
Instruction Manual

Model PR10
Manual Retractable Fitting



(BG)

Всички улътвания за продукти от серията ATEX Ex се предлагат на английски език. Ако се нуждаете от улътвания за продукти от серията Ex на родния ви език, се свържете с най-близкия офис или представителство на фирма Yokogawa.

(CZ)

Všechny uživatelské příručky pro výrobky, na něž se vztahuje nevýbušné schválení ATEX Ex, jsou dostupné v angličtině. Požadujete-li pokyny týkající se výrobků s nevýbušným schválením ve vašem lokálním jazyku, kontaktujte prosím vaši nejbližší reprezentační kancelář Yokogawa.

(D)

Alle Betriebsanleitungen für ATEX Ex bezogene Produkte stehen in den Sprachen Englisch. Sollten Sie die Betriebsanleitungen für Ex-Produkte in Ihrer Landessprache benötigen, setzen Sie sich bitte mit Ihrem örtlichem Yokogawa-Vertreter in Verbindung.

(DK)

Alle brugervejledninger for produkter relateret til CE er tilgængelige på engelsk. Skulle De ønske yderligere oplysninger om håndtering af CE produkter på eget sprog, kan De rette henvendelse herom til den nærmeste Yokogawa afdeling eller forhandler.

(EST)

Kõik ATEX Ex toodete kasutamishendid on esitatud inglise keeles. Ex seadmete muukeelse dokumentatsiooni saamiseks pöörduge lähima lokagava (Yokogawa) kontori või esindaja poole.

(E)

Todos los manuales de instrucciones para los productos antiexplosivos de ATEX están disponibles en inglés. Si desea solicitar las instrucciones de estos artículos antiexplosivos en su idioma local, deberá ponerse en contacto con la oficina o el representante de Yokogawa más cercano.

(F)

Tous les manuels d'instruction des produits ATEX Ex sont disponibles en langue anglaise. Si vous nécessitez des instructions relatives aux produits Ex dans votre langue, veuillez bien contacter votre représentant Yokogawa le plus proche.

(GB)

All instruction manuals for ATEX Ex related products are available in English. Should you require Ex related instructions in your local language, you are to contact your nearest Yokogawa office or representative.

(GR)

Όλα τα εγχειρίδια λειτουργίας των προϊόντων με ATEX Ex διατίθενται στα Αγγλικά. Σε περίπτωση που χρειάζεστε οδηγίες σχετικά με Ex στην τοπική γλώσσα παρακαλούμε επικοινωνήστε με το πλησιέστερο γραφείο της Yokogawa ή αντιπροσωπο της.

(H)

Az ATEX Ex műszerek gépkönyveit angol nyelven adjuk ki. Amennyiben helyi nyelven kéri az Ex eszközök leírásait, kérjük keressék fel a legközelebbi Yokogawa irodát, vagy képviselőt.

(I)

Tutti i manuali operativi di prodotti ATEX contrassegnati con Ex sono disponibili in inglese. Se si desidera ricevere i manuali operativi di prodotti Ex in lingua locale, mettersi in contatto con l'ufficio Yokogawa più vicino o con un rappresentante.

(LV)

Visas ATEX Ex kategorijas izstrādājumu Lietošanas instrukcijas tiek piegādātas angļu valodās. Ja vēlaties saņemt Ex ierīšu dokumentāciju citā valodā, Jums ir jāsazinās ar firmas Jokogava (Yokogawa) tuvāko ofisu vai pārstāvi.

(LT)

Visos gaminiø ATEX Ex kategorijos Eksploatavimo instrukcijos teikiami anglø kalbomis. Norëdami gauti priestaisø Ex dokumentacijà kitomis kalbomis susisiekite su artimiausiu bendrovës Yokogawa biuru arba atstovu.

(M)

Il-manwali kollha ta' l-istruzzjonijiet għal prodotti marbuta ma' ATEX Ex huma disponibbli bl-Ingliż. Jekk tkun teħtiegħ struzzjonijiet marbuta ma' Ex fil-lingwa lokali tiegħek, għandek tikkuntattja lill-eqreb rappreżentant jew ufficiċju ta' Yokogawa.

(NL)

Alle handleidingen voor producten die te maken hebben met ATEX explosiebeveiliging (Ex) zijn verkrijgbaar in het Engels. Neem, indien u aanwijzingen op het gebied van explosiebeveiliging nodig hebt in uw eigen taal, contact op met de dichtstbijzijnde vestiging van Yokogawa of met een vertegenwoordiger.

(P)

Todos os manuais de instruções referentes aos produtos Ex da ATEX estão disponíveis em Inglês. Se necessitar de instruções na sua língua relacionadas com produtos Ex, deverá entrar em contacto com a delegação mais próxima ou com um representante da Yokogawa.

(PL)

Wszystkie instrukcje obsługi dla urządzeń w wykonaniu przeciwwybuchowym Ex, zgodnych z wymaganiami ATEX, dostępne są w języku angielskim. Jeżeli wymagana jest instrukcja obsługi w Państwa lokalnym języku, prosimy o kontakt z najbliższym biurem Yokogawy.

(RO)

Toate manualele de instructiuni pentru produsele ATEX Ex sunt in limba engleza. In cazul in care doriti instructiunile in limba locala, trebuie sa contactati cel mai apropiat birou sau reprezentant Yokogawa.

(S)

Alla instruktionsböcker för ATEX Ex (explosionssäkra) produkter är tillgängliga på engelska. Om Ni behöver instruktioner för dessa explosionssäkra produkter på annat språk, skall Ni kontakta närmaste Yokogawakontor eller representant.

(SF)

Kaikkien ATEX Ex-tyyppisten tuotteiden käyttöohjeet ovat saatavilla englannin-. Mikäli tarvitsette Ex-tyyppisten tuotteiden ohjeita omalla paikallisella kielellänne, ottakaa yhteyttä lähimpään Yokogawa-toimistoon tai -edustajaan.

(SK)

Všetky návody na obsluhu pre prístroje s ATEX Ex sú k dispozícii v jazyku anglickom. V prípade potreby návodu pre Ex-prístroje vo Vašom národnom jazyku, skontaktujte prosím miestnu kanceláriu firmy Yokogawa.

(SLO)

Vsi predpisi in navodila za AEX Ex sorodni pridelki so pri roki v angleščini. Če so Ex sorodna navodila potrebna v vašem tukejnem jeziku, kontaktirajte vaš najbliži Yokogawa office ili predstavnika.

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1. Introduction

The retractable fitting with ball valve allows a safe insertion and retraction of a sensor while the process is under pressure. It can be mounted in a variety of positions. The insertion depth can be selected on site. An insertion stop is provided to set the position of the sensor in the process. The mechanism for releasing the probe is designed to operate only when the ball valve is closed, thus ensuring an effective safety precaution and avoiding production loss. The sensor can be replaced or calibrated easily.

2. General

2.1 Features

- One model for pH, conductivity and inductive conductivity sensors
- Integrated protection cage
- Build-in scraper to avoid contamination of the fitting
- Usable for wide range of sensors
- A safe "through the valve" insertion and retraction design
- Simplified installation by optional ball valves with flanged or tapered connections
- Optional flush port for keeping moist, cleaning and calibration
- Available in Stainless Steel and with Titanium shaft cage and adapters for more harsh applications

2.2 Warranty

Yokogawa warrants that the goods delivered are made from new materials to the best workmanship available. Malfunction of any of the delivered goods or parts of it, can only lead to replacement of the damaged parts. No claims can be made to damages or accidents resulting from the use of the goods. No claims can be made to the expected or promised performance of the goods under any circumstances. Damaged goods or parts should be sent to the local service organization for warranty claim purposes. Yokogawa has the right to deny warranty claims after investigation of the data and materials.

2.3 Serial Number definition

The Serial Number is defined by nine (9) alphanumeric characters:

X ₁ X ₂	Production Location
X ₃ X ₄	Year/Month code
X ₅ X ₆ X ₇ X ₈ X ₉	Tracking number

Example: N3P600028

Method used for year/month numbering

Table 1: Production Year code

Year	Year code	Year	Year code
2014	P	2026	3
2015	R	2027	4
2016	S	2028	5
2017	T	2029	6
2018	U	2030	7
2019	V	2031	8
2020	W	2032	9
2021	X	2033	A
2022	Y	2034	B
2023	Z	2035	C
2024	1	2036	D
2025	2	2037	E

Table 2: Production Month code

Month	Month code
January	1
February	2
March	3
April	4
May	5
June	6
July	7
August	8
September	9
October	A
November	B
December	C

2.4 Specifications

A. Wetted materials

- For sensor check Instruction Manual
- Stainless steel AISI 316L / Titanium
- O-ring seals: Viton 70° shore

B. Non-wetted materials

- For sensor check Instruction Manual
- Stainless steel AISI 316, 304
- Polypropylene glass filled

C. Insertion length

- Ref. mechanical drawing Fig. 2 - 7 on page 10 - 15.

D. Pressure/temperature ratings

- Static conditions: see Fig. 1.
- Operating conditions during extraction and insertion max. 500kPa, max. 100°C

E. Flange ratings:

- DIN flange DN32 PN10
- ANSI flange 1¼" 150 lbs
- DIN flange DN50 PN10
- ANSI flange 2" 150 lbs

F. Specifications of the sensor used

- Please check sensor specifications

G. Weight

- Approx 2.5 kg excl. ball valve

2.5 Model- and suffix codes

Model	Suffix	Options	Description
PR10			Retractable fitting general purpose
Material fitting	-S -T		Stainless steel Titanium (tube and sensor holder only)
Material O-rings	-V		Viton
Tube length	-L5		Tube length 0.5 meter
Connection	-D32 -D50		DN32 / 1¼" DN50 / 2"
Measuring sensor	-PH12 -PH13 -SC4A -ISC4 -NNNN -FU20		For 12mm pH sensors Y-cap For 12mm pH sensors PG13.5 cap For SC4A For ISC40 No parameter specification For FU20 / FU20F → Only for -S
Adapter screw-in Only available in Stainless Steel		/SA125 /SL125 /SA200 /SL200	ISO 228/1 G1¼ to 1¼" M-NPT Long ISO 228/1 G1¼ to 1¼" M-NPT ISO 228/1 G2 to 2" M-NPT Long ISO 228/1 G2 to 2" M-NPT
Flange adapter Only available in Stainless Steel		/FA125 /FN125 /FL125 /FA200 /FN200 /FL200 /FAD32 /FND32 /FAD50 /FND50	Flange adapter drain 1¼" 150 Lbs Flange adapter no drain 1¼" 150 Lbs Long flange adapter drain 1¼" 150 Lbs Flange adapter drain 2" 150 Lbs Flange adapter no drain 2" 150 Lbs Long flange adapter drain 2" 150 Lbs Flange adapter drain DN32 Flange adapter no drain DN32 Flange adapter drain DN50 Flange adapter no drain DN50
Adapter weld-in Only available in Stainless Steel		/WA125	Straight weld-in adapter ISO 228/1 G1¼
Ball-valves Only available in Stainless Steel		/BF125 /BF200 /BFD32 /BFD50 /BS125 /BS200	Ball-valve flanged 1¼" 150 Lbs Ball-valve flanged 2" 150 Lbs Ball-valve flanged DN32 PN10 Ball-valve flanged DN50 PN10 Ball-valve screw-in 1¼" F-NPT Ball-valve screw-in 2" F-NPT
Certificates		/M	Material certificate 3.1 according to NEN-EN 10024 (on wetted metal parts).

With Ball-valves,
flange adapters
or screw-in
adapters
are necessary.

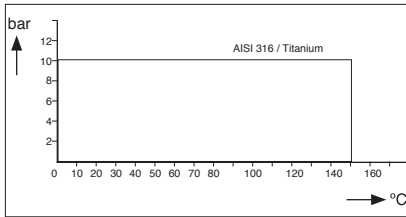


FIG. 1 Pressure / Temperature graphic

2.6 Regulatory standards

- Pressure : Directive 2014/68/EU,
as amended by Regulation
(EC) no. 1882/2003
by applying : 4.3 (Sound
Engineering article Practice)
- RoHS : Directive 2011/65/EU

3. Installation

3.1 Unpacking and checking

When you receive the PR10 retractable fitting it is packed in a cardboard box. Open the box and check that the model code on the fitting is the same as the one on the packing list. Refer to paragraph 2.5 for the model code. Also check that it is supplied with the options you ordered. The options can be delivered in separate boxes. If you have any problems or questions, contact your nearest Yokogawa service centre or sales organization for support. The PR10 retractable fitting has an identification plate on the protection ring with the full model code and a serial number.

3.2 Installation site

The PR10 fitting is intended to be used for in-line measurement. When it is delivered with an optional ball valve or when it is used in combination with a locally purchased ball valve, the process does not need to be interrupted for maintenance of the sensor. Mounting location can be in a large diameter pipeline or a vessel.

3.3 Safety precautions

The PR10 fitting is designed for maximum safety in operation. For optimum safety a flanged ball valve is recommended. Yokogawa does not accept any claims or penalties on

possible damages or accidents that occur in operation of the PR10 fitting. The installation of the probe is to be implemented under the local safety regulations for pressurized vessels or pipelines for retraction or insertion. The instructions given in this manual must be followed exactly.

3.4 Installation method

It is important to have the point of measurement in a location that is truly representing the process composition. Check whether the specifications of the sensor fulfill the maximum occurring process conditions. The fitting has several optional connection possibilities. Check that you received the correct size and type. Install the fitting in a convenient location for maintenance and calibration. For maintenance or calibration the probe will need a space of about 2m for total retraction (depending on probe length and optional adapters and/or ball valves). Installation in a bend of a pipe line is a good measurement position. When inserting the PR10 retractable fitting in a perpendicular position to the process flow, the flow velocity will put a mechanical force on the probe. Take care that this force is not too large. It is recommended to have the PR10 retractable fitting positioned at a 90° angle into the process stream.

Note: Do not insert fitting into process without sensor mounted. Start assembly of sensor into the probe and follow procedure in par 3.8.

Make sure to apply grease to thread of all parts.

3.5 Assembly of accessories

Optional accessories are (often) delivered in separate boxes. When an optional ball valve is ordered, it should be mounted to the measuring position first. When the ball valve is in place, the process line is secure.

Note: Before screwing in parts grease the thread

3.6 Dimensions

3.6.1 Dimensional drawing PR10...-D32 with mounted pH sensor

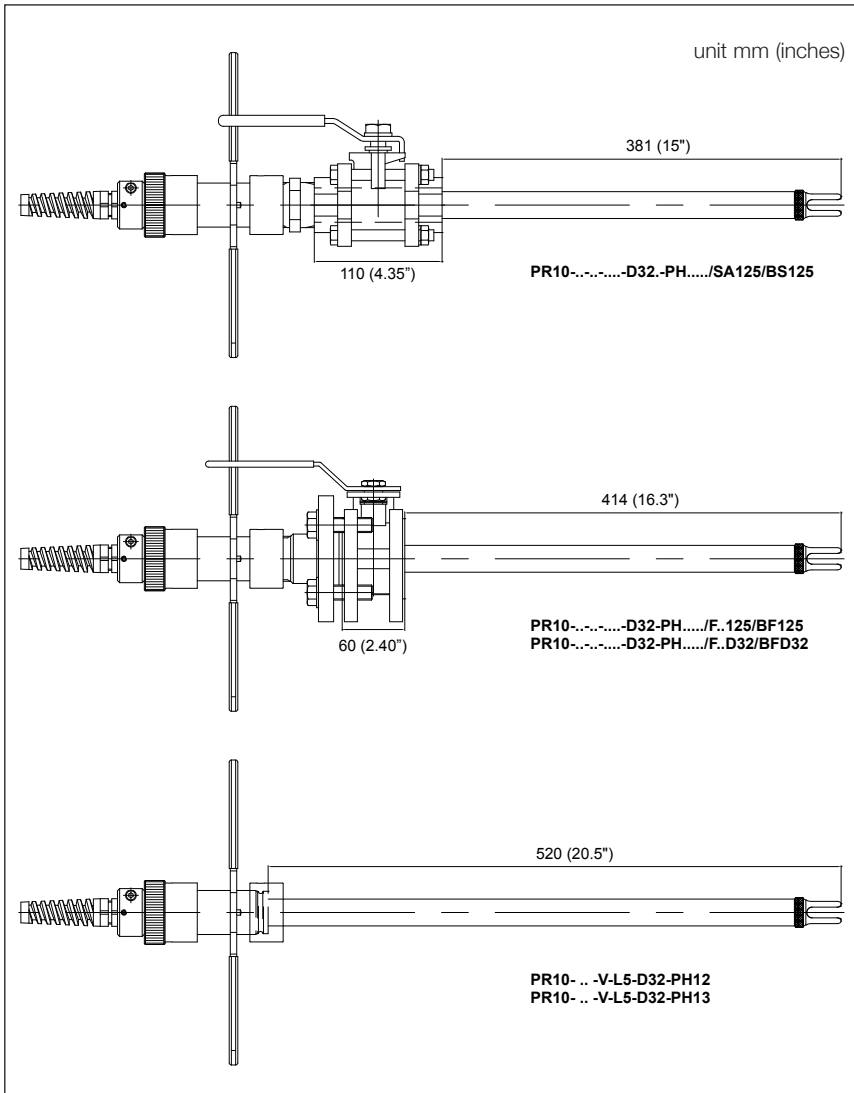


FIG. 2 Dimensional drawing PR10...-D32 with mounted pH sensor

3.6.2 Dimensional drawing PR10...-D32 with mounted SC4A sensor

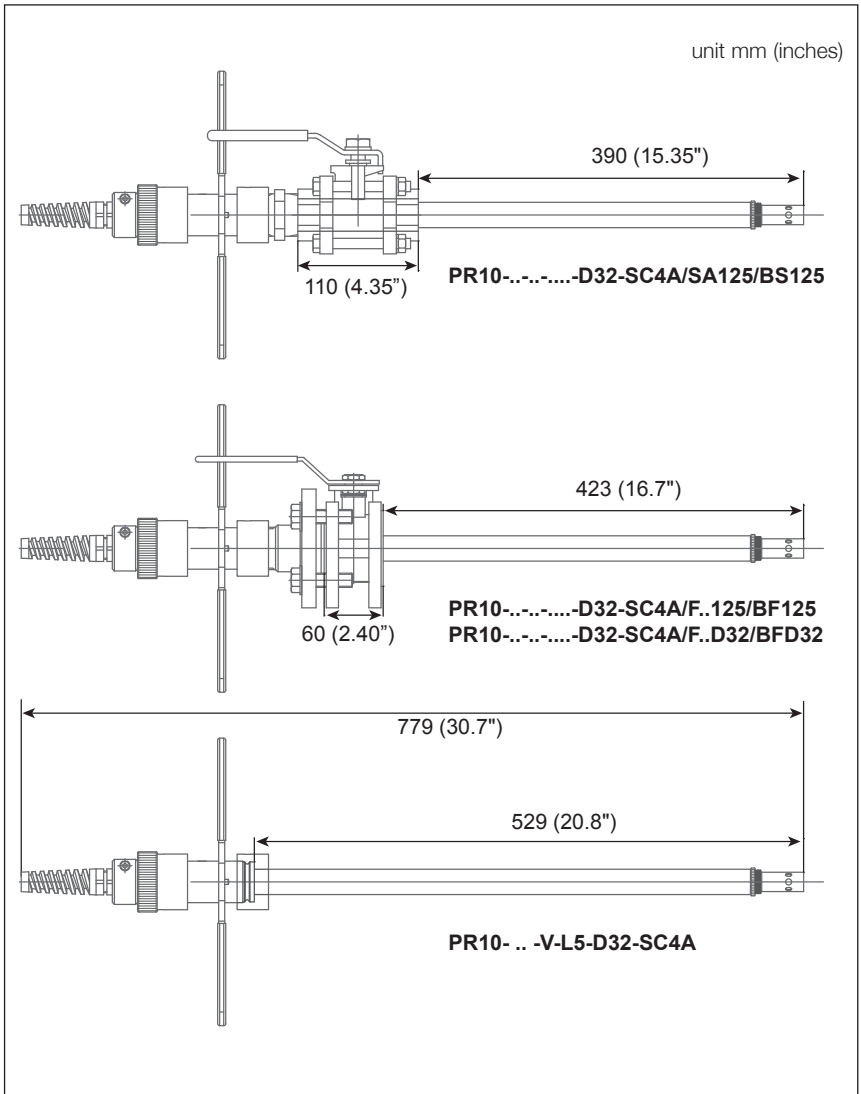


FIG. 3 Dimensional drawing PR10...-D32 with mounted SC4A sensor

3.6.3 Dimensional drawing PR10...-D50 with mounted SC4A sensor

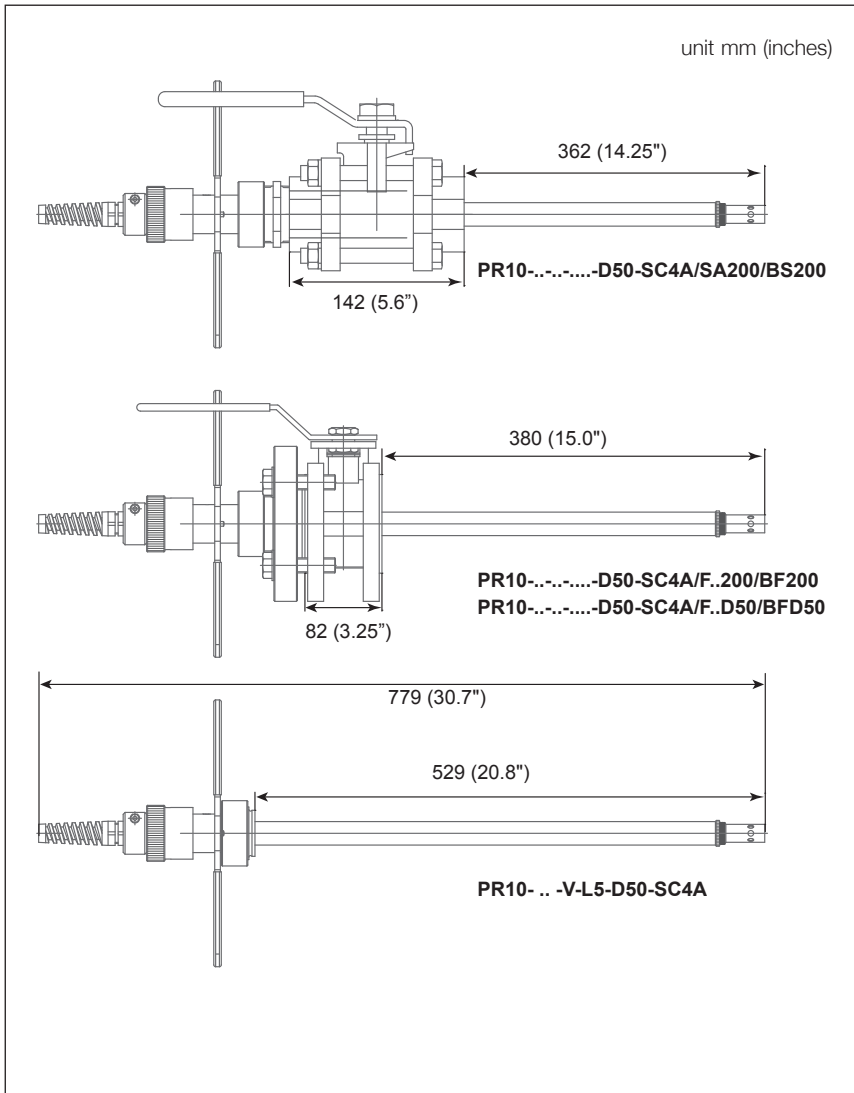


FIG. 4 Dimensional drawing PR10...-D50 with mounted SC4A sensor

3.6.4 Dimensional drawing PR10...-D50 with mounted ISC40 sensor

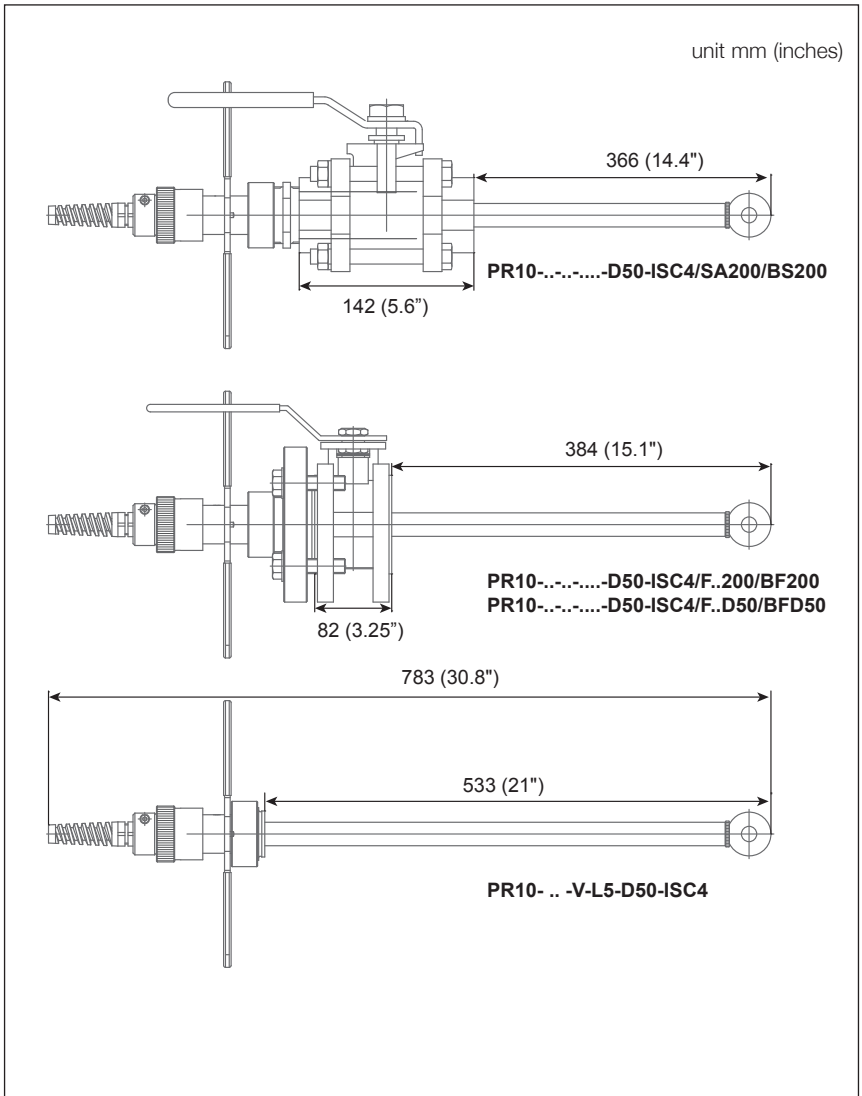


FIG. 5 Dimensional drawing PR10...-D50 with mounted ISC40 sensor

3.6.5 Dimensional drawing PR10...-D32 with mounted FU20 sensor

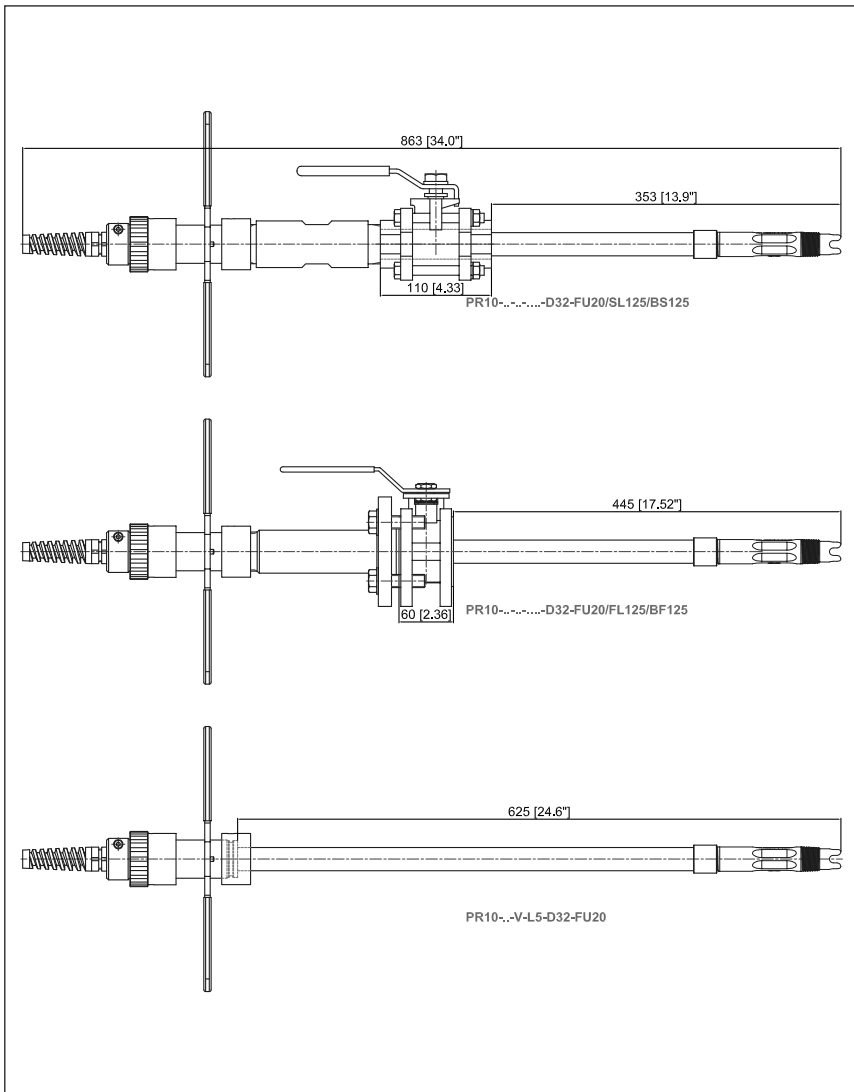


FIG. 6 Dimensional drawing PR10...-D32 with mounted FU20 sensor

3.6.6 Dimensional drawing PR10...-D50 with mounted FU20 sensor

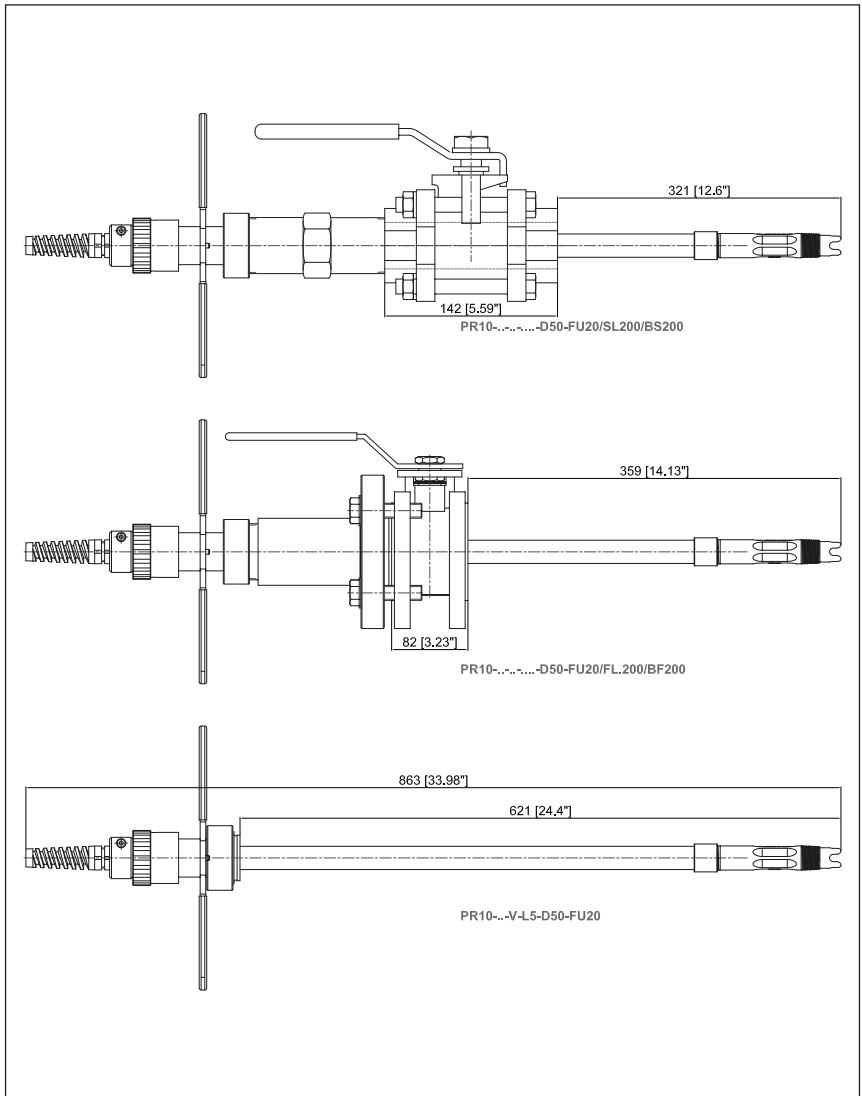


FIG. 7 Dimensional drawing PR10...-D50 with mounted FU20 sensor

3.7 Options PR10

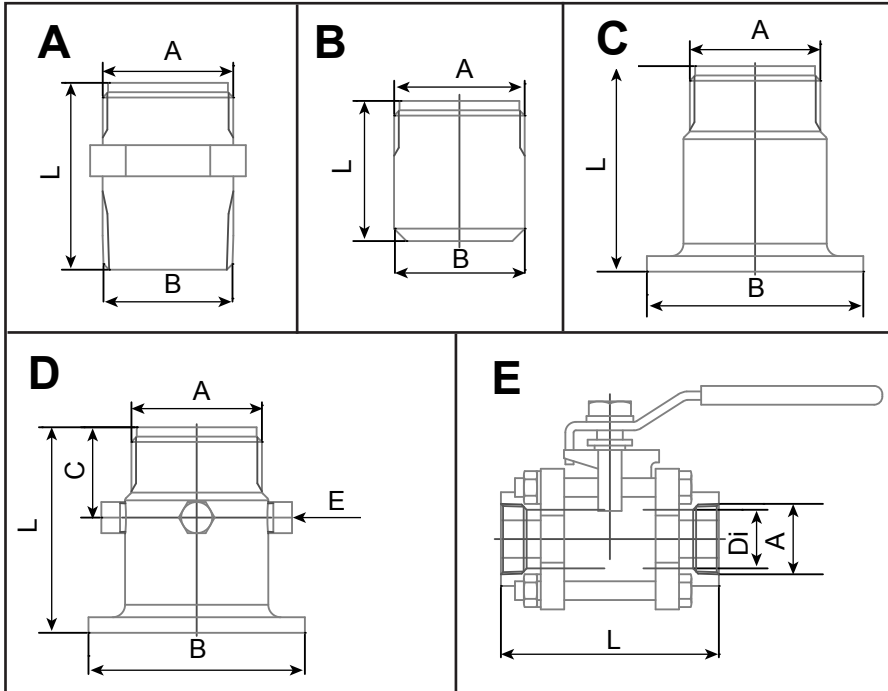
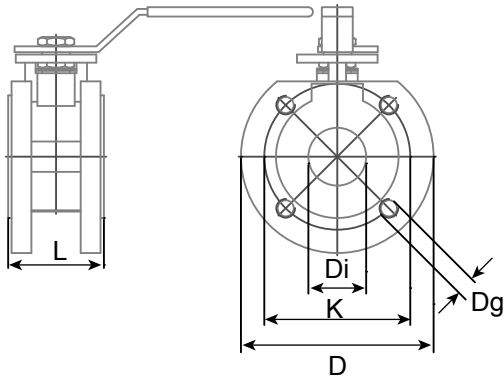


FIG. 8 Dimensions of the PR10 options

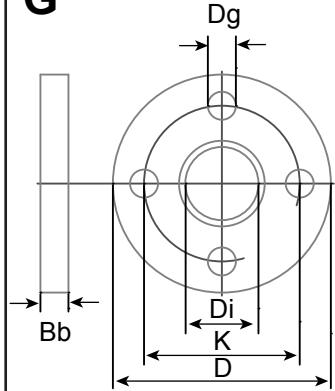
Table 1 Dimensions options in mm (inches)

Option	Description	Fig.	A	B
/SA125	ISO 228/1 G1¼ to 1¼" M-NPT	A	ISO 228/1 - G1¼	1¼" NPT
/SL125	Long ISO 228/1 G1¼ to 1¼" M-NPT	A	ISO 228/1 - G1¼	1¼" NPT
/FA125	Flange adapter drain 1¼" 150 Lbs	D, G	ISO 228/1 - G1¼	69.5 (2.7")
/FL125	Long flange adapter drain 1¼" 150 Lbs	D, G	ISO 228/1 - G1¼	69.5 (2.7")
/FN125	Flange adapter no drain 1¼" 150 Lbs	C, G	ISO 228/1 - G1¼	69.5 (2.7")
/FAD32	Flange adapter drain DN32	D, G	ISO 228/1 - G1¼	69.5 (2.7")
/FND32	Flange adapter no drain DN32	C, G	ISO 228/1 - G1¼	69.5 (2.7")
/WA125	Straight weld-in adapter ISO 228/1 G1¼	B	ISO 228/1 - G1¼	42 (1.7")
/BFD32	Ball-valve flanged DN32 PN10	F		
/BF125	Ball-valve flanged 1¼" 150 Lbs	F		
/BS125	Ball-valve screw-in 1¼" F-NPT	E	1¼" NPT	
/SA200	ISO 228/1 G2 to 2" M-NPT	A	ISO 228/1 - G2	2" NPT
/SL200	Long ISO 228/1 G2 to 2" M-NPT	A	ISO 228/1 - G2	2" NPT
/FA200	Flange adapter drain 2" 150 Lbs	D, G	ISO 228/1 - G2	101 (4")
/FL200	Long Flange adapter drain 2" 150 Lbs	D, G	ISO 228/1 - G2	101 (4")
/FN200	Flange adapter no drain 2" 150 Lbs	C, G	ISO 228/1 - G2	101 (4")
/FAD50	Flange adapter drain DN50	D, G	ISO 228/1 - G2	101 (4")
/FND50	Flange adapter no drain DN50	C, G	ISO 228/1 - G2	101 (4")
/BF200	Ball-valve flanged 2" 150 Lbs	F		
/BFD50	Ball-valve flanged DN50 PN10	F		
/BS200	Ball-valve screw-in 2" F-NPT	E	2" NPT	

F



G



	L	C	Bb	D	E	Di	Dg	K
	60 (2.4")							
	170 (6.7")							
	66 (2.6")	29 (1.1")	15.7 (0.6")	117.3 (4.6")	1/8" NPT	47 (1.9")	15.7 (0.6")	88.9 (3.5")
	170 (6.7")	86 (3.4")	15.7 (0.6")	117.3 (4.6")	1/8" NPT	47 (1.9")	15.7 (0.6")	88.9 (3.5")
	66 (2.6")	29 (1.1")	15.7 (0.6")	117.3 (4.6")		47 (1.9")	15.7 (0.6")	88.9 (3.5")
	66 (2.6")	29 (1.1")	16 (0.6")	140 (5.5")	1/8" NPT	47 (1.9")	18 (0.7")	100 (3.9")
	66 (2.6")	29 (1.1")	16 (0.6")	140 (5.5")		47 (1.9")	18 (0.7")	100 (3.9")
	45 (1.8")							
	60 (2.4")			140 (5.5")		32 (1.3")	M16	100 (3.9")
	60 (2.4")			118 (4.6")		32 (1.3")	M14	89 (3.5")
	110 (4.3")					32 (1.3")		
	58 (2.3")							
	177 (7")							
	77 (3")	32 (1.3")	20 (0.8")	165 (6.5")	1/8" NPT	73 (2.9")	19 (0.7")	120.7 (4.75")
	177 (7")	86 (3.4")	20 (0.8")	165 (6.5")	1/8" NPT	73 (2.9")	19 (0.7")	120.7 (4.75")
	70 (2.8")	32 (1.3")	20 (0.8")	165 (6.5")		73 (2.9")	19 (0.7")	120.7 (4.75")
	77 (3")	32 (1.3")	20 (0.8")	165 (6.5")	1/8" NPT	73 (2.9")	19 (0.7")	125 (4.9")
	70 (2.8")	32 (1.3")	20 (0.8")	165 (6.5")		73 (2.9")	19 (0.7")	125 (4.9")
	82 (3.2")			150 (5.9")		50 (2")	M16	121 (4.8")
	82 (3.2")			165 (6.5")		50 (2")	M16	125 (4.9")
	142 (5.6")					50 (2")		

3.8 Sensor mounting

3.8.1 Mounting a 12mm sensor in pH12

1. Take the cable out of the box and cut off the cable tie.
2. Tape the separate wires of the cable together.
3. Take the fitting out of the box and remove the sensor holder and Y-cap adapter.
4. Slide the Y-cap adapter over the cable.
5. Release the pigtail (cable gland) completely. Do not undo the part in the metal tube!
6. Lead the sensor cable through the tube of the fitting, from the side where the sensor holder has been removed.
7. Take the sensor out of the box.
8. Slide the O-ring (12x1) over the connector.
9. Connect the sensor to the cable.
10. Slide the sensor holder over the sensor.
11. Screw the Y-cap adapter onto the sensor holder.
12. Hold the sensor still and turn the metal tube onto the sensor holder. Don't rotate the sensor, but rotate the tube of the fitting, because the cable can be disconnected from the sensor, when rotating it.
13. Lead the loose part of the pigtail onto the cable and screw it onto the fixed part.
14. Remove the tape.

3.8.2 Mounting a 12mm PG13.5 sensor in pH13

1. Take the cable out of the box and cut off the cable tie.
2. Tape the separate wires of the cable together.
3. Take the fitting out of the box and remove the sensor holder.
4. Release the pigtail (cable gland) completely. Do not undo the part in the metal tube!
5. Lead the sensor cable through the tube of the fitting, from the side where the sensor holder has been removed.
6. Take the sensor out of the box.
7. Screw the sensor in the sensor holder.
8. Connect the sensor to the cable.
9. Hold the sensor still and turn the metal tube onto the sensor holder. Don't rotate the sensor, but rotate the tube of the fitting, because the cable can be disconnected from the sensor, when rotating it.
10. Lead the loose part of the pigtail onto the cable and screw it onto the fixed part.
11. Remove the tape.

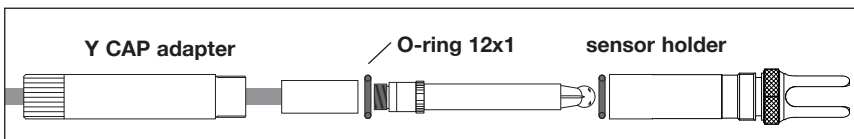


FIG. 9 Mounting 12mm pH sensor with pH12

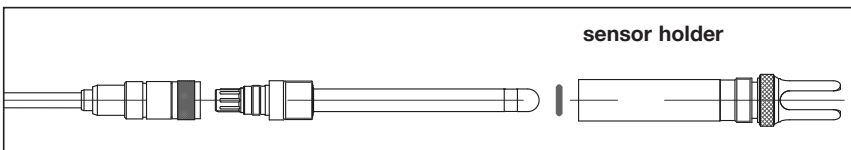


FIG. 10 Mounting PG13.5 pH sensor with pH13

3.8.3 Mounting the SC4A

- 1 Take the sensor out of the box and cut off the cable tie.
- 2 Bind the separate wires of the cable together with a piece of tape.
- 3 Take the fitting out of the box and remove the option(s), if necessary.
- 4 Release the pigtail (cable gland) completely. Do not undo the part in the metal tube!
- 5 Lead the sensor cable through the tube of the fitting, from the side where the knurled knob has been removed.
- 6 Hold the sensor still and turn the metal tube onto the sensor. Don't rotate the cell, but rotate the tube of the fitting, because the cable can be disconnected from the cell, when rotating it.
- 7 Lead the loose part of the pigtail onto the cable and screw it onto the fixed part.
- 8 Remove the tape.

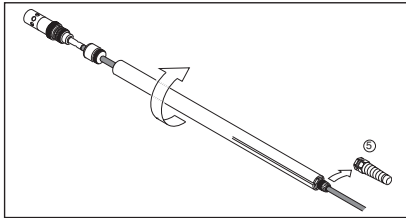


FIG. 11 Mounting the SC4A

3.8.4 Mounting the ISC40

- 1 Take the sensor out of the box and remove the cable tie carefully.
- 2 Bind the separate wires of the cable together with a piece of tape.
- 3 Take the fitting out of the box and remove the option(s), if necessary.
- 4 Release the pigtail (cable gland) completely. Do not undo the part in the metal tube!
- 5 Lead the sensor cable through the tube of the fitting, from the side where the knurled knob has been removed.
- 6 Hold the sensor still and turn the metal tube onto the sensor. Don't rotate the cell, but rotate the tube of the fitting,

- because the cable can be disconnected from the cell, when rotating it.
- 7 Lead the loose part of the pigtail onto the cable and screw it onto the fixed part.
- 8 Remove the tape.

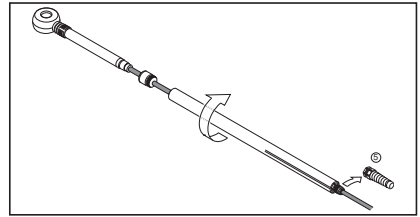


FIG. 12 Mounting the ISC40

3.8.5 Mounting the FU20

- 1 Take the sensor out of the box and apply Teflon tape to the appropriate threaded end. If the sensor is equipped with a fixed cable remove the cable tie carefully.
- 2 Bind the separate wires of the cable together with a piece of tape.
- 3 Take the fitting out of the box and remove the option(s), if necessary.
- 4 Release the pigtail (cable gland) completely. Do not undo the part in the metal tube!
- 5 Lead the sensor cable through the tube of the fitting, from the side where the knurled knob has been removed. In case sensor has VP connection, attach the sensor and cable as usual.
- 6 Hold the sensor still and turn the metal tube onto the sensor. Don't rotate the cell, but rotate the tube of the fitting, because the cable can be disconnected from the cell, when rotating it.
- 7 Lead the loose part of the pigtail onto the cable and screw it onto the fixed part.
- 8 Remove the tape.

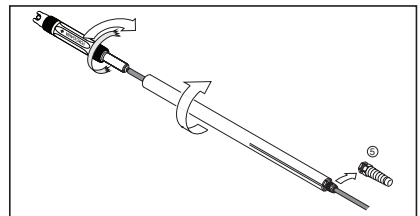
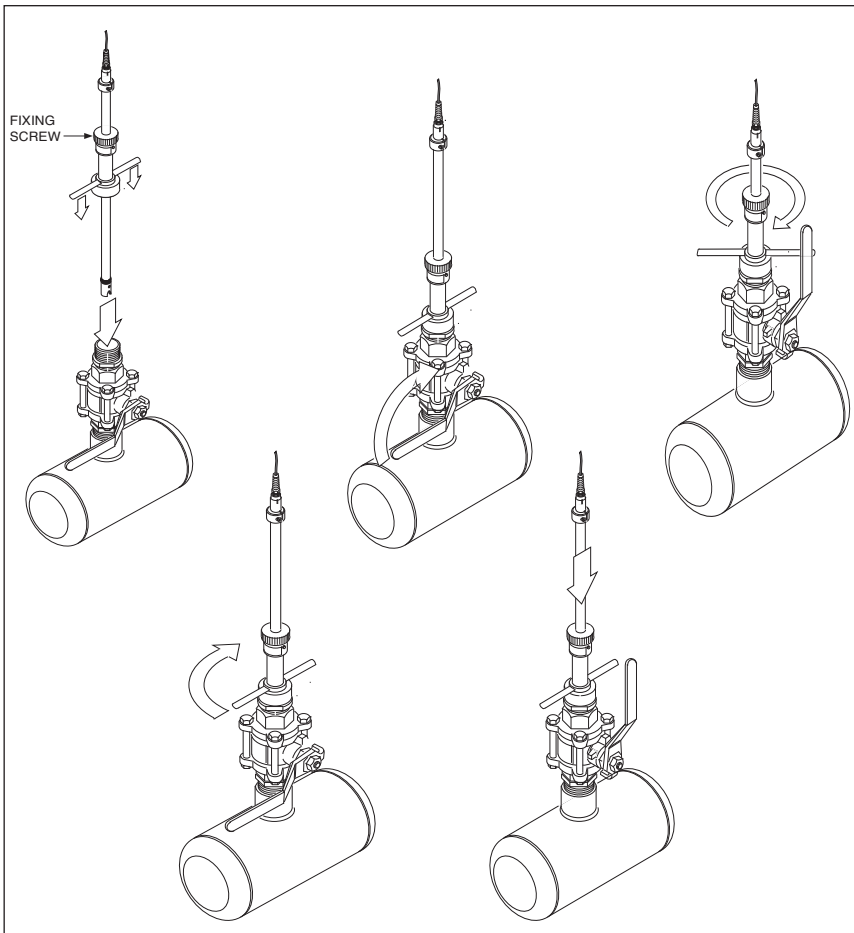


FIG. 13 Mounting the FU20

Remarks:

- Turning the T-bar key can only be done when the valve is closed.
- Pushing the probe into the process needs a force to overcome the pressure of the system and the friction of the dampening rings in the fitting.
- The locking mechanism can be tightened until the probe is firmly fixed in the measuring position.
- The insertion stop can be fixed in the actual insertion position.
Refer to paragraph 4.6 for adjusting the insertion depth.

**FIG. 14 Probe insertion**

4. Maintenance



CAUTION

Retract/ insert at $P < 5$ Bar. Do not stand behind immersion tube while retracting/ inserting

4.1 General

Before the sensor can be serviced, the probe with the sensor inside should be physically separated from the process. The PR10 retractable fitting can be retracted from its measuring position in the maintenance position by following the five step procedure mentioned in paragraph 4.2 in reverse order.

Note: Before screwing in parts grease the thread

4.2 Probe insertion

- 1 Position the probe for insertion.
- 2 Turn the T-bar key clockwise.
- 3 Open the ball valve.
- 4 Push the probe into the process.
- 5 Fix the probe by turning the fixing screw clockwise.

4.3 Taking out the sensor

Retract the probe from the process according to the following procedure:

- Release the fixing screw.
- Pull out the probe.
- Close the ball valve (*).
- Turn the T-bar counter clockwise
- Take out the probe.

* If the option provides a drain port, the process pressure can be relieved before removing the sensor.

- Stand clear when releasing the fixing screw! Due to the process pressure the probe can be pressed out.

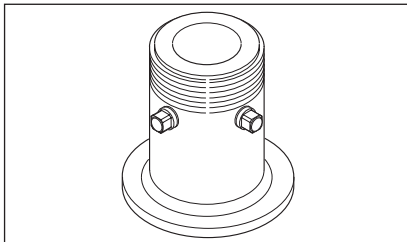


FIG. 15 Drain Port Connection

- The T-bar key can only be operated when the ball valve is closed. Make sure it is closed completely.
- The friction of the O-rings will slow down the probe when it is retracted.

4.4 Replacing the sensor

Refer to paragraph 3.8

4.5 Replacing the sealings

For prevention of leakage due to aging of the seals, the O-ring seals may need replacement. Hereto, follow the procedure below.

Procedure:

Remove the probe from the process. Follow the procedure described in paragraph 4.2 Dismount the sensor. Follow the procedure described in paragraph 3.8 in reverse order:

- Disassemble the housing of the insertion tube.
- Replace the o-rings with the proper tools (like K1525AF).

4.6 Drain ports connection

The PR10 retractable fitting can be equipped with optional drain (or flush) ports on the flanged adapter. The drain ports are tapered 1/8" NPT female for small diameter connectors.

Adjusting the insertion depth

The insertion depth of the sensor can be adjusted to your preference. The insertion stop can be set for the desired insertion depth, using the key supplied with the fitting.

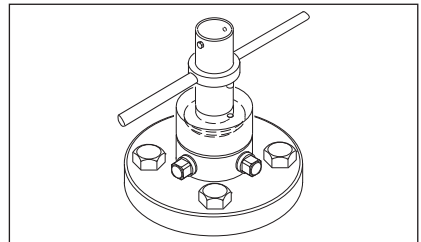


FIG. 16 Flush Port Connection

5. Declaration of Conformity

YOKOGAWA ◆

EU DECLARATION OF CONFORMITY

We: **Yokogawa Process Analyzers Europe B.V.**
Euroweg 2, 3825 HD Amersfoort
The Netherlands

herewith declare under our sole responsibility that the product, model: **PR10**

further specified with model suffix- and option codes: **As listed in Annex-1 in this document**

is manufactured in accordance with the following standards:

EN-ISO 9001: 2008 Quality management systems - Requirements

Subject product is:

- In compliance with the essential requirements of the specific product legislation:
 - **Pressure Equipment Directive 2014/68/EU (PED)**
As amended by Regulation (EC) no. 1882/2003, by applying:
Article 4.3: Sound Engineering Practice
 - **RoHS 2** **Directive 2011/65/EU**
- Produced according to appropriate quality control procedures.

The CE-mark has been affixed on the product in 2017 for the first time.

If applicable, the product is checked against the latest official released revision of the standards mentioned above; differences do not affect the product identified on this declaration.

Amersfoort – August 07, 2017



H. Leijten
General Manager
Yokogawa Process Analyzers Europe B.V.

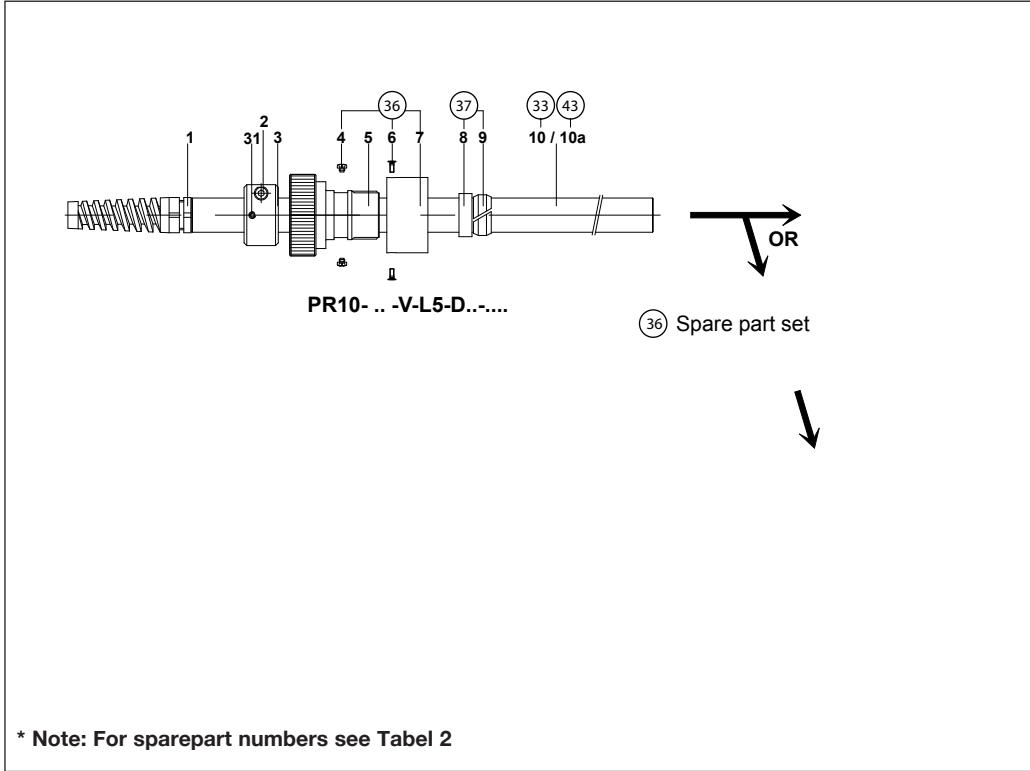
Annex-1

Annex-1

Model	Suffix	Options	Description
PR10			Retractable fitting general purpose
Material fitting	-S -T		Stainless steel Titanium (tube and sensor holder only)
Material O-rings	-V		Viton
Tube length	-L5		Tube length 0.5 meter
Connection	-D32 -D50		DN32 / 1¼" DN50 / 2"
Measuring sensor	-PH12 -PH13 -SC4A -ISC4 -NNNN -FU20		For 12mm pH sensors Y-cap For 12mm pH sensors PG13.5 cap For SC4A For ISC40 No parameter specification For FU20 / FU20F → Only for -S
Adapter screw-in Only available in Stainless Steel		/SA125 /SL125 /SA200 /SL200	ISO 228/1 G1¼ to 1¼" M-NPT Long ISO 228/1 G1¼ to 1¼" M-NPT ISO 228/1 G2 to 2" M-NPT Long ISO 228/1 G2 to 2" M-NPT
Flange adapter Only available in Stainless Steel		/FA125 /FN125 /FL125 /FA200 /FN200 /FL200 /FAD32 /FND32 /FAD50 /FND50	Flange adapter drain 1¼" 150 Lbs Flange adapter no drain 1¼" 150 Lbs Long flange adapter drain 1¼" 150 Lbs Flange adapter drain 2" 150 Lbs Flange adapter no drain 2" 150 Lbs Long flange adapter drain 2" 150 Lbs Flange adapter drain DN32 Flange adapter no drain DN32 Flange adapter drain DN50 Flange adapter no drain DN50
Adapter weld-in Only available in Stainless Steel		/WA125	Straight weld-in adapter ISO 228/1 G1¼
Ball-valves Only available in Stainless Steel		/BF125 /BF200 /BFD32 /BFD50 /BS125 /BS200	Ball-valve flanged 1¼" 150 Lbs Ball-valve flanged 2" 150 Lbs Ball-valve flanged DN32 PN10 Ball-valve flanged DN50 PN10 Ball-valve screw-in 1¼" F-NPT Ball-valve screw-in 2" F-NPT
Certificates		/M	Material certificate 3.1 according to NEN-EN 10024 (on wetted parts).

*With Ball-valves flange adapters or screw-in adapters are necessary.

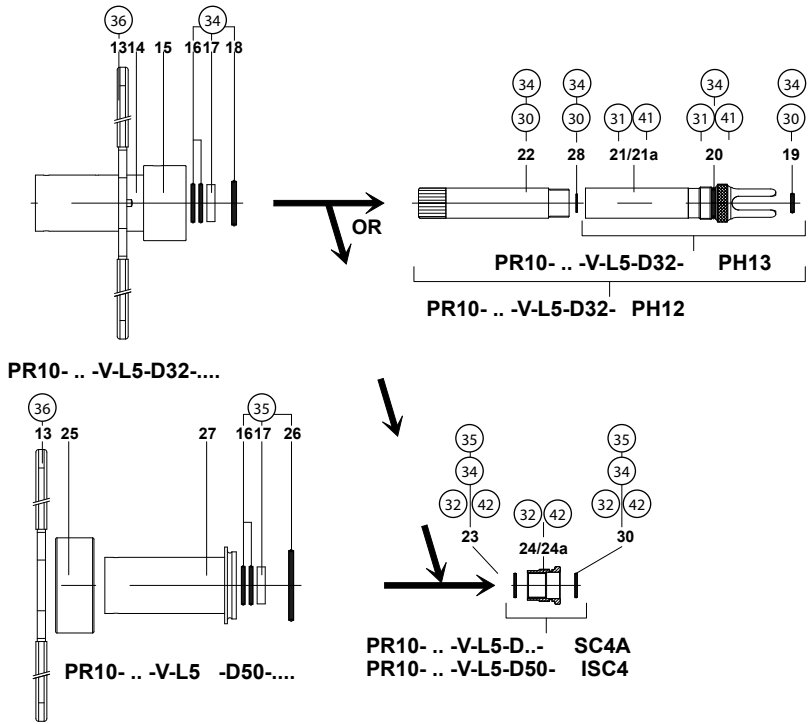
6. Exploded view



* Note: For sparepart numbers see Tabel 2

FIG. 17 Exploded view

PR10-S-V-L5-D32-PH12		
PR10-S-V-L5-D32-PH13		
PR10-S-V-L5-D32-SC4A		
PR10-S-V-L5-D50-ISC4		
PR10-S-V-L5-D50-SC4A		
K1525AG	Adapter Y-cap	30
K1525AB	Sensor holder PG13.5	31
K1525AP	Adapter SC4A - ISC40	32
K1525AA	Outer tube	33
K1525BA	O-ring set PR10-S-V-L5-D32	34
K1525BB	O-ring set PR10-S-V-L5-D50	35
K1525BC	Key set	36
K1525BD	Squeezing set;	37



PR10-T-V-L5-D32-PH12		
PR10-T-V-L5-D32-PH13		
PR10-T-V-L5-D32-SC4A		
PR10-T-V-L5-D50-ISC4		
PR10-T-V-L5-D50-SC4A		
K1525AG	Adapter Y-cap	30/40
K1525CB	Sensor holder PG13.5 Titanium	41
K1525CP	Adapter SC4A - ISC40 Titanium	42
K1525CA	Outer tube Titanium	43
K1525BA	O-ring set PR10-S-V-L5-D32	34
K1525BB	O-ring set PR10-S-V-L5-D50	35
K1525BC	Key set	36
K1525BD	Squeezing set;	37

7. Spareparts

Part no.	Description	
K1520LS	Cable retractable fitting 10M PT100	
K1520LP	Cable retractable fitting 5M PT100	
K1520LQ	Cable retractable fitting 5M PT1000	
K1520LT	Cable retractable fitting 10M PT1000	
K1525BZ	Cable gland (5 pcs)	1
K1525AA	Outer tube SS	33
K1525AB	Sensor holder PG13.5 SS	31
K1525AP	Adapter SC4A-ISC40 SS	
K1525AF	O-ring pick up tool	
K1525AG	Adapter Y-cap	30
K1525BA	O-ring set PR10-S-V-L5-D32	34
K1525BB	O-ring set PR10-S-V-L5-D50	35
K1525BC	Key set	36
K1525BD	Squeezing set	37
K1525BE	Set M16 bolt & washer (8 pcs)	
K1525BF	Set M14 bolt & washer (8 pcs)	
K1525BH	Gaskets ball valves - D32	
K1525BJ	Gaskets ball valves - D50 + 2"	
K1525BK	Gaskets ball valves - 1¼"	
K1525CA	Outer tube titanium	43
K1525CB	Sensor holder PG13.5 Titanium	41
K1525CP	Adapter SC4a-ISC40 Titanium	42
K1525YA	PR10/SA125	
K1525YB	PR10/FA125	
K1525YC	PR10/FN125	
K1525YD	PR10/FA200	
K1525YE	PR10/FN200	
K1525YF	PR10/FAD32	
K1525YG	PR10/FND32	
K1525YH	PR10/WA125	
K1525YK	PR10/BF125	
K1525YL	PR10/BF200	
K1525YM	PR10/BFD32	
K1525YN	PR10/BF50	
K1525YP	PR10/BS125	
K1541EM	Adapter 2" NPT - G2SS	
K1525YR	PR10/FAD50	
K1525YS	PR10/FND50	
K1525BX	OUTER TUBE SS FU20	
K1525YT	PR10/SL125	
K1525YU	PR10/FL125	
K1525YV	PR10/SL200	
K1525YW	PR10/FL200	

8. Installation Options Matrix

	PR10-S-V-L5-D32-FU20	PR10-S-V-L5-D32-NNNN	PR10-S-V-L5-D32-PH12	PR10-S-V-L5-D32-PH13	PR10-S-V-L5-D32-SC4A	PR10-S-V-L5-D50-FU20	PR10-S-V-L5-D50-ISC4	PR10-S-V-L5-D50-NNNN	PR10-S-V-L5-D50-PH12	PR10-S-V-L5-D50-PH13	PR10-S-V-L5-D50-SC4A	PR10-T-V-L5-D32-NNNN	PR10-T-V-L5-D32-PH12	PR10-T-V-L5-D32-PH13	PR10-T-V-L5-D32-SC4A	PR10-T-V-L5-D50-ISC4	PR10-T-V-L5-D50-NNNN	PR10-T-V-L5-D50-PH12	PR10-T-V-L5-D50-PH13	PR10-T-V-L5-D50-SC4A
/SA125		X	X	X	X															
/SL125	X	X	X	X	X															
/SA200							X	X	X	X	X									
/SL200						X	X	X	X	X	X									
/FA125		X	X	X	X															
/FN125		X	X	X	X															
/FL125	X	X	X	X	X															
/FA200							X	X	X	X	X									
/FN200							X	X	X	X	X									
/FL200						X	X	X	X	X	X									
/FAD32		X	X	X	X															
/FND32		X	X	X	X															
/FAD50							X	X	X	X	X									
/FND50							X	X	X	X	X									
/WA125	X	X	X	X	X															
/BF125	X	X	X	X	X															
/BF200						X	X	X	X	X	X									
/BFD32	X	X	X	X	X															
/BFD50						X	X	X	X	X	X									
/BS125	X	X	X	X	X															
/BS200						X	X	X	X	X	X									
/M	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

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