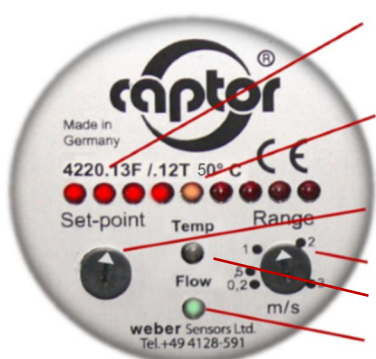


The **flow-captor** type 4220.xx is a unique, precise "metering" flow switch. This highly accurate flow switch is used in every industry where flow and temperature monitoring of waterbased liquid media is of importance. It works accordingly to the calorimetric principle, which is evaluated by using microprocessor technology. With this flow-captor it is possible to adjust an exact flow set-point and simultaneously to measure the flow speed, even up to very low flow conditions.

- precise switching sensor pressure resistant up to 100 bar
- high accuracy even under low flow conditions
- separate adjustment for range and set-point
- analog display of actual flow speed and display of the adjusted set-point
- The temperature set-point will be factory set according to the customer's request.
- LED-display for output status
- **ISO 9001 : 2015**



### Control and Display Panel



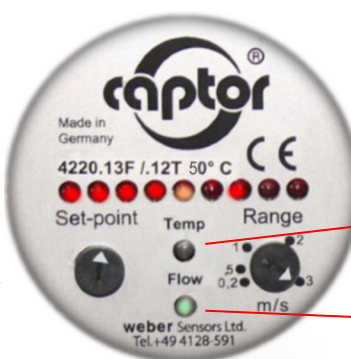
LED-string for display of flow range

Flashing LED for display of adjusted set-point

Potentiometer for flow set-point

Potentiometer for adjustment of measuring range from .2 to 3 m/s  
LED (green/red) for display of output status "temp"  
LED (green/red) for display of output status "flow"

### Example of operation



Measuring range adjusted to 3 m/s = 100% (9. LED)

Set-point adjusted to 50% of end value (5. LED)

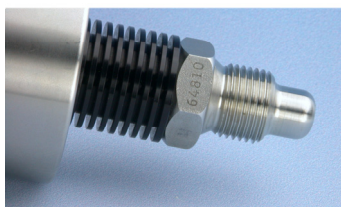
Flow speed equates 75% (7. LED)

Temp LED is red:  
Flow rate is above the adjusted set-point.

Flow LED is green:  
Flow rate is above the adjusted set-point.



**G 1/2" BSP thread  
Standard size**



### Sensor heads

The sensor head is constructed of only one piece of electro-polished stainless steel and without any sensor element intruding into the medium. Easy installation by means of T-piece or welded fitting.

For aggressive media special materials as Titanium, Hastelloy, Monel or a special sensor coating can be offered. The housing is constructed of glass fibre reinforced PBTP (Ultradur®). The electronics inside is completely epoxy resin encapsulated.

The **flow-captor** 4220.xxM is available with different sensor head versions:

- 1/2" BSP thread – standard size –
- Extended sensor probes with 1/2" BSP thread
- NPT thread as option



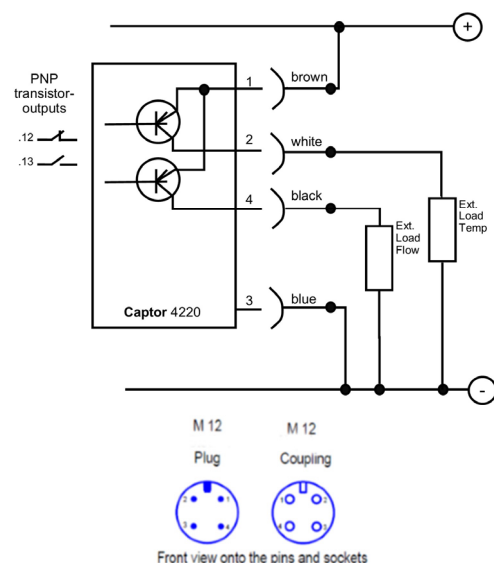
# Flow monitor for liquid media with temperature set-point

## flow-captor 4220.xx<sup>F</sup>/.xx<sup>TM</sup> xx° C



Technical Data	
Type	4220.xx <sup>F</sup> /.xx <sup>TM</sup> xx° C
Medium	water-based media (other media on request)
General Sensor Data	
Medium temperature	-20° C to +80° C / -4° F to +176° F
Ambient temperature	-20° C to +70° C / -4° F to +158° F
Pressure	max. 100 bar (1450 PSI)
Sensor Flow	
Measuring range	0-20 cm/s to 0-300 cm/s, continuously adjustable
Set-point range	approx. 15% - 90% of range setting
Response time	2 s - 10 s depending on range setting
Linearity deviation	< 5%
Repeatability tolerance	< 2%
Hysteresis	ca. 10%
Temperature drift	< 0,3% K
Sensor Data Temperature	
Set-point	50° C, 70° C, 80° C / 122° F, 158° F, 176° F (other set-points on request) (please indicate when placing the order)
Set-point accuracy	± 3°
Response time	ca. 5s
Hysteresis	5° C / 41° F
Mechanical Data	
Protection class	IP 67
Material of housing	stainless steel AISI 303
Material of sensor probe	stainless steel AISI 303, AISI 316Ti, Titanium or Hastelloy C4/C22 on request
Electrical connection	M12 4-pin, 2 m oilflex cable 4 x 0,34 mm <sup>2</sup> type 4941 (must be ordered separately)
Electrical Data	
Operating voltage	18 to 30 V DC, incl. residual ripple
Current consumption	max. 150 mA (pulsed)
Power consumption	approx. 1 W
Switching current	≤ 400 mA
Circuit protection	reverse polarity, short circuit and overload
Voltage drop	< 2,5 V at max. load
Initial operation	approx. 10 s after connection of power
Output	flow and temperature PNP n.o. and n.c.

Connection diagram:



types / function table 4220.XXF/.XXTM XX° C				
Flow	pnnp output .12F	Flow LED	pnnp output .13F	Flow LED
flow > switch point	○	red	●	green
flow < switch point	●	green	○	red
Temperatur	pnnp output .12T	Temp. LED	pnnp output .13T	Temp. LED
Temperature > switch point	○	red	●	green
Temperature < switch point	●	green	○	red

= Standard Series (other combinations on request)

Switching state semiconductor output : ● energized  
○ dead

since 1976



LASER  
MEASURING SYSTEMS

www.fae.it  
e-mail: fae@fae.it

FAE S.R.L. • Via Tertulliano, 41 • 20137 Milano  
Tel. +39 02 55187133 • Fax +39 02 55187399

Technical data subject to change Rev. AD / 27.04.17