



Overvoltage Protection Unit

Efficient protection of instruments and sensors

ELECTRONICS

ACOUSTIC

WEIGHT

OVERLOADING
SAFETY SYSTEMS

VALVES

TEMPERATURE

DETECT
A FIRE®

FLOW

DENSITY

INTERFACE

PRESSURE

LEVEL

TF
192

DataPro, SonicPro and EnerPro surge arrestors – highly stressable and particularly adjusted to sensors and transmitters. Maximum operational safety at small dimensions.

DataPro 2x1 and SonicPro 3x1 surge arrestors

DataPro 2x1 and Sonic Pro 3x1 surge arrestors are for safe and durable protection of sensitive electronic components at the end of data, measurement and control lines conducting 12 / 24 V DC to protect sensors and transmitters. The surge arrestors are capable of effectively protecting sensors and transmitters from effects caused by overvoltage.

EnerPro surge arrestors for power supply

EnerPro 1-24 Tr is a surge arrestor for 24 V DC power supply and serves as protection of electrical equipment earthed on one side with a power consumption of up to 6 A. EnerPro 220 Tr serves as protection of electrical equipment earthed on one side featuring 230 V AC power supply with a maximum power consumption of 16 A.

Both units are identical and can be snapped onto DIN rails without any problems.

The surge arrestors contain a two-stage protective circuit. Coarse protection is implemented using a gas-filled surge arrestor, the fine protection stage exclusively consists of filter and suppressor diodes. There is no significant leakage current since no varistors are used. This eliminates the need for remote monitoring or regular inspections.

High performance and durability (20 kA leakage current) guarantee long lifetimes and high operational safety of the surge arrestors.

Thanks to failsafe diodes the lightning protection units do not need to be checked regularly. In case of error the diodes will form a short-circuit.

Benefit

- Snap-on fastening on DIN rail
- Leakage current up to 20.000 A
- Failsafe behaviour

Technical Specifications

Measurement principle	Correlation with measurement of the real flow profile
Measurement frequency	1MHz
Protection	IP68
Ex approval	II 2G Ex ib IIB T4 Gb (ATEX) / Ex ib IIB T4 Gb (IECEX)
Operating temperature	Wedge sensor without hydrostatic level measurement • 20 °C up to +70 °C for up to 15 min operating time • 20 °C up to +65 °C when used continuously • 40 °C up to +80 °C when used in Ex Zone 1 Wedge sensor without hydrostatic level measurement • 20 °C up to +50 °C • 40 °C up to +80 °C when used in Ex Zone 1
Storage temperature	-30 °C to +70 °C
Operating pressure	max. 4 bar (combi sensor with pressure cell max. 1 bar)
Medium-contacting materials	Polyurethane, stainless steel 1.4571, PPO GF30, PA Pressure compensation element: POM-C, PMMA, PA, stainless steel 1.4571 (CSM-D only)
Flow velocity measurement	
Measurement range	-350 cm/s to +600 cm/s
Max. Measuring span	Δ 700 cm/s
Quantity of scan layers recorded and computed	max. 32
Zero point drift	absolutely stable zero point
Error limits (per scan layer)	• < 1 % of measurement value ($v > 1$ m/s) • < 0.5 % of measurement value +5 mm/s ($v < 1$ m/s)
Beam angle	±5 degrees
Level measurement – Pressure	
Measurement range	0 to 500 cm
Zero point drift	max. 0.75 % of final value (0 – 50 °C)
Measurement uncertainty	≤ 0.5 % of final value
Temperature measurement	
Measurement range	-40 °C to +80 °C
Measurement uncertainty	±0.5 K

Specifications subject to change