



## LSU49-CA

### CHARACTERISTICS

For further information see the corresponding web page on [www.THQtronic.com](http://www.THQtronic.com)

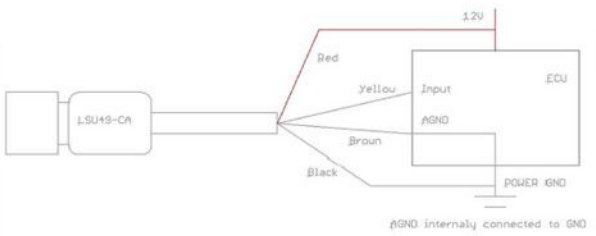
- Power supply: from 9V to 16V
- Consumption: maxi 3A on cold sensor
- Measurement range: air to 1.54 richness (probe limitation with HC=2)
- One analog output
- CAN bus (open, 2kOhm load built in PCB)
- Offset: +/-12mV
- Gain precision: +/-1%
- Analog output resistance: 1k
- Maximum ambient temperature use: 100°C
- Sensor heating temperature: regulated to 780°C (can drift with sensor aging)
- Total length: 32cm
- Weight: 45g
- IP: IP65
- Connector:
  - DTM04-6P on loom side
  - Matting: connector : DTM06-6S
  - Wedge lock: WM6S
  - Terminals : 1062-20-0222 (0,35 to 1,5mm2)
- Type VW on sensor side.

Cables : 22AWG PTFE with DR25 sleeve

Configuration is possible using freeware THQ\_Monitor through USB/CAN interface (Lawicel, Skynam or PEAK System)

### CONNECTION OF LSU49-CA

DTM Pin	Function	Cable colour
1	CAN H	White
2	CAN L	Blue
3	Power Supply	Red
4	Power Ground	Black
5	Analog Ground	Brown
6	Analog output	Yellow



### ANALOG OUTPUT LINEARISATION (Legacy mode)

Linearisation of the analog output at  
 - exhaust pressure (P3) = 1013mB  
 - HC = 2

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Richness	1,755	1,500	1,450	1,400	1,350	1,300	1,250	1,200	1,150	1,100	1,050	1,000	0,950	0,900	0,850	0,800
Lambda	0,570	0,667	0,690	0,714	0,741	0,769	0,800	0,833	0,870	0,909	0,952	1,000	1,053	1,111	1,176	1,250
A/F	8,4	9,8	10,1	10,5	10,9	11,3	11,8	12,3	12,8	13,4	14,0	14,7	15,5	16,3	17,3	18,4
O2 (=f(Ri,C,H))	-14,1%	-9,51%	-8,58%	-7,65%	-6,72%	-5,78%	-4,83%	-3,88%	-2,92%	-1,95%	-0,98%	0,00%	0,98%	1,98%	2,97%	3,98%
Vout (mV) (@P3)	4	693	850	1014	1185	1360	1540	1725	1914	2107	2303	2500	2592	2686	2781	2879

	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Richness	0,750	0,700	0,650	0,600	0,550	0,500	0,450	0,400	0,350	0,300	0,250	0,200	0,150	0,100	0,050	0,001
Lambda	1,333	1,429	1,538	1,667	1,818	2,000	2,222	2,500	2,857	3,333	4,000	5,000	6,667	10,000	20,000	1000,0
A/F	19,6	21,0	22,6	24,5	26,7	29,4	32,7	36,8	42,0	49,0	58,8	73,5	98,1	147,1	294,2	14709
O2 (=f(Ri,C,H))	4,89%	6,01%	7,03%	8,00%	9,10%	10,15%	11,20%	12,20%	13,33%	14,40%	15,49%	16,57%	17,07%	18,07%	19,09%	20,98%
Vout (mV) (@P3)	2978	3079	3183	3288	3395	3504	3616	3729	3844	3961	4080	4201	4324	4449	4576	4702

Preheating phase, sensor too cold: Vout = 2500mV  
 Unconnected sensor, or overload or regulation error: Vout < 100mV

LEGACY mode is fully compatible with previous version LSU49-5V device.

Do not connect yellow wire on 12V under threat of destruction of the analog output.  
 Do not connect the black wire to the analog ground but to the power ground.

The brown wire must be connected to the device analog ground. Then this analog ground must be internally connected to power ground. Check with your ECU supplier in case of doubt.

In the interest of continuous product improvement, we reserve the right to alter, without prior notice the specifications and features described on this document.