

IZAR BE PULSE

User guide



1 PRODUCT DESCRIPTION

1.1 BRIEF DESCRIPTION

IZAR Base External PULSE is an interface designed to be associated to a pulse emitter and a radio module to function as a remote external radio module.

1.2 COMPATIBILITY

1.2.1 WITH METERS AND PULSE EMITTERS

IZAR BE PULSE is compatible with water meters fitted with a Reed dry-contact pulse emitter or an open-collector transistor output (NPN).

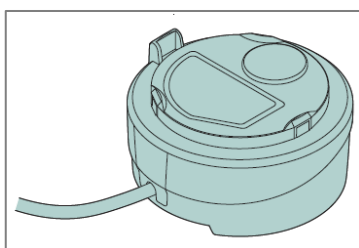


fig.1

- Meters with integrated pulse output (*)
- Water meters + IZAR PULSE range

(*) subject to validation of the compatibility of the pulse output by Diehl Metering.

Please enquire at Diehl Metering to find out which meters and pulse emitters are compatible.



Diehl Metering disclaims all liability for the non-functioning or malfunction of IZAR BE PULSE if it is connected to dry-contact or transistor pulse outputs other than those tested by Diehl Metering, or if the manufacturer has modified the specifications of its product since Diehl Metering tested it.

1.2.2 WITH RADIO MODULES

IZAR BE PULSE is compatible with any IZAR radio module featuring an inductive sensor from Diehl Metering product range.

Examples:

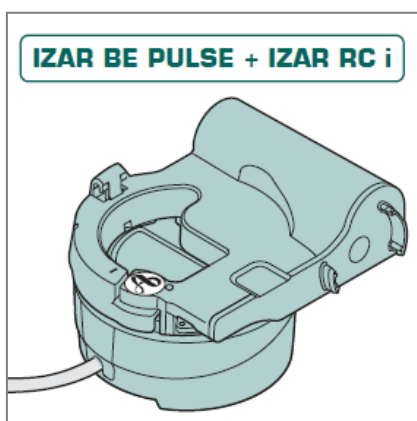


fig.2

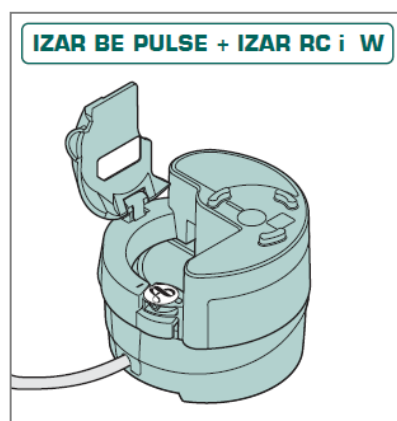


fig.3

2 OPERATING PRINCIPLES

Examples:

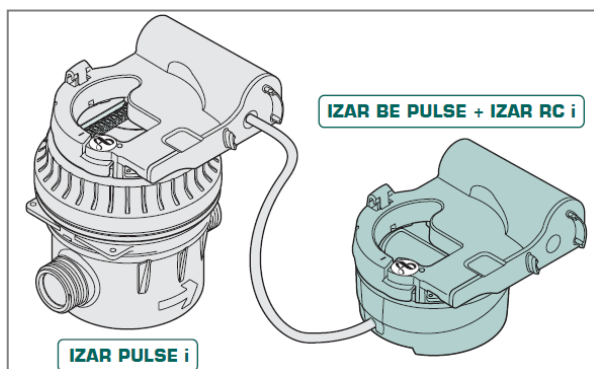


fig.4

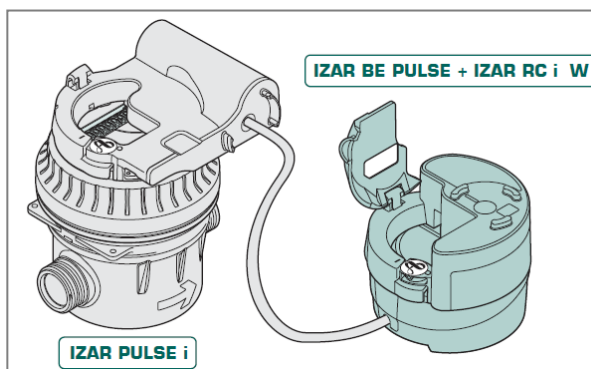


fig.5

IZAR BE PULSE receives information from a pulse emitter, such as an IZAR PULSE i and transmits this information in an inductive mode to the radio module clipped on it, by simulating the rotation of the half disc of the meter's register.

The associated radio module transmits the index and the alarms of the meter via radio link.

Mobile reading in walk-by / drive-by / passive drive-by:

The data sent by IZAR BE PULSE + radio module is collected using either a handheld computer or a tablet equipped with an IZAR RECEIVER BT for walk-by / drive-by or an IZAR RDC VEHICLE for passive drive-by. Data is then transferred directly to a centralized monitoring system (e.g. IZAR@NET 2 software).

Fixed network:

A fixed receiver IZAR RDC STANDARD/IZAR RDC BATTERY (fixed network R3) or IZAR RDC PREMIUM (long-range fixed network R4 when associated to IZAR RC i R4 or G4) installed in buildings will collect the data and send it at predefined intervals, via GPRS or LAN, to a centralized server. Reading through M-Bus application with an IZAR CENTER associated to an IZAR RECEIVER M-BUS and IZAR@NET 2 software is possible as well.

Protocol, frequency, radio range, sending intervals and functions are linked to the type of radio module clipped on the IZAR BE PULSE.

2.1 TECHNICAL SPECIFICATIONS

Standards	2014/30/UE directive EMC
Data update	In real time
Input frequency (pulses)	8 Hz maximum
Pulse duration	30 ms minimum
Resistance - closed contact	150 Ohms maximum
Parallel capacity - closed contact	22nF maximum
Resistance - open contact	10 MOhms maximum
Ingress protection	IP68
Ambient operating temperature	-15°C ... +55°C
Storage temperature	-20°C ... +70°C
Ambient humidity	0 ... 100%
Alarms	Identical to IZAR RC i radio module clipped on it
Power supply	1 fixed (non replaceable) lithium battery 3.6V
Battery lifetime	Up to 15 years (*)

(*) Under standard conditions of use and temperatures. Theoretical lifetime, not guaranteed.

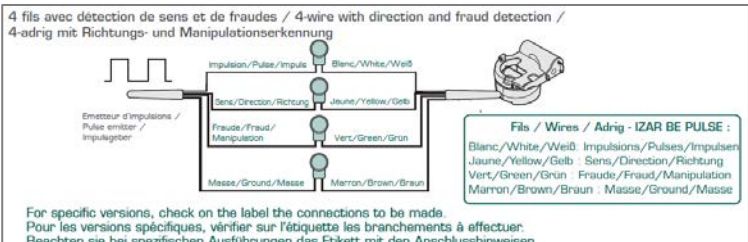
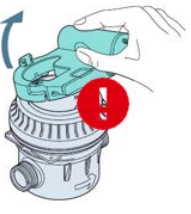


Caution: an extended use at high temperatures will cause a loss of battery autonomy. If, for example, the module is permanently at +55°C, the life expectancy will be reduced to 10 years.

2.2 ALARMS

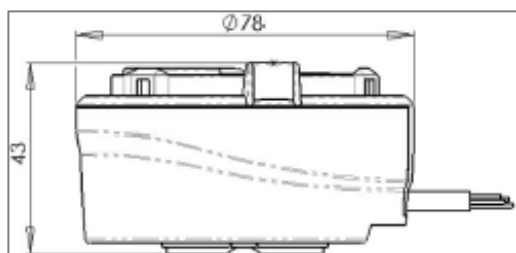
Alarms are directly linked to the radio module associated. Please refer to the user guide of the radio module.

Additional information: The disconnection alarm is used to manage IZAR BE PULSE alarms.

Cable cut-off 	The alarm is working only if the fraud wire is connected between IZAR BE PULSE and the pulse emitter. The disconnection alarm of the radio module will be switched ON if the cable is cut.  4 fils avec détection de sens et de fraudes / 4-wire with direction and fraud detection / 4-adrig mit Richtungs- und Manipulationserkennung For specific versions, check on the label the connections to be made. Pour les versions spécifiques, vérifier sur l'étiquette les branchements à effectuer. Beachten sie bei spezifischen Ausführungen das Etikett mit den Anschlussinweisen.
IZAR BE PULSE empty battery 	The disconnection alarm of the radio module will be switched ON.
Radio module removal 	If the radio module is removed from IZAR BE PULSE, the disconnection alarm of the radio module will be switched ON.
Pulse emitter removal 	If the pulse emitter is removed, the disconnection alarm of the radio module will be switched ON.

The alarms are reset after a programmable period on the radio module side. This period must be compatible with the frequency of reading.

2.3 DIMENSIONS



The cable length can vary between 2.95 and 3 meters due to the manufacturing tolerance.

fig.6

3 INSTALLATION AND CONNECTION

3.1 INSTALLATION

IZAR BE PULSE must be used together with a radio module.

Ensure that the radio module is correctly fixed to the IZAR BE PULSE

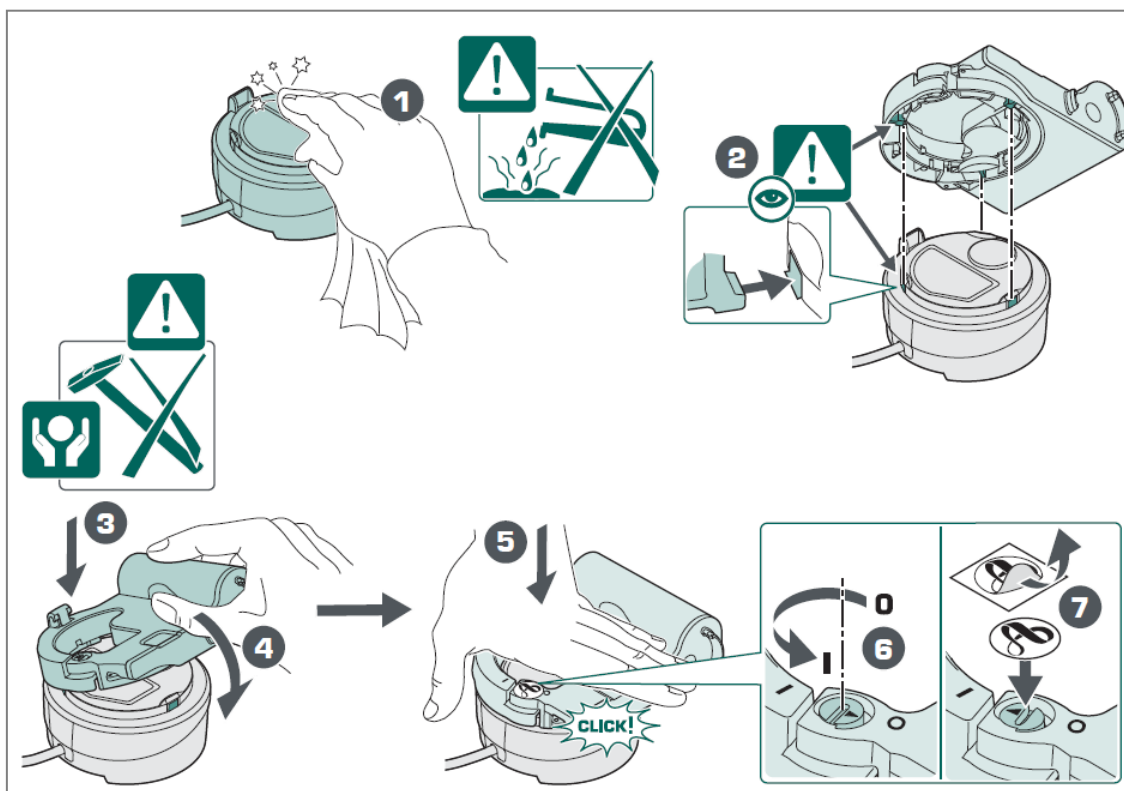


fig.7

IZAR BE PULSE can be installed in different ways to suit different types of environments. It can be fixed indoor or outdoor.

Typical installation on a pole or on a wall.

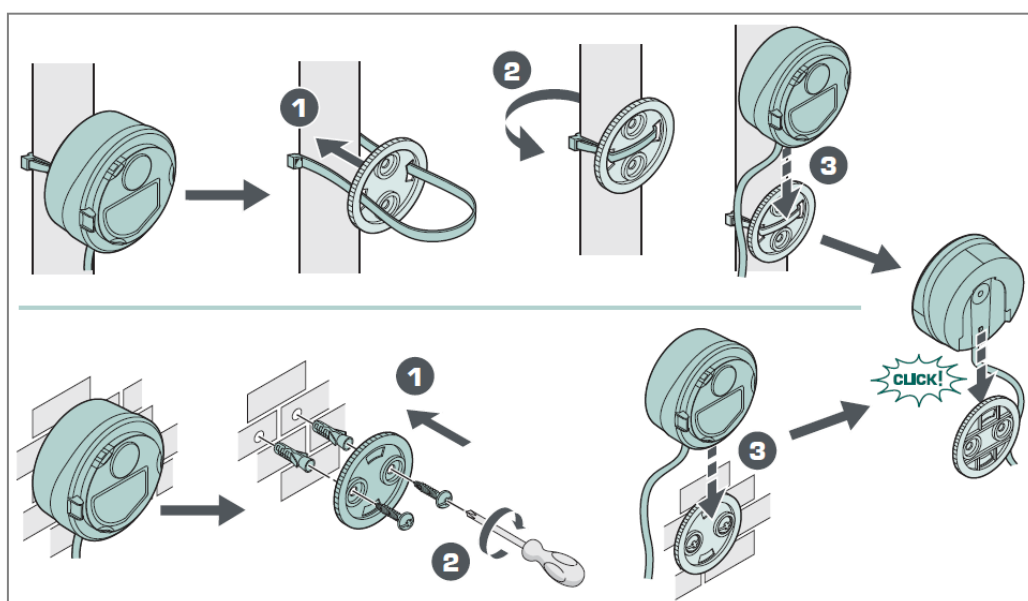


fig.8

3.2 CONNECTING PROCEDURES

Strip the wires of the IZAR BE PULSE, as well as those of the pulse emitter, for a maximum of 2 mm, in order to ensure a good electrical contact at the quick connector (Scotchlock).

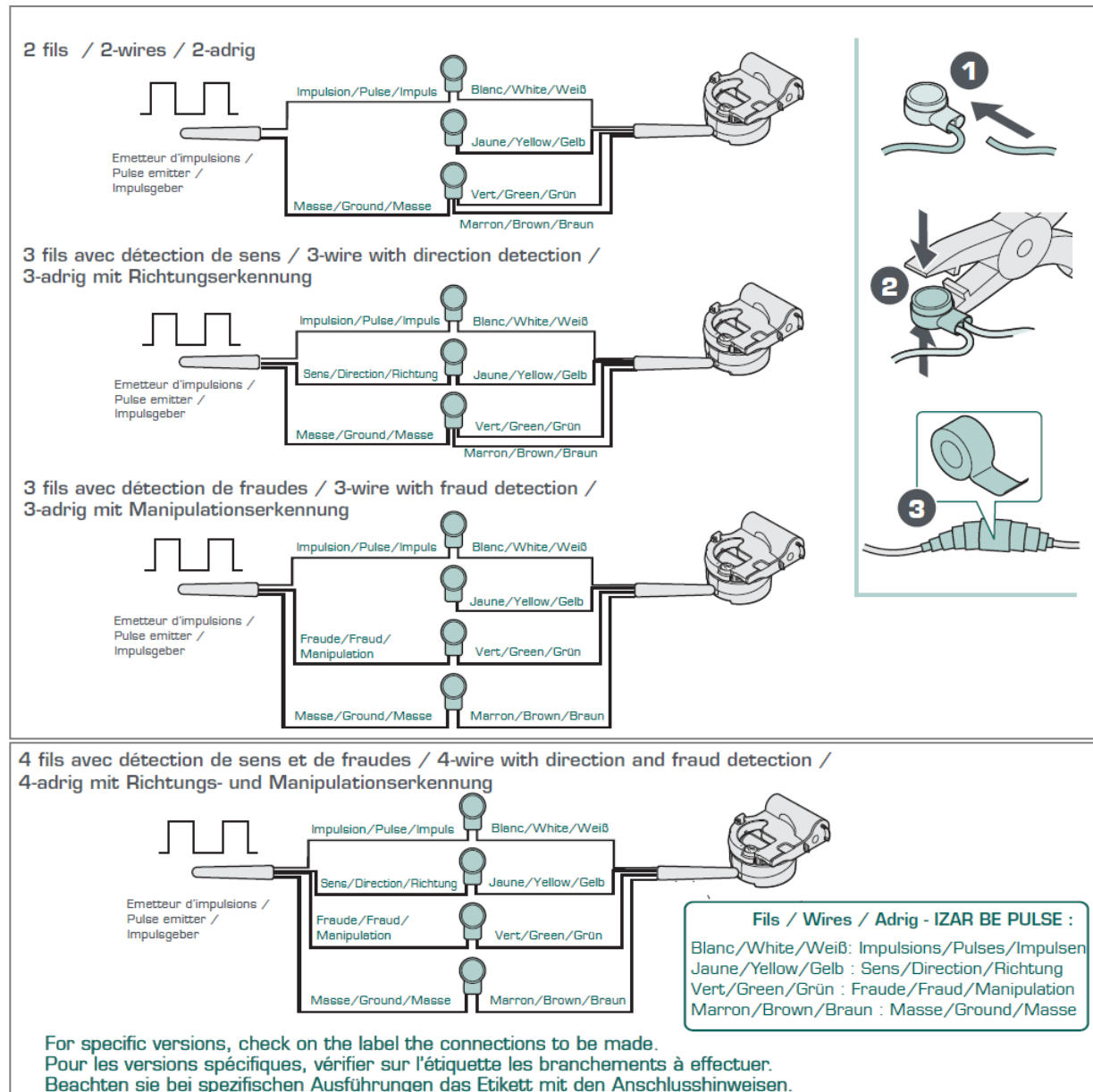


fig.9



The connectors are resistant to ambient humidity but they are not designed to be immersed. For total immersion, use the "flood zone" waterproofing kit available at Diehl Metering.

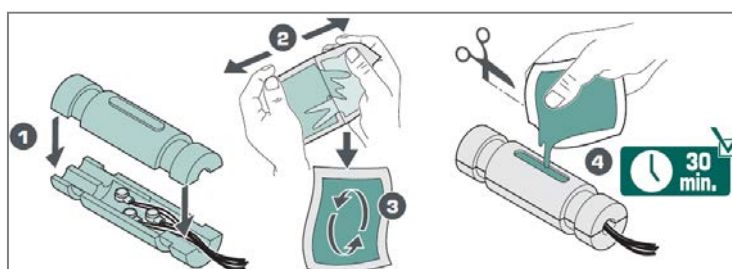


fig.10

4 PROGRAMMING

For details regarding programming of the radio module, please refer to the user guide of the radio module and IZAR WIN CE / IZAR@MOBILE 2 software.

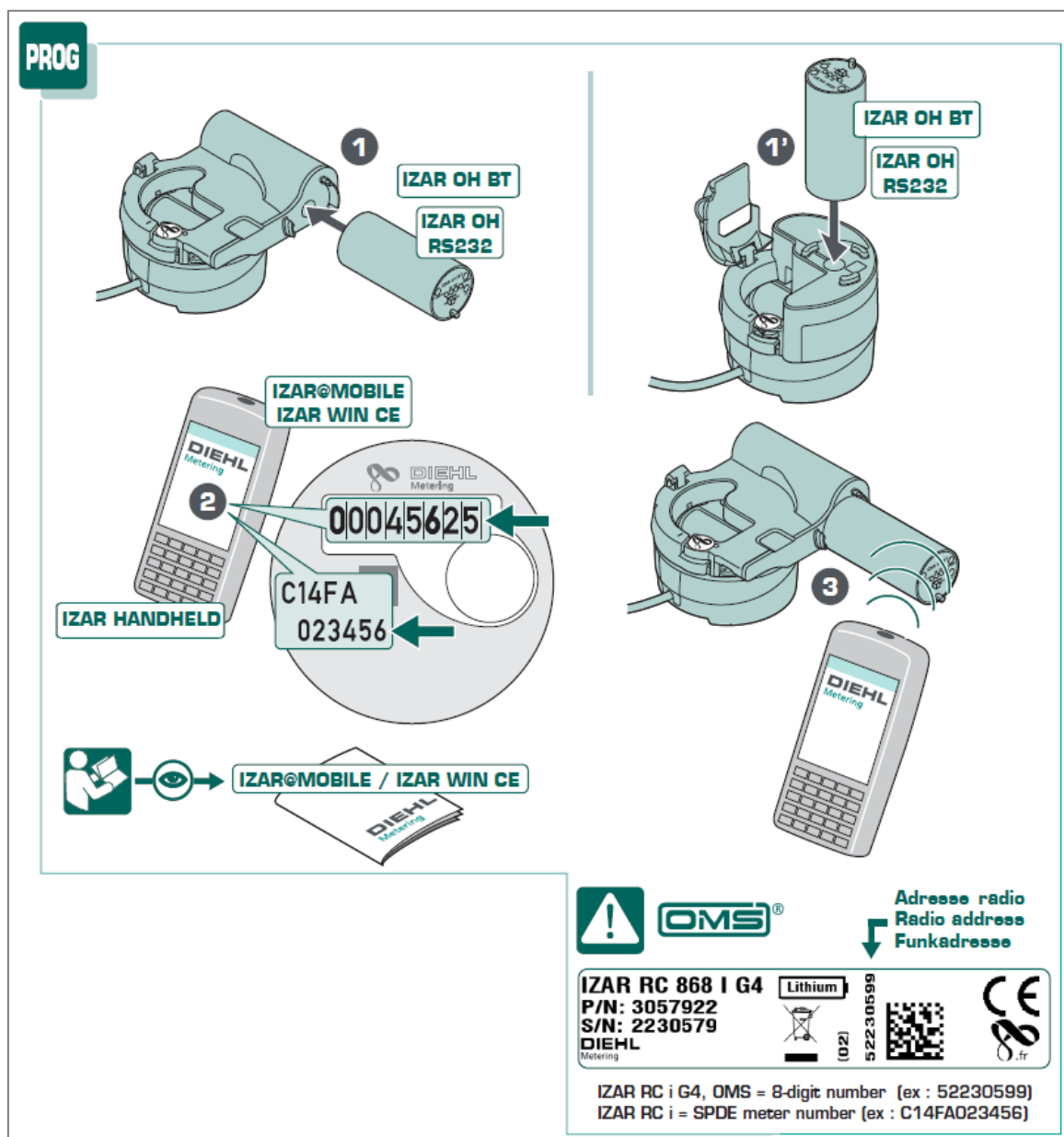


fig.11

5 MAINTENANCE

Maintenance	IZAR BE PULSE requires no specific maintenance. Do not clean it with solvents or abrasive cleaners, as these would damage the plastic shell. If necessary, use a damp cloth or sponge.
Storage	The product should be stored in a dry place at temperatures between -20°C and +70°C. Caution: Prolonged storage at high temperatures may cause a significant loss of autonomy.

6 KIT IZAR BE PULSE + IZAR PULSE I

IZAR BE PULSE is also available as a factory-assembled kit with an IZAR PULSE i. The cable length can vary between 4.95m and 5m due to manufacturing tolerance. The kit is IP68 and can be submerged. For more technical details about the IZAR PULSE i pulse emitter, refer to its specific user guide.



fig.12

7 REGULATIONS

7.1 CONFORMITY

The product complies with the European directives, as indicated on the EU declaration of conformity delivered with the product and available at:

<https://www.diehl.com/metering/en/support-center/download-center/>

7.2 RECYCLING



The transposed European Directives on waste batteries and waste electrical and electronic equipment supervise the actions necessary to limit the negative impact of the product end of life.

This product is subject to special collection and disposal. It should be deposited at an appropriate facility to enable recovery and recycling.

For further details about recycling this product, please contact your Diehl Metering agency