

XUM8ABAYM8 / XUM8ABAYP015 (34 x 12 x 20)

Photo-electric sensors - Miniature design



XUM8ABAYM8

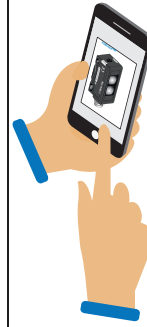
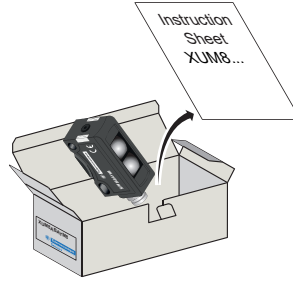
XUM8ABAYP015



Background suppression (BGS)



Package Content (Example)



Scan the code to access this Instruction Sheet in different languages and all the product information or you can visit our website at: www.tesensors.com

We welcome your comments about this document. You can reach us through the customer support page on your local website.

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

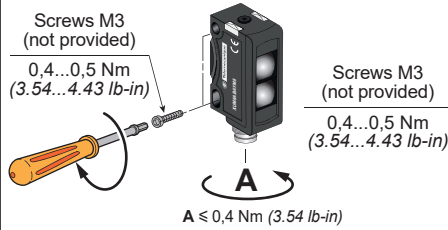
- Disconnect all power before servicing equipment.
 - Do not connect this device to AC power.
 - The power voltage must not exceed the rated range.
- Failure to follow these instructions will result in death or serious injury.**

⚠ WARNING

IMPROPER SETUP OR INSTALLATION

- This equipment must only be installed and serviced by qualified personnel.
 - Read, understand, and follow the compliance below, before installing the XU Photo-electric sensor.
 - Do not tamper with or make alterations on the unit.
 - Comply with the wiring and mounting instructions.
 - Check the connections and fastening during maintenance operations.
 - The proper functioning of the XU Photo-electric sensor and its operating line must be checked regularly and according to the application (for example number of operations, level of environmental pollution, etc.).
- Failure to follow these instructions can result in death, serious injury, or equipment damage.**

Mounting and tightening torques



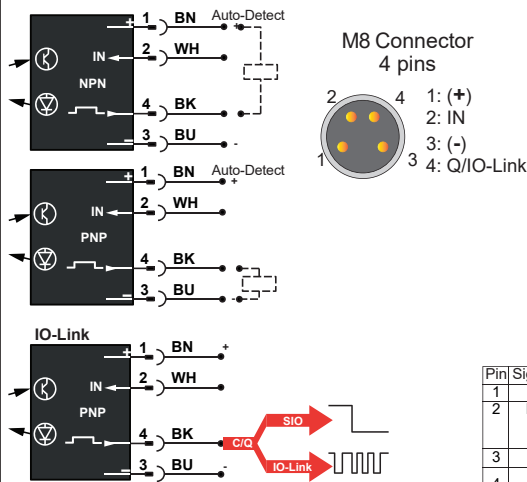
⚠ CAUTION

DEGREE OF PROTECTION DETERIORATION
Do not apply excessive torque on the sensor during the installation process.
Failure to follow these instructions can result in injury or equipment damage.

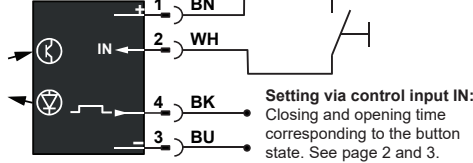
LEDs and settings



Wiring diagrams



Remote teach-in



⚠ CAUTION

INOPERABLE EQUIPMENT DUE TO CYBER ATTACK ON IO-LINK

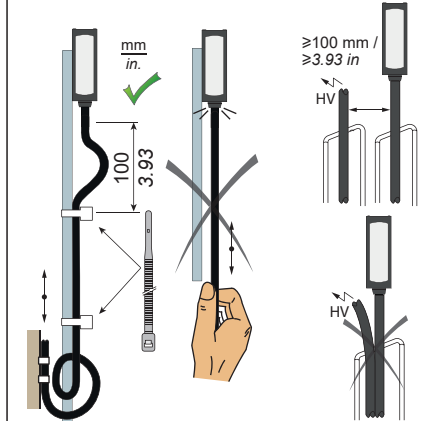
- Apply external cybersecurity protection on IO-Link Master device.
- Download IO-Link Description files only from these web servers: <https://tesensors.com/global/en/support/iolink> or <https://ioddfinder.io-link.com/#/>

Failure to follow these instructions can result in injury or equipment damage.

IO-Link data tables and IODD files are online: Scan the 2D code, above

Pin	Signal	Definition
1	+	+ 24 Vdc
2	IN	+ = NO - = NC Open = NO
3	-	0 Vdc
4	Q	Switching signal (SIO)
	C	Communication IO-Link

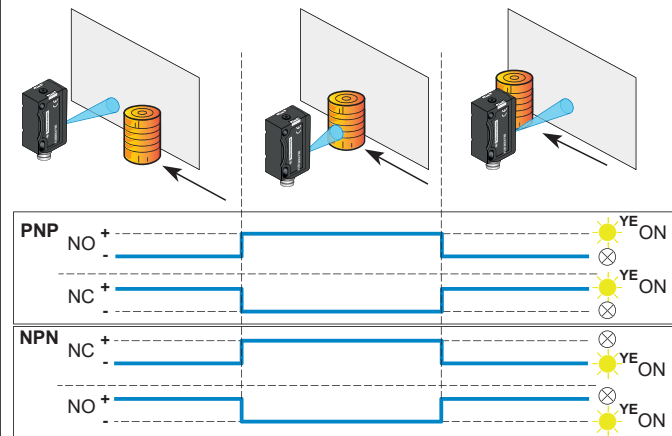
Mounting, wiring and maintenance precautions



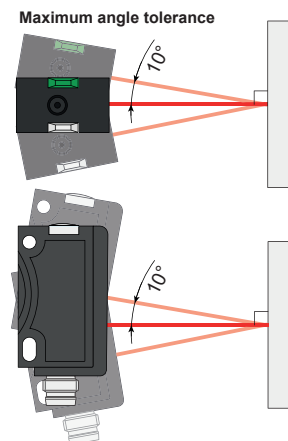
NOTICE

REDUCTION OF SERVICE LIFE
Do not pull on the sensor cable.
Failure to follow these instructions can result in equipment damage.

Switching mode for object

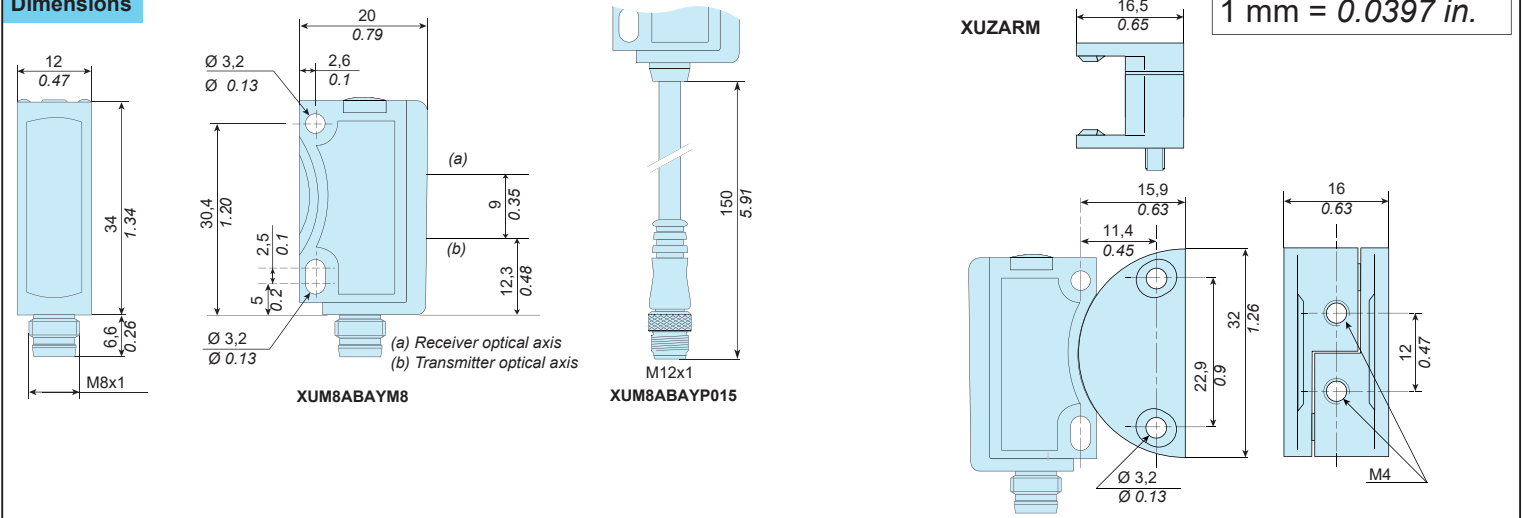


Alignment



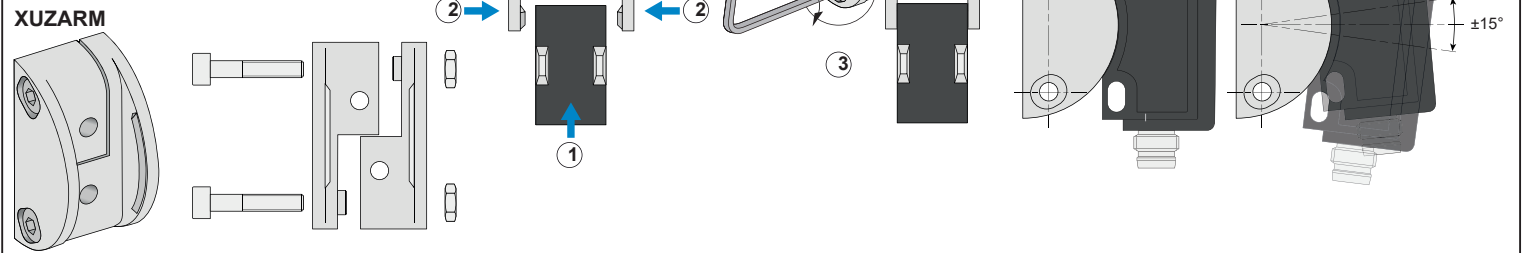
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Dimensions



Accessories

Dovetail clamp mounting for flexible adjustment (to order separately)



Pre-wired connectors (examples)

PVC cable for general use
PUR cable for severe industrial environments

Jumper M8 - 4 pins plug / M8 - 4 pins socket



XZCPB1141L2 2m PUR
XZCPB1141L5 5m PUR

Jumper M12 - 4 pins plug / M8 - 4 pins socket



XZCR2711037T1 1m PUR
XZCR2711037T2 2m PUR

M8 - 4 pins socket 4 wires

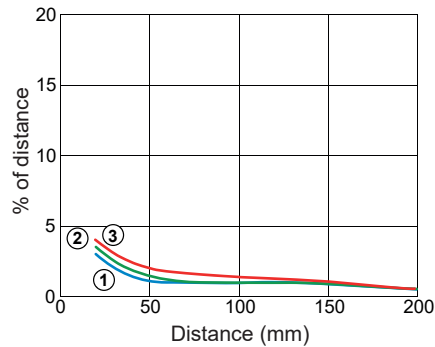


XZCR2705037R1 1m PUR
XZCR2705037R2 2m PUR

For other cables (angled or length) visit our website: Tesensors.com

Curves

Scanning properties



- 1** Min distance white object (90%) / white background (90%) (mm)
- 2** Min distance grey object (18%) / white background (90%) (mm)
- 3** Min distance black object (6%) / white background (90%) (mm)

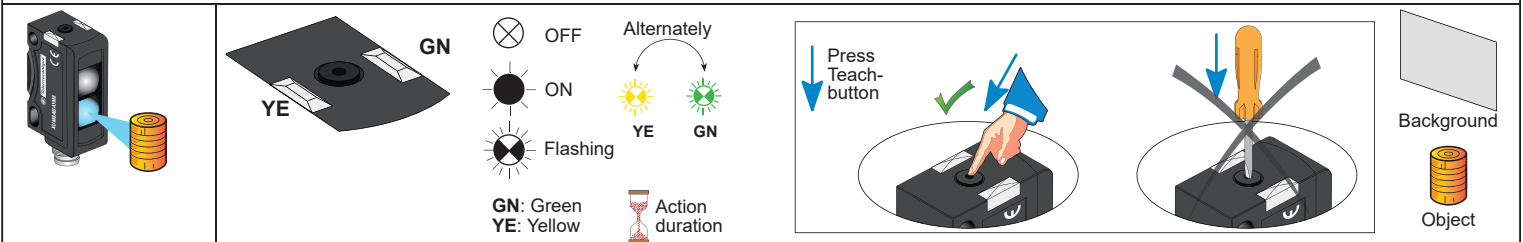
Setting

The sensor has 3 different Teach-in modes:

A-Standard Teach-in (STI): is suited for nearly all applications. Setting is made on object and background (see illustration A).

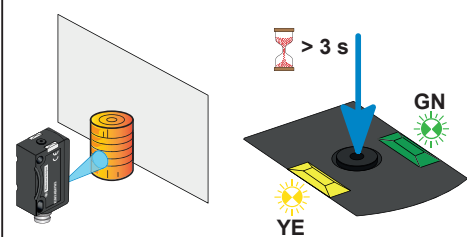
B-Object-Object Teach-in (OTI): is suited for applications where the background cannot be taught in. Setting is made 2x on the object (see illustration B).

C-Dynamic Teach-in (DTI): is suited for setting the sensor in the running process, particularly for small objects (see illustration C).



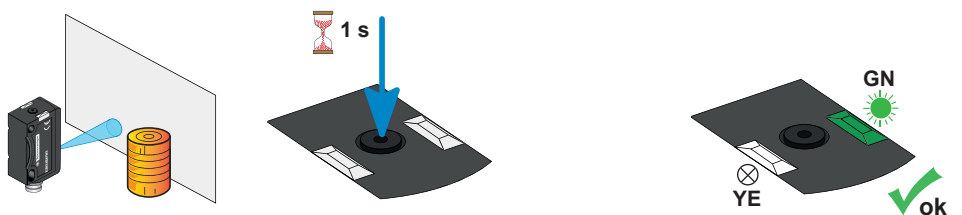
A Standard teach-in (STI)

Step 1: Teach-in object



Press teach button > 3 s
The green and yellow LEDs flash at the same time.
Release the button
The green and yellow LEDs flash alternately.

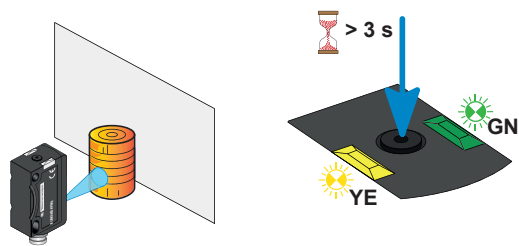
Step 2: Teach-in background



Press teach button 1 s
The green LED is ON fixed and the yellow LED is OFF (no object detected)

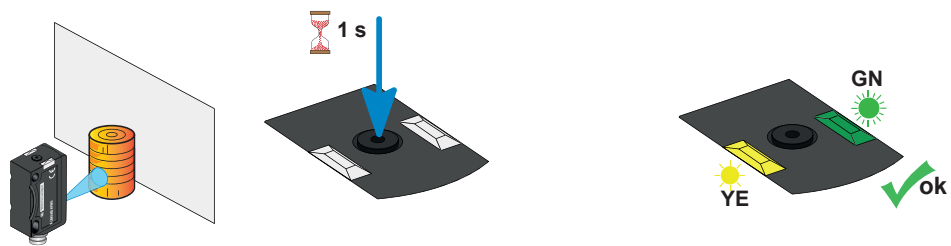
B Object-Object Teach-in (OTI)

Step 1: Teach-in object



Press teach button > 3 s
The green and yellow LEDs flash at the same time.
Release the button
The green and yellow LEDs flash alternatively.

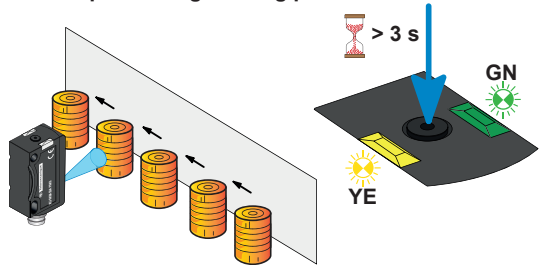
Step 2: Teach-in Object



Press teach button 1 s
The green LED is ON fixed and the yellow LED is ON (object detected)

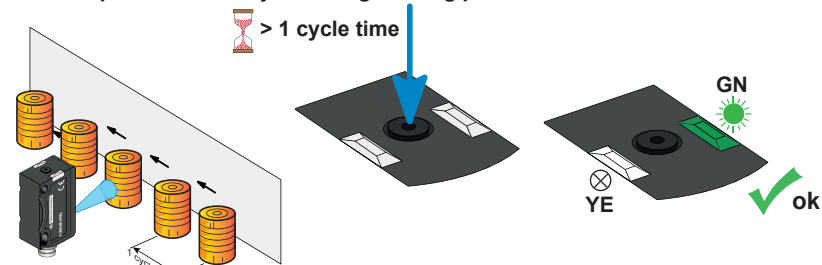
C Dynamic Teach-in (DTI)

Step 1: During running process



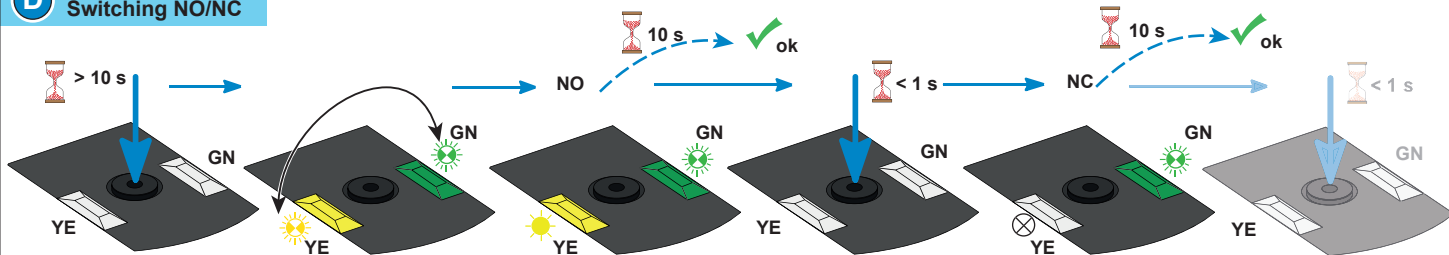
Press teach button > 3 s
The green and yellow LEDs flash at the same time.
Release the button
The green and yellow LEDs flash alternatively.

Step 2: Teach-in object during running process

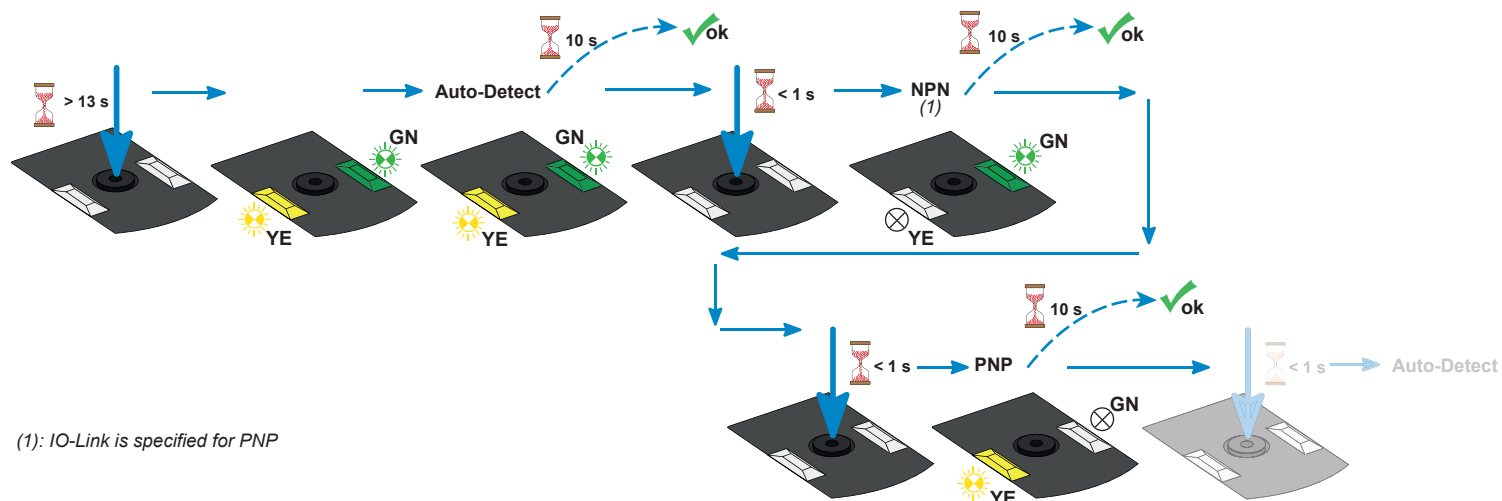


Press teach button > 1 cycle time
The green LED is ON fixed and the yellow LED is ON (object detected) or OFF (no object detected)

D Switching NO/NC



E SWITCHING AUTO-DETECT / NPN / PNP

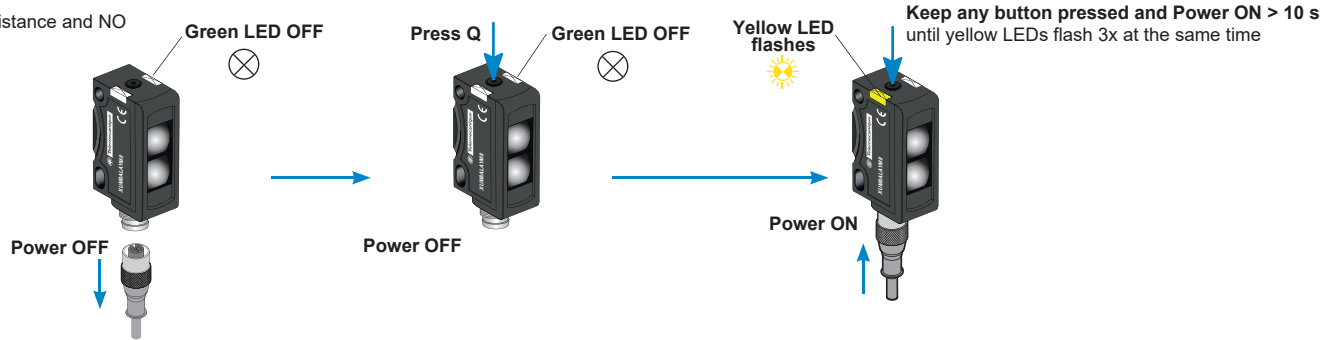


(1): IO-Link is specified for PNP

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E Factory Setting

Max. scanning distance and NO



Characteristics

Certification	CE - UKCA - cULus - Ecolab
Sensing distance	1...200 mm / 0.04...7.87 in.
Setting	Teach button
Color of detection light beam	LED, blue, 450 nm - Risk group 2 according to EN62471
Light spot size	7 x 7 mm / 0.28 x 0.28 in.
Switching output Q	Auto-Detect - PNP/NPN (NO or NC) - IO-LINK
Control input IN (switching function Q):	(+) = Teach-in (-) = button locked Open = normal function
Current consumption	≤ 30 mA
Switching capacity	≤ 100 mA
Switching frequency	≤ 700 Hz
First-up delay	< 300 ms
Response time	≤ 500 μs
Recovery time	< 300 ms
Ambient Temperature	Operating : - 20...+60 °C (-4...+140 °F) - UL : - 20...+50 °C (-4...+122 °F) Storage : - 20...+80 °C (-4...+176 °F)
Power Voltage	Rated operational voltage: 12...24 Vdc Operating range: 10...30 Vdc (including ripple p-p 10% maximum)
Product protection	Power supply : Reverse polarity protection Output: Short circuit protection
Protection against electric shocks	Protection class II
Degree of protection	IP67 conforming to IEC 60529, IP69K conforming to DIN 40050-9
Vibration resistance	Conforming to EN 60947-5-2
Shock resistance	Conforming to EN 60947-5-2
Material	Housing: ABS, Front and Lens: PMMA



Risk group 2

CAUTION

EYE INJURY DUE TO HAZARDOUS OPTICAL RADIATION

- Do not stare at the beam.
- Avoid any eye contact with the beam.

Failure to follow these instructions can result in injury or equipment damage.

IO-Link Data sheet and IODD IO-Link on website: <https://tesensors.com/iolink>

