

KMS

KMS UEGO controller

Part nr: 01-01-01-0005



Kronenburg Management Systems

This document contains detailed information about the KMS uego controller. Additional information, user manuals, wiring examples and software can be found on our website: <http://kms.vankronenburg.nl> or on the software CD included with the ECU.

1. Contents of the package

- 1 Controller
- 1 Weldingbung stainless steel (M18 x1,5)
- 1 Instruction manual
- 1 Wide-band lambda sensor LSU 4.2
- 1 Contra connector (to attach the 3 pole connector)

2. Installation of the lambda controller

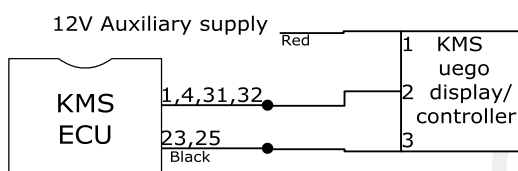
Place your KMS uego controller in a dry place where temperatures don't exceed 65°C.

Warning: don't place the uego controller and wires near any 'high powered' cables (sparkplug leads, etc), because of electrical interference.

The KMS uego controller has 2 cables with connectors. The function and connection/wiring of these connectors is as follows:

- 3 pole connector (superseal): power/ground for the lambda controller and analog data output to KMS ECU's → Connect as following:

Connector pin	Wire colour	Function	MD35 pin nr	MP25 pin nr
Pin 1	Red	+ 12V	12V Aux supply	12V Aux supply
Pin 2	White	Signal out	31: Lambda signal 1 32: Lambda signal 2	1: Lambda signal 4: Analog aux input
Pin 3	Black	Ground	23: ECU ground	25: ECU ground



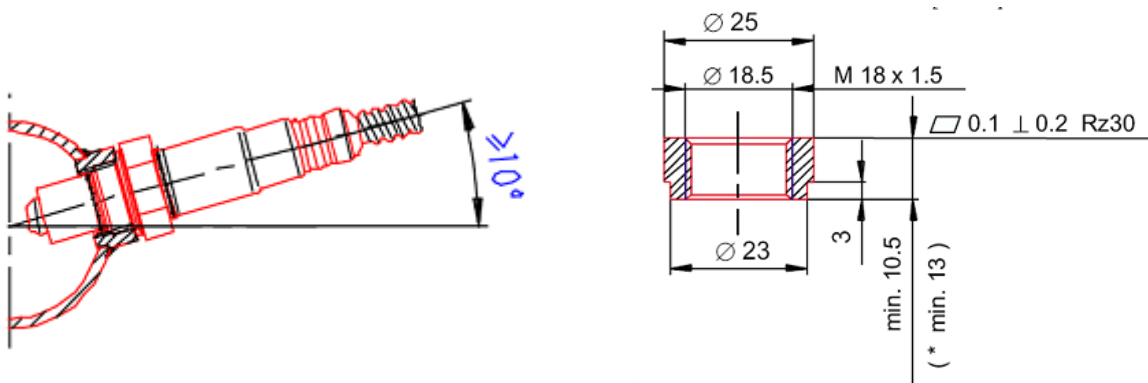
- 6 pole connector: to lambda sensor

3. Installation of the lambda sensor

Warning: The Lambda sensors are factory calibrated with a trimming resistor placed in the sensor connector, so the connector must not be cut off.

The Lambda sensor should be fitted to the exhaust system with the sensor tip in the exhaust gas flow. When fitting the Lambda sensor, the following factors need to be taken into account (*see also appendix*):

- Installation angle should be inclined at least 10° towards horizontal (electrical connection upwards). Thus preventing the collection of liquids between sensor housing and sensor element during the cold start phase.



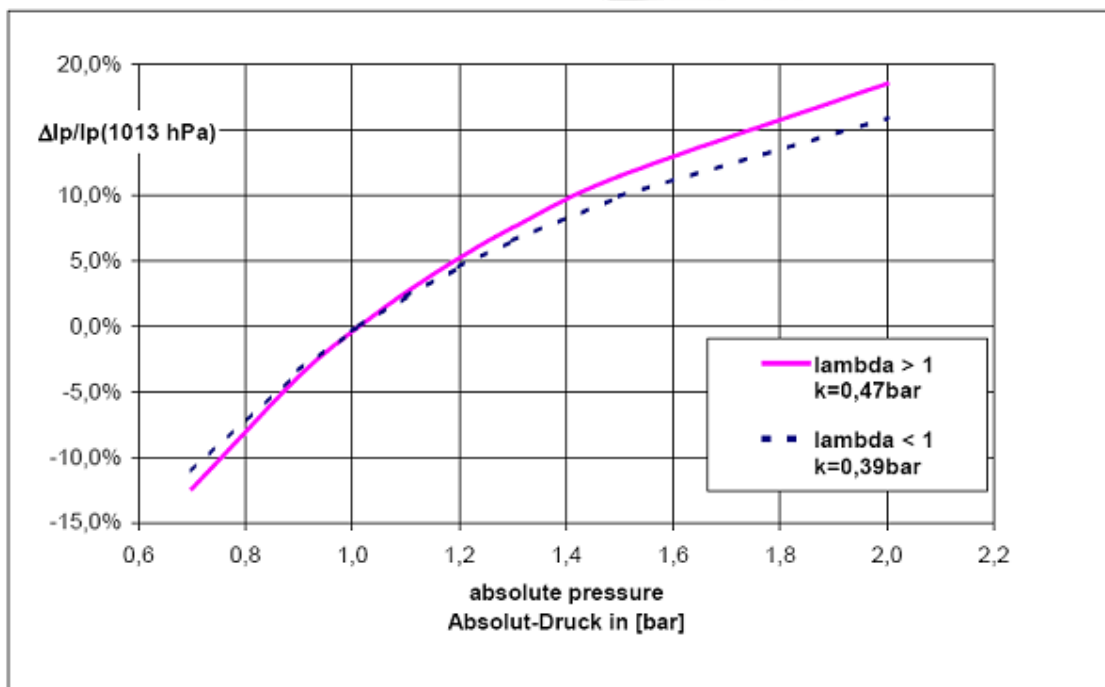
- For hot applications (temperature of hexagon above 500°C *) the thread boss should be at least 13 mm or longer to avoid overheating of the protection tube welding and to cool down the sensor hexagon.
- Place the sensor at least 1 meter from the open end of the exhaust system to avoid incorrect readings due to outside oxygen.
- If possible, do not place the sensor near exhaust slip joints. It's possible for some applications to allow air to enter resulting in incorrect readings.

4. Fault tracing

Problem	Cause	Solution
A/F ratio stays on 14,7	- Lambda sensor broken - Lambda sensor wiring damaged	- Renew lambda sensor - Check wiring
A/F ratio stays on 22,1	- Lambda sensor polluted - Lambda sensor wiring damaged	- Burn it clean by running the engine for a while - Check wiring

Appendix

Make sure that the lambda sensor isn't influenced by any pressure differences. These pressure differences may cause a few percentage of deviation in measurement. So don't place the lambda sensor before the turbo in the exhaust and watch out for back pressure from your exhaust (see chart below for pressure differences).



lambda	kms Controller Type A m.Volt	lambda	kms Controller Type A m.Volt	lambda	kms Controller Type A m.Volt
0,65	0	1,27	2002	1,89	2633
0,66	0	1,28	2016	1,90	2640
0,67	0	1,29	2030	1,91	2646
0,68	0	1,30	2045	1,92	2653
0,69	0	1,31	2059	1,93	2659
0,70	0	1,32	2073	1,94	2666
0,71	0	1,33	2088	1,95	2673
0,72	0	1,34	2102	1,96	2679
0,73	0	1,35	2116	1,97	2686
0,74	0	1,36	2131	1,98	2692
0,75	0	1,37	2145	1,99	2699
0,76	118	1,38	2159	2,00	2706
0,77	199	1,39	2174	2,01	2712
0,78	281	1,40	2188	2,02	2719
0,79	364	1,41	2202	2,03	2725
0,80	429	1,42	2215	2,04	2732
0,81	497	1,43	2227	2,05	2738
0,82	564	1,44	2238	2,06	2745
0,83	632	1,45	2248	2,07	2752
0,84	695	1,46	2259	2,08	2758
0,85	760	1,47	2269	2,09	2765
0,86	821	1,48	2280	2,10	2771
0,87	882	1,49	2291	2,11	2778
0,88	943	1,50	2301	2,12	2785
0,89	999	1,51	2312	2,13	2791
0,90	1050	1,52	2322	2,14	2798
0,91	1095	1,53	2333	2,15	2804
0,92	1146	1,54	2343	2,16	2811
0,93	1192	1,55	2354	2,17	2818
0,94	1240	1,56	2364	2,18	2824
0,95	1289	1,57	2375	2,19	2831
0,96	1338	1,58	2385	2,20	2837
0,97	1380	1,59	2396	2,21	2844
0,98	1416	1,60	2406	2,22	2850
0,99	1455	1,61	2417	2,23	2857
1,00	1500	1,62	2428	2,24	2864
1,01	1523	1,63	2438	2,25	2870
1,02	1550	1,64	2449	2,26	2877
1,03	1573	1,65	2459	2,27	2883
1,04	1598	1,66	2470	2,28	2890
1,05	1622	1,67	2480	2,29	2897
1,06	1643	1,68	2491	2,30	2903
1,07	1662	1,69	2500	2,31	2910
1,08	1681	1,70	2508	2,32	2916
1,09	1702	1,71	2514	2,33	2923
1,10	1720	1,72	2521	2,34	2929
1,11	1742	1,73	2528	2,35	2936
1,12	1760	1,74	2534	2,36	2943
1,13	1781	1,75	2541	2,37	2949
1,14	1798	1,76	2547	2,38	2956
1,15	1816	1,77	2554	2,39	2962
1,16	1837	1,78	2561	2,40	2969
1,17	1856	1,79	2567	2,41	2978
1,18	1873	1,80	2574	2,42	2984
1,19	1887	1,81	2580	2,43	2992
1,20	1901	1,82	2587	2,44	2997
1,21	1916	1,83	2594	2,45	3005
1,22	1930	1,84	2600	2,46	3009
1,23	1944	1,85	2607	2,47	3017
1,24	1959	1,86	2613	2,48	3025
1,25	1973	1,87	2620	2,49	3034
1,26	1987	1,88	2626		

air fuel ratio	kms Controller Type A m.Volt	air fuel ratio	kms Controller Type A m.Volt	air fuel ratio	kms Controller Type A m.Volt	air fuel ratio	kms Controller Type A m.Volt
9,5	0	16,5	1762	23,3	2390	30,2	2741
9,6	0	16,6	1775	23,4	2397	30,3	2746
9,7	0	16,7	1788	23,5	2403	30,4	2750
9,8	0	16,8	1800	23,6	2411	30,5	2754
9,9	0	16,9	1813	23,7	2418	30,6	2759
10,0	0	17,0	1827	23,8	2425	30,7	2763
10,1	0	17,1	1841	23,9	2433	30,8	2768
10,2	0	17,2	1852	24,0	2440	30,9	2773
10,3	0	17,3	1864	24,1	2446	31,0	2777
10,4	0	17,4	1876	24,2	2454	31,1	2781
10,5	0	17,5	1886	24,3	2461	31,2	2786
10,6	0	17,6	1896	24,4	2469	31,3	2790
10,7	0	17,7	1904	24,5	2476	31,4	2795
10,8	0	17,8	1914	24,6	2482	31,5	2799
10,9	0	17,9	1924	24,7	2490	31,6	2804
11,0	0	18,0	1934	24,8	2498	31,7	2808
11,1	61	18,1	1944	24,9	2501	31,8	2813
11,2	118	18,2	1953	25,0	2508	31,9	2818
11,3	175	18,3	1963	25,1	2512	32,0	2821
11,4	227	18,4	1973	25,2	2516	32,1	2826
11,5	281	18,5	1983	25,3	2521	32,2	2831
11,6	339	18,6	1993	25,4	2526	32,3	2835
11,7	390	18,7	2002	25,5	2530	32,4	2840
11,8	436	18,8	2012	25,6	2534	32,5	2845
11,9	483	18,9	2022	25,7	2539	32,6	2848
12,0	524	19,0	2032	25,8	2543	32,7	2853
12,1	571	19,1	2042	25,9	2548	32,8	2858
12,2	618	19,2	2052	26,0	2553	32,9	2862
12,3	663	19,3	2060	26,1	2557	33,0	2867
12,4	708	19,4	2071	26,2	2561	33,1	2871
12,5	747	19,5	2081	26,3	2566	33,2	2875
12,6	791	19,6	2091	26,4	2570	33,3	2880
12,7	833	19,7	2101	26,5	2575	33,4	2885
12,8	876	19,8	2109	26,6	2580	33,5	2889
12,9	913	19,9	2119	26,7	2584	33,6	2893
13,0	959	20,0	2129	26,8	2588	33,7	2898
13,1	994	20,1	2139	26,9	2593	33,8	2901
13,2	1030	20,2	2149	27,0	2597	33,9	2904
13,3	1063	20,3	2158	27,1	2602	34,0	2908
13,4	1095	20,4	2168	27,2	2607	34,0	2912
13,5	1131	20,5	2178	27,3	2611	34,1	2915
13,6	1160	20,6	2188	27,4	2615	34,1	2918
13,7	1192	20,7	2197	27,5	2620	34,2	2922
13,8	1225	20,8	2206	27,6	2624	34,3	2925
13,9	1259	20,9	2215	27,7	2629	34,4	2929
14,0	1294	21,0	2224	27,8	2633	34,5	2934
14,1	1325	21,1	2231	27,9	2638	34,6	2939
14,2	1352	21,2	2239	28,0	2642	34,7	2943
14,3	1383	21,3	2246	28,1	2647	34,8	2947
14,4	1409	21,4	2253	28,2	2651	34,9	2952
14,5	1431	21,5	2260	28,3	2655	35,0	2955
14,6	1459	21,6	2267	28,4	2660	35,1	2957
14,7	1491	21,7	2275	28,5	2665	35,1	2961
14,8	1512	21,8	2282	28,6	2669	35,2	2965
14,9	1528	21,9	2290	28,7	2674	35,3	2970
15,0	1544	22,0	2296	28,8	2679	35,4	2973
15,1	1561	22,1	2303	28,9	2682	35,5	2978
15,2	1578	22,2	2309	29,0	2687	35,5	2981
15,3	1595	22,3	2314	29,1	2692	35,6	2986
15,4	1613	22,3	2319	29,2	2696	35,7	2992
15,5	1629	22,4	2325	29,3	2701	35,8	2995
15,6	1641	22,5	2332	29,4	2705	35,9	2998
15,7	1655	22,6	2339	29,5	2709	36,0	3004
15,8	1668	22,7	2346	29,6	2714	36,1	3008
15,9	1681	22,8	2354	29,7	2719	36,2	3012
16,0	1696	22,9	2361	29,8	2723	36,3	3016
16,1	1708	23,0	2367	29,9	2727	36,4	3022
16,2	1722	23,1	2375	30,0	2732	36,5	3028
16,3	1736	23,2	2382	30,1	2736	36,6	3034
16,4	1750						