

Instruction Manual

Model WU11 Interconnection Cable for SENCOM Sensor

1 General

1.1 Introduction

The WU11 interconnection cable is specified for reliable transfer of digital signals between the SENCOM sensors and Yokogawa FLXA analyzer. It is especially designed to be installed in a heavy industrial environment. The double shielded cable will protect the connected devices for interference from high voltages and currents which are present on other cables. The cable is specified to be used in IP67 applications, allowing it to be submerged as a whole. The cable has a wide temperature operation range which is sufficient for most of the applications. The materials used for the cable are flame retardant to resist the spread of fire.

The WU11 cable has at one side a 5 pins female connector for connection to the Yokogawa SENCOM Sensor, while on the other side there are 5 wired pins for connection to the terminal strip of the Yokogawa FLXA analyzer. The cable can be ordered in four different lengths, but long cable runs up to 100 m (328 ft) are possible.

1.2 Unpacking & Checking

Upon delivery, unpack the cable carefully and inspect it to ensure that it is not damaged during shipment. If damage is found, retain the original packing materials and immediately notify the carrier and the relevant local Yokogawa Sales office. Make sure the Model Code and Serial Number on the cable are the same as on the packing list.

1.3 Warranty & Service

Yokogawa products are guaranteed free from defects in workmanship and materials 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 a warranty claim, the defective goods should be sent (freight paid) to the Service Department of the relevant Yokogawa Sales office 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 cable.
- 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 cable is been exposed.

2 General Specifications

2.1 Description

Two twisted pair cables with overall shield, at one side finished with a M9 5- pins molded female connector and on the other side with 5 wired pins. The cable is recognized by U_L (fileno. E124763) and CSA (fileno. LL105324).

2.2 Cable materials

Twisted pair cables:

Tinned copper conductors 0.25mm² (24 AWG).

Outside shield:

Foil shield with drain wire, 125% coverage.

Braid, tinned copper 0.008 mm² (38 AWG), 95% coverage.

Insulator:

Polyethylene for the twisted pair cables.

Color twisted pair #1: green / yellow.

Color twisted pair #2: brown / white.

Polyvinylchloride for the outside jacket, solid extrusion, color black.

2.3 Connector materials

Housing	: Polybutylene terephthalate UL94V-0, color: black.
O-ring	: Nitrilbutadienrubber, color: black.
Nut	: Brass.
Contact finishing	: Gold plated.

2.4 Electrical specifications

Twisted pair cables	: Capacity < 50 pF/m Resistance < 100 Ω/km Characteristic Impedance 120 Ω
Connector	: Maximum rated current 5 A Maximum voltage 125 V

2.5 Operational specifications

Temperature	: -40 ~ +85 °C (-40 ~ +185 °F)
Water Proof	: IP67 (conform IEC60529)

2.6 Dimensional drawing

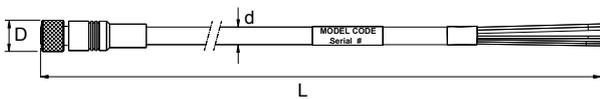


Figure 1. Cable, available in four fixed lengths (L).

Length (L)	: 3, 5, 10, 20 m (9.8, 16.4, 32.8, 65.6 ft)
Dia. connector (D)	: 10.6 ± 0.2 mm (4.17 ± 0.08 inch)
Dia. cable (d)	: 5.8 ± 0.1 mm (2.28 ± 0.04 inch)
Wire pins	: 8 x 1.3 mm (3.1 x 0.5 inch)

2.7 Cable installation

Procuring a smooth bend radius allows the cable to absorb the impact of bending and thereby increasing its life cycle. Minimum bend radius is approx. 5 cm (2").

When using cable ties, do not pinch or deform the cable.

When connected cable is subjected to any motion between two points, stress on the cable can be prevented by an adequate cable length or using a cable loop.

3 Wiring

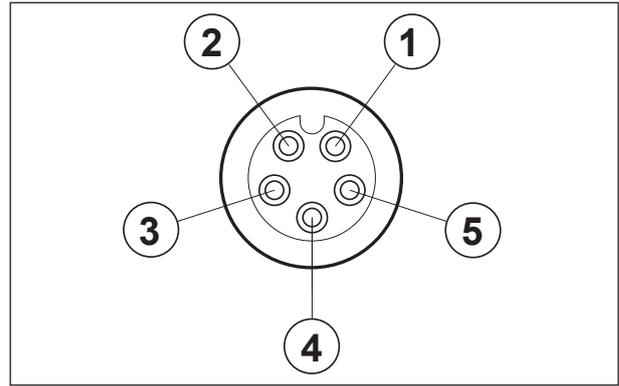


Figure 2. Front view cable connector

3.1 Definition connector pin to cable

Pin # pair #	Twisted color	Wire number	Wire
1	1	yellow	83
2	1	green	84
3	2	brown	87
4	drain	black	82
5	2	white	86

3.2 Connection cable to FLXA analyzer

Signal Description	Wire color	Wire number	FLXA terminal
Supply +	brown	87	87
Supply Gnd	white	86	86
Data +	green	84	84
Data -	yellow	83	83
Shield	black	82	82

4 Model and Suffix Codes

Model	Suffix	Description
WU11		
Conn. type	-M9	M9 connector
Cable length	-03	3 m (9.8 ft)
	-05	5 m (16.4 ft)
	-10	10 m (32.8 ft)
	-20	20 m (65.6 ft)
Cable finishing	-WIP	Wire pins
Jacket material	-V	PVC

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