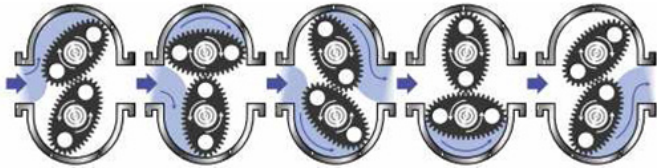


DESCRIPTION

The Industrial Oval Gear Meter is a modular flow meter design, economical yet highly accurate and rugged. Due to the rugged nature of this particular flow measurement technology, the industrial Oval Gear Meter can be used in a number of applications where conventional meters are not acceptable.

OPERATION PRINCIPLE

Fluid enters the inlet port and then passes through the metering chamber. Inside the chamber, fluid forces the internal gears to rotate before exiting through the outlet port. Each rotation of the gears displaces a specific volume of fluid. As the gears rotate, a magnet on each end of the gear pass a reed switch in the top-mounted register's circuit board. The reed switches send pulses to the microprocessor in the register to change the LED display segments. The oval gear meter can be used in conjunction with a variety of industrial registers.



ADVANTAGES

- Highest quality, made in Germany
- Cost effective and commercially competitive product due to the most up to date automated production techniques
- Wide range of sizes, materials, displays and component options
- Most items ex stock for fast delivery, benefit from low shipping cost
- Local support, worldwide



FEATURES

- High accuracy and repeatability
- Insensitive to viscosity change – Maintains accuracy
- Not affected by pulsating flows
- Can be mounted in tight pipework and any orientation
- Most industrial communications and outputs available
- Custom options available
- ATEX approval

APPLICATIONS

Whether the liquid being measured is very viscous or highly corrosive, the oval gear meter can handle it. The industrial oval gear is designed for a variety of chemical applications including petroleum based fluids, water solutions, and any other liquid compatible with the materials of construction.

PROCESS CONNECTIONS

Port Size	Housing Material	NPT/BSP	ANSI 150#	ANSI 300#	DIN	Tri-Clamp®
1/8 in.	Stainless	1450 psi (100 bar)	n/a	n/a	n/a	n/a
1/4 in.	PVDF	230 psi (16 bar)				
	Stainless	1450 psi (100 bar)				
	Aluminum	940 psi (65 bar)				
1/2 in.	Stainless	3000 psi (210 bar)	275 psi (20 bar)	790 psi (55 bar)	230 psi (16 bar)	230 psi (16 bar)
	Aluminum	2000 psi (140 bar)	n/a	n/a	n/a	n/a
3/4 in.	PVDF	230 psi (16 bar)	n/a	n/a	n/a	n/a
	Stainless	3000 psi (210 bar)	275 psi (20 bar)	790 psi (55 bar)	230 psi (16 bar)	230 psi (16 bar)
	Aluminum	2000 psi (140 bar)	n/a	n/a	n/a	n/a
1 in.	Stainless	3000 psi (210 bar)	275 psi (20 bar)	790 psi (55 bar)	230 psi (16 bar)	230 psi (16 bar)
	Aluminum	2000 psi (140 bar)	n/a	n/a	n/a	n/a
1 in. HF	PVDF	230 psi (16 bar)	n/a	n/a	n/a	n/a
	Stainless	3000 psi (210 bar)	275 psi (20 bar)	790 psi (55 bar)	230 psi (16 bar)	230 psi (16 bar)
	Aluminum	2000 psi (140 bar)	275 psi (20 bar)	790 psi (55 bar)	230 psi (16 bar)	n/a
1-1/2 in.	Stainless	720 psi (50 bar)	275 psi (20 bar)	720 psi (50 bar)	230 psi (16 bar)	230 psi (16 bar)
	Aluminum	720 psi (50 bar)	275 psi (20 bar)	720 psi (50 bar)	230 psi (16 bar)	n/a
2 in.	Stainless	580 psi (40 bar)	275 psi (20 bar)	580 psi (40 bar)	230 psi (16 bar)	145 psi (10 bar)
	Aluminum	580 psi (40 bar)	275 psi (20 bar)	580 psi (40 bar)	230 psi (16 bar)	n/a
3 in.	Stainless	360 psi (25 bar)	275 psi (20 bar)	360 psi (25 bar)	230 psi (16 bar)	n/a
	Aluminum	360 psi (25 bar)	275 psi (20 bar)	360 psi (25 bar)	230 psi (16 bar)	n/a

High pressure ratings on request

SPECIFICATIONS

Housing and connection by size	
Sizes	1/8 in., 1/4 in., 1/2 in., 3/4 in., 1 in., 1 in. HF, 1-1/2 in., 2 in. and 3 in.
Aluminum	NPT, BSP, 150# flange, DIN flange EN 1092-1/05
Stainless	NPT, BSP, 150# or 300# flange, DIN flange Tri-Clamp®
PVDF	BSP, NPT

Operating temperature	Housing	Oval gears
Stainless steel	-22° F ... 240° F (-30° C ... 120° C)	-22° F ... 240° F (-30° C ... 120° C)
Plastic (PPS/LCP)	-22° F ... 176° F (-30° C ... 80° C)	-22° F ... 176° F (-30° C ... 80° C)
Aluminum	-22° F ... 240° F (-30° C ... 120° C)	
PVDF	14° F ... 140° F (-10° C ... 60° C)	
Storage temperature for all units	-67° F / 257° F (-55° C / 125° C)	

Viscosity
Max 1000 mPas with standard rotors / 500000 mPas with high viscosity rotors

FLOW RANGE

Port Size	l/min	gpm	Fluid viscosity	Accuracy (%)	Accuracy PVDF (%)	Repeatability (%)
1/8 in.	0.017 ... 0.83	0.0044 ... 0.22	>5.0 cP	±1.0	—	±0.03
	0.034 ... 0.83	0.0088 ... 0.22	<5.0 cP	±1.5	—	±0.03
1/4 in. LF*	0.04 ... 1.6	0.01 ... 0.4	>5.0 cP	±1.0	±1.5	±0.03
	0.09 ... 1.6	0.02 ... 0.4	<5.0 cP	±1.5	±2.5	±0.03
1/4 in.*	0.25 ... 8.3	0.067 ... 2.2	>5.0 cP	±1.0	±1.5	±0.03
	0.44 ... 8.3	0.11 ... 2.2	<5.0 cP	±1.5	±2.5	±0.03
1/2 in.	1 ... 30	0.25 ... 8.0	>5.0 cP	±0.5	—	±0.03
	2 ... 25	0.5 ... 6.6	<5.0 cP	±1.5	—	±0.03
3/4 in.	2 ... 60	0.5 ... 16	>5.0 cP	±0.5	±1.5	±0.03
	4.5 ... 53	1.2 ... 14	<5.0 cP	±1.5	±2.5	±0.03
1 in.	2.3 ... 68	0.6 ... 18	>5.0 cP	±0.5	±1.5	±0.03
	5.3 ... 60	1.4 ... 16	<5.0 cP	±1.5	±2.5	±0.03
1 in. HF	5.7 ... 170	1.5 ... 45	>5.0 cP	±0.5	—	±0.03
	9.5 ... 150	2.6 ... 40	<5.0 cP	±1.5	—	±0.03
	5.7 ... 120	1.5 ... 31	>5.0 cP	—	±1.5	±0.03
	9.5 ... 120	2.6 ... 31	<5.0 cP	—	±2.5	±0.03
1-1/2 in.	9.5 ... 245	2.5 ... 65	>5.0 cP	±0.5	—	±0.03
	15 ... 227	4.0 ... 60	<5.0 cP	±1.5	—	±0.03
2 in.	15 ... 380	4.0 ... 100	>5.0 cP	±0.5	—	±0.03
	23... 380	6.0 ... 100	<5.0 cP	±1.0	—	±0.03
3 in.	20 ... 700	5.0 ... 185	>5.0 cP	±0.5	—	±0.03
	38 ... 700	10 ... 185	<5.0 cP	±1.0	—	±0.03

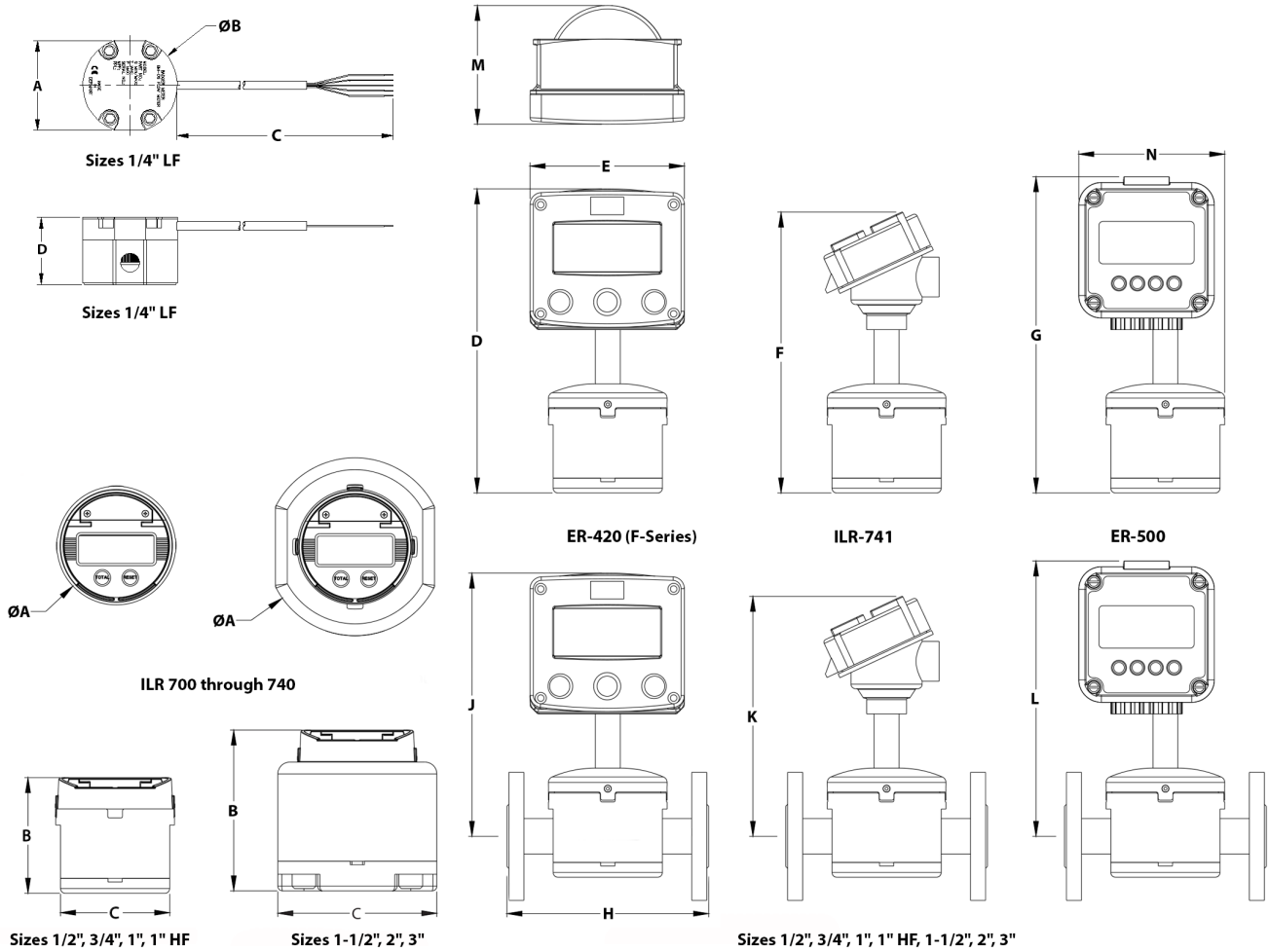
*Special calibration with the following viscosities is possible for the 1/8 in. and 1/4 in. meters.

MATERIAL OF CONSTRUCTION

Port Size	Housing	Cover	Spindle	Gears	Bearings	O-Ring	Bolts
1/8 in.	316 SS	316 SS	316 SS	316 SS	Graphite	Viton	316 SS
1/4 in.	316 SS	316 SS		316 SS	Graphite		
	6061/6082 Al	6061/6082 Al		PPS			
1/2 in.	316 SS	316 SS		316 SS	Graphite		
	6061/6082 Al	6061/6082 Al		LCP or PPS			
3/4 in.	316 SS	316 SS		316 SS	Graphite		
	6061/6082 Al	6061/6082 Al		LCP or PPS			
1 in.	316 SS	316 SS		316 SS	Graphite		
	6061/6082 Al	6061/6082 Al		LCP or PPS			
1 in. HF	316 SS	316 SS		316 SS	Graphite		
	6061/6082 Al	6061/6082 Al		PPS			
1- 1/2 in.	316 SS	316 SS		316 SS	Graphite		
	6061/6082 Al	6061/6082 Al		PPS			
2 in.	316 SS	316 SS		316 SS	Graphite		
	6061/6082 Al	6061/6082 Al		PPS			
3 in.	316 SS	316 SS		316 SS	Graphite		
	6061/6082 Al	6061/6082 Al	PPS				
					Kalrez		

NOTE: All PVDF devices are supplied with Hastelloy-C spindles.

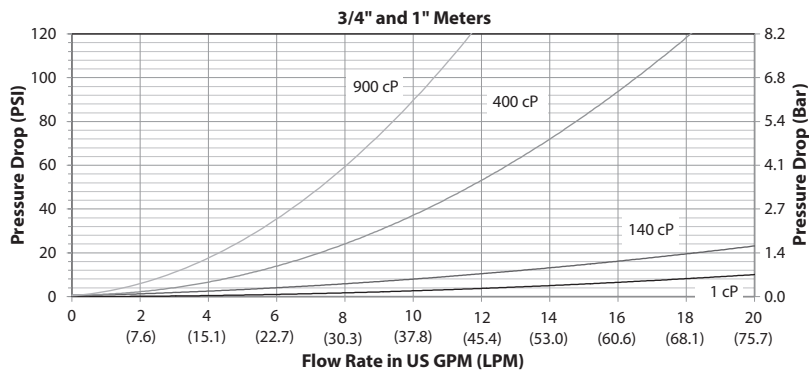
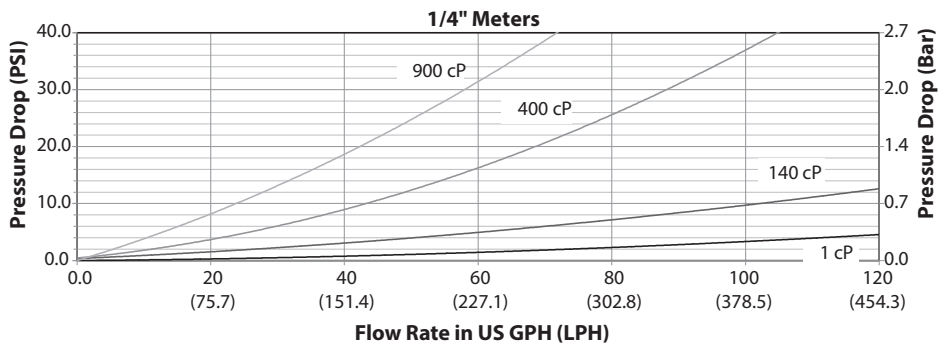
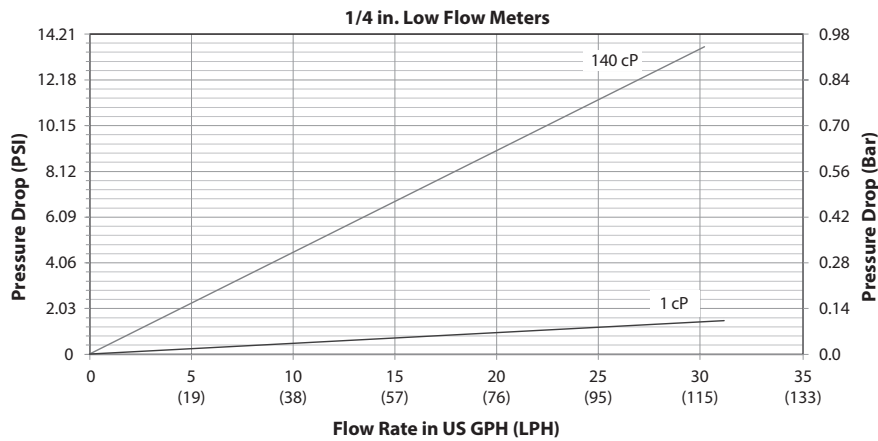
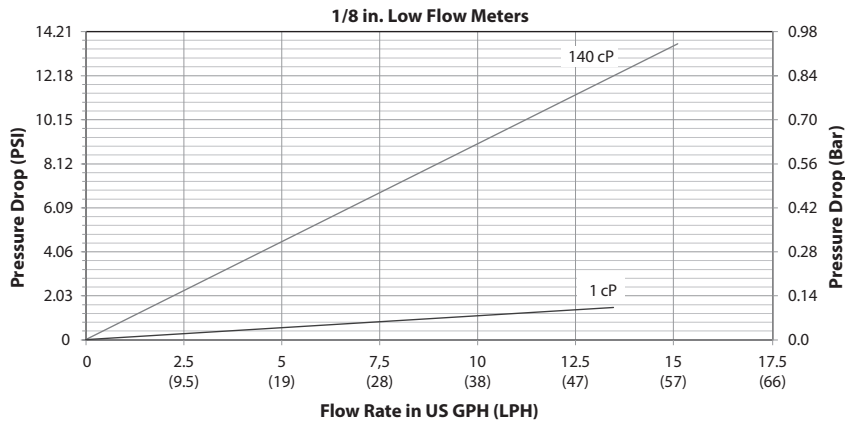
DIMENSIONS

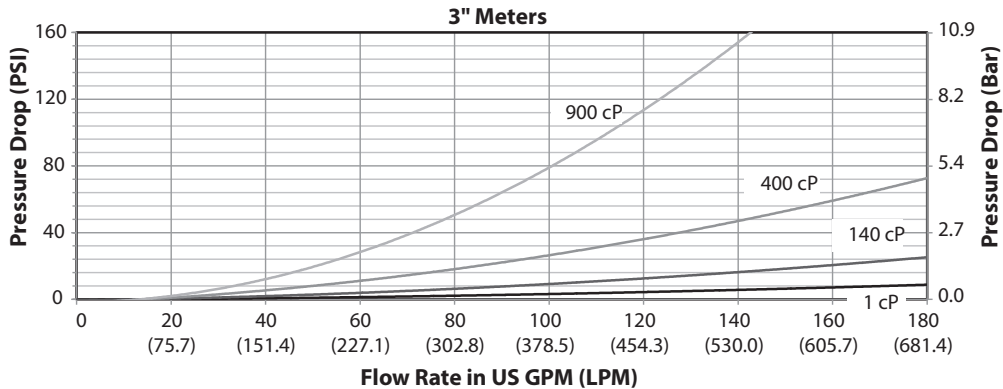
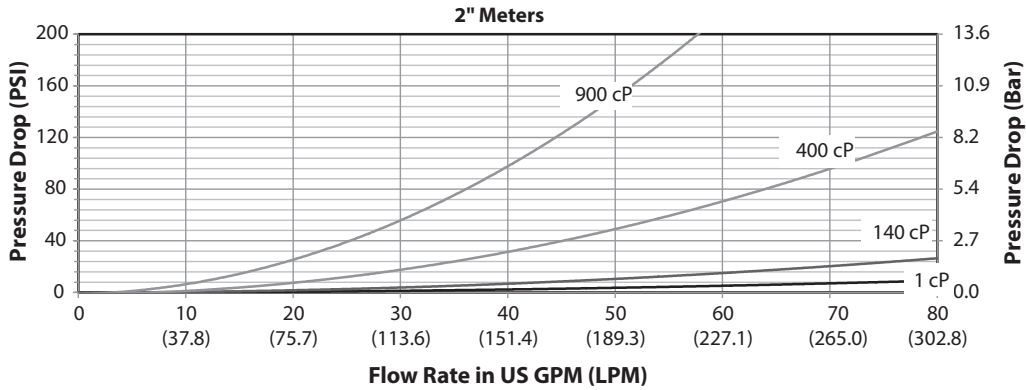
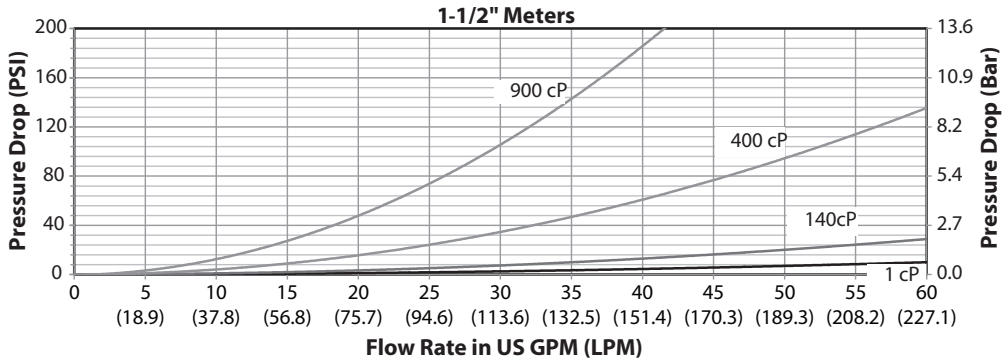
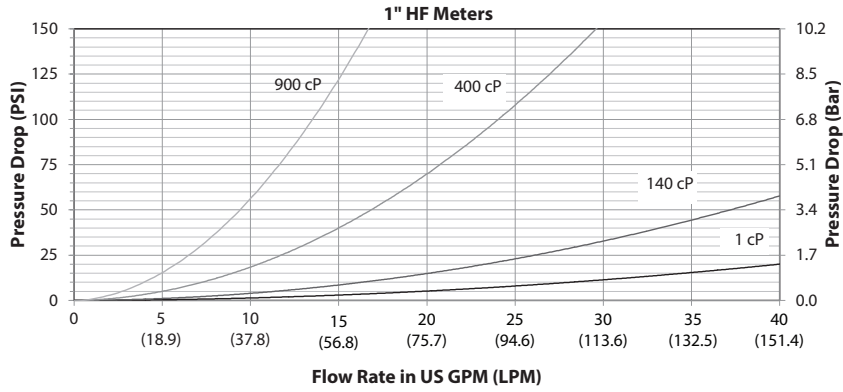


Port Size	A	B	C	D	E	F	G	H	J	K	L	M	N
1/8 in.	2.05 in. (52 mm)	2.17 in. (55 mm)	118 in. (3000 mm)	0.79 in. (20 mm)	—	—	—	—	—	—	—	—	—
1/4 in. LF	2.05 in. (52 mm)	2.17 in. (55 mm)	118 in. (3000 mm)	1.54 in. (39 mm)	—	—	—	—	—	—	—	—	—
1/4 in.	2.05 in. (52 mm)	2.17 in. (55 mm)	118 in. (3000 mm)	1.54 in. (39 mm)	—	—	—	—	—	—	—	—	—
1/2 in.	3.94 in. (100 mm)	3.44 in. (87.5 mm)	3.62 in. (92 mm)	9.70 in. (246.4 mm)	5.12 in. (130 mm)	8.93 in. (226.8 mm)	10.10 in. (256.5 mm)	6.69 in. (170 mm)	8.45 in. (214.6 mm)	7.68 in. (195.1 mm)	8.89 in. (225.8 mm)	3.94 in. (100.2 mm)	4.84 in. (122.9 mm)
3/4 in.	3.94 in. (100 mm)	3.84 in. (97.5 mm)	3.62 in. (92 mm)	10.10 in. (256.5 mm)	5.12 in. (130 mm)	9.33 in. (236.9 mm)	10.50 in. (266.7 mm)	6.69 in. (170 mm)	8.70 in. (220.9 mm)	7.93 in. (201.4 mm)	9.14 in. (232.2 mm)	3.94 in. (100.2 mm)	4.84 in. (122.9 mm)
1 in.	3.94 in. (100 mm)	3.84 in. (97.5 mm)	3.62 in. (92 mm)	10.10 in. (256.5 mm)	5.12 in. (130 mm)	9.33 in. (236.9 mm)	10.50 in. (266.7 mm)	6.69 in. (170 mm)	8.70 in. (220.9 mm)	7.93 in. (201.4 mm)	9.14 in. (232.2 mm)	3.94 in. (100.2 mm)	4.84 in. (122.9 mm)
1 in. HF	3.94 in. (100 mm)	3.89 in. (98.9 mm)	3.62 in. (92 mm)	10.15 in. (257.8 mm)	5.12 in. (130 mm)	9.38 in. (238.3 mm)	10.55 in. (268.0 mm)	6.69 in. (170 mm)	8.60 in. (218.4 mm)	7.83 in. (198.8 mm)	9.04 in. (229.6 mm)	3.94 in. (100.2 mm)	4.84 in. (122.9 mm)
1-1/2 in.	5.51 in. (140 mm)	4.93 in. (125.3 mm)	4.92 in. (125 mm)	11.15 in. (283.2 mm)	5.12 in. (130 mm)	10.38 in. (263.7 mm)	11.51 in. (292.4 mm)	8.35 in. (212 mm)	8.90 in. (226.1 mm)	8.13 in. (206.5 mm)	9.31 in. (236.5 mm)	N/A	N/A
2 in.	5.91 in. (150 mm)	5.34 in. (135.6 mm)	5.28 in. (134 mm)	11.60 in. (294.6 mm)	5.12 in. (130 mm)	10.83 in. (275.1 mm)	11.96 in. (303.8 mm)	10.39 in. (264 mm)	9.16 in. (232.7 mm)	8.39 in. (213.1 mm)	9.57 in. (243.1 mm)	N/A	N/A
3 in.	8.27 in. (210 mm)	6.35 in. (162 mm)	7.09 in. (180 mm)	12.57 in. (319.3 mm)	5.12 in. (130 mm)	11.80 in. (299.7 mm)	12.93 in. (328.4 mm)	13.54 in. (344 mm)	9.58 in. (243.3 mm)	8.81 in. (223.8 mm)	9.99 in. (253.8 mm)	N/A	N/A

NOTE: ILR register series not compatible with 3 in. meter.

PRESSURE DROP VS. FLOW RATE





INDUSTRIAL LINE REGISTERS

Type ILR 700, 701, 740, 741, 750

Description

The electronic register module contains a microprocessor board powered by a lithium battery. It can be programmed to batch in liters, pints, quarts, or gallons and will totalize in liters or gallons. A calibration factor and unit of measure are programmed during factory test. Unlike mechanical registers, these units can be electronically recalibrated in the field when necessary.

A 6 digit LC display, accurate to three decimal places, shows the exact amount of fluid that has passed through the meter. The entire register module is protected from normal wear and tear by a rugged, shock resistant housing.

If the total dispensed exceeds 999.999 then the display will shift and only 2 digits will be displayed after the decimal point, 9999.99 and will continue to shift to the maximum value of 999999. After reaching 999999 the batch totalizer will rollover to 0.000. The batch totalizer is reset to zero when the reset button is depressed.

The register also has a resettable totalizer that requires that the total and reset button both be depressed to reset (hold the "Total" button, then press the "Reset" button to reset this totalizer while resettable totalize is displayed). This would be used for multiple batch totalization purposes.

The register's life time totalizer is 11 digits and will either be in gallons or liters based on the unit of measure selected. Pushing and holding the total button while the life time totalizer is displayed will display the full 11 digit life time totalizer value.

Operation

Industrial Oval Gear Meter has magnets on the gears that cause the reed switches to send pulses to the register as they rotate.

The register is in a sleep mode until it detects these pulses caused by fluid going through the meter. The micro-processor in the register then measures the flow and will display either the batch totalization or the flow rate of the fluid going through the meter on the 6 digit display.

The registers batch totalizer is a 6 digit display with three places of resolution after the decimal point.



Features

- Large six digit LCD display
- Display in liters, pints, quarts or gallons, freely programmable
- 11 digits, non-resettable lifetime totalizer and 6 digits, resettable totalizer
- ILR series: -4° F ... 176° F (-20° C ... 80° C)
- Replaceable long life battery
- Calibration factor saved in non-volatile memory
- 9 point linearization (ILR 750, ILR 701). Test medium is water
- Scalable pulse output (ILR 750)
- 4 ... 20 mA output (ILR 750)
- Protection class IP65

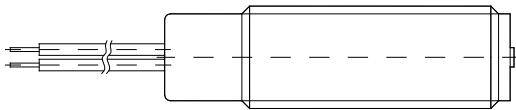
Register Model	Register features	Temperature Ranges
ILR 700 Standard register	Flow rate or totalizer display selectable in the programming menu Selectable unit of measure	-4 ... 176° F (-20 ... 80° C)
ILR 701	9 point linearization	
ILR 750 pulse output 4 ... 20 mA output	Scalable pulse output Ability to set pulse output length Analog 4 ... 20 mA output representing the flow rate of the meter Minimum and maximum values can be set for analog output 9 point linearization	

NOTE: The ILR 701 and 750 all have the standard features of the ILR 700.

ILR 740 Transmitter	Transmitter (reed switch)	-40 ... 257° F (-40 ... 125° C)
ILR 741 Transmitter	NEMA 4x enclosure and adapter	
ER 420 (F110) Flow rate/Totalizer	Refer to the ER 420 product data sheet and user manual for additional, detailed information.	-22 ... 176° F (-30 ... 80° C)
ER 500 Flow rate/Totalizer	Refer to the ER 500 product data sheet and user manual for additional, detailed information.	-22 ... 158° F (-30 ... 70° C)

NOTE: The ILR register series is not compatible with 3 in. meters.

NPN AND PNP SENSOR FOR HAZARDOUS LOCATION



White (□□)

Red (+)

Black (-)



Specifications

Switching function	Open collector
Output type	NPN or PNP 3-wire (2 versions available)
Supply voltage	5 ... 30 V DC ($I \leq 15$ mA)
Supply current	100 mA max ($P_{max} = 0.66$ watt)
Effective internal inductivity	$C_i \leq 12$ nF
Effective internal inductance	$L_i \leq 0$ μ H
Cable length	118 inch (3 meters)
Material	Stainless steel 1.4404 (316L)
Protection class	IP66 / IP67

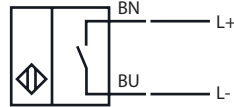
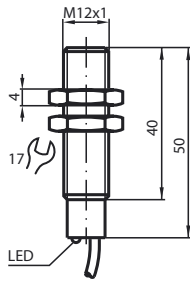
Marking

USA	Intrinsically safe Class I, II, III, Division 1 GROUP ABCDEFG T6 to T5
Canada	Intrinsically safe Class I, Division 1 GROUP ABCD T6 to T5 Class I, Zone 0, Ex ia IIC T6 to T5
ATEX	Ex II 1G Ex ia IIC T6 to T4 Ga
IIECEX	Ex ia IIC T6 to T4 Ga

NAMUR SENSOR



CE
0102



Specifications

Switching function	Normally open (NO)
Output type	NAMUR 2-wire
Nominal voltage	U _o 8.2 V (R _i approx. 1 kΩ)
Effective internal inductivity	C _i ≤ 15 nF; a cable length of 32.8 feet (10 m) is considered
Effective internal inductance	L _i ≤ 35 μH; a cable length of 32.8 feet (10 m) is considered
Switch state indicator	LED (yellow)
Ambient temperature	-13 ... 158° F (-25 ... 70° C)
Cable length	78 inch (2 meters) (PVC)
Core cross-section	0.34 mm ²
Material	Stainless steel 1.4404 (316L)
Protection class	IP66 / IP67

Marking

Namur	CE 0102 / Ex II2G Ex ib IIC T6 Gb
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REED AND HALL BOARD

Description

Using the reed or hall board, unscaled pulses can be transmitted from the meter to an evaluation instrument like a SPS or a flow computer. The size of the meter can be selected by the slide switch on the circuit board, so all meter sizes

1/2 ... 3 in. are covered with only one circuit board. Further slide switches on the hall board enable various settings, as pulse doubling, pull-up resistance or signal inversion. As well both outputs can be used with only one or two separated power supplies.

Pulse Factors for ILR 740, Reed and Hall Board

Size	Pulse per gallon	Pulse per liter
1/8 in.	17032	Approx. 4500
1/4 in. LF*	8213.4	Approx. 2170
1/4 in.*	1476	Approx. 390
1/2 in.	378.5	100
3/4 in.	249.8	66
1 in.	249.8	66
1 in. HF	162.8	43
1-1/2 in.	64.4	17
2 in.	34.1	9
3 in.	11.4	3

* 2 pulse outputs: 1 reed, 1 hall, standard for all 1/8 in. and 1/4 in. meters.

Features

- One reed or hall board for all meter sizes (1/2 in. ... 3 in.)
- Meter size can be selected on the circuit board
- Available in stainless steel 316, aluminum and POM (for PVDF version)
- Two pulse outputs each via reed or hall 90° out-of-phase to detect the flow direction
- Hall board with optional pulse doubling and optional pull-up resistor
- Hall signal with option for positive or negative edge
- Power supply for Hall 24V DC



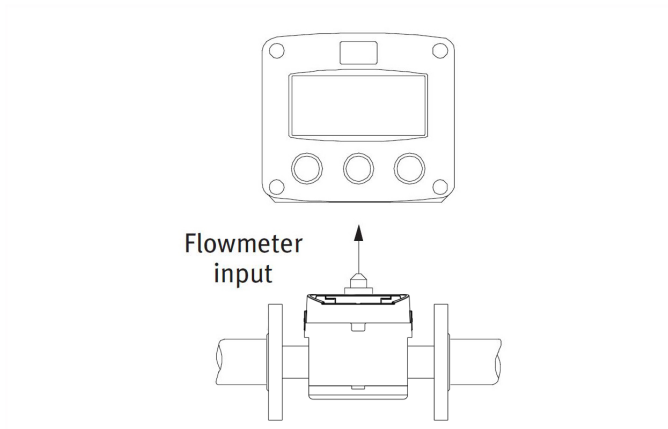
ER420 [F-SERIES (F012, F018, ER420 (F110), F131)]

Features

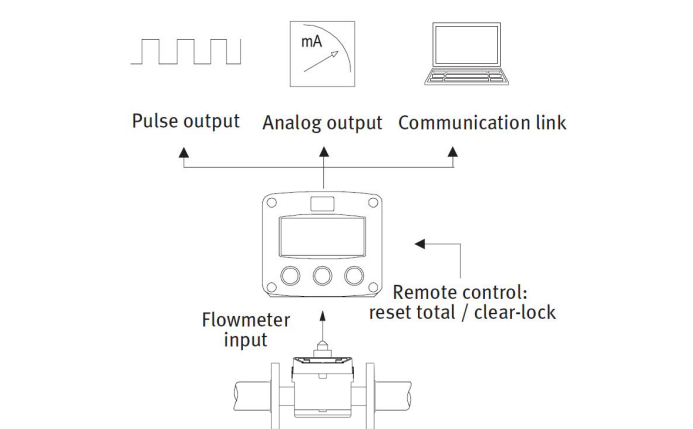
- With the ER420 (F-Series) the following signals types can be processed: Turbine sine wave (coil) pick-ups, reed switches, hall-effect sensors and other active or passive.
- Analog output (0)4 ... 20 mA or 0 ... 10 V DC
- Temperature ranges -22 ... 176° F (-30 ... 80° C)
- Modbus via RS232, RS485 or TTL interface
- Scaled pulse output
- HART 7.0 option
- Meter control
- ER420 (F110) Temperature Range
- ATEX markings for gas and dust applications are:
II 1 G Ex ia IIC T4
II 1 D Ex iaD 20 IP 65/67 T 100° C



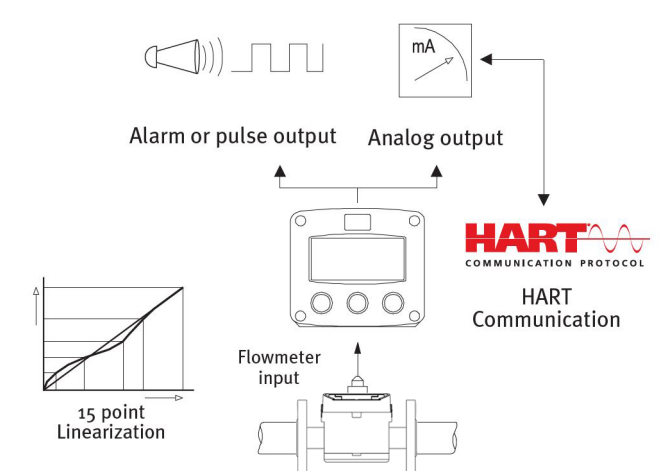
Overview Application F012



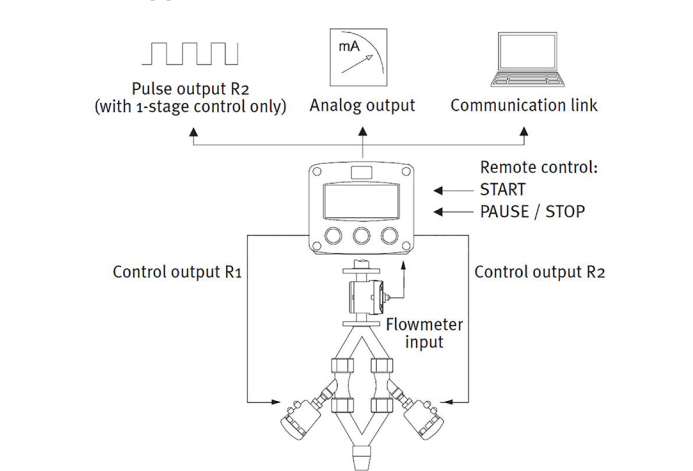
Overview Application ER420 (F110)



Overview Application F018



Overview Application F131



FLOW MONITOR ER-500

Input

Frequency range	1 ... 3500 Hz
Frequency accuracy	±0.1 %
Over voltage protection	28 V DC

Outputs

Analog: 4 ... 20 mA

Totalizing Pulse

Optoisolated (ISO) open collector transistor, non-isolated open drain FET.

Status Alarms

Open collector transistor, adjustable flow rate with programmable dead band and phase.

Modbus

Modbus RTU over RS485, 127 addressable units / 2-wire network, 9600 baud, long integer and single precision IEEE754 formats; retrieve: flow rate, job totalizer, grand totalizer, alarm status and battery level; write: reset job totalizer, reset grand totalizer.

Protection Class

NEMA 4X/IP 66

For more information, see the data sheet "Flow Monitor ER-500".



Features

- Compact size.
- High accuracy and repeatability (0.05 %).
- Flexibility of installation options.
- Robust alarm parameters provide faster warning when something changes in the process or pipeline.
- Advanced connectivity options allow you to connect meters to your network for remote monitoring and process automation capabilities.
- Flexible power options include battery and 4 ... 20 mA loop power, providing a number of benefits including: The ability to install in remote location and be up and running immediately.
- Maintains readings and settings in the event of a power loss, and pro-long the life of the batteries for up to 6 years.
- An updated display and enhanced totalization options provide more flow information at your fingertips, including display of rate and total at the same time and standard, batch and grand totals.

PART NUMBER CONSTRUCTION

**Industrial Oval Gear Meter
Model IOG**



METER SIZE (LINE SIZE)

1/8 in (6 mm) 1,0 - 50 liter per hour 001

BASE MATERIAL 1/8" (6 mm)

STAINLESS STEEL (316L) BODY / STAINLESS STEEL (316L) ROTORS SS

ROTORS

STANDARD ST

PROCESS CONNECTION

NPT, STANDARD FEMALE
BSP, STANDARD FEMALE

NAA
BAA

SEALS

FKM/VITON
TFE(P)/AFLAS
FFKM/KALREZ
EPDM

V
A
K
E

REGISTRATION

METER MOUNTED TRANSMITTERS

REED / HALL Pulsar reed switch free of potential / pulser hall sensor 3-wire external powered 6-24 VDC

T8

REMOTE REGISTRATION

ER-420-AC ER-420 (Scaleable Rate/Flow Counter w/ 4-20mA, 115-230 VAC)
 ER-420-DC ER-420 (Scaleable Rate/Flow Counter w/ 4-20mA, 24V DC)
 ER-420-LP ER-420 (Scaleable Rate/Flow Counter w/ 4-20mA, LOOP POWERED)
 F012A 8-30VDC / Battery / Backlight
 F012B 8-30VDC / Battery / Backlight / intrinsically safe
 F012C 115 - 230 VAC / Backlight
 F018A 8-30VDC / Battery / Backlight / HART 7.0
 F018B 8-30VDC / Battery / Backlight / HART 7.0 / intrinsically safe
 F110A 8-30VDC / Battery / Backlight / Analog+pulse output
 F110B 8-30VDC / Battery / Analog+pulse output / intrinsically safe
 F110C 115-230VAC / Backlight / Analog+pulse output
 F110D 8-30VDC / Battery / Backlight/RS485-2 wire / Analog+pulse output
 F110E 115-230VAC / Backlight/RS485-2 wire / Analog+pulse output
 F131A 8-30VDC / Battery / Backlight / Batch / 2 transistor outputs
 F131B 115-230VAC / Backlight / Batch / 2 Relay outputs
 F131C 8-30VDC / Battery / Batch / 2 transistor outputs / Intrinsically safe
 F131D 24VDC / Backlight / Batch / 2 Relay outputs
 F001 Wall mount remote display with pulse output and analog output, units - l/min, l/hr,... 3 decimals
 ER-500S 24VDC / Battery / Analog+Pulse output
 ER-500A 24VDC / Battery / Analog+Pulse output/ Modbus RS485
 NONE

RD
RE
RF
TA
TB
TC
TD
TE
TF
TG
TH
TI
TJ
TK
TL
TN
TM
FW
PR
PA
XX

UNIT OF MEASURE/PROGRAMMING

LITERS
NONE

LTR
XXX

REMOTE CABLE LENGTH

3M STANDARD CABLE
NONE

M3
WW

CERTIFICATION

NONE
 ADDITIONAL DOCUMENTATIONS FOR FOOD INDUSTRY
 SILICON FREE
 ADDITIONAL DOCUMENTATIONS FOR FOOD INDUSTRY and SILICONE FREE

W
F
L
E

SERIALIZATION METER

YR MFG 8D, NONE
NONE

YF
XX

Additional Options

5 POINT CALIBRATION REPORT
 LINEARIZATION with 5-POINT CALIBRATION REPORT (ILR-750 and ILR-701 only)
 3.1 MATERIAL CERTIFICATE (certificates for pressurized parts, Aluminum or Stainless housings only)
 NONE

BA
BB
BC
XX

**Industrial Oval Gear Meter
Model IOG**



METER SIZE (LINE SIZE)

1/4 in (8 mm) LOW FLOW 2.4 - 100 liter per hour L02

BASE MATERIAL 1/4", 1/4" LOW FLOW (8 mm, 8 mm LOW FLOW)

ALUMINUM (6061/6081) BODY / STAINLESS STEEL (316L) ROTORS	AS
ALUMINUM (6061/6081) BODY / RYTON (PPS) ROTORS	AR
STAINLESS STEEL (316L) BODY / STAINLESS STEEL (316L) ROTORS	SS
STAINLESS STEEL (316L) BODY / RYTON (PPS) ROTORS	SR
KYNAR (PVDF) BODY / STAINLESS STEEL (316L) ROTORS	KS
KYNAR (PVDF) BODY / RYTON (PPS) ROTORS	KR

ROTORS

STANDARD ST

PROCESS CONNECTION

NPT, STANDARD FEMALE NAA
 BSP, STANDARD FEMALE BAA

SEALS

FKM/VITON	V
TFE(P)/AFLAS	A
FFKM/KALREZ	K
EPDM	E

REGISTRATION

METER MOUNTED TRANSMITTERS

REED / HALL Pulsar reed switch free of potential / pulser hall sensor 3-wire external powered 6-24 VDC T8

REMOTE REGISTRATION

ER-420-AC	ER-420 (Scaleable Rate/Flow Counter w/ 4-20mA, 115-230 VAC)	RD
ER-420-DC	ER-420 (Scaleable Rate/Flow Counter w/ 4-20mA, 24V DC)	RE
ER-420-LP	ER-420 (Scaleable Rate/Flow Counter w/ 4-20mA, LOOP POWERED)	RF
F012A	8-30VDC / Battery / Backlight	TA
F012B	8-30VDC / Battery / Backlight / intrinsically safe	TB
F012C	115 - 230 VAC / Backlight	TC
F018A	8-30VDC / Battery / Backlight / HART 7.0	TD
F018B	8-30VDC / Battery / Backlight / HART 7.0 / intrinsically safe	TE
F110A	8-30VDC / Battery / Backlight / Analog+pulse output	TF
F110B	8-30VDC / Battery / Analog+pulse output / intrinsically safe	TG
F110C	115-230VAC / Backlight / Analog+pulse output	TH
F110D	8-30VDC / Battery / Backlight/RS485-2 wire / Analog+pulse output	TI
F110E	115-230VAC / Backlight/RS485-2 wire / Analog+pulse output	TJ
F131A	8-30VDC / Battery / Backlight / Batch / 2 transistor outputs	TK
F131B	115-230VAC / Backlight / Batch / 2 Relay outputs	TL
F131C	8-30VDC / Battery / Batch / 2 transistor outputs / Intrinsically safe	TN
F131D	24VDC / Backlight / Batch / 2 Relay outputs	TM
F001	Wall mount remote display with pulse output and analog output, units - l/min, l/hr,... 3 decimals	FW
ER-500S	24VDC / Battery / Analog+Pulse output	PR
ER-500A	24VDC / Battery / Analog+Pulse output/ Modbus RS485	PA
NONE		XX

UNIT OF MEASURE/PROGRAMMING

LITERS LTR
 NONE XXX

REMOTE CABLE LENGTH

3M STANDARD CABLE M3
 NONE WW

CERTIFICATION

NONE W
 ADDITIONAL DOCUMENTATIONS FOR FOOD INDUSTRY F
 SILICON FREE L
 ADDITIONAL DOCUMENTATIONS FOR FOOD INDUSTRY and SILICONE FREE E

SERIALIZATION METER

YR MFG 8D, NONE YF
 NONE XX

Additional Options

5 POINT CALIBRATION REPORT BA
 LINEARIZATION with 5-POINT CALIBRATION REPORT (ILR-750 and ILR-701 only) BB
 3.1 MATERIAL CERTIFICATE (certificates for pressurized parts, Aluminum or Stainless housings only) BC
 NONE XX

Industrial Oval Gear Meter
Model IOG

OG - [] - [] - [] - [] - [] - LTR - M3 - [] - YF - []

METER SIZE (LINE SIZE)

1/4 in (8 mm) 15 - 500 liter per hour 002

BASE MATERIAL 1/4", 1/4" LOW FLOW (8 mm, 8 mm LOW FLOW)

ALUMINUM (6061/6081) BODY / STAINLESS STEEL (316L) ROTORS	AS
ALUMINUM (6061/6081) BODY / RYTON (PPS) ROTORS	AR
STAINLESS STEEL (316L) BODY / STAINLESS STEEL (316L) ROTORS	SS
STAINLESS STEEL (316L) BODY / RYTON (PPS) ROTORS	SR
KYNAR (PVDF) BODY / STAINLESS STEEL (316L) ROTORS	KS
KYNAR (PVDF) BODY / RYTON (PPS) ROTORS	KR

ROTORS

STANDARD	ST
HIGH VISCOSITY ROTORS (MODIFIED ROTORS)	HV

PROCESS CONNECTION

NPT, STANDARD FEMALE	NAA
BSP, STANDARD FEMALE	BAA

SEALS

FKM/VITON	V
TFE(P)/AFLAS	A
FFKM/KALREZ	K
EPDM	E

REGISTRATION

METER MOUNTED TRANSMITTERS

REED / HALL	Pulsar reed switch free of potential / pulser hall sensor 3-wire external powered 6-24 VDC	T8
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REMOTE REGISTRATION

ER-420-AC	ER-420 (Scaleable Rate/Flow Counter w/ 4-20mA, 115-230 VAC)	RD
ER-420-DC	ER-420 (Scaleable Rate/Flow Counter w/ 4-20mA, 24V DC)	RE
ER-420-LP	ER-420 (Scaleable Rate/Flow Counter w/ 4-20mA, LOOP POWERED)	RF
F012A	8-30VDC / Battery / Backlight	TA
F012B	8-30VDC / Battery / Backlight / intrinsically safe	TB
F012C	115 - 230 VAC / Backlight	TC
F018A	8-30VDC / Battery / Backlight / HART 7.0	TD
F018B	8-30VDC / Battery / Backlight / HART 7.0 / intrinsically safe	TE
F110A	8-30VDC / Battery / Backlight / Analog+pulse output	TF
F110B	8-30VDC / Battery / Analog+pulse output / intrinsically safe	TG
F110C	115-230VAC / Backlight / Analog+pulse output	TH
F110D	8-30VDC / Battery / Backlight/RS485-2 wire / Analog+pulse output	TI
F110E	115-230VAC / Backlight/RS485-2 wire / Analog+pulse output	TJ
F131A	8-30VDC / Battery / Backlight / Batch / 2 transistor outputs	TK
F131B	115-230VAC / Backlight / Batch / 2 Relay outputs	TL
F131C	8-30VDC / Battery / Batch / 2 transistor outputs / Intrinsically safe	TN
F131D	24VDC / Backlight / Batch / 2 Relay outputs	TM
F001	Wall mount remote display with pulse output and analog output, units - l/min, l/hr,... 3 decimals	FW
ER-500S	24VDC / Battery / Analog+Pulse output	PR
ER-500A	24VDC / Battery / Analog+Pulse output/ Modbus RS485	PA
NONE		XX

UNIT OF MEASURE/PROGRAMMING

LITERS	LTR
NONE	XXX

REMOTE CABLE LENGTH

3M STANDARD CABLE	M3
NONE	WW

CERTIFICATION

NONE	W
ADDITIONAL DOCUMENTATIONS FOR FOOD INDUSTRY	F
SILICON FREE	L
ADDITIONAL DOCUMENTATIONS FOR FOOD INDUSTRY and SILICONE FREE	E

SERIALIZATION METER

YR MFG 8D, NONE	YF
NONE	XX

Additional Options

5 POINT CALIBRATION REPORT	BA
LINEARIZATION with 5-POINT CALIBRATION REPORT (ILR-750 and ILR-701 only)	BB
3.1 MATERIAL CERTIFICATE (certificates for pressurized parts, Aluminum or Stainless housings only)	BC
NONE	XX

Industrial Oval Gear Meter
Model IOG

OG - - - - - LTR - - - - - YF - - - - -

METER SIZE (LINE SIZE)

1/2 in (15 mm) 1 ~ 30 l/min (0.25 ~ 8 USG/min) 005

BASE MATERIAL 1/2" - 3/4" - 1" (15 mm, 20 mm, 25 mm)

ALUMINUM (6061/6081) BODY / VECTRA (LCP) ROTORS AV
 STAINLESS STEEL (316L) BODY / STAINLESS STEEL (316L) ROTORS SS
 STAINLESS STEEL (316L) BODY / RYTON (PPS) ROTORS SR
 STAINLESS STEEL (316L) BODY / VECTRA (LCP) ROTORS SV

ROTORS

STANDARD ST
 HIGH VISCOSITY ROTORS (MODIFIED ROTORS) HV

PROCESS CONNECTION

NPT, STANDARD FEMALE NAA
 BSP, STANDARD FEMALE BAA
 ASME, CLASS 150 FLG, RF (Only for SST housing) FAA
 ASME, CLASS 300 FLG, RF (Only for SST housing) FAB
 DIN, PN 16 FLG (Only for SST housing) FEC
 TRI-CLAMP (DIN 32676) (Only for SST housing) TAA

SEALS

FKM/VITON V
 TFE(P)/AFLAS A
 FFKM/KALREZ K
 EPDM E

REGISTRATION

METER MOUNTED TRANSMITTERS

ILR-740 Unscaled Pulse Output (w/ 3 meter cable) T1
 ILR-741 Unscaled Pulse Output (no cable) T2
 NAMUR Namur sensor / unscaled (w/ 2 meter cable) T3
 PNP Open collector Sensor PNP / unscaled (w/ 3 meter cable) T4
 NPN Open collector Sensor NPN / unscaled (w/ 3 meter cable) T5
 REED Reed switch board with cable gland (no cable) T6
 HALL Hall board with cable gland (no cable) T7

METER MOUNTED REGISTRATION / BATCH CONTROLLERS

ILR-700 Standard display rate / total / total resettable D1
 ILR-701 Display rate / total / total resettable / Linearization D2
 ILR-750 Display rate / total / total resettable / pulse out / 4-20mA / Linearization / 6-24VDC (w/3 meter cable) D3
 ER-420-AC Scalable Rate/Flow Counter w/ 4-20 mA, 115-230V AC AA
 ER-420-DC Scalable Rate/Flow Counter w/ 4-20 mA, 24V DC A4
 ER-420-LP Scalable Rate/Flow Counter w/ 4-20 mA, LOOP POWERED AL
 F012A 8-30VDC / Battery / Backlight FA
 F012B 8-30VDC / Battery / Backlight / intrinsically safe FB
 F012C 115 - 230 VAC / Backlight FC
 F018A 8-30VDC / Battery / Backlight / HART 7.0 FD
 F018B 8-30VDC / Battery / Backlight / HART 7.0 / intrinsically safe FE
 F110A 8-30VDC / Battery / Backlight / Analog+pulse output FF
 F110B 8-30VDC / Battery / Analog+pulse output / intrinsically safe FG
 F110C 115-230VAC / Backlight / Analog+pulse output FH
 F110D 8-30VDC / Battery / Backlight/RS485-2 wire / Analog+pulse output FI
 F110E 115-230VAC / Backlight/RS485-2 wire / Analog+pulse output FJ
 F131A 8-30VDC / Battery / Backlight / Batch / 2 transistor outputs FK
 F131B 115-230VAC / Backlight / Batch / 2 Relay outputs FL
 F131C 8-30VDC / Battery / Batch / 2 transistor outputs / Intrinsically safe FN
 F131D 24VDC / Backlight / Batch / 2 Relay outputs FM
 ER-500S 24VDC / Battery / Analog+Pulse output ER
 ER-500A 24VDC / Battery / Analog+Pulse output/ Modbus RS485 EA
 NONE XX

REMOTE REGISTRATION

ER-420-AC ER-420 (Scaleable Rate/Flow Counter w/ 4-20mA, 115-230 VAC) RD
 ER-420-DC ER-420 (Scaleable Rate/Flow Counter w/ 4-20mA, 24V DC) RE
 ER-420-LP ER-420 (Scaleable Rate/Flow Counter w/ 4-20mA, LOOP POWERED) RF
 F012A 8-30VDC / Battery / Backlight TA
 F012B 8-30VDC / Battery / Backlight / intrinsically safe TB
 F012C 115 - 230 VAC / Backlight TC
 F018A 8-30VDC / Battery / Backlight / HART 7.0 TD
 F018B 8-30VDC / Battery / Backlight / HART 7.0 / intrinsically safe TE
 F110A 8-30VDC / Battery / Backlight / Analog+pulse output TF
 F110B g+pulse output / intrinsically safe TG
 F110C 115-230VAC / Backlight / Analog+pulse output TH
 F110D 8-30VDC / Battery / Backlight/RS485-2 wire / Analog+pulse output TI
 F110E 115-230VAC / Backlight/RS485-2 wire / Analog+pulse output TJ
 F131A 8-30VDC / Battery / Backlight / Batch / 2 transistor outputs TK
 F131B 115-230VAC / Backlight / Batch / 2 Relay outputs TL
 F131C 8-30VDC / Battery / Batch / 2 transistor outputs / Intrinsically safe TN
 F131D 24VDC / Backlight / Batch / 2 Relay outputs TM
 ER-500S 24VDC / Battery / Analog+Pulse output PR
 ER-500A 24VDC / Battery / Analog+Pulse output/ Modbus RS485 PA
 NONE XX

UNIT OF MEASURE/PROGRAMMING

LITERS LTR
 NONE XXX

REMOTE CABLE LENGTH

3M STANDARD CABLE M3
 NONE WW

CERTIFICATION

NONE
 ADDITIONAL DOCUMENTATIONS FOR FOOD INDUSTRY (Only for SST BODY with SST ROTORS available) W
 SILICON FREE L
 ADDITIONAL DOCUMENTATIONS FOR FOOD INDUSTRY and SILICONE FREE (Only for SST BODY with SST ROTORS available) E

SERIALIZATION METER

YR MFG 8D, NONE YF
 NONE XX

Additional Options

5 POINT CALIBRATION REPORT BA
 LINEARIZATION with 5-POINT CALIBRATION REPORT (ILR-750 and ILR-701 only) BB
 3.1 MATERIAL CERTIFICATE (certificates for pressurized parts, Aluminum or Stainless housings only) BC
 NONE XX

Industrial Oval Gear Meter
Model IOG

OG - - - - - LTR - - - - - YF - - - - -

METER SIZE (LINE SIZE)

3/4 in (20 mm) 2 - 60 l/min (0.5 - 16 USG/min) 007

BASE MATERIAL 1/2" - 3/4" - 1" (15 mm, 20 mm, 25 mm)

ALUMINUM (6061/6081) BODY / VECTRA (LCP) ROTORS	AV
STAINLESS STEEL (316L) BODY / STAINLESS STEEL (316L) ROTORS	SS
STAINLESS STEEL (316L) BODY / RYTON (PPS) ROTORS	SR
STAINLESS STEEL (316L) BODY / VECTRA (LCP) ROTORS	SV
KYNAR (PVDF) BODY / RYTON (PPS) ROTORS	KR
KYNAR (PVDF) BODY / VECTRA (LCP) ROTORS	KV

ROTORS

STANDARD	ST
HIGH VISCOSITY ROTORS (MODIFIED ROTORS)	HV

PROCESS CONNECTION

NPT, STANDARD FEMALE	NAA
BSP, STANDARD FEMALE	BAA
ASME, CLASS 150 FLG, RF (Only for SST housing)	FAA
ASME, CLASS 300 FLG, RF (Only for SST housing)	FAB
DIN, PN 16 FLG (Only for SST housing)	FEC
TRI-CLAMP (DIN 32676) (Only for SST housing)	TAA

SEALS

FKM/VITON	V
TFE(P)/FLAS	A
FFKM/KALREZ	K
EPDM	E

REGISTRATION

METER MOUNTED TRANSMITTERS

ILR-740	Unscaled Pulse Output (w/ 3 meter cable)	T1
ILR-741	Unscaled Pulse Output (no cable)	T2
NAMUR	Namur sensor / unscaled (w/ 2 meter cable)	T3
PNP	Open collector Sensor PNP / unscaled (w/ 3 meter cable)	T4
NPN	Open collector Sensor NPN / unscaled (w/ 3 meter cable)	T5
REED	Reed switch board with cable gland (no cable)	T6
HALL	Hall board with cable gland (no cable)	T7

METER MOUNTED REGISTRATION / BATCH CONTROLLERS

ILR-700	Standard display rate / total / total resettable	D1
ILR-701	Display rate / total / total resettable / Linearization	D2
ILR-750	Display rate / total / total resettable / pulse out / 4-20mA / Linearization / 6-24VDC (w/3 meter cable)	D3
ER-420-AC	Scalable Rate/Flow Counter w/ 4-20 mA, 115-230V AC	AA
ER-420-DC	Scalable Rate/Flow Counter w/ 4-20 mA, 24V DC	A4
ER-420-LP	Scalable Rate/Flow Counter w/ 4-20 mA, LOOP POWERED	AL
F012A	8-30VDC / Battery / Backlight	FA
F012B	8-30VDC / Battery / Backlight / Intrinsically safe	FB
F012C	115 - 230 VAC / Backlight	FC
F018A	8-30VDC / Battery / Backlight / HART 7.0	FD
F018B	8-30VDC / Battery / Backlight / HART 7.0 / Intrinsically safe	FE
F110A	8-30VDC / Battery / Backlight / Analog+pulse output	FF
F110B	8-30VDC / Battery / Analog+pulse output / Intrinsically safe	FG
F110C	115-230VAC / Backlight / Analog+pulse output	FI
F110D	8-30VDC / Battery / Backlight/RS485-2 wire / Analog+pulse output	FJ
F110E	115-230VAC / Backlight/RS485-2 wire / Analog+pulse output	FK
F131A	8-30VDC / Battery / Backlight / Batch / 2 transistor outputs	FL
F131B	115-230VAC / Backlight / Batch / 2 Relay outputs	FN
F131C	8-30VDC / Battery / Batch / 2 transistor outputs / Intrinsically safe	FM
F131D	24VDC / Backlight / Batch / 2 Relay outputs	ER
ER-500S	24VDC / Battery / Analog+Pulse output	EA
ER-500A	24VDC / Battery / Analog+Pulse output/ Modbus RS485	EA
NONE		XX

REMOTE REGISTRATION

ER-420-AC	ER-420 (Scalable Rate/Flow Counter w/ 4-20mA, 115-230 VAC)	RD
ER-420-DC	ER-420 (Scalable Rate/Flow Counter w/ 4-20mA, 24V DC)	RE
ER-420-LP	ER-420 (Scalable Rate/Flow Counter w/ 4-20mA, LOOP POWERED)	RF
F012A	8-30VDC / Battery / Backlight	TA
F012B	8-30VDC / Battery / Backlight / Intrinsically safe	TB
F012C	115 - 230 VAC / Backlight	TC
F018A	8-30VDC / Battery / Backlight / HART 7.0	TD
F018B	ght / HART 7.0 / Intrinsically safe	TE
F110A	8-30VDC / Battery / Backlight / Analog+pulse output	TF
F110B	8-30VDC / Battery / Analog+pulse output / Intrinsically safe	TG
F110C	115-230VAC / Backlight / Analog+pulse output	TH
F110D	8-30VDC / Battery / Backlight/RS485-2 wire / Analog+pulse output	TI
F110E	115-230VAC / Backlight/RS485-2 wire / Analog+pulse output	TJ
F131A	8-30VDC / Battery / Backlight / Batch / 2 transistor outputs	TK
F131B	115-230VAC / Backlight / Batch / 2 Relay outputs	TL
F131C	8-30VDC / Battery / Batch / 2 transistor outputs / Intrinsically safe	TN
F131D	24VDC / Backlight / Batch / 2 Relay outputs	TM
ER-500S	24VDC / Battery / Analog+Pulse output	PR
ER-500A	24VDC / Battery / Analog+Pulse output/ Modbus RS485	PA
NONE		XX

UNIT OF MEASURE/PROGRAMMING

LITERS	LTR
NONE	XXX
REMOTE CABLE LENGTH	
3M STANDARD CABLE	M3
NONE	WW

CERTIFICATION

NONE	W
ADDITIONAL DOCUMENTATIONS FOR FOOD INDUSTRY (Only for SST BODY with SST ROTORS available)	F
SILICON FREE	L
ADDITIONAL DOCUMENTATIONS FOR FOOD INDUSTRY and SILICONE FREE (Only for SST BODY with SST ROTORS available)	E

SERIALIZATION METER

YR MFG 8D, NONE	YF
NONE	XX

Additional Options

5 POINT CALIBRATION REPORT	BA
LINEARIZATION with 5-POINT CALIBRATION REPORT (ILR-750 and ILR-701 only)	BB
3.1 MATERIAL CERTIFICATE (certificates for pressurized parts, Aluminum or Stainless housings only)	BC
NONE	XX

Industrial Oval Gear Meter
Model IOG

LOG - - - - - LTR - - - - - YF - - - - -

METER SIZE / LINE SIZE

1 in (25 mm) 2.3 - 68 l/min (0.6 - 18 USG/min) 010

BASE MATERIAL 1/2" - 3/4" - 1" (15 mm, 20 mm, 25 mm)

ALUMINUM (6061/6081) BODY / VECTRA (LCP) ROTORS AV
 STAINLESS STEEL (316L) BODY / STAINLESS STEEL (316L) ROTORS SS
 STAINLESS STEEL (316L) BODY / RYTON (PPS) ROTORS SR
 STAINLESS STEEL (316L) BODY / VECTRA (LCP) ROTORS SV

ROTORS

STANDARD ST
 HIGH VISCOSITY ROTORS (MODIFIED ROTORS) HV

PROCESS CONNECTION

NPT, STANDARD FEMALE NAA
 BSP, STANDARD FEMALE BAA
 ASME, CLASS 150 FLG, RF (Only for SST housing) FAA
 ASME, CLASS 300 FLG, RF (Only for SST housing) FAB
 DIN, PN 16 FLG (Only for SST housing) FEC
 TRI-CLAMP (DIN 32676) (Only for SST housing) TAA

SEALS

FKM/VITON V
 TFE(P)/AFLAS A
 FFKM/KALREZ K
 EPDM E

REGISTRATION

METER MOUNTED TRANSMITTERS

ILR-740 Unscaled Pulse Output (w/ 3 meter cable) T1
 ILR-741 Unscaled Pulse Output (no cable) T2
 NAMUR Namur sensor / unscaled (w/ 2 meter cable) T3
 PNP Open collector Sensor PNP / unscaled (w/ 3 meter cable) T4
 NPN Open collector Sensor NPN / unscaled (w/ 3 meter cable) T5
 REED Reed switch board with cable gland (no cable) T6
 HALL Hall board with cable gland (no cable) T7

METER MOUNTED REGISTRATION / BATCH CONTROLLERS

ILR-700 Standard display rate / total / total resettable D1
 ILR-701 Display rate / total / total resettable / Linearization D2
 ILR-750 Display rate / total / total resettable / pulse out / 4-20mA / Linearization / 6-24VDC (w/3 meter cable) D3
 ER-420-AC Scalable Rate/Flow Counter w/ 4-20 mA, 115-230V AC AA
 ER-420-DC Scalable Rate/Flow Counter w/ 4-20 mA, 24V DC A4
 ER-420-LP Scalable Rate/Flow Counter w/ 4-20 mA, LOOP POWERED AL
 F012A 8-30VDC / Battery / Backlight FA
 F012B 8-30VDC / Battery / Backlight / intrinsically safe FB
 F012C 115 - 230 VAC / Backlight FC
 F018A 8-30VDC / Battery / Backlight / HART 7.0 FD
 F018B 8-30VDC / Battery / Backlight / HART 7.0 / intrinsically safe FE
 F110A 8-30VDC / Battery / Backlight / Analog+pulse output FF
 F110B 8-30VDC / Battery / Analog+pulse output / intrinsically safe FG
 F110C 115-230VAC / Backlight / Analog+pulse output FH
 F110D 8-30VDC / Battery / Backlight/RS485-2 wire / Analog+pulse output FI
 F110E 115-230VAC / Backlight/RS485-2 wire / Analog+pulse output FJ
 F131A 8-30VDC / Battery / Backlight / Batch / 2 transistor outputs FK
 F131B 115-230VAC / Backlight / Batch / 2 Relay outputs FL
 F131C 8-30VDC / Battery / Batch / 2 transistor outputs / Intrinsically safe FN
 F131D 24VDC / Backlight / Batch / 2 Relay outputs FM
 ER-500S 24VDC / Battery / Analog+Pulse output ER
 ER-500A 24VDC / Battery / Analog+Pulse output/ Modbus RS485 EA
 NONE XX

REMOTE REGISTRATION

ER-420-AC ER-420 (Scaleable Rate/Flow Counter w/ 4-20mA, 115-230 VAC) RD
 ER-420-DC ER-420 (Scaleable Rate/Flow Counter w/ 4-20mA, 24V DC) RE
 ER-420-LP ER-420 (Scaleable Rate/Flow Counter w/ 4-20mA, LOOP POWERED) RF
 F012A 8-30VDC / Battery / Backlight TA
 F012B 8-30VDC / Battery / Backlight / intrinsically safe TB
 F012C 115 - 230 VAC / Backlight TC
 F018A 8-30VDC / Battery / Backlight / HART 7.0 TD
 F018B 8-30VDC / Battery / Backlight / HART 7.0 / intrinsically safe TE
 F110A 8-30VDC / Battery / Backlight / Analog+pulse output TF
 F110B g+pulse output / intrinsically safe TG
 F110C 115-230VAC / Backlight / Analog+pulse output TH
 F110D 8-30VDC / Battery / Backlight/RS485-2 wire / Analog+pulse output TI
 F110E 115-230VAC / Backlight/RS485-2 wire / Analog+pulse output TJ
 F131A 8-30VDC / Battery / Backlight / Batch / 2 transistor outputs TK
 F131B 115-230VAC / Backlight / Batch / 2 Relay outputs TL
 F131C 8-30VDC / Battery / Batch / 2 transistor outputs / Intrinsically safe TN
 F131D 24VDC / Backlight / Batch / 2 Relay outputs TM
 ER-500S 24VDC / Battery / Analog+Pulse output PR
 ER-500A 24VDC / Battery / Analog+Pulse output/ Modbus RS485 PA
 NONE XX

UNIT OF MEASURE/PROGRAMMING

LITERS LTR
 NONE XXX

REMOTE CABLE LENGTH

3M STANDARD CABLE M3
 NONE WW

CERTIFICATION

NONE
 ADDITIONAL DOCUMENTATIONS FOR FOOD INDUSTRY (Only for SST BODY with SST ROTORS available) W
 SILICON FREE F
 ADDITIONAL DOCUMENTATIONS FOR FOOD INDUSTRY AND SILICON FREE (Only for SST BODY with SST ROTORS available) L
 E

SERIALIZATION METER

YR MFG 8D, NONE YF
 NONE XX

Additional Options

5 POINT CALIBRATION REPORT BA
 LINEARIZATION with 5-POINT CALIBRATION REPORT (ILR-750 and ILR-701 only) BB
 3.1 MATERIAL CERTIFICATE (certificates for pressurized parts, Aluminum or Stainless housings only) BC
 NONE XX

Industrial Oval Gear Meter
Model IOG

OG - [] - [] - [] - [] - [] - LTR - [] - [] YF - []

METER SIZE (LINE SIZE)

1 in (25 mm) HIGH FLOW 5.7 – 170 l/min (1.5 – 45 USG/min) H10

BASE MATERIAL 1" HF, 1-1/2", 2", 3" (15 mm HF, 40 mm, 50 mm, 80 mm)

ALUMINUM (6061/6081) BODY / STAINLESS STEEL (316L) ROTORS AS
 ALUMINUM (6061/6081) BODY / RYTON (PPS) ROTORS AR
 STAINLESS STEEL (316L) BODY / STAINLESS STEEL (316L) ROTORS SS
 STAINLESS STEEL (316L) BODY / RYTON (PPS) ROTORS SR
 KYNAR (PVDF) BODY / RYTON (PPS) ROTORS KR

ROTORS

STANDARD ST
 HIGH VISCOSITY ROTORS (MODIFIED ROTORS) HV

PROCESS CONNECTION

NPT, STANDARD FEMALE NAA
 BSP, STANDARD FEMALE BAA
 ASME, CLASS 150 FLG, RF FAA
 ASME, CLASS 300 FLG, RF FAB
 DIN, PN 16 FLG FEC
 TRI-CLAMP (DIN 32676) (Only for SST housing) TAA

SEALS

FKM/VITON V
 TFE(P)/AFLAS A
 FFKM/KALREZ K
 EPDM E

REGISTRATION

METER MOUNTED TRANSMITTERS

ILR-740 Unscaled Pulse Output (w/ 3 meter cable) T1
 ILR-741 Unscaled Pulse Output (no cable) T2
 NAMUR Namur sensor / unscaled (w/ 2 meter cable) T3
 PNP Open collector Sensor PNP / unscaled (w/ 3 meter cable) T4
 NPN Open collector Sensor NPN / unscaled (w/ 3 meter cable) T5
 REED Reed switch board with cable gland (no cable) T6
 HALL Hall board with cable gland (no cable) T7

METER MOUNTED REGISTRATION / BATCH CONTROLLERS

ILR-700 Standard display rate / total / total resettable D1
 ILR-701 Display rate / total / total resettable / Linearization D2
 ILR-750 Display rate / total / total resettable / pulse out / 4-20mA / Linearization / 6-24VDC (w/3 meter cable) D3
 ER-420-AC Scalable Rate/Flow Counter w/ 4-20 mA, 115-230V AC AA
 ER-420-DC Scalable Rate/Flow Counter w/ 4-20 mA, 24V DC A4
 ER-420-LP Scalable Rate/Flow Counter w/ 4-20 mA, LOOP POWERED AL
 F012A 8-30VDC / Battery / Backlight FA
 F012B 8-30VDC / Battery / Backlight / intrinsically safe FB
 F012C 115 - 230 VAC / Backlight FC
 F018A 8-30VDC / Battery / Backlight / HART 7.0 FE
 F018B 8-30VDC / Battery / Backlight / HART 7.0 / intrinsically safe FD
 F110A 8-30VDC / Battery / Backlight / Analog+pulse output FF
 F110B 8-30VDC / Battery / Analog+pulse output / intrinsically safe FG
 F110C 115-230VAC / Backlight / Analog+pulse output FH
 F110D 8-30VDC / Battery / Backlight/RS485-2 wire / Analog+pulse output FI
 F110E 115-230VAC / Backlight/RS485-2 wire / Analog+pulse output FJ
 F131A 8-30VDC / Battery / Backlight / Batch / 2 transistor outputs FK
 F131B 115-230VAC / Backlight / Batch / 2 Relay outputs FL
 F131C 8-30VDC / Battery / Batch / 2 transistor outputs / Intrinsically safe FN
 F131D 24VDC / Backlight / Batch / 2 Relay outputs FM
 ER-500S 24VDC / Battery / Analog+Pulse output ER
 ER-500A 24VDC / Battery / Analog+Pulse output/ Modbus RS485 EA
 NONE XX

REMOTE REGISTRATION

ER-420-AC ER-420 (Scalable Rate/Flow Counter w/ 4-20mA, 115-230 VAC) RD
 ER-420-DC ER-420 (Scalable Rate/Flow Counter w/ 4-20mA, 24V DC) RE
 ER-420-LP ER-420 (Scalable Rate/Flow Counter w/ 4-20mA, LOOP POWERED) RF
 F012A 8-30VDC / Battery / Backlight TA
 F012B 8-30VDC / Battery / Backlight / intrinsically safe TB
 F012C 115 - 230 VAC / Backlight TC
 F018A 8-30VDC / Battery / Backlight / HART 7.0 TD
 F018B 8-30VDC / Battery / Backlight / HART 7.0 / intrinsically safe TE
 F110A Backlight / Analog+pulse output TF
 F110B 8-30VDC / Battery / Analog+pulse output / intrinsically safe TG
 F110C 115-230VAC / Backlight / Analog+pulse output TH
 F110D 8-30VDC / Battery / Backlight/RS485-2 wire / Analog+pulse output TI
 F110E 115-230VAC / Backlight/RS485-2 wire / Analog+pulse output TJ
 F131A 8-30VDC / Battery / Backlight / Batch / 2 transistor outputs TK
 F131B 115-230VAC / Backlight / Batch / 2 Relay outputs TL
 F131C 8-30VDC / Battery / Batch / 2 transistor outputs / Intrinsically safe TN
 F131D 24VDC / Backlight / Batch / 2 Relay outputs TM
 ER-500S 24VDC / Battery / Analog+Pulse output PR
 ER-500A 24VDC / Battery / Analog+Pulse output/ Modbus RS485 PA
 NONE XX

UNIT OF MEASURE/PROGRAMMING

LITERS LTR
 NONE XXX

REMOTE CABLE LENGTH

3M STANDARD CABLE M3
 NONE WW

CERTIFICATION

NONE W
 ADDITIONAL DOCUMENTATIONS FOR FOOD INDUSTRY (Only for SST BODY with SST ROTORS available) F
 SILICON FREE L
 ADDITIONAL DOCUMENTATIONS FOR FOOD INDUSTRY and SILICONE FREE (Only for SST BODY with SST ROTORS available) E

SERIALIZATION METER

YR MFG 8D, NONE YF
 NONE XX

Additional Options

5 POINT CALIBRATION REPORT BA
 LINEARIZATION with 5-POINT CALIBRATION REPORT (ILR-750 and ILR-701 only) BB
 3.1 MATERIAL CERTIFICATE (certificates for pressurized parts, Aluminum or Stainless housings only) BC
 NONE XX

Industrial Oval Gear Meter
Model IOG

IOG - - - - - LTR - - - - - YF - - - - -

METER SIZE (LINE SIZE)

1-1/2 in (40 mm) 9.5 - 246 l/min (2.5 - 65 USG/min) 015

BASE MATERIAL 1" HF, 1-1/2", 2", 3" (15 mm HF, 40 mm, 50 mm, 80 mm)

ALUMINUM (6061/6081) BODY / STAINLESS STEEL (316L) ROTORS AS
 ALUMINUM (6061/6081) BODY / RYTON (PPS) ROTORS AR
 STAINLESS STEEL (316L) BODY / STAINLESS STEEL (316L) ROTORS SS
 STAINLESS STEEL (316L) BODY / RYTON (PPS) ROTORS SR

ROTORS

STANDARD ST
 HIGH VISCOSITY ROTORS (MODIFIED ROTORS) HV

PROCESS CONNECTION

NPT, STANDARD FEMALE NAA
 BSP, STANDARD FEMALE BAA
 ASME, CLASS 150 FLG, RF FAA
 ASME, CLASS 300 FLG, RF FAB
 DIN, PN 16 FLG FEC
 TRI-CLAMP (DIN 32676) (Only for SST housing) TAA

SEALS

FKM/VITON V
 TFE(P)/AFLAS A
 FFKM/KALREZ K
 EPDM E

REGISTRATION

METER MOUNTED TRANSMITTERS

ILR-740 Unscaled Pulse Output (w/ 3 meter cable) T1
 ILR-741 Unscaled Pulse Output (no cable) T2
 NAMUR Namur sensor / unscaled (w/ 2 meter cable) T3
 PNP Open collector Sensor PNP / unscaled (w/ 3 meter cable) T4
 NPN Open collector Sensor NPN / unscaled (w/ 3 meter cable) T5
 REED Reed switch board with cable gland (no cable) T6
 HALL Hall board with cable gland (no cable) T7

METER MOUNTED REGISTRATION / BATCH CONTROLLERS

ILR-700 Standard display rate / total / total resettable D1
 ILR-701 Display rate / total / total resettable / Linearization D2
 ILR-750 Display rate / total / total resettable / pulse out / 4-20mA / Linearization / 6-24VDC (w/3 meter cable) D3
 ER-420-AC Scalable Rate/Flow Counter w/ 4-20 mA, 115-230V AC AA
 ER-420-DC Scalable Rate/Flow Counter w/ 4-20 mA, 24V DC A4
 ER-420-LP Scalable Rate/Flow Counter w/ 4-20 mA, LOOP POWERED AL
 F012A 8-30VDC / Battery / Backlight FA
 F012B 8-30VDC / Battery / Backlight / intrinsically safe FB
 F012C 115 - 230 VAC / Backlight FC
 F018A 8-30VDC / Battery / Backlight / HART 7.0 FD
 F018B 8-30VDC / Battery / Backlight / HART 7.0 / intrinsically safe FE
 F110A 8-30VDC / Battery / Backlight / Analog+pulse output FF
 F110B 8-30VDC / Battery / Analog+pulse output / intrinsically safe FG
 F110C 115-230VAC / Backlight / Analog+pulse output FH
 F110D 8-30VDC / Battery / Backlight/RS485-2 wire / Analog+pulse output FI
 F110E 115-230VAC / Backlight/RS485-2 wire / Analog+pulse output FJ
 F131A 8-30VDC / Battery / Backlight / Batch / 2 transistor outputs FK
 F131B 115-230VAC / Backlight / Batch / 2 Relay outputs FL
 F131C 8-30VDC / Battery / Batch / 2 transistor outputs / Intrinsically safe FN
 F131D 24VDC / Backlight / Batch / 2 Relay outputs FM
 ER-500S 24VDC / Battery / Analog+Pulse output ER
 ER-500A 24VDC / Battery / Analog+Pulse output/ Modbus RS485 EA
 NONE XX

REMOTE REGISTRATION

ER-420-AC ER-420 (Scalable Rate/Flow Counter w/ 4-20mA, 115-230 VAC) RD
 ER-420-DC ER-420 (Scalable Rate/Flow Counter w/ 4-20mA, 24V DC) RE
 ER-420-LP ER-420 (Scalable Rate/Flow Counter w/ 4-20mA, LOOP POWERED) RF
 F012A 8-30VDC / Battery / Backlight TA
 F012B 8-30VDC / Battery / Backlight / intrinsically safe TB
 F012C 115 - 230 VAC / Backlight TC
 F018A 8-30VDC / Battery / Backlight / HART 7.0 TD
 F018B 8-30VDC / Battery / Backlight / HART 7.0 / intrinsically safe TE
 F110A 8-30VDC / Battery / Backlight / Analog+pulse output TF
 F110B g+pulse output / intrinsically safe TG
 F110C 115-230VAC / Backlight / Analog+pulse output TH
 F110D 8-30VDC / Battery / Backlight/RS485-2 wire / Analog+pulse output TI
 F110E 115-230VAC / Backlight/RS485-2 wire / Analog+pulse output TJ
 F131A 8-30VDC / Battery / Backlight / Batch / 2 transistor outputs TK
 F131B 115-230VAC / Backlight / Batch / 2 Relay outputs TL
 F131C 8-30VDC / Battery / Batch / 2 transistor outputs / Intrinsically safe TN
 F131D 24VDC / Backlight / Batch / 2 Relay outputs TM
 ER-500S 24VDC / Battery / Analog+Pulse output PR
 ER-500A 24VDC / Battery / Analog+Pulse output/ Modbus RS485 PA
 NONE XX

UNIT OF MEASURE/PROGRAMMING

LITERS LTR
 NONE XXX

REMOTE CABLE LENGTH

3M STANDARD CABLE M3
 NONE WW

CERTIFICATION

NONE W
 ADDITIONAL DOCUMENTATIONS FOR FOOD INDUSTRY (Only for SST BODY with SST ROTORS available) F
 SILICON FREE L
 ADDITIONAL DOCUMENTATIONS FOR FOOD INDUSTRY AND SILICON FREE (Only for SST BODY with SST ROTORS available) E

SERIALIZATION METER

YR MFG 8D, NONE YF
 NONE XX

Additional Options

5 POINT CALIBRATION REPORT BA
 LINEARIZATION with 5-POINT CALIBRATION REPORT (ILR-750 and ILR-701 only) BB
 3.1 MATERIAL CERTIFICATE (certificates for pressurized parts, Aluminum or Stainless housings only) BC
 NONE XX

Industrial Oval Gear Meter
Model IOG

OG - - - - - LTR - - - - - YF - - - - -

METER SIZE (LINE SIZE)

2 in (50 mm) 15 - 379 l/min (4 - 100 USG/min) 020

BASE MATERIAL 1" HF, 1-1/2", 2", 3" (15 mm HF, 40 mm, 50 mm, 80 mm)

ALUMINUM (6061/6081) BODY / STAINLESS STEEL (316L) ROTORS	AS
ALUMINUM (6061/6081) BODY / RYTON (PPS) ROTORS	AR
STAINLESS STEEL (316L) BODY / STAINLESS STEEL (316L) ROTORS	SS
STAINLESS STEEL (316L) BODY / RYTON (PPS) ROTORS	SR

ROTORS

STANDARD	ST
HIGH VISCOSITY ROTORS (MODIFIED ROTORS)	HV

PROCESS CONNECTION

NPT, STANDARD FEMALE	NAA
BSP, STANDARD FEMALE	BAA
ASME, CLASS 150 FLG; RF	FAA
ASME, CLASS 300 FLG; RF	FAB
DIN, PN 16 FLG	FEC
TRI-CLAMP (DIN 32676) (Only for SST housing)	TAA

SEALS

FKM/VITON	V
TFE(P)/AFLAS	A
FFKM/KALREZ	K
EPDM	E

REGISTRATION

METER MOUNTED TRANSMITTERS

ILR-740	Unscaled Pulse Output (w/ 3 meter cable)	T1
ILR-741	Unscaled Pulse Output (no cable)	T2
NAMUR	Namur sensor / unscaled (w/ 2 meter cable)	T3
PNP	Open collector Sensor PNP / unscaled (w/ 3 meter cable)	T4
NPN	Open collector Sensor NPN / unscaled (w/ 3 meter cable)	T5
REED	Reed switch board with cable gland (no cable)	T6
HALL	Hall board with cable gland (no cable)	T7

METER MOUNTED REGISTRATION / BATCH CONTROLLERS

ILR-700	Standard display rate / total / total resettable	D1
ILR-701	Display rate / total / total resettable / Linearization	D2
ILR-750	Display rate / total / total resettable / pulse out / 4-20mA / Linearization / 6-24VDC (w/3 meter cable)	D3
ER-420-AC	Scalable Rate/Flow Counter w/ 4-20 mA, 115-230V AC	AA
ER-420-DC	Scalable Rate/Flow Counter w/ 4-20 mA, 24V DC	A4
ER-420-LP	Scalable Rate/Flow Counter w/ 4-20 mA, LOOP POWERED	AL
F012A	8-30VDC / Battery / Backlight	FA
F012B	8-30VDC / Battery / Backlight / intrinsically safe	FB
F012C	115 - 230 VAC / Backlight	FC
F018A	8-30VDC / Battery / Backlight / HART 7.0	FD
F018B	8-30VDC / Battery / Backlight / HART 7.0 / intrinsically safe	FE
F110A	8-30VDC / Battery / Backlight / Analog+pulse output	FF
F110B	8-30VDC / Battery / Analog+pulse output / intrinsically safe	FG
F110C	115-230VAC / Backlight / Analog+pulse output	FH
F110D	8-30VDC / Battery / Backlight/RS485-2 wire / Analog+pulse output	FI
F110E	115-230VAC / Backlight/RS485-2 wire / Analog+pulse output	FJ
F131A	8-30VDC / Battery / Backlight / Batch / 2 transistor outputs	FK
F131B	115-230VAC / Backlight / Batch / 2 Relay outputs	FL
F131C	8-30VDC / Battery / Batch / 2 transistor outputs / Intrinsically safe	FN
F131D	24VDC / Backlight / Batch / 2 Relay outputs	FM
ER-500S	24VDC / Battery / Analog+Pulse output	ER
ER-500A	24VDC / Battery / Analog+Pulse output/ Modbus RS485	EA
NONE		XX

REMOTE REGISTRATION

ER-420-AC	ER-420 (Scaleable Rate/Flow Counter w/ 4-20mA, 115-230 VAC)	RD
ER-420-DC	ER-420 (Scaleable Rate/Flow Counter w/ 4-20mA, 24V DC)	RE
ER-420-LP	ER-420 (Scaleable Rate/Flow Counter w/ 4-20mA, LOOP POWERED)	RF
F012A	8-30VDC / Battery / Backlight	TA
F012B	8-30VDC / Battery / Backlight / intrinsically safe	TB
F012C	115 - 230 VAC / Backlight	TC
F018A	8-30VDC / Battery / Backlight / HART 7.0	TD
F018B	8-30VDC / Battery / Backlight / HART 7.0 / intrinsically safe	TE
F110A	8-30VDC / Battery / Backlight / Analog+pulse output	TF
F110B	g+pulse output / intrinsically safe	TG
F110C	115-230VAC / Backlight / Analog+pulse output	TH
F110D	8-30VDC / Battery / Backlight/RS485-2 wire / Analog+pulse output	TI
F110E	115-230VAC / Backlight/RS485-2 wire / Analog+pulse output	TJ
F131A	8-30VDC / Battery / Backlight / Batch / 2 transistor outputs	TK
F131B	115-230VAC / Backlight / Batch / 2 Relay outputs	TL
F131C	8-30VDC / Battery / Batch / 2 transistor outputs / Intrinsically safe	TN
F131D	24VDC / Backlight / Batch / 2 Relay outputs	TM
ER-500S	24VDC / Battery / Analog+Pulse output	PR
ER-500A	24VDC / Battery / Analog+Pulse output/ Modbus RS485	PA
NONE		XX

UNIT OF MEASURE/PROGRAMMING

LITERS	LTR
NONE	XXX

REMOTE CABLE LENGTH

3M STANDARD CABLE	M3
NONE	WW

CERTIFICATION

NONE	W
ADDITIONAL DOCUMENTATIONS FOR FOOD INDUSTRY (Only for SST BODY with SST ROTORS available)	F
SILICON FREE	L
ADDITIONAL DOCUMENTATIONS FOR FOOD INDUSTRY and SILICONE FREE (Only for SST BODY with SST ROTORS available)	E

SERIALIZATION METER

YR MFG 8D, NONE	YF
NONE	XX

Additional Options

5 POINT CALIBRATION REPORT	BA
LINEARIZATION with 5-POINT CALIBRATION REPORT (ILR-750 and ILR-701 only)	BB
3.1 MATERIAL CERTIFICATE (certificates for pressurized parts, Aluminum or Stainless housings only)	BC
NONE	XX

Industrial Oval Gear Meter
Model IOG



METER SIZE (LINE SIZE)		
3 in (80 mm)	19 ~ 700 l/min (5 ~ 185 USG/min)	030
BASE MATERIAL 1" HF, 1-1/2", 2", 3" (15 mm HF, 40 mm, 50 mm, 80 mm)		
ALUMINUM (6061/6081) BODY / STAINLESS STEEL (316L) ROTORS		AS
STAINLESS STEEL (316L) BODY / STAINLESS STEEL (316L) ROTORS		SS
ROTORS		
STANDARD		ST
HIGH VISCOSITY ROTORS (MODIFIED ROTORS)		HV
PROCESS CONNECTION		
NPT, STANDARD FEMALE		NAA
BSP, STANDARD FEMALE		BAA
ASME, CLASS 150 FLG, RF		FAA
ASME, CLASS 300 FLG, RF		FAB
DIN, PN 16 FLG		FEC
SEALS		
FKM/VITON		V
TFE(P)/AFLAS		A
FFKM/KALREZ		K
EPDM		E
REGISTRATION		
METER MOUNTED TRANSMITTERS		
ILR-741	Unscaled Pulse Output (no cable)	T2
NAMUR	Namur sensor / unscaled (w/ 2 meter cable)	T3
PNP	Open collector Sensor PNP / unscaled (w/ 3 meter cable)	T4
NPN	Open collector Sensor NPN / unscaled (w/ 3 meter cable)	T5
REED	Reed switch board with cable gland (no cable)	T6
HALL	Hall board with cable gland (no cable)	T7
METER MOUNTED REGISTRATION / BATCH CONTROLLERS		
ER-420-AC	Scalable Rate/Flow Counter w/ 4-20 mA, 115-230V AC	AA
ER-420-DC	Scalable Rate/Flow Counter w/ 4-20 mA, 24V DC	A4
ER-420-LP	Scalable Rate/Flow Counter w/ 4-20 mA, LOOP POWERED	AL
F012A	8-30VDC / Battery / Backlight	FA
F012B	8-30VDC / Battery / Backlight / Intrinsically safe	FB
F012C	115 - 230 VAC / Backlight	FC
F018A	8-30VDC / Battery / Backlight / HART 7.0	FD
F018B	8-30VDC / Battery / Backlight / HART 7.0 / Intrinsically safe	FE
F110A	8-30VDC / Battery / Backlight / Analog+pulse output	FF
F110B	8-30VDC / Battery / Analog+pulse output / Intrinsically safe	FG
F110C	115-230VAC / Backlight / Analog+pulse output	FH
F110D	8-30VDC / Battery / Backlight/RS485-2 wire / Analog+pulse output	FI
F110E	115-230VAC / Backlight/RS485-2 wire / Analog+pulse output	FJ
F131A	8-30VDC / Battery / Backlight / Batch / 2 transistor outputs	FK
F131B	115-230VAC / Backlight / Batch / 2 Relay outputs	FL
F131C	8-30VDC / Battery / Batch / 2 transistor outputs / Intrinsically safe	FN
F131D	24VDC / Backlight / Batch / 2 Relay outputs	FM
ER-500S	24VDC / Battery / Analog+Pulse output	ER
ER-500A	24VDC / Battery / Analog+Pulse output/ Modbus RS485	EA
NONE		XX
REMOTE REGISTRATION		
ER-420-AC	ER-420 (Scaleable Rate/Flow Counter w/ 4-20mA, 115-230V AC)	RD
ER-420-DC	ER-420 (Scaleable Rate/Flow Counter w/ 4-20mA, 24V DC)	RE
ER-420-LP	ER-420 (Scaleable Rate/Flow Counter w/ 4-20mA, LOOP POWERED)	RF
F012A	8-30VDC / Battery / Backlight	TA
F012B	8-30VDC / Battery / Backlight / Intrinsically safe	TB
F012C	115 - 230 VAC / Backlight	TC
F018A	8-30VDC / Battery / Backlight / HART 7.0	TD
F018B	8-30VDC / Battery / Backlight / HART 7.0 / Intrinsically safe	TE
F110A	8-30VDC / Battery / Backlight / Analog+pulse output	TF
F110B	8-30VDC / Battery / Analog+pulse output / Intrinsically safe	TG
F110C	115-230VAC / Backlight / Analog+pulse output	TH
F110D	8-30VDC / Battery / Backlight/RS485-2 wire / Analog+pulse output	TI
F110E	115-230VAC / Backlight/RS485-2 wire / Analog+pulse output	TJ
F131A	8-30VDC / Battery / Backlight / Batch / 2 transistor outputs	TK
F131B	115-230VAC / Backlight / Batch / 2 Relay outputs	TL
F131C	8-30VDC / Battery / Batch / 2 transistor outputs / Intrinsically safe	TN
F131D	/ Batch / 2 Relay outputs	TM
ER-500S	24VDC / Battery / Analog+Pulse output	PR
ER-500A	24VDC / Battery / Analog+Pulse output/ Modbus RS485	PA
NONE		XX
UNIT OF MEASURE/PROGRAMMING		
LITERS		LTR
NONE		XXX
REMOTE CABLE LENGTH		
3M STANDARD CABLE		M3
NONE		WW
CERTIFICATION		
NONE		W
ADDITIONAL DOCUMENTATIONS FOR FOOD INDUSTRY (Only for SST BODY with SST ROTORS available)		F
SILICON FREE		L
ADDITIONAL DOCUMENTATIONS FOR FOOD INDUSTRY and SILICONE FREE (Only for SST BODY with SST ROTORS available)		E
SERIALIZATION METER		
YR MFG 8D, NONE		YF
NONE		XX
Additional Options		
5 POINT CALIBRATION REPORT		BA
LINEARIZATION with 5-POINT CALIBRATION REPORT (ILR-750 and ILR-701 only)		BB
3.1 MATERIAL CERTIFICATE (certificates for pressurized parts, Aluminum or Stainless housings only)		BC
NONE		XX

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