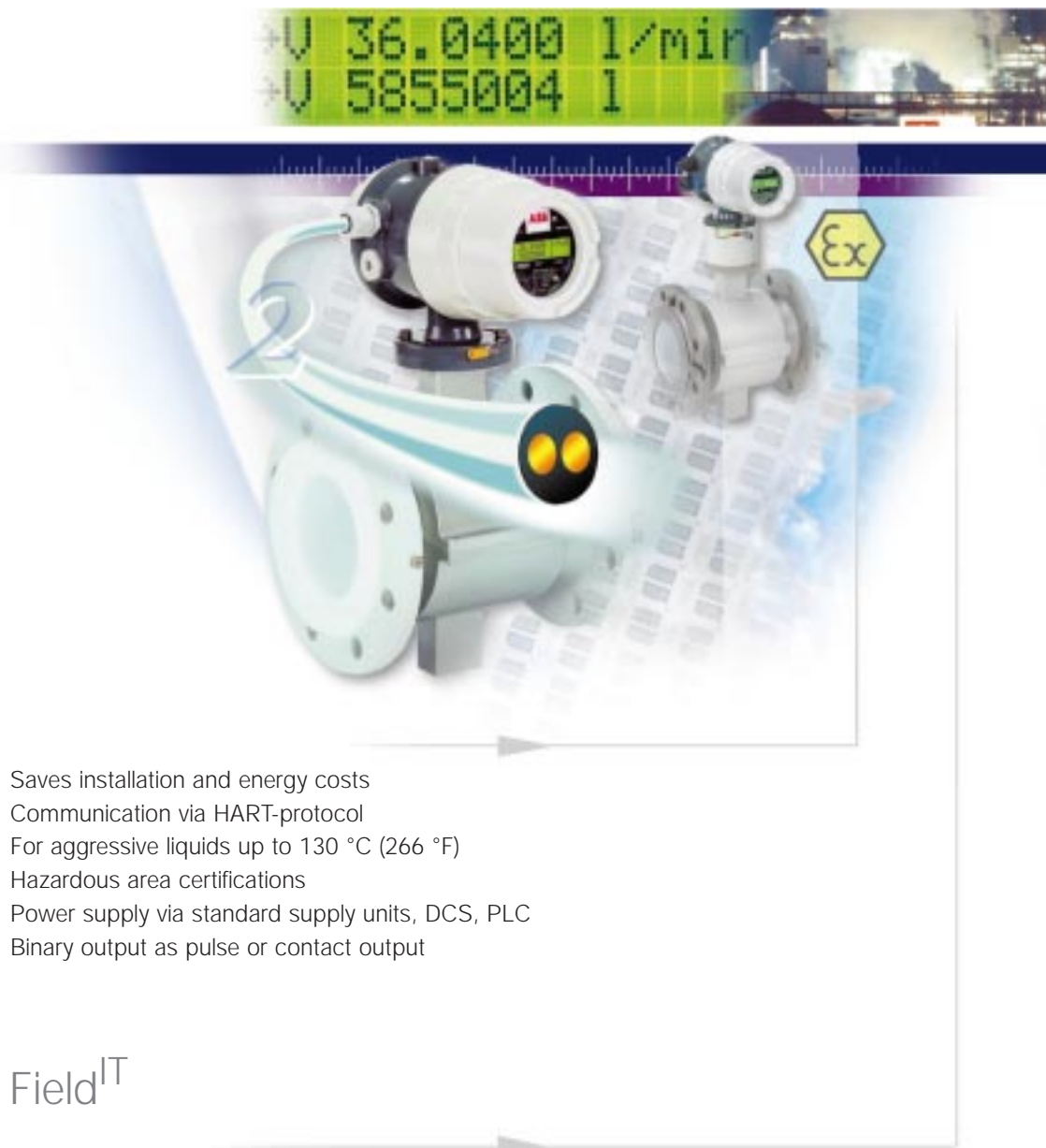


# Electromagnetic Flowmeter FXT4000 (COPA-XT)

2-Wire Flowmeter for the measurement of conductive liquids



- Saves installation and energy costs
- Communication via HART-protocol
- For aggressive liquids up to 130 °C (266 °F)
- Hazardous area certifications
- Power supply via standard supply units, DCS, PLC
- Binary output as pulse or contact output

Field<sup>IT</sup>

Analyze<sup>IT</sup> Control<sup>IT</sup> Engineer<sup>IT</sup> Field<sup>IT</sup> Inform<sup>IT</sup> Operate<sup>IT</sup> Power<sup>IT</sup> **Industrial<sup>IT</sup>**

**ABB**

# FXT4000 (COPA-XT) – energy and installation costs reduced through 2-wire technology

FXT4000 (COPA-XT), the 2-wire electromagnetic flowmeter from ABB offers major benefits. It is your choice when costs have to be reduced and the advantages of a 2-wire instrument are needed.

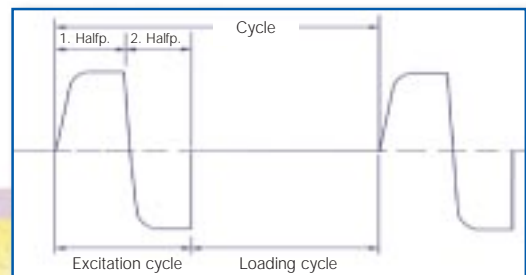
A major benefit of the FXT4000 (COPA-XT) design, is the reduction of the installation costs per meter – a direct result of not requiring a separate power supply cable. In addition, energy costs are also lowered, the meter requiring only 0.5 Watts.

### New primary concept

A unique feature of the FXT4000 (COPA-XT) is a totally reworked flowmeter primary concept, which draws its energy directly from the 4 mA signal.

The instruments are available in a flanged design in flowmeter sizes 3/8" to 4" [DN 10 to DN 100]. The maximum flowrate measurement error is 0.5 % of rate.

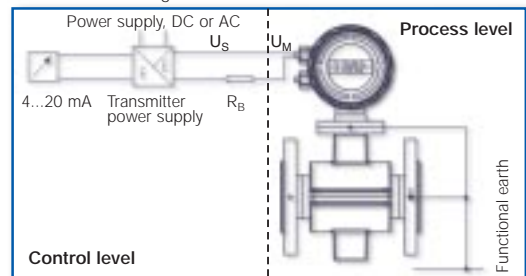
The excitation frequency is essentially proportional to the flow rate. The signal measurement occurs during constant time intervals, i.e. the excitation on cycle is constant and the power cycle is controlled proportional to the flowrate. The noise levels superimposed on the flow signal are eliminated in the input circuit and through utilisation of a high resolution Sigma-Delta A/D converter fed to the processor. It produces a scaled 4...20 mA flowrate signal, controls the internal 2-line LC display and generates a scaled pulse output which is available as an optocoupler output. The meter can be configured on-site using the 3 button control or via the magnetic stick, from an operator unit using HART protocol or from the PC-Operator level using SmartVision®.



Measure cycle schematic

| Meter size DN | min. flow range flow velocity 0-0.5 m/s | max. flow range flow velocity 0-10 m/s |
|---------------|---|--|
| 10            | 0 to 2.25 l/min                         | 0 to 45 l/min                          |
| 15            | 0 to 5.00 l/min                         | 0 to 100 l/min                         |
| 20            | 0 to 7.50 l/min                         | 0 to 150 l/min                         |
| 25            | 0 to 10 l/min                           | 0 to 200 l/min                         |
| 32            | 0 to 20 l/min                           | 0 to 400 l/min                         |
| 40            | 0 to 30 l/min                           | 0 to 600 l/min                         |
| 50            | 0 to 3 m <sup>3</sup> /h                | 0 to 60 m <sup>3</sup> /h              |
| 65            | 0 to 6 m <sup>3</sup> /h                | 0 to 120 m <sup>3</sup> /h             |
| 80            | 0 to 9 m <sup>3</sup> /h                | 0 to 180 m <sup>3</sup> /h             |
| 100           | 0 to 12 m <sup>3</sup> /h               | 0 to 240 m <sup>3</sup> /h             |

Meter size, flow range



Interconnection examples

### Pressure tight encapsulation for hazardous operation (zone1)

Approval: TÜV 98 ATEX 1333 X

II 2G EEx emd [ib] IIC T3...T6.

The supply circuit and the binary outputs can be connected to a transmitter power supply with the intrinsically safe circuits „ib“ or to a line power supply with an increased safety „e“.

### Intelligent 2-wire converter

The 2-wire EMF is a flow metering system with the same power supply requirements as other 2-wire instruments – exclusively from the 4...20 mA current output signal. This is achieved through the utilisation of an innovative magnetic field generating system, which stores the energy and is coupled with a unique driver circuit for pulsed magnetic field excitation.



www.abb.com

**ABB Ltd.**  
Oldends Lane, Stonehouse  
Gloucestershire, GL 10 3TA  
UK  
Tel. +44 1453 826-661  
Fax +44 1453 827-856

**ABB Inc.**  
125 E. County Line Road  
Warminster, PA 18974  
USA  
Tel. +1 215-674-6000  
Fax +1 215-674-7183

**ABB Automation Products GmbH**  
Dransfelder Strasse 2  
37079 Göttingen  
GERMANY  
Tel. +49 551 905-0  
Fax +49 551 905-777