

Mfrs. List No.	Order Code	1+	10+	25+	
1.5 l/min, 15VA	FS15	730-889	1,079.00	944.00	917.00
3.5 l/min, 15VA	FS22	730-890	1,161.00	1,016.00	929.00

Flow Transducers

Compact, Pulse Output
1 - 25 l/min.



'Dataflow Compact' is for monitoring low flows of liquids with an electronic output signal at low cost. Fluid impacts on a twin-vaned turbine which rotates at a speed proportional to the flow rate. The rotation is detected optically and converted to a pulse output signal suitable for display or control of flow rate, totalising or batch control.

Electrical connections, 3 wire H = 29, W = 52 overall, D = 27
Red = +5V Connections 3/8" BSP
Green = output signal Cable L = 300
Blue = 0V

- Pulse output signal for flows up to 25 l/min.
- Lightweight, robust and suitable for most liquids
- Operates in any plane
- Simple to install
- Negligible pressure drop
- Accepts reverse flow
- Low cost flow measurement

Construction	Shaft retainers	Grilamid - TR55
Body: Grilamid - TR55	Max. working pressure: 20 Bar	
Rotor: 18% PTFE filled nylon	Pressure drop (max.): 0.1 bar @ 15 l/min.	
Shaft: Stainless Steel		
Calibration	Temperature range: +5°C to +70°C	
'K' Factor: 752 pulses/litre	Power supply: +5V dc	
Accuracy: ±2% typ.	Flow range: 1 to 25 l/min.	
Repeatability: ±1%		

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Mfrs. List No.	Order Code	1+	5+	10+	+
DFC.9000	560-121	4,021.00	3,925.00	3,841.00	--

Encoders - Incremental

Encoder Module



The module consists of a lensed LED source and a detector IC enclosed in a small C-shaped plastic package.

The two channel module and code wheel gives two outputs in quadrature, and the three channel module and code wheel also gives an index output.

Encoder: H=10.2, W=26.7, D=11.7 (excl. pins), Slot width=1.78
Code Wheel: O/D=50
For shaft dia 1/4" or 6mm

- High performance low cost optical incremental encoder modules and code wheels
- Module designed to be tolerant to mounting misalignment
- Modules operate from a single 5V supply

Count frequency (guaranteed max.) 100kHz
Code wheel set screw 2.56 (use 0.035" hex wrench)

Encoder	Assembly Tools	
	Centering	Gap Setting
HEDS-9100	329-5977	329-5965
HEDS-9140/9730	329-5977	329-5977
HEDS-9000	389-1331	329-5965
HEDS-9040	389-1331	389-1331

Encoder	PPR	Code Wheel 1/4"	Code Wheel 4/6mm
328-7889	200	418-0082	418-0094
328-7890	256	418-0100 (5/8")	418-0112
415-327	500	280-884	280-896(4mm)
328-8109	500	280-884	280-896(4mm)
280-902	500	280-914	280-926(4mm)
328-7877	1024	389-1367	--
328-7865	200		

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Resolution (PPR)	Mfrs. List No.	Order Code	1+	10+	100+	
Encoder Modules						
2 ch.	200	HEDS-9100-E00	328-7889	1,450.00	1,375.00	--
3 ch.	256	HEDS-9140-F00	328-7890	1,606.00	1,528.00	--
2 ch.	2000	HEDS-9000-T00	328-7865	1,450.00	1,365.00	1,279.00
2 ch.	500					
(Flange Mount)		HEDS-9730-A50	328-8109	1,042.00	980.00	--
3 ch.	500	HEDS9140-A00	280-902	1,671.00	1,447.00	1,400.00
3 ch.	1024	HEDS-9040#J00	328-7877	1,606.00	1,529.00	--
2 ch.	2000	HEDS-9000-T00	328-7865	1,450.00	1,365.00	1,279.00

Resolution (PPR)	Mfrs. List No.	Order Code	1+	10+	100+	
Code Wheels						
2 ch., 1/4"	200	HEDS-5120-E06	418-0082	1,106.00	952.00	833.00
2 ch., 6mm	200	HEDS-5120-E12	418-0094	1,106.00	952.00	833.00
3 ch., 515/8"mm	256	HEDS-5140-F04	418-0100	1,243.00	1,070.00	937.00
3 ch., 6mm	256	HEDS-5140-F12	418-0112	1,243.00	1,070.00	937.00
3 ch., 1/4"	1024	HEDS6140-J06	389-1367	1,986.00	1,754.00	1,564.00
2 ch., 1/4"	500	HEDS5120-A06	280-884	1,014.00	796.00	--
2 ch., 4mm	500	HEDS5120-A11	280-896	1,014.00	796.00	--
3 ch., 1/4"	500	HEDS5140-A06	280-914	1,138.00	894.00	--
3 ch., 4mm	500	HEDS5140-A11	280-926	1,138.00	950.00	--
2 ch., 1/4"	2000	HEDM6120-T06	389-1343	1,969.00	1,738.00	1,550.00
2 ch., 6mm	2000	HEDM6120-T12	389-1355	1,947.00	1,719.00	1,534.00
Assembly Tools						
		HEDS-8905	329-5977	458.00	432.00	430.00
		HEDS-8901	329-5965	458.00	459.00	436.00
		HEDS8906	389-1331	601.00	532.00	461.00

360/500 Pulses/Rev



H=41.1, W=30.0, D=18.3
Mounting: Standard types - 2 screw M2.5 on 19.05 PCD or 3 screw M1.6 on 20.90 PCD
Types with external mounting ears - Overall W=52.1 with 2 fixing holes for M2.5 screws on 46.0 PCD.

- High reliability
- Quick and easy assembly
- High resolution
- Single 5V supply

A series of two and three channel optical encoders incorporating an HEDS9100/9140 series encoder module and an HEDS5120/5140 series code wheel. The outputs of the two channel version are two square waves in quadrature. The three channel version gives one additional index output pulse per revolution.

The standard encoders (without mounting ears) are available for a 4mm or 1/4" dia shaft and can be mounted to a motor using either the two screw or three screw mounting options on the lid. The encoders with external mounting ears are designed for larger diameter motors and 1/4" dia shafts. The use of an alignment tool or aligning pins is recommended for 2 channel encoders and is essential for 3 channel encoders. Suitable alignment tools and also connecting leads (length 152mm) are available.

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Type	Mfrs. List No.	Order Code	1+	10+	100+
Standard - 4mm Shaft Dia.					
2 ch., 500ppr	HEDS5500-A11	415-352	2,899.00	2,510.00	2,314.00
3 ch., 500ppr	HEDS5540-A11	415-376	3,108.00	2,694.00	2,655.00
3 ch., 360ppr	HEDS5540-G11	415-388	3,108.00	2,863.00	2,708.00
2 ch., 500ppr	HEDS-5505-A04	328-7920	2,627.00	--	--
2 ch., 200ppr	HEDS-5500-E05	328-7919	2,781.00	2,764.00	--
Standard - 1/4" Shaft Dia.					
2 ch., 500ppr	HEDS5500-A06	280-938	3,465.00	3,068.00	2,675.00
3 ch., 200ppr	HEDS-5540-E06	328-7932	2,800.00	2,800.00	--
3 ch., 500ppr	HEDS5540-A06	280-940	3,655.00	3,563.00	3,068.00
External Mounting Ears - 1/4" Shaft Dia.					
2 ch., 500ppr	HEDS5600-A06	415-390	2,899.00	2,526.00	--
2 ch., 360ppr	HEDS5600-G06	415-406	2,899.00	2,666.00	2,528.00
3 ch., 500ppr	HEDS5640-A06	415-418	3,108.00	2,694.00	2,740.00
2 ch., 200ppr	HEDS-5605-E06	328-7944	2,773.00	--	--
Connecting Leads					
2 ch.	HEDS-8902	415-431	282.00	266.00	--
3 ch.	HEDS-8903	415-443	392.00	303.00	278.00
Alignment Tools					
1/4" shaft dia.	HEDS8910-006	280-951	483.00	--	--
4mm shaft dia.	HEDS8910-011	280-963	477.00	--	--

EC Series Digital Contacting Encoder



Body D=27.6, W=22.2, H=7.4
Shaft=19.0 (inc bush) x 6.32 dia,
Bush=M9 x 0.75

- Low cost digital contacting encoders, long operating life and high operating temperature characteristics
- 2 bit gray code output is produced, channel A leads channel B by 90° (clockwise)
- Optional snap-on PCB mounting bracket

Contact rating	10mA @ 10V, or 0.1W	Maximum operating speed	120 rpm
Voltage rating	350V ac (or limited by power dissipation whichever <)	Rotational life	200000 revs
Dielectric strength	1000V ac	Mechanical rotation	Continuous
		Insulation resistance	>1000MR
		Operating temperature	+1°C to + 125°C