

## DRS OEM TURBINE FLOW SENSOR



Flow  
Pressure  
Level  
Temperature  
measurement  
monitoring  
control



- **Flow Range 0.6-10.5 GPM**
- **Accuracy  $\pm 1.5\%$  of Full Scale**
- **Plastic, Brass or Stainless Steel Construction**
- **Pulse or 4-20 mA outputs**
- **Optional Additional RTD Output for Flow and Temperature Measurement**
- **Low Cost**

S4



### USA

KOBOLD Instruments Inc.  
1801 Parkway View Drive  
USA-Pittsburgh, PA 15205  
☎ +1 412-788-2830  
Fax +1 412-788-4890  
E-mail: info@koboldusa.com



### CANADA

KOBOLD Instruments Canada Inc.  
9A Aviation  
Pointe-Claire, QC H9R 4Z2  
☎ +1 514-428-8090  
Fax +1 514-428-8899  
E-mail: kobold@kobold.ca

Visit KOBOLD Online at  
[www.kobold.com](http://www.kobold.com)

Model:  
DRS



**Features**

- Flow range 0.6-10.5 GPM
- Accuracy ±1.5% of full scale
- Plastic, brass or stainless steel construction
- Pulse or 4-20 mA outputs
- Optional additional RTD output for flow and temperature measurement
- Low cost

The KOBOLD DRS series is the ticket when your application requires a quality solution with a low price tag. The DRS features a vane-axial turbine design with imbedded permanent magnets and Hall effect sensor. This allows both clear and opaque liquids to be metered. The turbine bodies are available in Noryl thermoplastic, brass or stainless steel. Signal outputs available are frequency or 4-20mA. In addition to the flow signal, an optional Pt-100 RTD output is available to provide temperature as well as flow measurement.



**KOBOLD DRS Series OEM Turbine Flow Sensor**

**Specifications**

**Flow Range:** 0.6-10.5 GPM water

**Maximum Pressure:** 230 PSIG

**Temperature Range:** -4 to 176°F

**Accuracy**

**Freq. Outputs:** 320Hz ±12Hz @ 10.5 GPM

**All Other Outputs:** ± 1.5% of full scale

**Linearity:** ±0.5% of full scale

**Repeatability:** ±0.1% of full scale

**Wetted Materials**

**Plastic Version** Noryl, ultem, buna-N, sapphire, 316 SS

**Brass Version** Brass, ultem, buna-N, sapphire, 316 SS

**Stainless Steel Version** 304 SS, 316 SS, ultem, viton, sapphire

**Electrical Specifications**

**Output K000 OEM Version**

**Power Supply:** 6-16 VDC  
**Output:** NPN open collector, 10mA Max.

**Electrical Connection Standard:** 5ft. PVC jacketed cable

**Electrical Protection:** NEMA 4X

**Output F300 & F500, PNP Freq.**

**Power Supply:** 24 VDC ±20%, 10mA  
**Output:** PNP open collector, 20mA Max.

**Electrical Connection Standard**  
**Type F500:** 6ft. PVC jacketed cable  
**Type F300:** Micro-DC connector 4-pin male

**Electrical Protection:** NEMA 4X

**Temperature Sensor:** Pt-100 3-wire (optional)

**Output Type L342, L343 & L442**

**Power Supply:** 24 VDC ±20%, 10mA  
**Output:** 4-20mA, 2-wire or 3-wire depending on model

**Electrical Connection**  
**Output L342:** Micro-DC, 4 pin male  
**Output L442:** DIN43650 (Hirschmann) plug

**Electrical Protection:** NEMA 4X  
**Temperature Sensor:** Pt-100 3-wire (optional)

**Output Type C34P & C30R Compact Electronics**

**Housing Material:** 303 stainless steel  
**Power Supply:** 24 VDC ±20%, 80mA  
**Display:** 3 digit LED  
**Output Types:** Analog output + 1 PNP switch or 2 PNP switches  
**Analog Output:** 4-20 mA, 3-wire RLoop < 500 ohms  
**Switch Type:** PNP, open collector 300 mA Max.

**Electrical Connection** Micro-DC, 5-pin male

**Electrical Protection:** NEMA 4X

**Order Numbers for Standard Types**

Body Materials	Series	Mechanical Connection	Output/Electronics	Options
Brass Stainless Steel Noryl Plastic	DRS-9180 DRS-9280 DRS-9380	N5 = 3/4" NPT male	F300 = PNP Frequency output, Micro-DC plug F500 = PNP Frequency output, 6 Ft. PVC cable  L342 = 4-20 mA, 2-wire, Micro-DC plug L343 = 4-20 mA, 3-wire, Micro-DC plug L442 = 4-20 mA, 2-wire DIN 43650 plug C34P= Compact electronics 4-20 mA + 1 PNP switch C30R= Compact electronics 2 PNP switches Z340= Analog Indicator + 4-20mA 3-wire	P=Pt-100 3-wire RTD (not available with electronics L442, C34P & C30R)

**Accessories**

807.037 = mating 4 PIN Micro-DC connector with 6 ft. cable for output types F300, L342, L343 & Z340  
807.007 = mating 5 PIN Micro-DC connector with 6 ft. cable for output types C34P & C30R

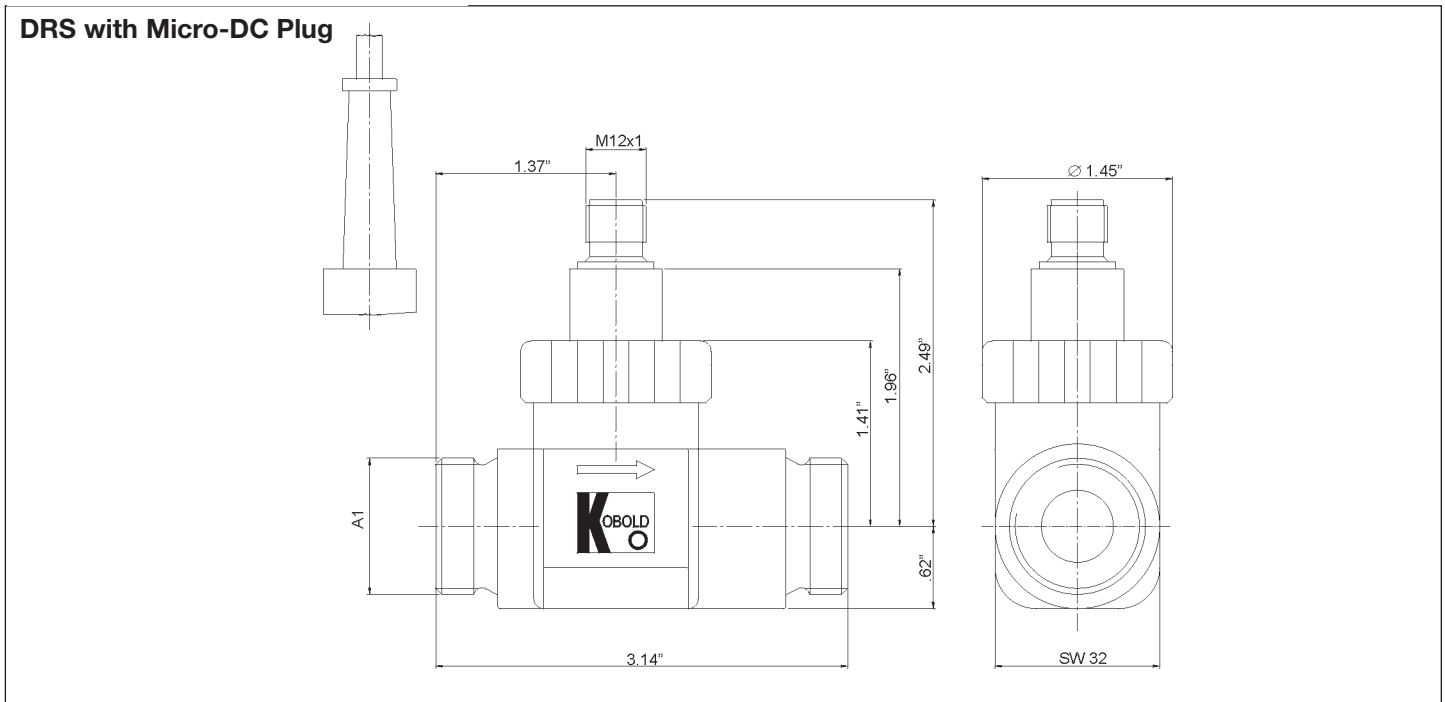
**Order Numbers for OEM Versions**

Body Materials	Series	Mechanical Connection	Output Type
Brass Stainless Steel Noryl Plastic	DRS-0180 DRS-0280 DRS-0380	N5 = 3/4" NPT male	K000 = NPN frequency output, 5 ft. PVC cable without CE

S4

Example: DRS-9180N5F5000

**DIMENSIONS**



DIMENSIONS

DRS with Compact Electronics

