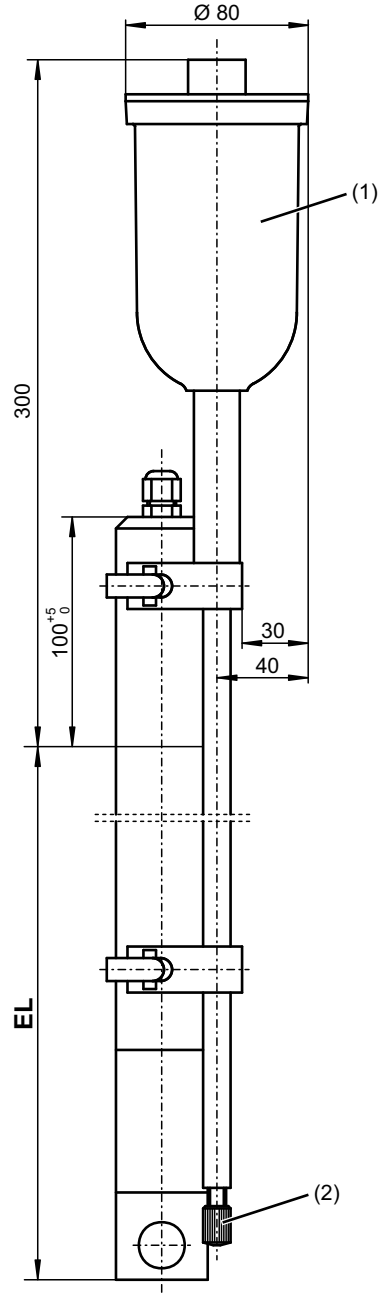
- (1) Fitting dimension 50 mm
- (2) Wetting cup bracket
- (3) Screws





**Cleaning nozzle, extra code 078**

- (1) Hose connection DN 12
- (2) Immersion tube length (EL)



**KCI reservoir with diaphragm tube, extra code 082**

- (1) KCI reservoir
- (2) Diaphragm reference system
- (3) Immersion tube length (EL)

## Type 202820/63...

For installing up to 3 sensors with a Pg13.5 thread.

An impedance converter type 202995/00... (Data Sheet 202995), or a 2-wire transmitter type 202701 (Data Sheet 202701) can be incorporated.

## Technical data

Material	Polypropylene (PP), seals FPM
Permissible temp.	0 to 95 °C
Safe pressure	1 bar, up to 90 °C
Electrode holder	Pg 13.5 threads for 1 to 3 electrodes (blind grommets are included)
Immersion tube length	Ex-stock 500 mm up to 2000 mm can be implemented standard lengths 500, 800, 1000, 1300, 1500 and 2000 mm
Mounting	Normally with pipe clips, other mounting forms (flange, etc.) are optionally available
Protection	IP65, EN 60529
Weight	Depending on length

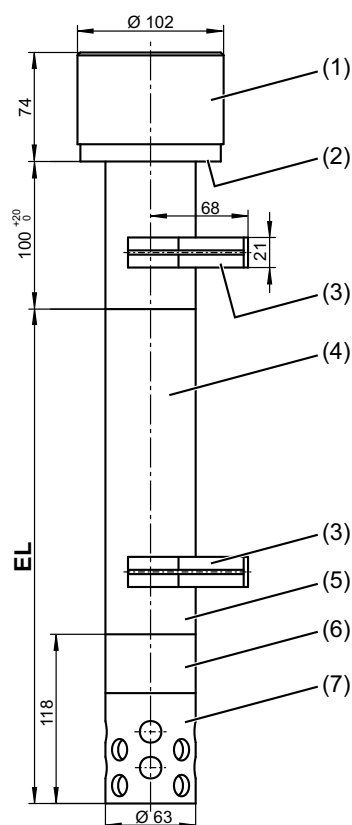
### Note:

An external KCl reservoir can be used with all immersion fittings.



Type 202820/63-0500-87

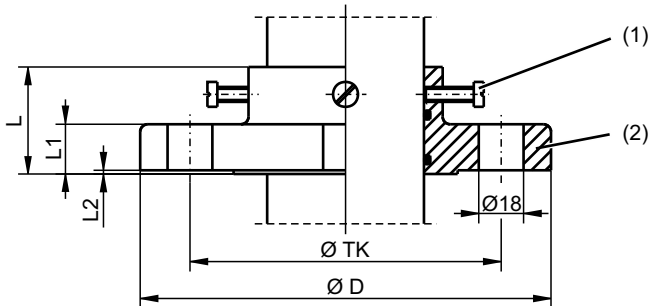
## Dimensions



- (1) Connection head
- (2) Three Pg 7 glands for cable diameter from 5 to 6 mm
- (3) Pipe clip
- (4) Protection tube
- (5) Electrode holder
- (6) Spacer ring
- (7) Protection basket
- EL Immersion tube length

Type 202820/63...

## Extra codes/accessories

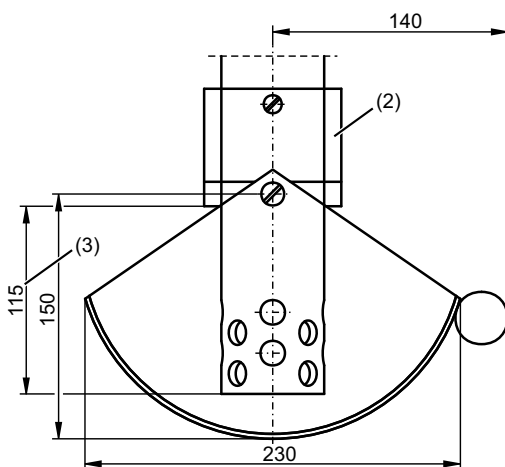


Flange DN 50, part no. 00056544

Flange DN 65, part no. 00056545

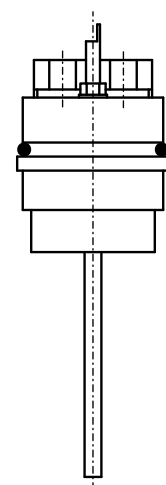
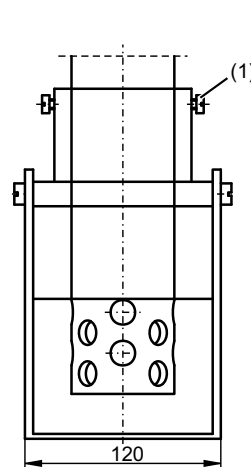
- (1) Fixing screw
- (2) Flange (slidable)

DN	D	TK	L	L <sub>1</sub>	L <sub>2</sub>
50	165	125	43	20	1.5
65	185	145	49	22	2

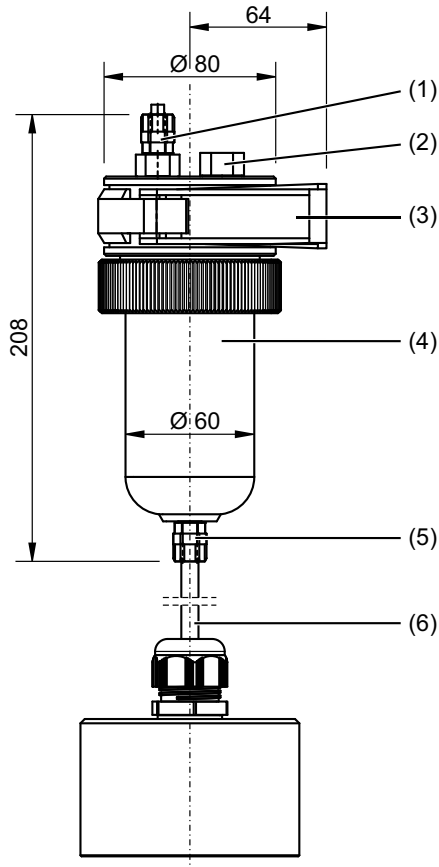


Wetting cup, part no. 00057581

- (1) Screws
- (2) Holder
- (3) Fitting dimension 115 mm



Grounding rod, extra code 055,  
for equipotential bonding,  
e.g. in insulated plastic containers



**KCl reservoir, pressure-tight, suitable for wall mounting, part no. 00060254**

to set up an electrolyte bridge<sup>a</sup>  
or when using KCl-filled electrodes

- (1) Compressed-air connection
- (2) Holder for reference electrode
- (3) Pipe clip DN 65
- (4) KCl reservoir, pressure-tight up to 6 bar, suitable for wall-mounting
- (5) Plastic gland, connection for KCl tube
- (6) KCl tube

<sup>a</sup> The installation of an electrolyte bridge is not possible when using electrodes with digiLine electronics.

## Order details

<b>(1) Basic type</b>	
202820	Immersion fitting
<b>(2) Tube diameter</b>	
40	40 mm
63	63 mm
<b>(3) Fitting length</b>	
0500	Length EL = 500 mm, see dimensions
0800	Length EL = 800 mm, see dimensions
1000	Length EL = 1000 mm, see dimensions
1300	Length EL = 1300 mm, see dimensions
1500	Length EL = 1500 mm, see dimensions
2000	Length EL = 2000 mm, see dimensions
<b>(4) Material of wetted components</b>	
87	Polypropylene (PP)
<b>(5) Extra codes</b>	
000	None
055	Grounding rod
078	Cleaning nozzle
082	KCl reservoir for fittings with diameter 40 mm
092	Flange DN 50 for sprayer

	(1)	-	(2)	-	(3)	-	(4)	-	(5)	, ... <sup>a</sup>
<b>Order code</b>										
<b>Order example</b>	202820		40		1500		87		082	

<sup>a</sup> List extra codes in sequence, separated by commas.

## Stock versions

Type	Part no.
202820/40-0500-87	00083319
202820/40-1000-87	00083320
202820/63-0500-87	00300099

## Accessories

Designation	Part no.
Flange DN 32, complete for type 202820/40... <sup>a</sup>	00083375
Flange DN 50, complete for type 202820/40... <sup>a</sup>	00083376
Flange DN 50, complete for type 202820/63...	00056544
Flange DN 65, complete for type 202820/63...	00056545
Wetting cup, complete for type 202820/40...	00083372
Wetting cup, complete for type 202820/63...	00057581
KCl reservoir, pressure-tight	00060254
Shackle for suspended fitting with diameter 40 mm	00453191
Connection head for type 202820/63 - JUMO digiLine	00666612

<sup>a</sup> Not in conjunction with extra codes 78 or 82

### Note:

The type code is a **type designation, not a modular system**. If at all possible, please choose the items listed under "Stock versions" when ordering. Any free combination of individual code features must be technically checked by us and released. Please ask us in case of doubt !