weber
flow-captor

Solid-state flow-captor eurocard system for flow and temperature measurement of liquid and semi-solid media, simple to install, non-intrusive sensing, stainless steel housing

flow-captor Eurocard System
Type 4204.20 + 4971.44 A-FL/T-D

The flow-captor, type 4204.20, is a universally applicable solid-state flow and temperature meter, for liquid and semi-solid media.

In connection with the eurocard, type 4971.44 A-FL/T-D, it forms the flow-captor Eurocard-System for flow and temperature measurement.

The system allows both continuous measurement of medium flow rate and temperature, together with a monitoring function which provides switching signals at adjustable set-points.

It is particularly suitable for extensive liquid flow systems where a large number of measuring points necessitate central panelling, adjustment and evaluation.

Typical applications are found wherever cooling and lubrication systems require accurate and reliable measurement, e.g. oven cooling systems in the steel industry, in raw material productions or in power stations.

flow-captor eurocard for 19" rack mounting

System Displays

LED,red,flashing	sensor/cable failure
LED,green	flow/temperature normal
LED,red	flow below set-point
LED,red	temperature above set-point
Display,3digit (7segment)	indicating flow or set-point temperature

Display Selection

5 position switch:
N...nominal flow rate (cm/s)
1 flow set-point (%)
2 relative flow rate (%)
°C temperature
3 temperature set-point (°C)

Adjustment Potentiometer for

1 flow set-point (%)	2 flow calibration (1 00%)	3 temperature set-point (°C)

All data related to water

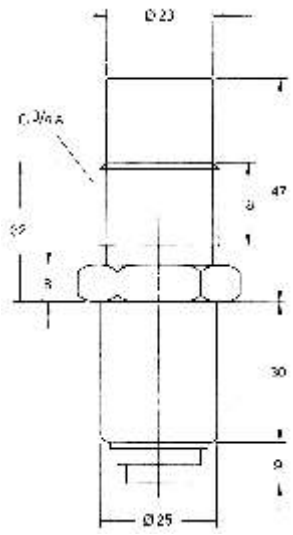
flow-captor Eurocard System

Type 4204.20 + 4971.44 A-FL/TD

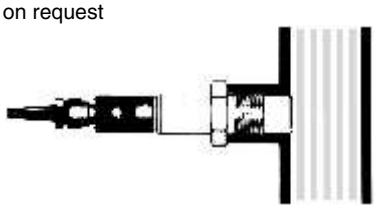
The eurocard converts the pulse-width-modulated (PWM) current input signal from the flow-captor into an analog current and voltage output signal. The related flow-rate will be displayed as a nominal value or as a percentage of the calibrated flow-measurement range.

Alternatively, the pulse-width-modulated current output of the flow-captor can be utilized for computer processing according to the user's requirements.

Dimensions (in mm)



Connection cable with female socket on request



Type 4971. 44 A-FL/T-D

Mechanical Data

Construction	eurocard with aluminium front panel
Front panel dimensions	28 x 30 mm (H x W) (3 HE x 6 TE)
Connection	plug, DIN 41612, 32 pin, model F
Ambient temperature	0 °C to 50 °C (32 °F to 1 22 °F)
Weight	approx. 200 g

Sensing Data

	Flow	Temperature
Linearity deviation	< 5 %	± 3 °C
Temperature drift	< 0.3 % / K	
Signal input	PWM	analog

Electrical Data

Supply voltage	24 V DC, stabilised (max. tolerance ±1 VDC)
Current consumption	max. 350 mA (incl. flow-captor)
Sensor-/ cable failure	red LED, flashing; relay output activated

Analog Outputs

	Flow	Temperature
Voltage	0 - 10 V, resistive load >1 kOHMS	
Current	4 - 20 mA, load 0 - 600 OHMS	
Set-point	0 - 100 % *	0 °C to +90 °C * (32 F to 194 F)
Hysteresis	< 4 %	< 2 %
*adjustable with 18 turn potentiometer		
Solid-state output	NPN, open collector, max. 30 mA	
Relay output	1 relay each for flow, temperature and sensor / cable failure potential free single pole double throw contacts switching load: max. 250 VAC / 30 VDC, 2A resistive load	

Type 4204.20

Mechanical Data

Sensing surface / housing	stainless steel WN 1.4305 (V2A, 303 Ti)
Thread	G 3/4 A / DIN ISO 228 (alternative 3/4"- 14 NPT)
Connection	4-pin miniature round, type 723
Operating pressure	max. 30 bar
Protection standard	IP 67 / DIN 40050 (Equivalent to NEMA 4)
Ambient temperature	-10°C to +70 °C (14 F to 158 F)
Medium temperature	-20 °C to + 90°C (-4 F to 194 F)
Weight	approx. 180 g

Sensing Data

	Flow	Temperature
Measuring range	0 - 100 cm/s (related to water)	0 °C to +90 °C (32 F to 194 F)

Electrical Data

Supply voltage	24 V DC, stabilised
Flow output	pulse width modulated pulse current: 150 mA; pause current < 10 mA pulse period: approx. 10 ms
Temperature output	analog, unlinearised 1000 OHMS at 25 °C; Tc = 7500 ppm ± 250 ppm at 25 °C

Signal Transmission from 4204.20 to 4971.44 A-FL/T-D

Connection cable	4 x 0.5 mm^2 ; if required, a shielded cable has to be used
Distance	max. 200 m (with 4 x 0.5 mm^2 cable)

weber Sensors Inc
Member of the captor Group
2230 Towne Lake Pkwy., Bldg. 900, Suite 200 • Woodstock, GA 30189
Phone: +1(770)592-6630 • Fax: -6640 • E-mail: info@captor.com • www.captor.com