



ISSPRO R8480TM 3 3/8" Dia. Programmable Speedometer Air Core Version

General Information:

Operating Voltage: 11-30 VDC: NOTE – Instrument comes equipped with a 12V lamp. Replace lamp with one of proper voltage when installing instrument on 24V systems. 24V Lamp part number is 656.

Input: Magnetic sensor or AC generator

Transient Protection: +100V, -400V

Reverse Voltage Protected

Calibration:

The ISSPRO Programmable Speedometer is calibrated (programmed) by setting a combination of eight switches found in the rear of the instrument. The odometer and pointer are electronically linked together and both are calibrated when the switches are properly set. Program before installing. Models are available with and without odometers.

Calibration Procedure:

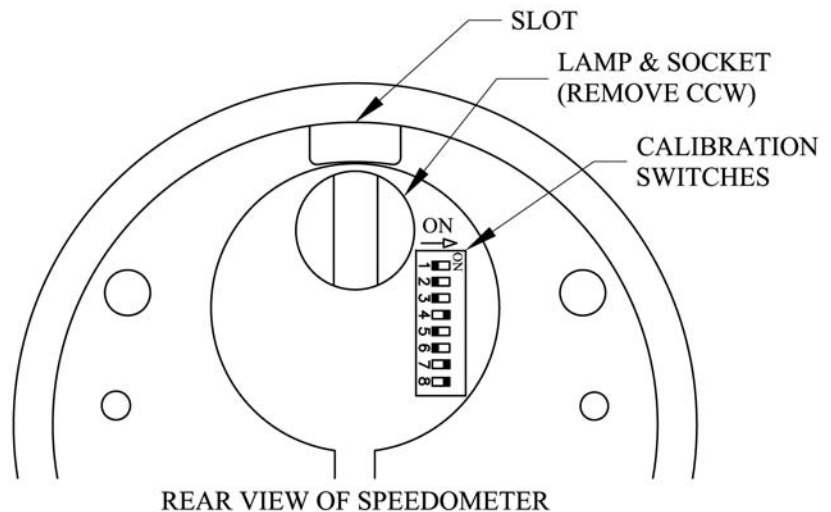
Calculate the “calibration number” from the appropriate formula below. A minimum calibration number of 12390 is required to be within calibration range. Refer to the “Calibration Switch Setting” table with this number. Locate the row in which the calibration number is between the limits, then set the switches marked with an “X” to the “on” position (up).

Example: Calibration number = 29644: From the table 29644 lies between 29609 and 29844, therefore, switches 3,4,6 and 8 will be set to “on”.

(1) Front wheel mounted tone wheel:
 Calibration Number = # slots in tone wheel X tires REV's per mile

(2) Tail Shaft mounted magnetic sensor:
 Calibration Number = Tires REV's per mile X differential ratio X 16

(3) Sender driven from transmission cable drive:
 Calibration Number = Cable turns per mile X # pulses per sender turn



If the number of cable turns per mile is not known, follow this procedure: Obtain a ratio tester and a correct drive tang for your transmission. With a steel tape measure, mark off 1/10th mile (523 feet) in as straight a line as possible. Mark start and stop lines with chalk or paint. Position the vehicle so that one of the wheels aligns with the start mark. Disconnect the speedometer cable at the transmission and install the ratio tester in its place. Secure the cables and reset the ratio tester. Drive the vehicle to the stop point positioning the selected wheel on the stop mark. The reading display on the ratio tester is the number of cable turns per mile if using an Engler “SAC-10”. If using an SS Whit ratio tester (part number 312-12175Y), multiply the reading by 10 to obtain the cable turns per mile.

Frequently Used Senders	Number of Pulses per Turn
Datcon 4-D-C 71267	8*
Dixson SG201A, SG201S1, SG202	2*
Engler 870-0588	15
ISSPRO R8970, R8940	30
Kienzle-Argo 8-161-237008	8*
Motorola 4-100(7SG100), 40-111 (7SG100B)	30
Rockwell 240R02-001	30
Sun Model CP7643	6*
Synchro-Start Minigen	30
Teleflex 9604276	8*
VDO (Old Style Engler) ISSPRO 300092	4*
Zemco 4710	8*
Zemco 6314	5*

*NOTE: These senders do not produce the minimum required number of pulses to be in calibration range when driven at 1000 turns per mile. It may be necessary to change your sender to one that generates more pulses per rev such as an ISSPRO R8970.

Installation: Mount the speedo in the dash panel and connect the wires as described below:

Make all your connections to the black plug supplied and then plug it in to the speedometer’s white connector.

- Red – Connect to ignition switched power source
- Black – Connect to ground along with one of the sensor wires.
- Green – Connect to dash lamp power.
- White – Connect to other sensor wire.

Installation Hints:

1. Bring both sensor wires back to the speedo connector. Do not connect the sensor ground wire to a point which is physically different than the speedometer ground.
2. When power is applied the needle should go to the zero position. If it does not, there may be a bad connection in the “hot” (red wire) or ground wire circuit. Check power to the meter by measuring with a voltmeter at the plug (meter leads on the pins that attach to the red and black wires). If there is power at the plug, the problem is in the gauge.
3. Low voltage (below 10.5 volts) will cause inaccurate reading. If inaccuracy is suspected, measure voltage with vehicle operating and meter connected. This can be done by connecting a voltmeter to power source (i.e. fuse block, etc.) and/or by piercing the red and black wire insulation with the meter leads.
4. If speedo reads zero, then “jumps” to normal reading after a certain speed adjust the sensor in closer to gear (generators cannot be adjusted).

The following calibration chart is for use with units that apply to direction sheet IS107 (R8480TM 3 3/8” Programmable Speedometer Air Core Version.) If you have another application call ISSPRO for the appropriate calibration chart.

R8480TM Air Core Speedometers - MPH

Calibration Switch Setting

CALIBRATION NUMBER	SWITCHES SET "ON"								CALIBRATION NUMBER	SWITCHES SET "ON"							
	1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8
88119 – 90191	x	x	x	x	x	x	x	x	34875 – 35290	x	x	x	x	x	x	x	x
86093 – 88118		x	x	x	x	x	x	x	34554 – 34874		x	x	x	x	x	x	x
84160 – 86092	x		x	x	x	x	x	x	34238 – 34553	x		x	x	x	x	x	x
82308 – 84159			x	x	x	x	x	x	33927 – 34237			x	x	x	x	x	x
80535 – 82307	x	x		x	x	x	x	x	33622 – 33926	x	x		x	x	x	x	x
78840 – 80534		x		x	x	x	x	x	33322 – 33621		x		x	x	x	x	x
77216 – 78839	x			x	x	x	x	x	33030 – 33321	x			x	x	x	x	x
75653 – 77215				x	x	x	x	x	32740 – 33029				x	x	x	x	x
74152 – 75652	x	x	x		x	x	x	x	32456 – 32739	x	x	x		x	x		x
72714 – 84151		x	x		x	x	x	x	32177 – 32455		x	x		x	x		x
71329 – 72713	x		x		x	x	x	x	31903 – 32176	x		x		x	x		x
69994 – 71328			x		x	x	x	x	31634 – 31902			x		x	x		x
68707 – 69993	x	x			x	x	x	x	31369 – 31633	x	x			x	x		x
67471 – 68706		x			x	x	x	x	31107 – 31368		x			x	x		x
66278 – 67470	x				x	x	x	x	30851 – 31106	x				x	x		x
65070 – 66277					x	x	x	x	30587 – 30850					x	x		x
63904 – 65069	x	x	x	x		x	x	x	30327 – 30586	x	x	x	x		x		x
62833 – 63903		x	x	x		x	x	x	30084 – 30326		x	x	x		x		x
61797 – 62832	x		x	x		x	x	x	29845 – 30083	x		x	x		x		x
60792 – 61796			x	x		x	x	x	29609 – 29844			x	x		x		x
59819 – 60791	x	x			x	x	x	x	29376 – 29608	x	x			x	x		x
58879 – 59818		x			x	x	x	x	29147 – 29375		x			x	x		x
57968 – 58878	x				x	x	x	x	28922 – 29146	x				x	x		x
57084 – 57967					x	x	x	x	28700 – 28921					x	x		x
56225 – 57083	x	x	x			x	x	x	28481 – 28699	x	x	x			x		x
55394 – 56224		x	x			x	x	x	28267 – 28480		x	x			x		x
54587 – 55393	x		x			x	x	x	28055 – 28266	x		x			x		x
53802 – 54586			x			x	x	x	27847 – 28054			x			x		x
53038 – 53801	x	x				x	x	x	27640 – 27846	x	x				x		x
52299 – 53037		x				x	x	x	27439 – 27639		x				x		x
51579 – 52298	x					x	x	x	27239 – 27438	x					x		x
50828 – 51578						x	x	x	27028 – 27238						x		x
50098 – 50827	x	x	x	x	x		x	x	26820 – 27027	x	x	x	x	x			x
49437 – 50097		x	x	x	x		x	x	26630 – 26819		x	x	x	x			x
48794 – 49436	x		x	x	x		x	x	26442 – 26629	x		x	x	x			x
48165 – 48793			x	x	x		x	x	26256 – 26441			x	x	x			x
47552 – 48164	x	x		x	x		x	x	26073 – 26255	x	x		x	x			x
46957 – 47551		x		x	x		x	x	25893 – 26072		x		x	x			x
46379 – 46956	x			x	x		x	x	25715 – 25892	x			x	x			x
45808 – 46375				x	x		x	x	25540 – 25714				x	x			x
45253 – 45807	x	x	x		x		x	x	25367 – 25539	x	x	x		x			x
44719 – 45252		x	x		x		x	x	25196 – 25366		x	x		x			x
44185 – 44712	x		x		x		x	x	25027 – 25195	x		x		x			x
43669 – 44184			x		x		x	x	24861 – 25026			x		x			x
43166 – 43668	x	x			x		x	x	24697 – 24860	x	x			x			x
42675 – 43165		x			x		x	x	24536 – 24696		x			x			x
42194 – 42674	x				x		x	x	24376 – 24535	x				x			x
41701 – 42193					x		x	x	24211 – 24375					x			x
41219 – 41700	x	x	x	x			x	x	24047 – 24210	x	x	x	x				x
40772 – 41218		x	x	x			x	x	23894 – 24046		x	x	x				x
40332 – 40771	x		x	x			x	x	23743 – 23893	x		x	x				x
39902 – 40331			x	x			x	x	23593 – 23742			x	x				x
39481 – 39901	x	x			x		x	x	23445 – 23592	x	x			x			x
39069 – 39480		x			x		x	x	23300 – 23444		x			x			x
38666 – 39068	x				x		x	x	23155 – 23299	x				x			x
38270 – 38665					x		x	x	23012 – 23154					x			x
37882 – 38269	x	x	x				x	x	22872 – 23011	x	x	x					x
37503 – 37881		x	x				x	x	22733 – 22871		x	x					x
37132 – 37502	x		x				x	x	22596 – 22732	x		x					x
36766 – 37131			x				x	x	22461 – 22595			x					x
36409 – 36765	x	x					x	x	22326 – 22460	x	x						x
36058 – 36408		x					x	x	22195 – 22325		x						x
35715 – 36057	x						x	x	22063 – 22194	x							x
35291 – 35714							x	x	21901 – 22062								x

AIRCORE SPEEDOMETERS - MPH
CALIBRATION SWITCH SETTING

CALIBRATION NUMBER	SWITCHES SET "ON"								CALIBRATION NUMBER	SWITCHES SET "ON"							
	1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8
21741 – 21900	x	x	x	x	x	x	x		15793 – 15877	x	x	x	x	x	x		
21615 – 21740		x	x	x	x	x	x		15727 – 15792		x	x	x	x	x		
21491 – 21614	x		x	x	x	x	x		15661 – 15726	x		x	x	x	x		
21368 – 21490			x	x	x	x	x		15596 – 15660			x	x	x	x		
21247 – 21367	x	x		x	x	x	x		15531 – 15595	x	x		x	x	x		
21127 – 21246		x		x	x	x	x		15467 – 15530		x		x	x	x		
21009 – 21126	x			x	x	x	x		15403 – 15466	x			x	x	x		
20891 – 21008				x	x	x	x		15340 – 15402				x	x	x		
20775 – 20890	x	x	x		x	x	x		15277 – 15339	x	x	x		x	x		
20661 – 20774		x	x		x	x	x		15215 – 15276		x	x		x	x		
20547 – 20660	x		x		x	x	x		15154 – 15214	x		x		x	x		
20436 – 20546			x		x	x	x		15093 – 15153			x		x	x		
20324 – 20435	x	x			x	x	x		15032 – 15092	x	x			x	x		
20215 – 20323		x			x	x	x		14972 – 15031		x			x	x		
20106 – 20214	x				x	x	x		14912 – 14971	x				x	x		
19994 – 20105					x	x	x		14851 – 14911					x	x		
19882 – 19993	x	x	x	x		x	x		14789 – 14850	x	x	x	x		x		
19777 – 19881		x	x	x		x	x		14731 – 14788		x	x	x		x		
19674 – 19776	x		x	x		x	x		14673 – 14730	x		x	x		x		
19570 – 19673			x	x		x	x		14616 – 14672			x	x		x		
19469 – 19569	x	x		x		x	x		14558 – 14615	x	x		x		x		
19368 – 19468		x		x		x	x		14503 – 14557		x		x		x		
19268 – 19367	x			x		x	x		14447 – 14502	x			x		x		
19170 – 19267				x		x	x		14391 – 1444				x		x		
19072 – 19169	x	x	x			x	x		14336 – 14390	x	x	x			x		
18976 – 19071		x	x			x	x		14282 – 14335		x	x			x		
18880 – 18975	x		x			x	x		14227 – 14281	x		x			x		
18785 – 18879			x			x	x		14174 – 14226			x			x		
18691 – 18784	x	x				x	x		14119 – 14173	x	x				x		
18599 – 18690		x				x	x		14067 – 14118		x				x		
18507 – 18598	x					x	x		14014 – 14066	x					x		
18409 – 18506						x	x		13958 – 14013						x		
18313 – 18408	x	x	x	x	x		x		13902 – 13957	x	x	x	x	x			
18223 – 18312		x	x	x	x		x		13851 – 13901		x	x	x	x			
18135 – 18222	x		x	x	x		x		13801 – 13850	x		x	x	x			
18048 – 18134			x	x	x		x		13750 – 13800			x	x	x			
17961 – 18047	x	x		x	x		x		13699 – 13749	x	x		x	x			
17875 – 17960		x		x	x		x		13648 – 13698		x		x	x			
17790 – 17874	x			x	x		x		13599 – 13647	x			x	x			
17706 – 17789				x	x		x		13550 – 13598				x	x			
17623 – 17705	x	x	x		x		x		13502 – 13549	x	x	x		x			
17541 – 17622		x	x		x		x		13453 – 13501		x	x		x			
17458 – 17540	x		x		x		x		13405 – 13452	x		x		x			
17377 – 17457			x		x		x		13357 – 13404			x		x			
17298 – 17376	x	x			x		x		13309 – 13356	x	x			x			
17217 – 17297		x			x		x		13262 – 13308		x			x			
17139 – 17216	x				x		x		13216 – 13261	x				x			
17057 – 17138					x		x		13166 – 13215					x			
16976 – 17056	x	x	x				x		13118 – 13165	x	x	x	x				
16900 – 16975		x	x	X			x		13072 – 13117		x	x	x				
16823 – 16899	x		x	x			x		13027 – 13071	x		x	x				
16748 – 16822			x	x			x		12982 – 13026			x	x				
16674 – 16747	x	x		x			x		12937 – 12981	x	x		x				
16599 – 16673		x		x			x		12893 – 12936		x		x				
16527 – 16598	x			x			x		12849 – 12892	x			x				
16454 – 16526				x			x		12805 – 12848				x				
16381 – 16453	x	x	x				x		12761 – 12804	x	x	x					
16311 – 16380		x	x				x		12718 – 12760		x	x					
16239 – 16310	x		x				x		12675 – 12717	x		x					
16169 – 16238			x				x		12632 – 12674			x					
16100 – 16168	x	x					x		12589 – 12631	x	x						
16031 – 16099		x					x		12547 – 12588		x						
15962 – 16030	x						x		12506 – 12546	x							
15878 – 15961							x		12390 – 12505								