

## The Kent Range of Metering Products

### T131, T132, T133, T134 pulse units

Elster retrofit pulse units are suitable for V300 (Master 2000), H2000 and H3000 water meters. The range includes four models: T131 (LRP, Low Resolution Pulser); T132 (DLRP, Dual Low Resolution Pulser) which provides two low resolution pulse outputs in one unit; T134 (HRP, High Resolution Pulser); and T133 (DRP, Dual Resolution Pulser) which provides high and low outputs in one unit.

Note: The fitting of a pulse unit involves breaking the wire lock seal. Regrettably, this invalidates the outstanding warranty.

Please note: Although these pulse units are of robust construction, the T131, T132 and T133 do contain a glass reed switch, therefore they should be handled with care.

#### T131 — Low Resolution Pulser

The T131 unit generates 10 pulses per revolution of the centre pointer. With a volt free contact closure design, it utilises a 10 pole magnet operating a reed switch to generate the pulses.

#### Litres per pulse

Meter size (mm)	40	50	65	80	100	150	200	250	300
V300	1	1	–	10	10	–	–	–	–
H2000	10	10	10	10	100	100	100	100	100
H3000	10	10	10	10	10*	100	–	–	–
C3200	–	10	–	10	10	100	–	–	–

\*Some earlier meters will give 100 litres/pulse, as the original dial registration was 1000 litres/revolution of the centre pointer.

#### T132 — Dual Low Resolution Pulser

The T132 combines two low resolution pulse outputs in one unit. Its specifications per output are identical with the T131.



## T134 — High Resolution Pulser

The T134 unit is a uni-directional pulser which generates 100 pulses per revolution of the centre pointer. It uses a slotted disc and an opto-sensor to generate the pulses.

### Litres per pulse

Meter size (mm)	40	50	65	80	100	150	200	250	300
V300	0.1	0.1	–	1	1	–	–	–	–
H2000	1	1	1	1	10	10	10	10	10
H3000	1	1	1	1	1*	10	–	–	–
C3200	–	1	–	1	1	10	–	–	–

\*Some earlier meters will give 10 litres/pulse, as the original dial registration was 1000 litres/revolution of the centre pointer.

## T133 — Dual Resolution Pulser

The uni-directional T133 unit has both the T131 and T134 options within the same enclosure with colour coded cables (black for T131, grey for T134) to distinguish the low and high resolution outputs.

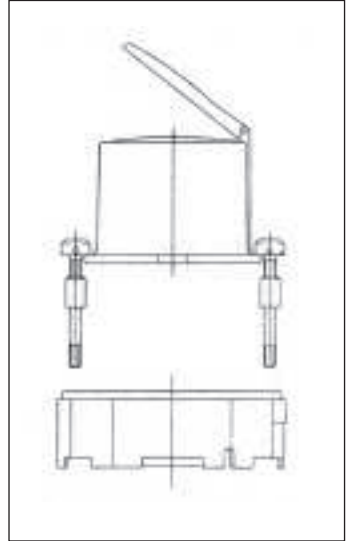
### Pulser Specifications

	Units	T131/T132/T133	T134/T133
Supply voltage max	Volts	50	15
Supply voltage min	Volts	–	6
Supply current	mA	50	20 max
Switch rating	mA	–	18 max sink
Switch type		reed	NPN transistor + 10k pullup
Series resistance	Ohms	100	–
Resistor dissipation	Watts	0.25	–
Cable size	strands/dia	7/0.2	7/0.2
Cable – No. of cores	–	2	3
Cable core colours	–	red, black	red, black, white
Cable diameter	mm	4.1	4.8
Cable screened		Yes	Yes
Cable termination*	–	Bare wires	Bare wires
Cable sheath colour	–	Black	Grey
Std. cable length	metres	5	5

\*other factory fitted cable terminations are optional

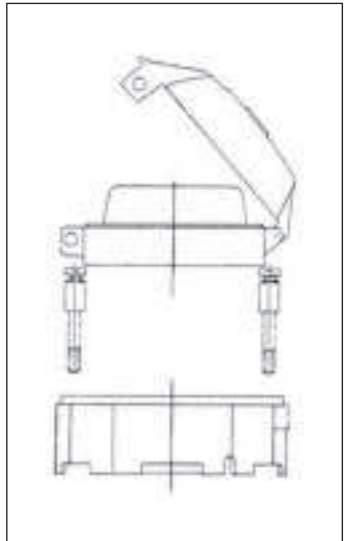
## Brass Register

1. Cut and remove sealing wire.
2. Unscrew the two large screws clearly visible on either side of register.
3. The register can then be lifted away.
4. Fit pulse unit using the two screws provided, in same position as register.
5. Place the register on top of the pulse unit (you will see that the pulse unit screws have female threads in the head) and screw into place using the two large screws removed under 2.
6. Reseal the meter.



## Low Profile Register (short, all-plastic)

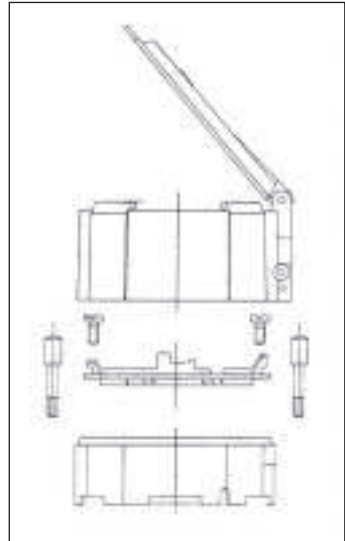
Follow the same procedure as for the brass register. Note that the allen screws securing the register are concealed in the black plastic surround by plastic caps. Below the register is a round metal plate (magnetic shield). Position this on top of the pulse unit before re-fitting the register.



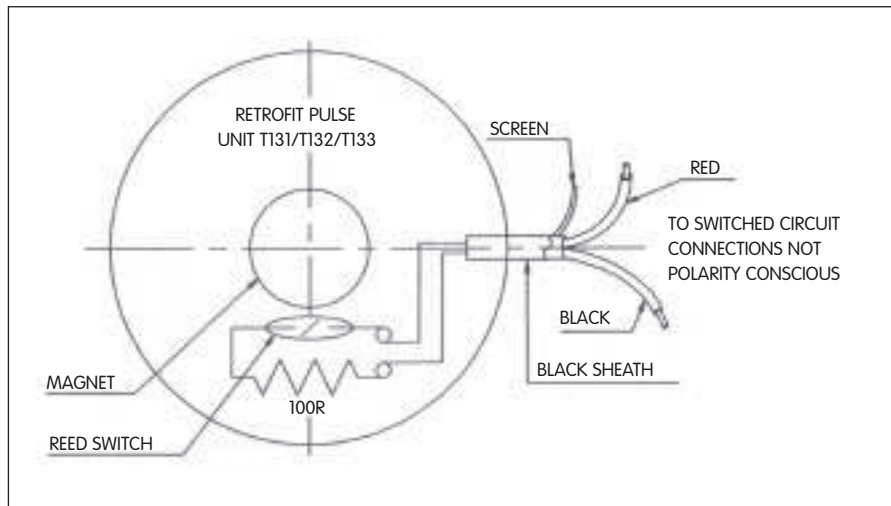
## New Copper-Can Type Register

This register has a plastic casing. Where the lid is hinged to the casing, follow the seam to the base of the counter.

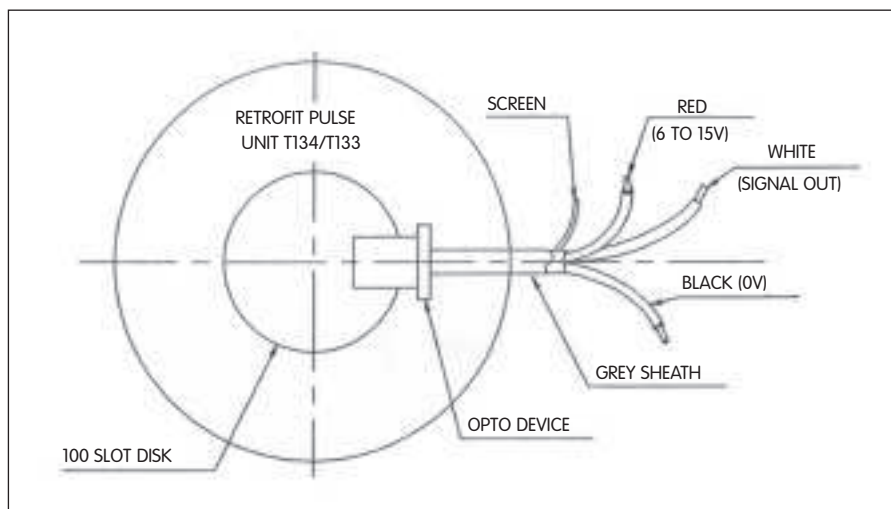
1. Remove the seal.
2. At the register base is a screw and nut. Unscrew the screw from the nut (make sure the nut does not get lost as on early meters it was loose in the casing; on more recent meters the nut is encapsulated and will not fall out).
3. Pull the plastic casing apart at the seam (be careful not to crack the plastic). The whole register will be loosened and will come away from the meter.
4. Under the register on the meter top cover is a brass ring attached with two screws. Unscrew the two screws and remove the ring.
5. Fit the pulse unit as previously described.
6. Attach the brass ring to the top of the pulse unit with the two screws.
7. Place copper register in the centre of the brass ring, and clamp the plastic shroud around it.
8. Fit and tighten screw on the plastic shroud.
9. Reseal.



## Electrical Installation



T131/T132/T133 – 10 pulses per revolution output



T134/T133 – 100 pulses per revolution output

## Health & Safety at Work Act 1974

1. We wish to inform you that in accordance with Section 6 of the above Act, we take every care, as far as is reasonably practicable to ensure that our products are safe without risk to health when properly handled, transported, installed, used, maintained and disposed. However, as manufacturers and suppliers of a wide range of products, we would advise you that related information for these products will be found in the following literature.

- Regulations (such as the COSHH Regulations, Manual Lifting Regulations, Personal Protective Equipment Regulations), British Standards and other applicable ISO and European Specifications and Codes of Practice, as applicable to the intended application of the products.
- Regulations for electrical equipment of buildings (published by the Institution of Electrical Engineers).
- Catalogues and product leaflets of this Company or literature which may be obtained by specific request to the Company.

It is important that the products concerned should be installed, handled, transported, commissioned and maintained by, or under the supervision of, competent persons in accordance with good engineering practice and:

- IEE Regulations for the electrical equipment of buildings.
- Regulations, British, European, ISO and other standards, specifications and Codes of Practice, as applicable to the intended application of products, i.e. Water Supply By Laws.
- Statutory Requirements.
- Any instructions specifically advised by the Company and, where appropriate, with particular reference to information marked on the product. The product must only be used in the condition supplied or specified by the Company, without modification, and for the purpose for which it was designed.

2. In accordance with your statutory duties to employees and other persons, you are therefore requested to take such steps as are necessary to ensure that any appropriate information relevant to our products is made available by you to everyone concerned. The Company takes no responsibility for any failure to comply with the above guidelines.

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The Company's policy is one of continuous improvement and the right is reserved to modify the specifications without notice.

## The Kent Range of Metering Products

# Electronic Pulse Splitter

**Available for V100, V110, V200,  
V210, V120, V140, S2000, C4000,  
C4200 and H4000 meters**

The Elster Pulse Splitter is a cost-effective, dual output pulse transmitter, providing a secondary output from a single pulse source and is specifically designed for use with the above meters (model to be specified), to meet today's Water Industry demand.

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The Pulse Splitter, which is only suitable for the low resolution (reed switch) type of meter outputs. The standard Pulse Splitter is provided with a 2 metre cable length between meter probe/pulse unit and Splitter box input, with the output cables terminating in 2 x 5 metre flying leads which are sealed against water ingress.



# Electronic Pulse Splitter

## INSTALLATION INSTRUCTIONS

### Operating Principle

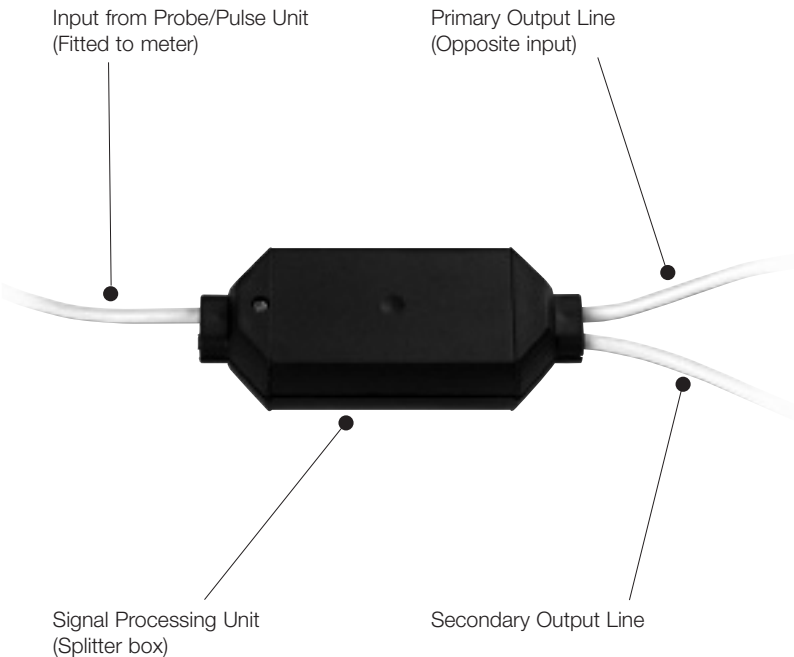
The probe/pulse unit connection cable from the meter, enters the signal-processing unit and via the internal electronic circuitry, splits the signal into two identical outputs. This enables the output cables to simultaneously transmit a volt free signal to a building management system and independently, to a logger or remote wall counter.

Note: The Primary and Secondary cables are defined as 4 x 7/0.2 mm with core colours of RED, BLACK, YELLOW and BLUE, enclosed in a WHITE outer sheath, 3.8/4.0 mm outside diameter.

### Pulse Splitter Connections

Core Colour	Primary Cable	Secondary Cable	Function
Red	Most Positive (+)		Pulse Reed (Reed Switch Closure)
Black	Most Negative (-)		
Yellow	Not Polarity Sensitive (As Pulse Unit specification)	Not Connected	Tamper Loop or Security Reed
Blue	Not Polarity Sensitive (As Pulse Unit specification)	Not Connected	





**Note:** The two outputs are designated as Primary and Secondary. The Primary output, (opposite the input) has the pulse reed wiring and any Tamper Loop or Security Reed wiring of the original probe.

The Secondary output has the pulse reed wiring only, ie, the Yellow and Blue wires are not connected.

The Pulse Splitter is designed and rated to be fully compliant with all retro-fit probes and pulse units in the Elster range of products.

However, the Pulse Splitter is not necessary when a dual output is required from certain meters, ie, H2000, H3000, V300 or the C3200 combination (main) meter, as there is already a complete range of dedicated dual output pulse units available. (Detailed on leaflet ref: 8596A4793).

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  - Regulations, British, European, ISO and other standards, specifications and Codes of Practice, as applicable to the intended application of products, i.e. Water Supply Bye-Laws.
  - Statutory Requirements.
  - Any instructions specifically advised by the Company and, where appropriate, with particular reference to information marked on the product. The product must only be used in the condition supplied or specified by the Company, without modification, and for the purpose for which it was designed.



# Electronic Pulse Splitter

## INSTALLATION INSTRUCTIONS

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