

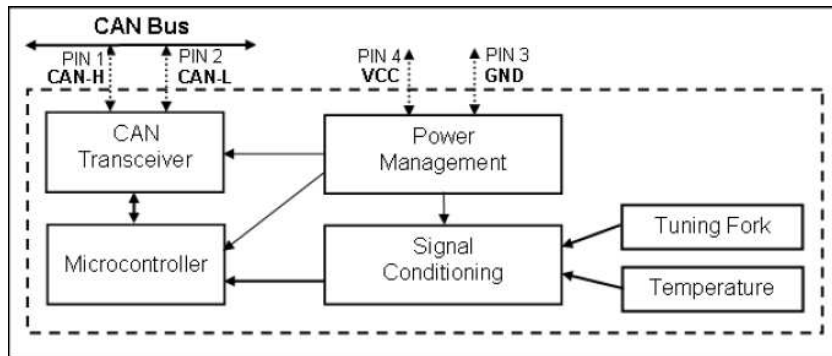
# FPS2800B12C4

Datasheet

## Electrical Characteristics

(@Vcc=12Vdc, T=100°C, unless otherwise noted)

Electrical characteristics	Symbol	Minimum	Typical	Maximum	Unit
Supply voltage	Vcc	9	12	36	Vdc
Supply current (steady state)	Iavg		70	100	mA



Block Diagram

## Transmission Data

Viscosity	Minimum	Typical	Maximum
Data range (cP)	0.0		1003.9
Limits (DATA)	0x0000		0xFAF9
Resolution (cP per bit)		0.015625	
Update period (s)		30	
Density	Minimum	Typical	Maximum
Data range (gm/cc)	0.000		1.9608
Limits (DATA)	0x0000		0xFAF1
Resolution (gm/cc per bit)		0.00003052	
Update period (s)		30	
Dielectric constant	Minimum	Typical	Maximum
Data range (-)	0.00		7.842
Limits (DATA)	0x0000		0xFAF1
Resolution (per bit)		0.00012207	
Update period (s)		30	
Temperature	Minimum	Typical	Maximum
Data range (°C)	-273.0		+1735
Limits (DATA)	0x0000		0xFB00
Resolution (°C per bit)		0.03125	
Update period (s)		30	

**Self-Diagnostic**

Status message code	Bit position
Tuning fork – impedance below normal or shorted to ground	1
Tuning fork – impedance above normal or sensor damaged	2
Tuning fork – ASIC over temperature conditions	3
Fit – simplex algorithm failed to converge	4
RTD – resistance below normal or shorted to ground	5
RTD – resistance above normal or sensor damage	6
RTD – sensor temperature over temperature conditions	7
Internal – system error	8

Diagnostic bit is set to '1' when error is detected.

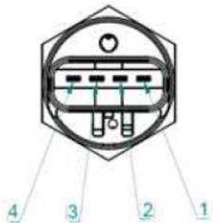
**FPS2800 Standard SPN and Standard PGN**

Parameter	SPN	PGN	Byte position	Length (byte)
Dynamic viscosity	5055	64776	1	2
Density	5056	64776	3	2
Dielectric constant	5068	64776	7	2
Oil temperature sensor	175	65262	3	2
Status code message	N/A	65329	1	1

No delay is required between command write and data read.  
CAN transmission Baudrate = 250kbps

**Connecting & Mechanical Packaging**

**PINOUT Assignment**



N <sub>0</sub>	Function
1	CAN_H
2	CAN_L
3	GND – Ground
4	VCC – Voltage Supply