

IEE DR1 ver 2 : Rotation detector

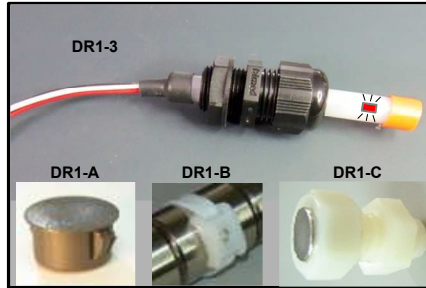
2 output : 0-5V & ON/OFF (DC or AC , (9 selections of %On & %Off))

2 output modes : direct or reverse)

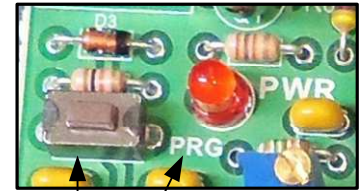
10 Ranges : 2 to 24 RPH : RPM 0,5 to 25, 50, 100 : 8 to 250, 500, 1000, 2000, 3000, 4000



Circuit DR1 ver2
DR1-DC or DR1-AC
Support compatible with DIN rail




Magnetic sensor with DEL (DR1-3)
&
Actuator (DR1-A, B, C)

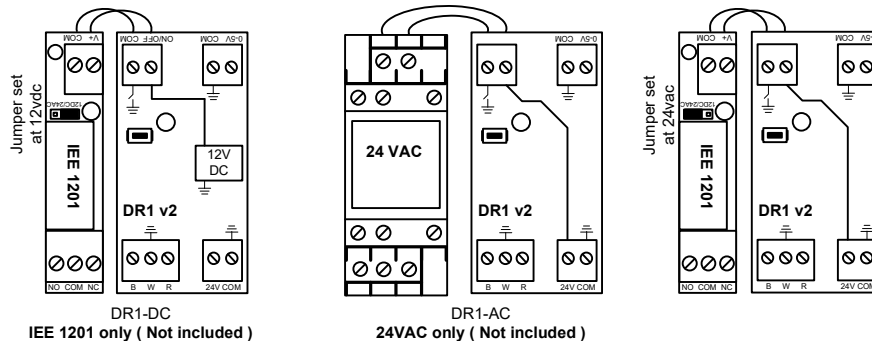


LED
Displays : Power
Programming
Run
Programming
switch

	Power supply :	Input signal :	Output signal
Rectifier :	1 Diode (half wave)	Sensor : 0 to 100 pulse/sec	0-5v & ON/OFF (dc or ac)
Power (VA) :	2 to 10va depending on relay	Min. pulse duration: 5ms	

Output	ON/OFF DC (20ma max)	ON/OFF AC (200ma , 5va max) , 0v crossing switch
0-5v (20ma max) 0.000 volt = 0 rph / rpm 5.000 volts = xxxx rph / rpm Step 0,005v	IEE 1201 only > xx%ON = ON (See note 1 P.3) < xx%OFF =OFF	24vac relay only > xx%ON = ON (See note 1 P.3) < xx%OFF =OFF

Terminals : 35° angle cage 12 - 22 gauge 10 Amp, 300 Vac PA66 UL94-0 	Printed circuit : FR4 Fire retardant UL Flame Class 94 V-0	Support : PVC , compatible with DIN rail UL Flame Class 94 V-0	Operation temp. -40° à 85°C , -40° à 185°F 5 à 95% HR sans condensation
Dimension : L x W x H 2.750" x 1.300" x 1.500" 70mm x 33mm x 40mm			



Installation

Insert from left side



Press on right side



Remove with flat screw driver



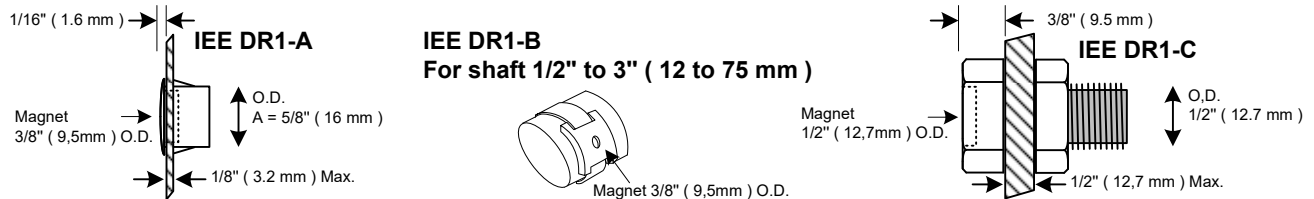
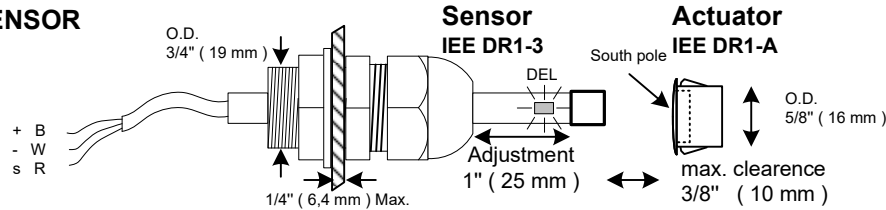
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INSTALLING SENSOR



PROGRAMMING

- 1 **OUTPUT MODE** (1: 0-5v & On/Off Direct , 2: 0-5v & On/Off reversed)
- 2 **RANGES** (1: 2-24 RPH, 2: 25, 3: 50, 4: 100, 5: 250, 6: 500, 7: 1000, 8: 2000, 9: 3000, 10: 4000 RPM)
- 3 **% ON** for On/Off (9 values , 10%, 20% ... 90% of selected range) (Ouput = ON at xx% * RPH / RPM) (See * par. 3 & Note 1 P.3 sect. OUTPUT)
- 4 **% OFF** for On/Off (9 values , 0%, 10% ... 80% of selected range) (Output = OFF at xx% * RPH / RPM) (See * par. 4 Note 2 P.3 sect. OUTPUT)
- 5 **Magnet qty**
- 6 **SENSOR TEST MODE**
 - Range 1 : 1 = 4 Actuators , 2 = 8 Actuators
 - Range 2 to 4 : 1 = 1 Actuator , 2 = 2 Actuators , 3 = 4 Actuators
 - Range 5 to 10 : 1 = 1 Actuator

To know the programmed functions :

Press and release switch (less than 2 sec. or until LED goes off)

The 5 functions shall be displayed in this order :1- Output Mode , 2- RPM range , 3- %ON for On/Off mode , 4- %OFF for On/Off mode , 5- Qty of magnet
While displaying , switch is deactivated .

Programming :

Press and hold switch 2 sec. or until LED blinks once for the first function and so on for other function .

Press and hold switch ,

After 2 sec. LED blinks once , release to select **Output mode** or hold to reach next function.

- 1 Press 1 or 2 times as the desired mode . Wait 4 sec. and LED displays your choice or press & hold to reach next function.
Wait 3 sec and device returns to normal operation or press & hold to reach next function.

After 4 sec. LED blinks twice , release to select **RPM Range** or hold to reach next function.

- 2 Press 1 , 2 ... 10 times as the desired range . Wait 4 sec. and LED displays your choice or press & hold to reach next function.
Wait 3 sec and device returns to normal operation or press & hold to reach next function.

After 6 sec. LED blinks 3 times , release to select **%On** or hold to reach next function.

- 3 Press 1 , 2 ... 9 time as the desired %On . Wait 4 sec. and LED displays your choice or press & hold to reach next function.
Wait 3 sec and device returns to normal operation or press & hold to reach next function.

* For ranges 2-24 TPH & 25,50,100 , selection 1 = Minimum RPH/RPM ON and 0% OFF

After 8 sec. LED blinks 4 times , release to select **%Off** or hold to reach next function.

- 4 Press 1 , 2 ... 9 time as the desired %Off . Wait 4 sec. and LED displays your choice or press & hold to reach next function.
Wait 3 sec and device returns to normal operation or press & hold to reach next function.

* %OFF never greater than %ON , software handled

After 10 sec. LED blinks 5 times , release to select **Number of magnet** or hold to reach next function.

- 5 Press 1 , 2 ... 4 time as the number of magnet used . Wait 4 sec. and LED displays your choice or press & hold to reach next function.
Wait 3 sec and device returns to normal operation or press & hold to reach next function.

After 12 sec. LED blinks 6 times , release (**Test Sensor Mode**). LED turns ON only when sensor gets in line with magnet .

- 6 Press switch to return to normal operation .
Wait 3 sec and device returns to normal operation .

Note that the programmed value is acknowledged at the release of the switch , which allow to press the switch again to reach next function without waiting for the display or the return to normal operation .

NOTE : The "North" pole of a magnet defined by the National Bureau of Standards convention is based on the following: "The North Pole of a magnet is that pole which is attracted to the geographic North Pole. Therefore, the North Pole of a magnet will repel the north seeking pole of a magnetic compass."

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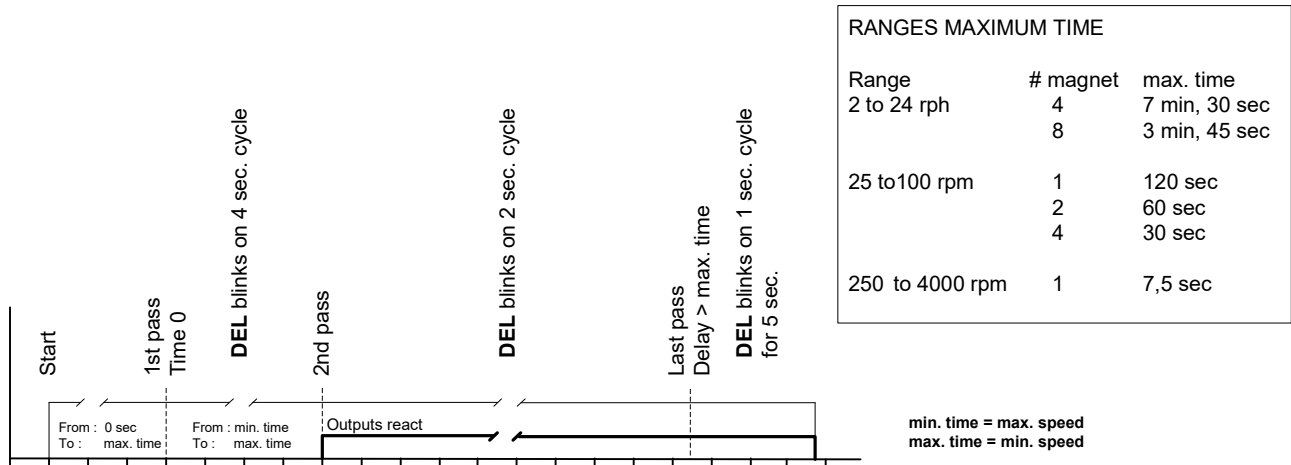
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OUTPUT REACTION TO ACTUATOR

Outputs react at second actuator pass if delay is shorter than maximum time .

First pass is time 0 (no reaction , LED blinks on a 4 sec. cycle for maximum time of the selected range)

After second pass , analog output is adjusted by 5% of the error every 200 msec.



LED SEQUENCE

- Stand by : Steady
- 1st pass : Blinks on a 4 sec. cycle until 2nd pass or until the end of max time.
- 2nd pass : Blinks on a 2 sec. cycle
- End of rotation : Blinks on a 1 sec. cycle for 5 sec.

OUTPUTS

0-5V Output		ON-OFF Output	
VOLTAGE	VALUE	%ON of selected range *note 1	%OFF of selected range
0	0 RPH/RPM	1 = 10%	1 = 0% (always 10% less than %ON , défaut)
5	xxxx RPH/RPM	2 = 20%	2 = 10%
		.	3 = 20%
		.	4 = 30%
		.	.
		Note 1 :	Note 2 : always 10% less than %ON , program handled)
		For 2 to 24 RPH & 0,5 to 25, 50, 100 RPM	.
		1 = Minimum speed ON et 0% OFF	.

ORDERING

Part #	Description	Qty
IEE DR1-DC	Circuit	
IEE DR1-AC	Circuit	
IEE DR1-3	Sensor	

Part #	Description	Qty
IEE DR1-A	Actuator	
IEE DR1-B	Actuator	
IEE DR1-C	Actuator	

Dry contact (ON / OFF)

Part #	Description	Qty
IEE 1201	Relais spdt	

