Use of MSA gas detector type ULTIMA X5000 XIR for the measurement of flammable gases and vapours also in conjunction with MSA control Systems SUPREMA, 9010/9020/SIL and GasGard XL

We, **MSA Europe GmbH, Schlüsselstrasse 12, 8645 Rapperswil-Jona, CH - Switzerland** hereby declare that the ULTIMA X5000 XIR Plus certified by Sira (Sira 17 ATEX 1049 X) as an explosion protected electrical apparatus is able to measure following listed gases and vapours in the measuring range of 0-100 %LEL in air

Gas/Vapour	CAS No.	Curve	Display correlates to		$t_{50/s}$	$t_{90/s}$
Benzene	71-43-2	8	52 % LEL	Ethylene 1,15 Vol%	<7	<18
Butanal	123-72-8	6	68 % LEL	Propane 0,6 Vol%	<4	<11
2-Chloropropane	75-29-6	2	45 % LEL	Propane 0,6 Vol%	<11	<18
1,2-Dichloroethane	107-06-2	8	14 % UEG	Propane 0,1 Vol%	<6	<21
1,2-Dichloropropane	78-87-5	2	83 % LEL	Propane 0,6 Vol%	<8	<15
Dimethyl ether	115-10-6	2	39 % LEL	Propane 0,6 Vol%	<8	<22
Dimethylformamide (1)	68-12-2	2	54 % LEL	Methane 2,5 Vol%	<6	<42
Dimethyl sulfide	75-18-3	2	80 % LEL	Propane 0,6 Vol%	<10	<16
Ethylene	74-85-1	8	50 % LEL	Ethylene 1,15 Vol%	<5	<21
Ethylbenzene	100-41-4	8	83 % LEL	Propane 0,6 Vol%	<8	<14
Ethyl chloride	75-00-3	6	27 % LEL	Propane 0,6 Vol%	<11	<22
Formic acid (2)	64-18-6	2	21 % LEL	Propane 0,85 Vol%	<7	<17
Isopentane	78-78-4	2	36 % LEL	Propane 0,6 Vol%	<16	<22
JET a-1 (3)	8008-20-6	6	86 % LEL	Propane 0,6 Vol%	<8	<58
Kerdane D75 (4)		8	61 % LEL	Methane 2,2 Vol%	<6	<49
Methanol	67-56-1	6	56 % LEL	Propane 0,6 Vol%	<7	<11
Methyl chloride	74-87-3	6	51 % LEL	Propane 0,6 Vol%	<6	<20
Methylcyclopentadiene dimer**	26472-00-4	2	31 % LEL	Methane 2,2 Vol%	<5	<13
Naphtha	64741-46-4	6	25 % LEL	Propane 0,6 Vol%	<7	<14
n-Butane	106-97-8	4	38 % LEL	Propane 0,6 Vol%	<8	<21
n-Hexane	110-54-3	6	46 % LEL	Propane 0,6 Vol%	<10	<14
n-Methylmorpholine (1)	109-02-4	2	30 % LEL	Propane 0,6 Vol%	< 3	< 11
n-Pentane	109-66-0	5	45 % LEL	Propane 0,6 Vol%	<10	<14
Propanal	123-38-6	6	88 % LEL	Propane 0,6 Vol%	<6	<13
Propylene (till 2020)	115-07-1	2	88 % LEL	Propane 0,6 Vol%	<8	<11
Propylene (from 2021)	115-07-1	6	86 % LEL	Propane 0,6 Vol%	<8	<16
Pseudocumene	95-63-6	2	47 % LEL	Methane 2,2 Vol%	<5	<25
Styrene	100-42-5	8	48 % LEL	Ethylene 1,15 Vol%	<11	<54
Tetrapopane (TPH) (4)	68551-17-7	6	59 % LEL	Propane 0,6 Vol%	<24	<49
TPH+ Tetrabutylphosphate (4) (TPH;70%+TBP;+30%)	68551-17-7 + 126-73-8	6	56 % LEL	Propane 0,6 Vol%	<16	<24

Toluene	108-88-3	8	80 % LEL	Methane 2,2 Vol%	<6	<17
Xylene*	1330-20-7	1	57 % LEL	Methane 2,2 Vol%	<7	<23

(1) The linearity from 60 %LEL is out of deviation based on EN 60079-29-1
(2) The linearity from 50 %LEL is out of deviation based on EN 60079-29-1
(3) The linearity from 40 %LEL is out of deviation based on EN 60079-29-1, The Alarm level has to be set ≤ 30% LEL latched. In case the latched Alarm occurs you have to make sure that no gas is in this area before you reset the Alarm!
(4) The linearity from 30 %LEL is out of deviation based on EN 60079-29-1, The Alarm level has to be set ≤ 20% LEL latched. In case the latched Alarm occurs you have to make sure that no gas is in this area before you reset the Alarm!

For use also in conjunction with following certified Control systems

Control System	EU Type Examination certificate	Notified Body
SUPREMA	DMT 03 ATEX G 003 X	DEKRA EXAM GmbH
9010/9020 SIL	BVS 16 ATEX G 001	DEKRA EXAM GmbH
GasGard XL	FTZU 07 ATEX 0066 X	FTZU s.p.

The calibration/ adjustment procedure must be carried out in accordance with the operating instructions.

The calibration of the gas detector ULTIMA X5000 XIR Plus must be carried out in accordance with EN 60079-29-2 or local requirements.

Berlin, 19.07.2022

Ingmar Bönig
European Product Compliance Manager
MSA Technologies and Enterprise Services GmbH
Thiemannstrasse 1
12059 Berlin