

S1D ABSOLUTE-ENCODER

Now also available for the IRM rotary meter series

After successfully extending the use of the ENCODER technology to all turbine meter and diaphragm meter models, Elster-Instromet is now continuing the process to include all of its rotary meters. Having already implemented the ENCODER in the RVG series, it is now also available for the IRM lines

When the ENCODER technology was introduced to the field of gas meters in 1999, it was first only used for large turbine meters in connection with flow computers. Now that this technology has started to establish itself and is also applied in smaller gas stations, it is becoming more and more important also for diaphragm and rotary gas meters. This trend has been confirmed by an increasing demand for rotary meters with ENCODER indexes for new installations. Furthermore, rotary meters in existing stations are now being more and more upgraded by retrofitting the existing meters with ECODER indexes.

Upgrading a gas meter with an ENCODER-add-on-index is, in principle, at any time possible as long as a mechanical instrument drive in accordance with EN 12261 or EN 12480 is either available or retro-fittable. That is the case with all IRM meters. But from a technical point of view, the better and more cost-effective solution is the Absolute-ENCODER as the main index.

As of now, the following models are available with an Absolute-ENCODER as the main index:

RVG rotary meters:	G 40 up to G400
IRM-1 rotary meters:	G 25 up to G 250
IRM-3 DUO rotary meters:	G 400 up to G 1000
TRZ turbine meters:	all sizes
SM-RI turbine meters:	all sizes
Q series Quantometers:	all sizes
BK-G diaphragm meters:	all sizes

The full advantages of the Encoder technology can be used by connecting the meter to an EK 260 volume corrector, to devices of the gas-net series, to Model 2000 flow computers, or to the new DL 210 data logger (see page 9).



Fig 1: IRM-1 with ENCODER

Retro-fitting ENCODER indexes:

When the subject of ENCODER is brought up, we are often asked whether already existing meters which do not have a mechanical instrument drive can also be retro-fitted with an ENCODER. This is often the case with relatively new meters which are intended to stay in operation for a long time.

The retro-fitting is now possible for nearly all meters, whereby the meter type and year of manufacture have to be considered.

As from the year 2000, all TRZ turbine meters and RVG rotary meters with an S1 index can be retro-fitted with an Absolute-ENCODER as a main index on site. Recalibration is not necessary. The only requirement is that a calibration officer or an employee from a state-approved test centre is present to officially seal the device.

The situation is different for SM-RI, IRM-1, IRM-3 Duo series as well as older TRZ turbine meters manufactured up to 1999. After retrofitting with an ENCODER index these meters should be checked with the help of a high-frequency pulser in order to verify the correctness of the gear ratio, or they must be recalibrated if a high-frequency pulser is not available.

Devices from other manufacturers which have a mechanical instrument drive can be retrofitted

ENCODER principle:

Elster-Instromet's Absolute-ENCODER is a mechanical index which is read out optically with the help of light barriers. The power supply for the index comes from supplementary devices such as a volume corrector.

The ENCODER itself requires neither a battery nor a permanent external power supply.



Fig 2: ENCODER as double-index

with an ENCODER-add-on-index. This is now also available as a double-index and, therefore, can be used for all flow directions or all rotational directions of the instrument drive without the need for an additional reversing gear.

Elster-Instromet's ENCODER technology gives gas suppliers a variety of application possibilities. Why not let us help you in your choice?

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Fig 3: SM-RI with ENCODER

Meter Type	Version	Condition for Retro-fitting
TRZ, TRZ-IFS, TRZ2, RVG	from mid 2004 on	on site, pressurised
TRZ, TRZ-IFS, RVG	from 2000 on, with S1-index	on site, depressurised
TRZ, TRZ-IFS, RVG	until 2000	on site, depressurised
SM-RI		on site, depressurised
IRM-1, IRM-3 DUO		on site, depressurised
IRM-1, IRM-3 DUO		on site, depressurised
BK-G2,5 – BK-G100	from 2005 on, with Z6 index	