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# Instruction Manual

**Model BA10**  
Junction box

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# 1. PREFACE

## 1.1 Introduction

Between measuring plant and control room, especially when the distance between these places is greater than the length of the standard appropriate sensor cables, the BA10 connecting equipment can be an expedient method for connecting sensor cables to an extension cable which is connected to the measuring device. Although BA10 enables longer distance connection it is not advisable to use it in pH measuring loops. For pH loops with long distance cable runs it is recommended to use digital Sencom configuration.

## 1.2 Unpacking and Checking

Upon arrival of the purchased product, carefully unpack it and make sure the product has not been damaged during transportation.

Verify the model code on a name label adhered on the packaging box. For details of the model code, see subsection 6.

## 1.3 Warranty and Service

Yokogawa products and parts are guaranteed free from defects in workmanship and material under normal use and service for a period of (typically) 12 months from the date of shipment from the manufacturer. Individual sales organizations can deviate from the typical warranty period, and the conditions of sale relating to the original purchase order should be consulted. Damage caused by wear and tear, inadequate maintenance, corrosion, or by the effects of chemical processes are excluded from this warranty coverage. In the event of warranty claim, the defective goods should be sent (freight paid) to the Service Department of the relevant sales Organization for repair or replacement (at Yokogawa's discretion)

The following information must be included in the letter accompanying the returned goods:

- Model Code and Serial Number.
- Original Purchase Order and Date.
- Length of time in service and description of the process.
- Description of the fault and circumstances of the failure.
- Process/environmental conditions that may be related to the failure of the connection box
- Statement as to whether warranty or non-warranty service is requested.
- Complete shipping and billing instructions for return of material, plus the name and phone number of a contact person that can be reached for further information.
- Clean Statement

Returned goods that have been in contact with process fluids must be decontaminated and disinfected prior to shipment. Goods should carry a certificate to this effect, for the health and safety of our employees. Material Safety Data sheets must be included for all components of the process to which the connection box has been exposed.

1.4 Serial number

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

X<sub>1</sub>X<sub>2</sub>

X<sub>3</sub>X<sub>4</sub>

X<sub>5</sub>X<sub>6</sub> X<sub>7</sub>X<sub>8</sub> X<sub>9</sub>

Production location

Year/Month code

Tracking number

Example:                N3X300005

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. GENERAL SPECIFICATIONS

### 2.1 Junction box, type BA10

The junction box is an expedient method for connecting sensor cables to a measuring instrument using the extension cable

#### Note

The extension cable, type WF10/WE10 should be used to interconnect the junction box and the measuring instrument.

To have optimum measuring results the length of this cable may be max. 100 m.

### 2.2 Specifications

Material	: Cast aluminium case with chemically resistant coating
Rain- and dust protection	: Meets IP 65
Terminals	: Screw type wires up to 6 mm <sup>2</sup>
Cable entries*	: 2 holes with screw thread

Weight	: Ca. 2 kg.
Dimensions	: See Fig. 6 dimensional drawing
Fixing	: 140 x 110 mm (indicated on reverse side of the box)

#### Note\*

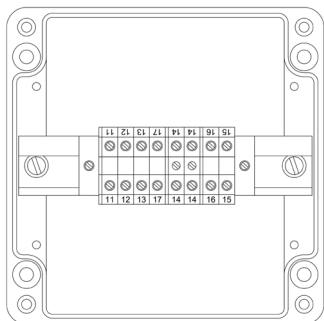
As delivered the box includes 2 cable glands PG 16 (Figure 3), a hose connection for a 19 mm I/D protection hose (Figure 4) and a grommet (Figure 5) for watertight cable input in a gland (3 electrode cables and the liquid earth cable).

### 2.3 Shipping details

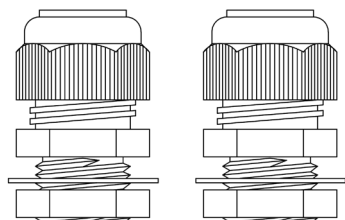
Package size mm (LxWxH)	: 245x180x210
Package weight (Approx.)	: 2 kg.

### 3. INSTALLATION

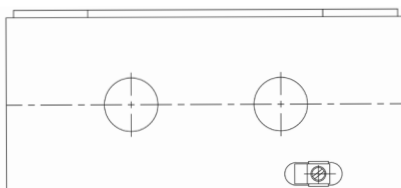
BA10



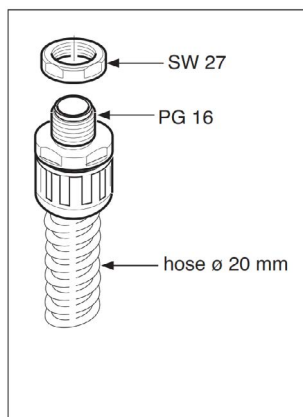
**Figure 1.** BA10 junction box



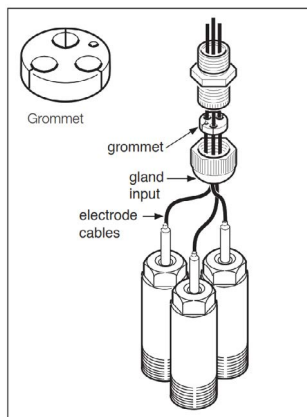
**Figure 3.** PG16 cable glands



**Figure 2.** PG16 cable gland and grounding connection

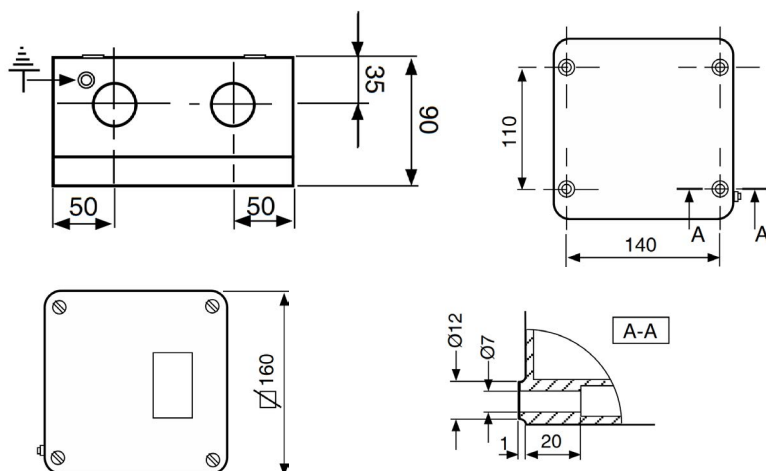


**Figure 4.** Hose connector for 19mm I/D protection hose



**Figure 5.** Grommet

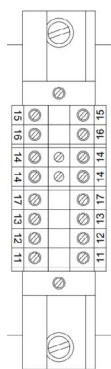
## 4. DIMENSIONS



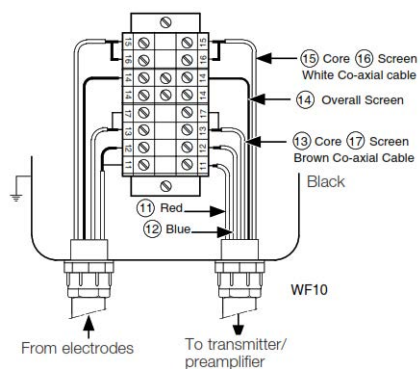
**Figure 6.** Dimensions BA10 in mm

## 5. WIRING

BA10 wiring



**Figure 7.** BA10 connection block



**Figure 8.** Example of connection diagram<sup>(1)</sup>

**Note <sup>(1)</sup>** : For details on connection please refer to respective analyzer/sensor Instruction manual.

# 6. MODEL AND SUFFIX CODES

Table 3: MS Code

Model	Suffix code	Description
BA10		Terminal box for normal use

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