

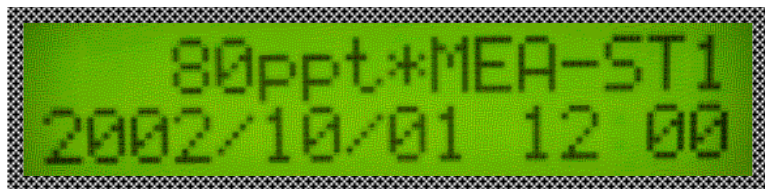
LDL 20ppt
(for MX1-A)

PPT Oxygen Analyzer

MX1-A
MX1-S

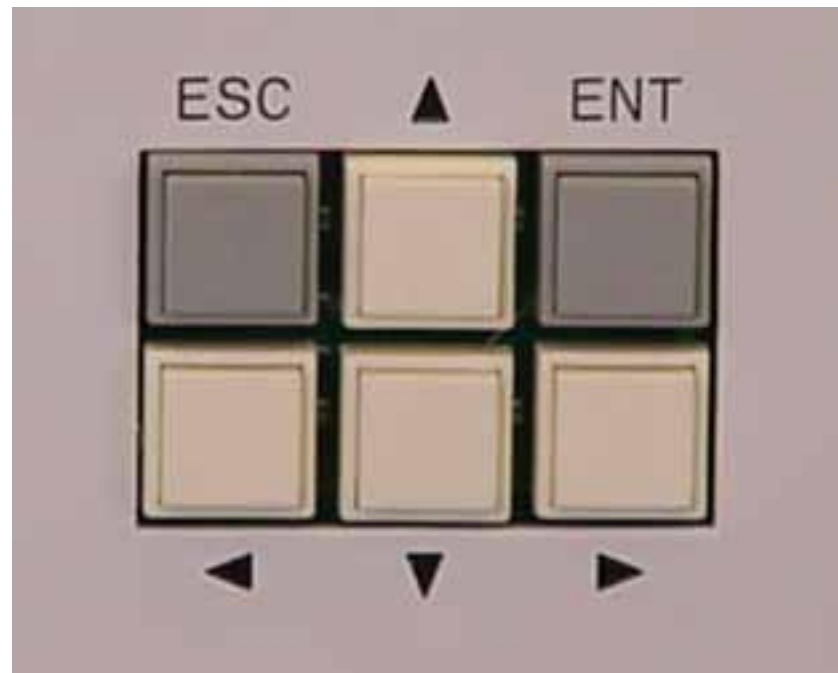


Easy Operation

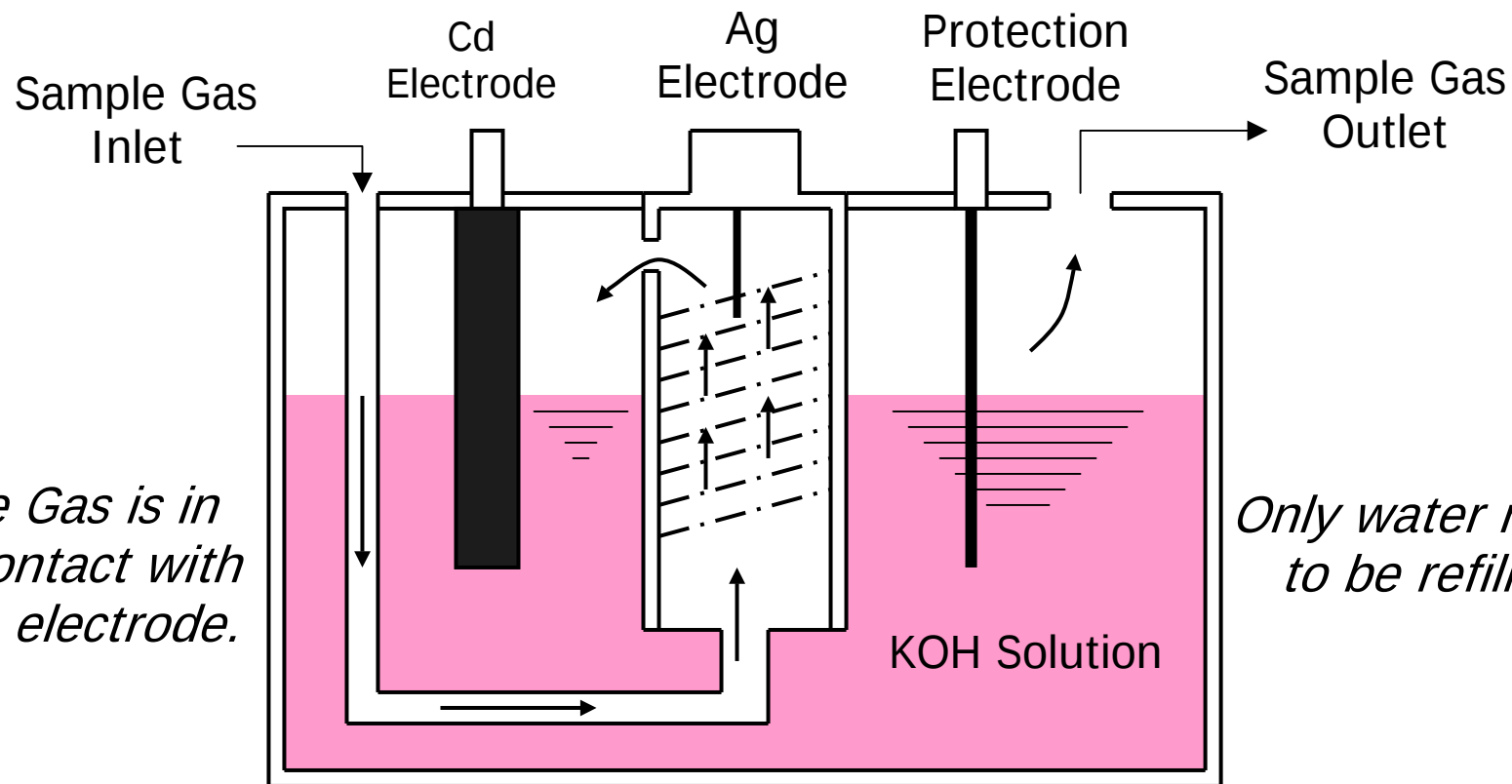


80ppt*MEA-ST1
2002/10/01 12 00

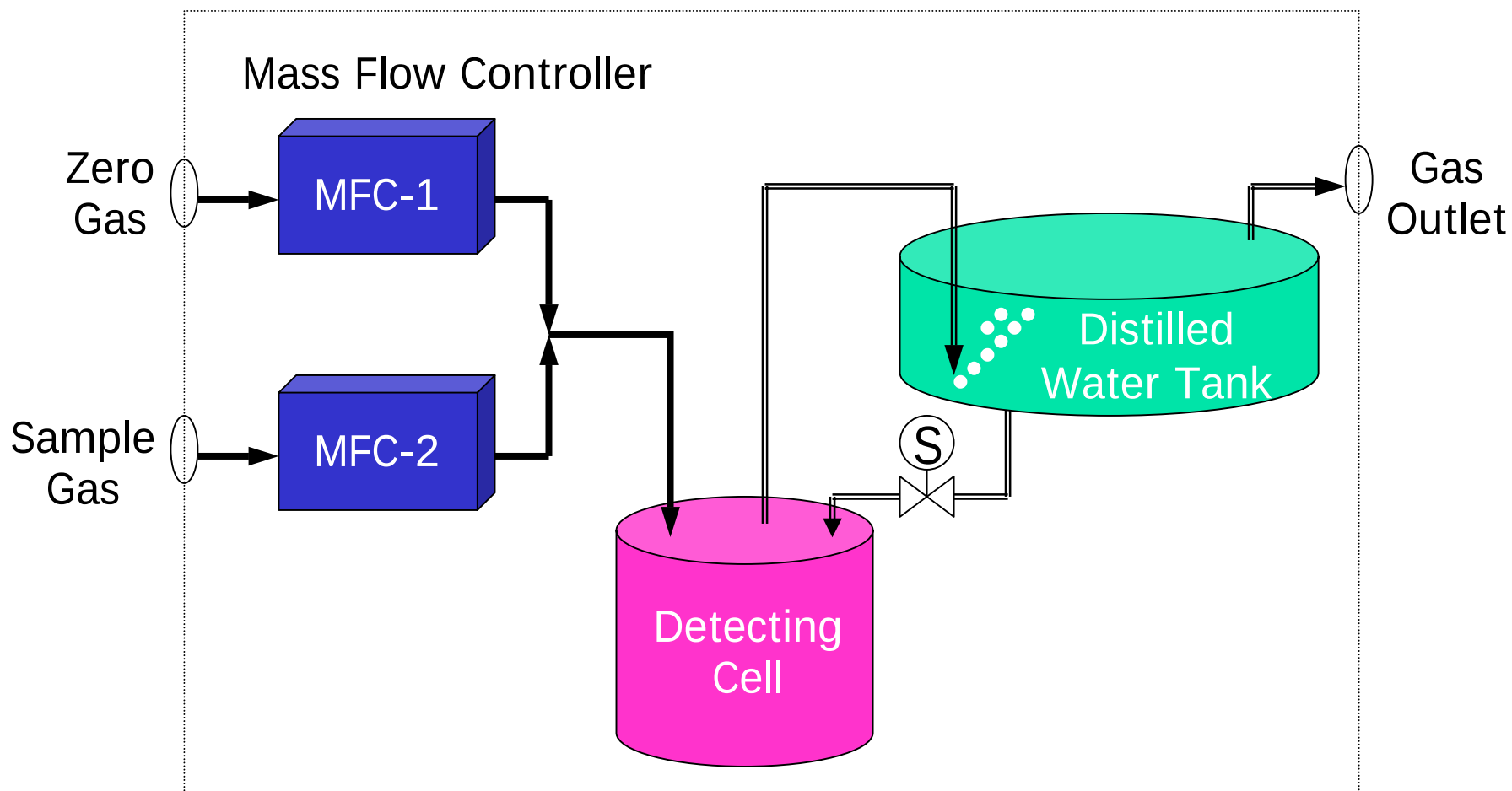
Simple and user-friendly
with high performance



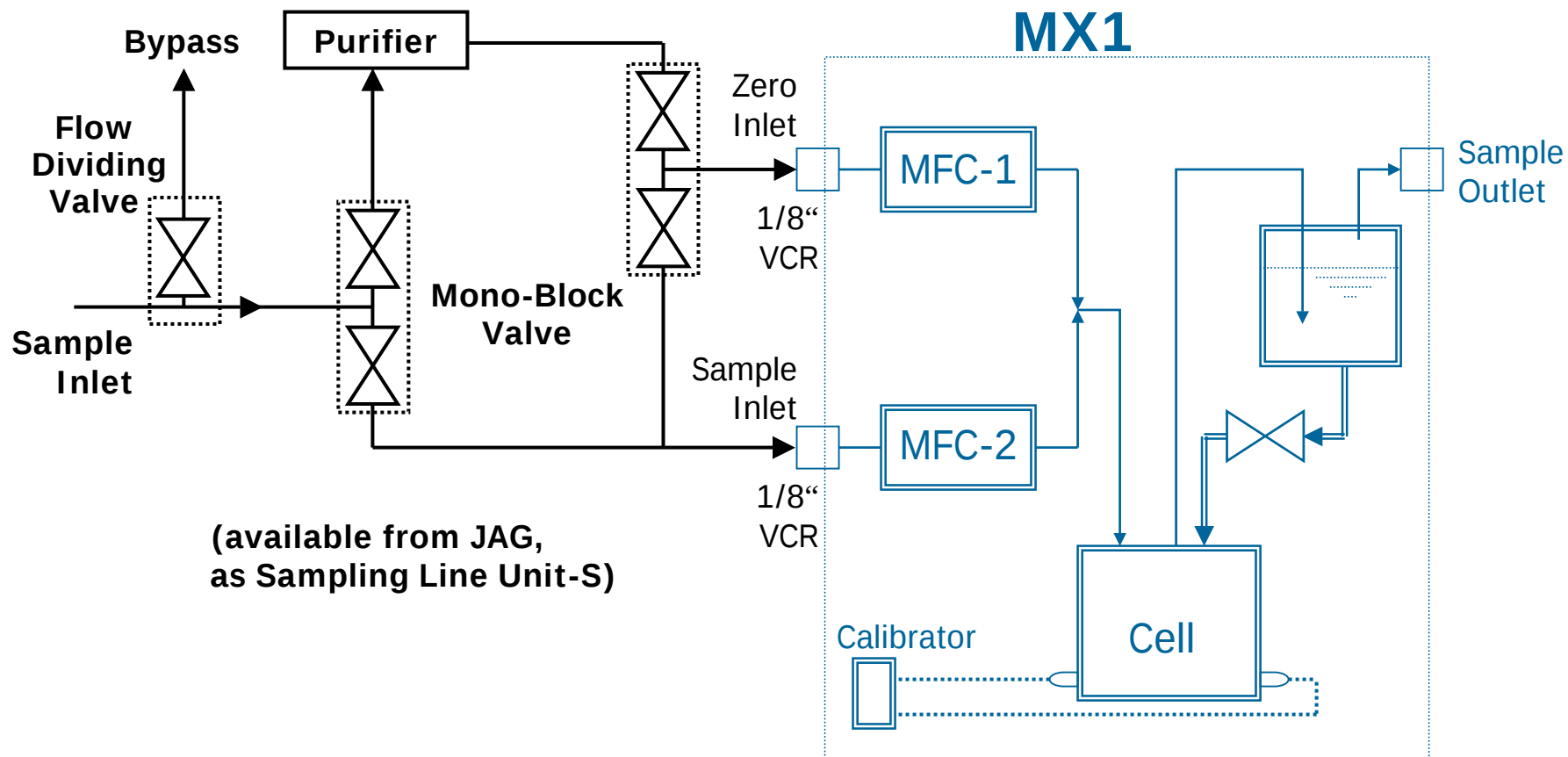
Proven Technology - Galvanic Cell



Cutting-Edge Technology – “MX Method”

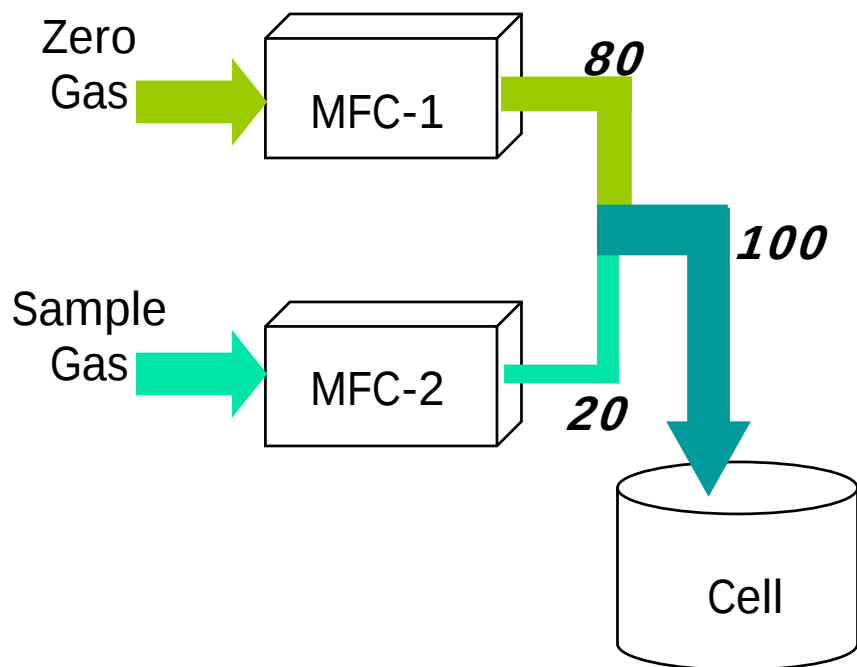


Recommended Sampling Line for MX1

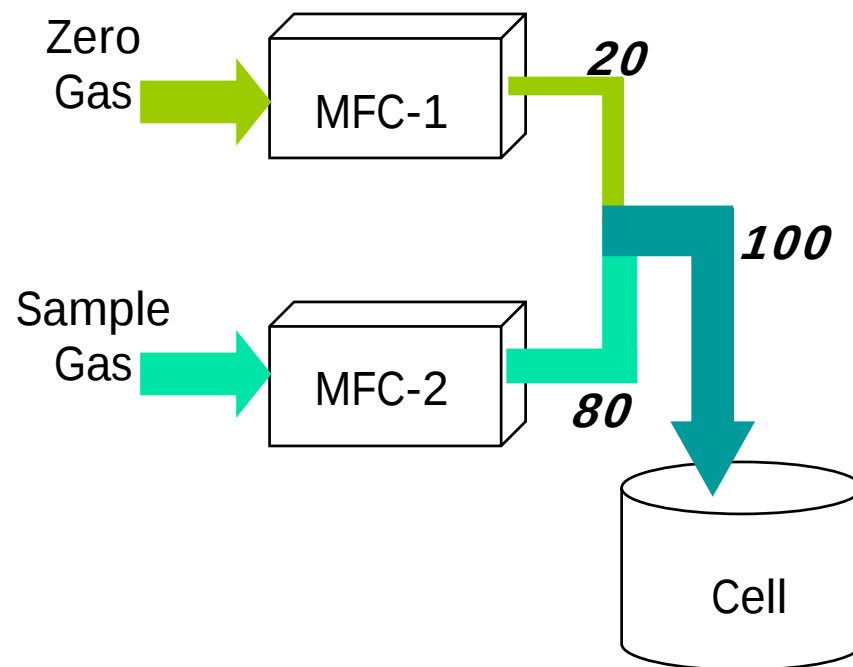


“Mixture Xing” – Two References

Stage-1 (15 min.)

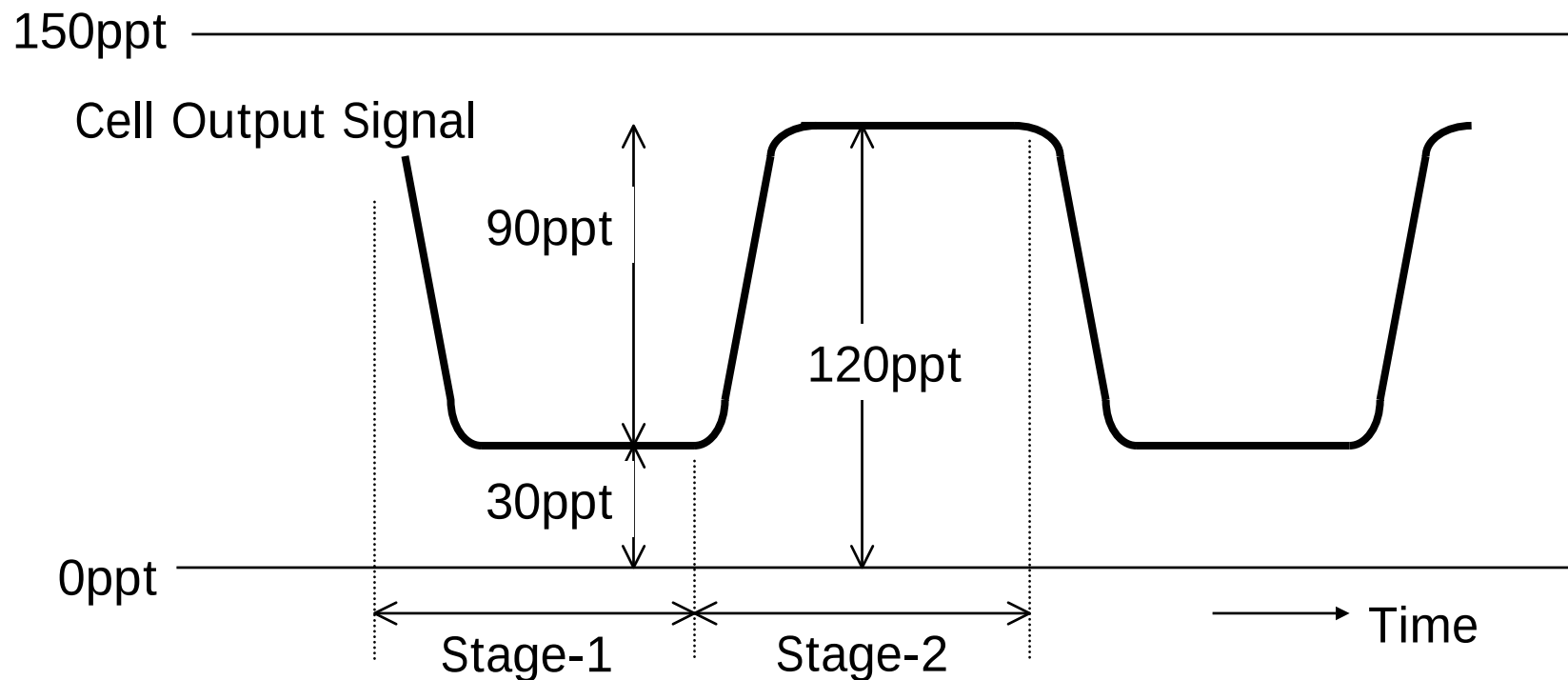


Stage-2 (15 min.)



* The values are examples only.

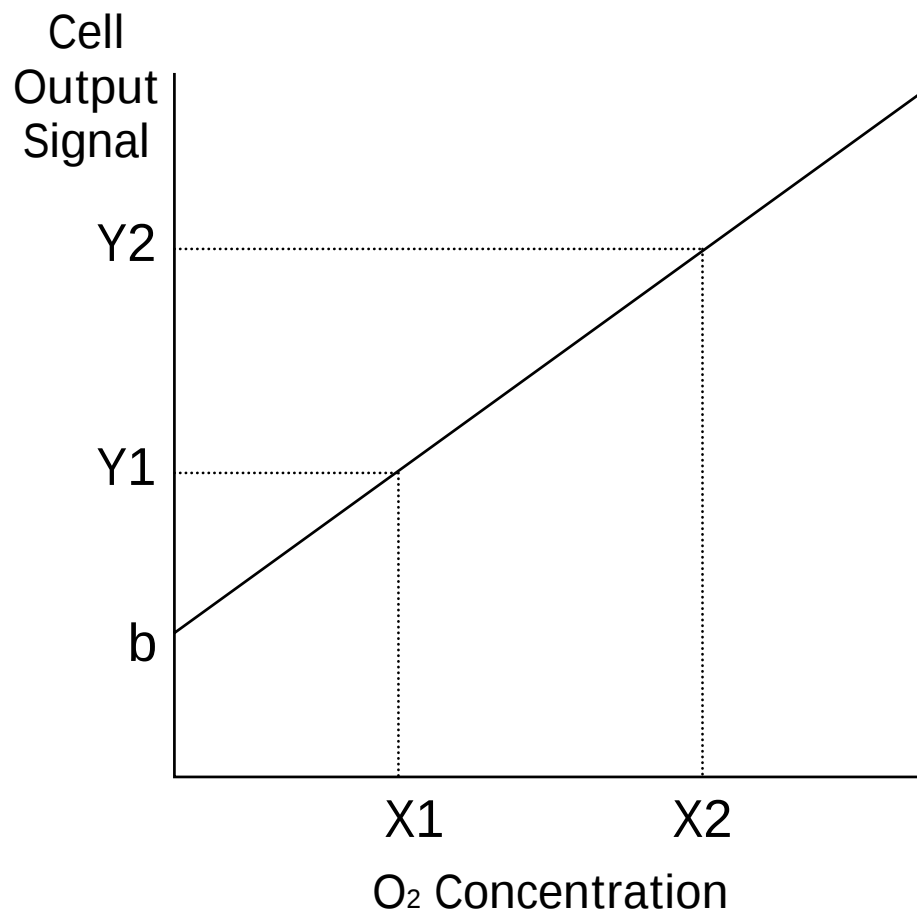
“Mixture Xing” – Difference Given



$$120ppt - 30ppt = 90ppt \rightarrow 90 / 60\% = 150ppt$$

* The values are examples only.

“Mixture Xing” – Background Offset



$$Y2 = aX2 + b$$

$$Y1 = aX1 + b$$

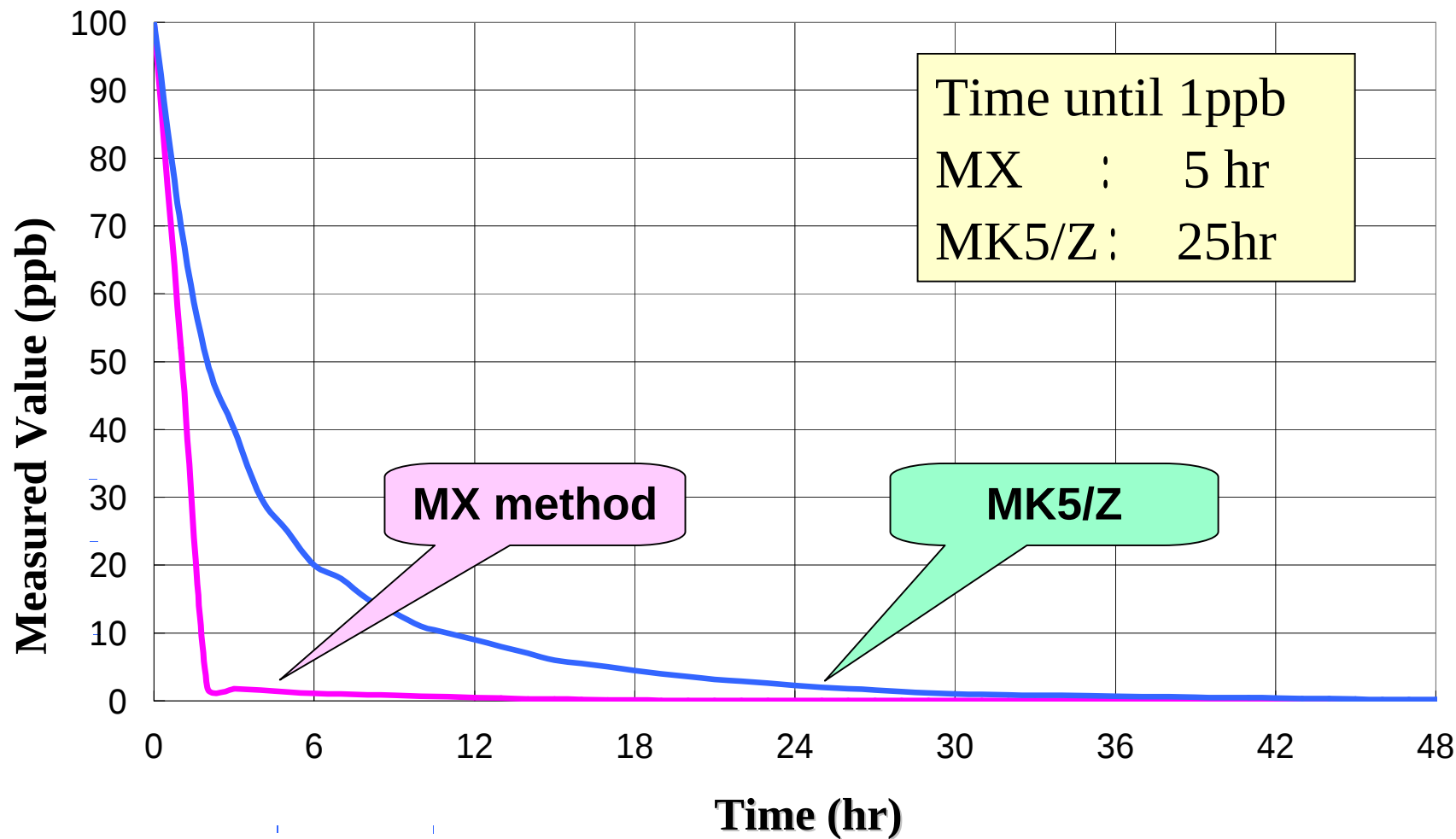
$$Y2 - Y1 = a(X2 - X1)$$

The background noise “b” is offset, thus reducing drift.

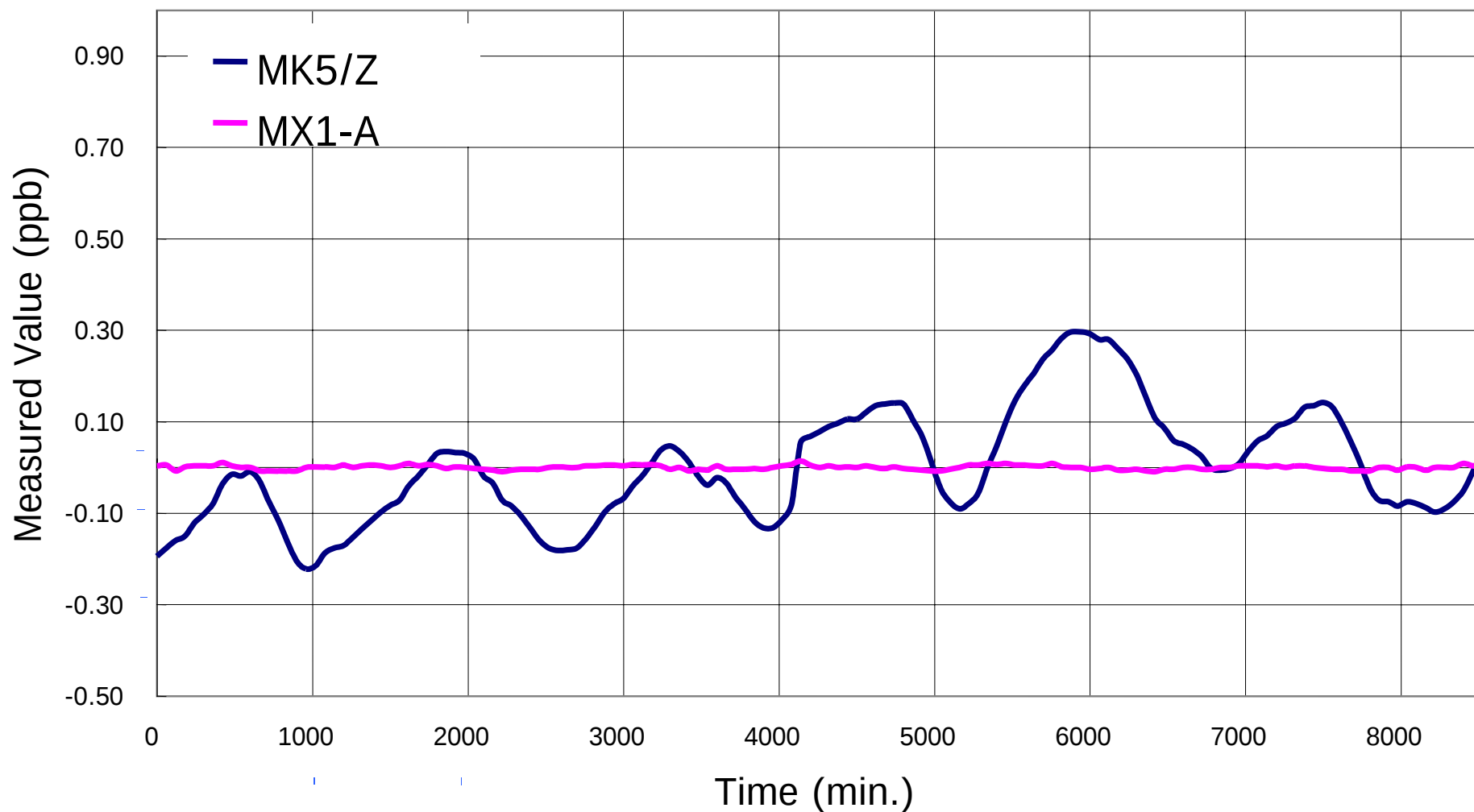
Features

- **Lowest Detection Limit: 20ppt (MX1-A)**
 - World lowest among single component oxygen analyzers
 - Readings indicated in ppt
- **Excellent Stability by Inovative Method**
 - “MX Method” eliminating background noise
 - Not affected by water replenishment
- **Much less frequent calibration**
 - Effect similar continuous calibration
- **Simple Operation**
 - Operation minimized and data logging included
- **Quick Start-up**
 - “MX Method” achieving quick start-up

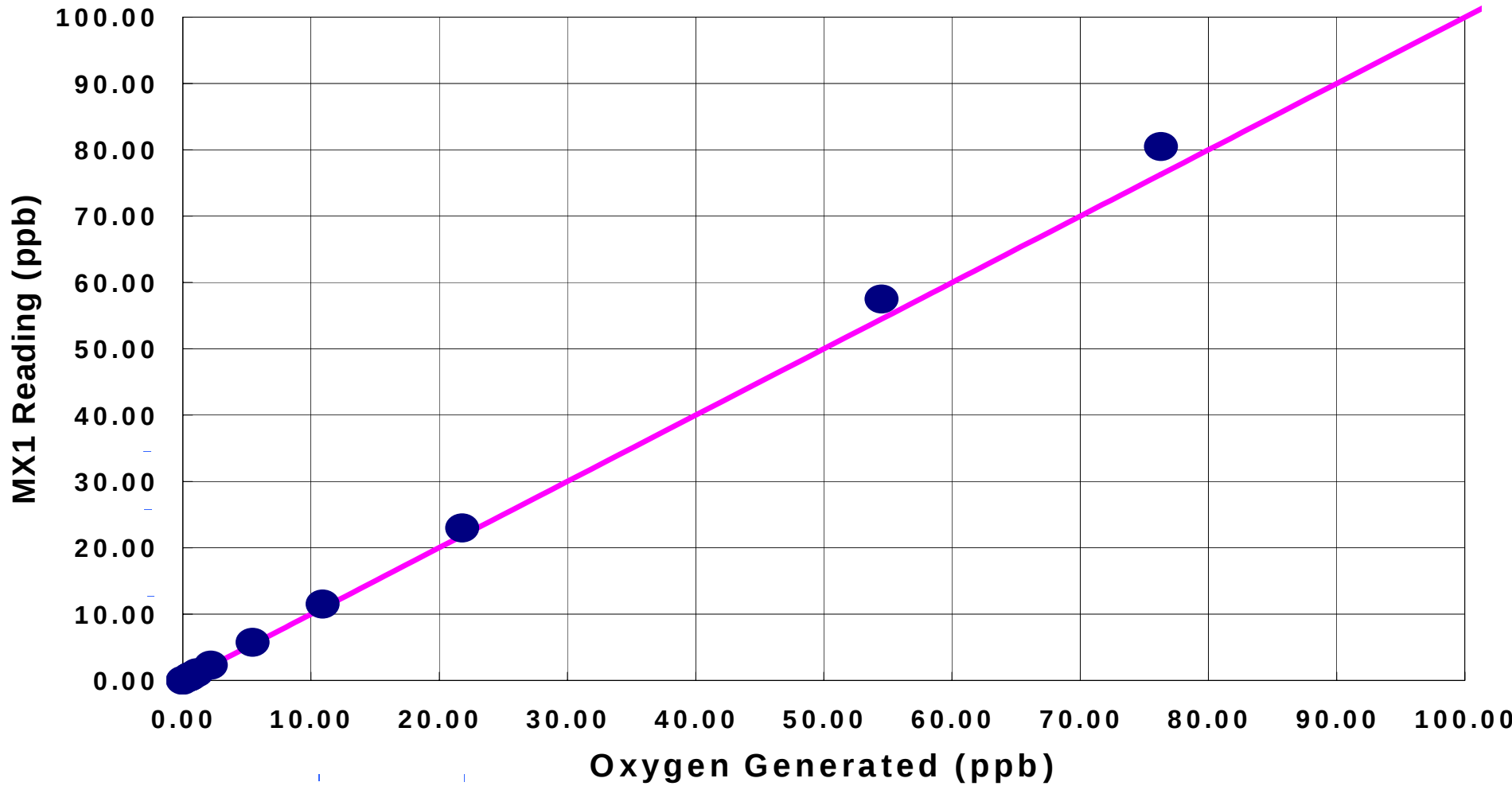
Start-Up - MX1-A vs. MK5/Z



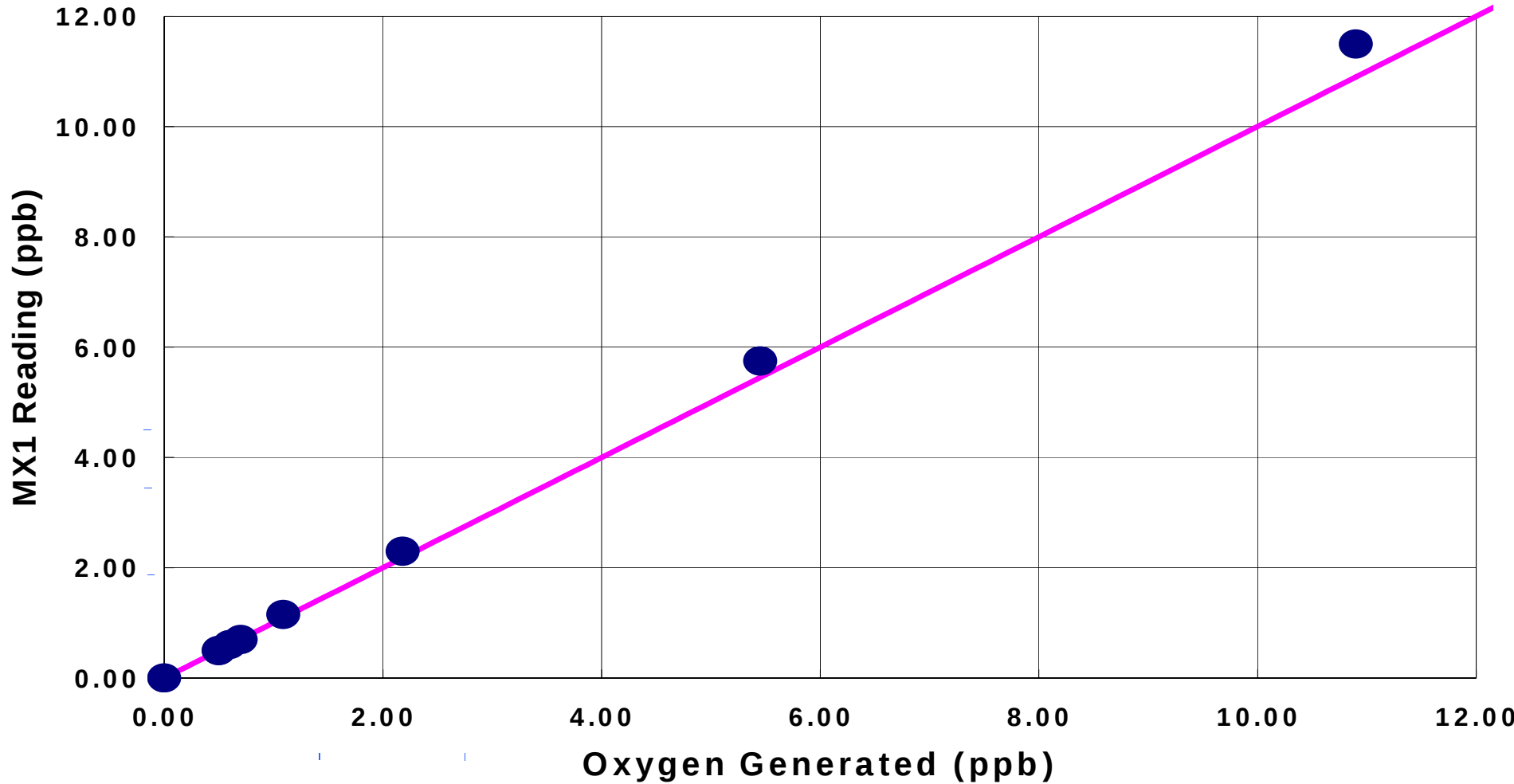
Stability - MX1-A vs. MK5/Z



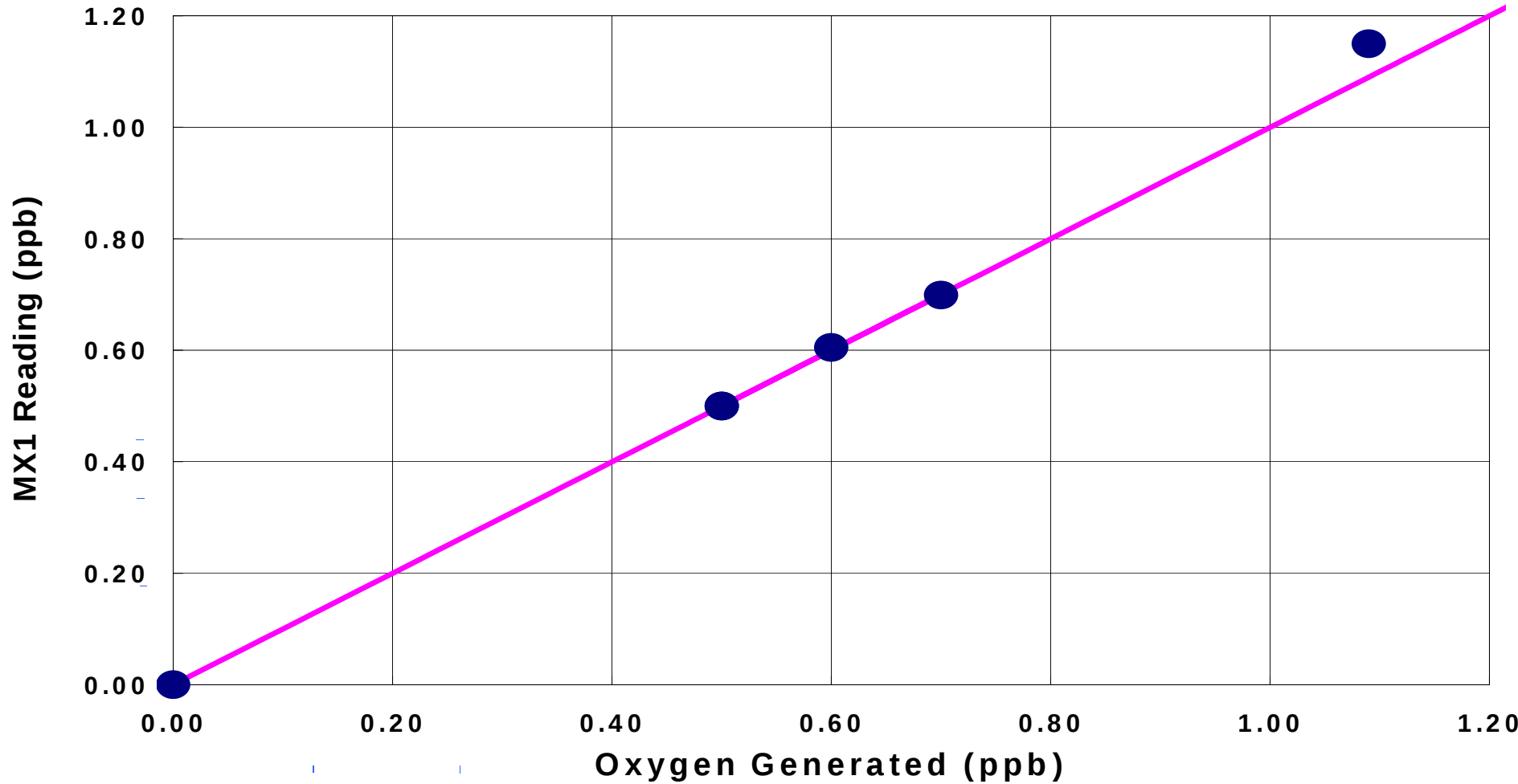
Linearity (0-100ppb)



Linearity (0-10ppb)



Linearity (0-1ppb)



Specifications (1)

Model	MX1-A	MX1-S
Measuring Range	One User Settable Range 0-1ppb & 0-1000ppb	One User Settable Range 0-0.1ppm & 0-100ppm
Lowest Detection Limit	20ppt (0.02ppb)	1ppb
Repeatability	$\pm 2.0\%$ of full scale	
Stability	Within $\pm 5.0\%$ FS/24hr	
Compatible Gas	N2, Ar, He, H2, Ne, CO, CH4, C2H4, C2H6, C3H6, C3H8, etc.	
Sample Flow Rate	100mL/min.	133mL/min.
Sample Pressure	49 to 294kPa(G)	
Gas Inlet	1/8" VCR male (two inlets for sample and zero)	
Gas Outlet	1/8" SWAGELOK	
Ambient Temperature and Humidity	10 to 35 ± 5 degrees C/24hr RH80% or below	

Specifications (2)

Model	MX1-A	MX1-S
Analog Output	DC 0-20mA or 4-20mA (DIN5P)	Isolated Output max. 750 Ω
Communication	RS232C (9P) (usable for remote control)	
External Contact	Open Collector (NPN) DC 5 to 35V max. 100mA	
Alarm Contact	2 contacts	
Data Logging	1 to 60min. (one minute interval), 1 to 24hr (one hour interval) Up to 500 data, not displayed but output	
Water Tank Capacity	0.75L (consumption period: approx. 10 months/18 degrees C)	
Power	AC 85 to 250V	15W
Dimensions & Weight	335 (W) x 425 (D) x 335 (H) (mm)	15kg
Paint Color	Munsell N8	
Display	LCD 16 digits x 2 lines (concentration, stage, year/month/hour/minute or calendar time)	

Specifications (3)

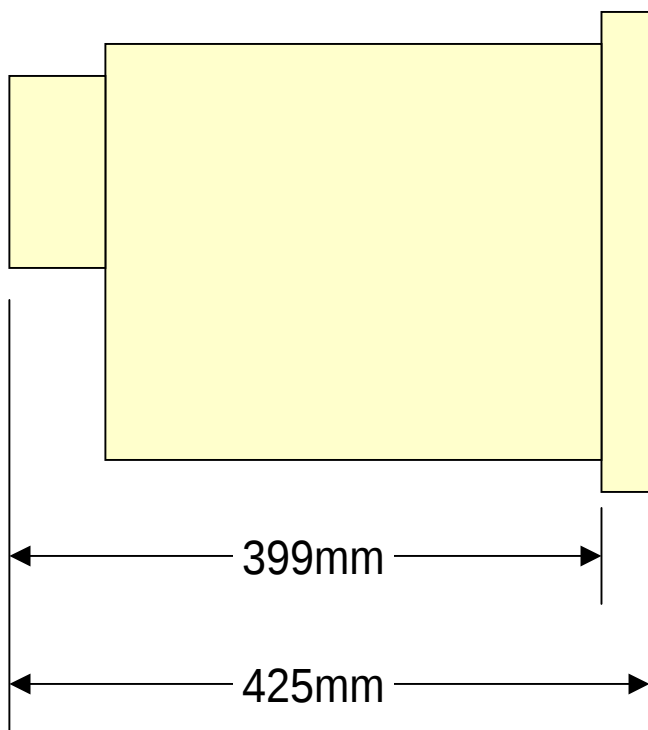
Model	MX1-A	MX1-S
Standard Accessories	■ Power cord 1 pce ■ Recorder cord 1 pce ■ Electrolyte (20%KOH) (250mL) 1 bottle ■ Mounting brackets (right, left) 1 pce each	
Optional Items	■ MnO purifier ■ Sampling line unit (for standard gas usage configuration) ■ External relay contact (in an additional box)	

Difference of MX1-A &MX1-S

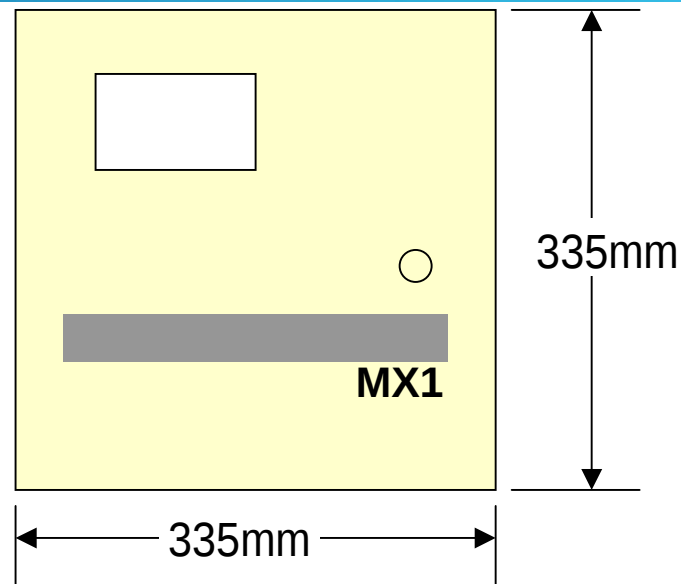
- **MFC**
- **PCB board**
- **Cell**

Appearance

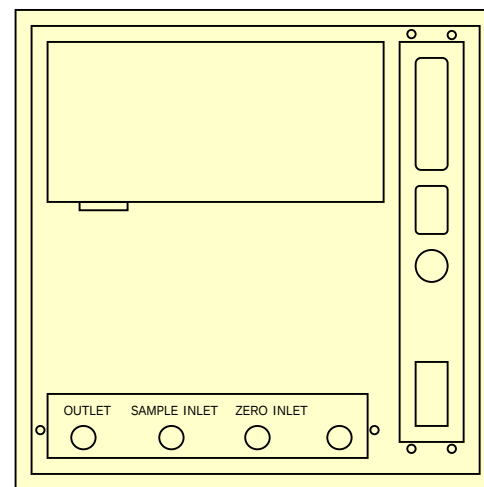
Side View



Front View

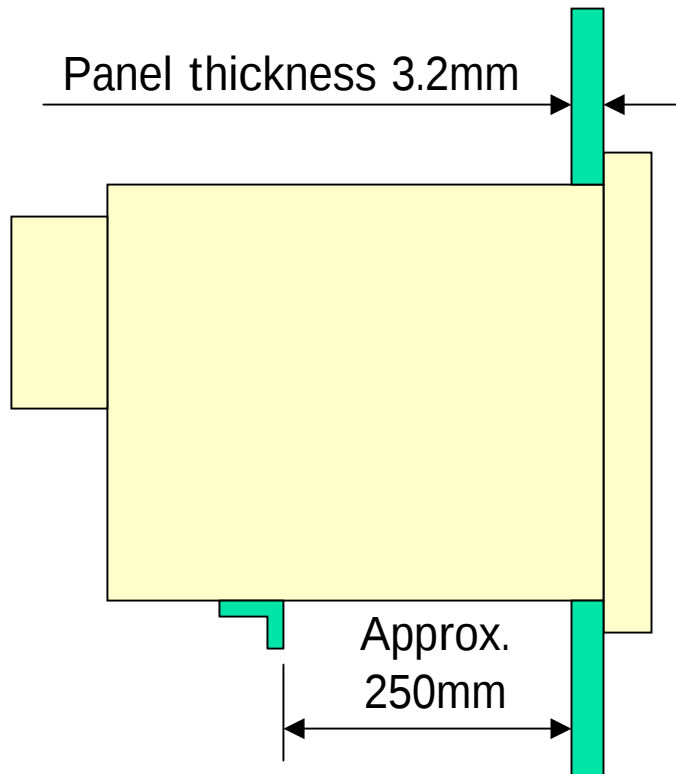


Rear View

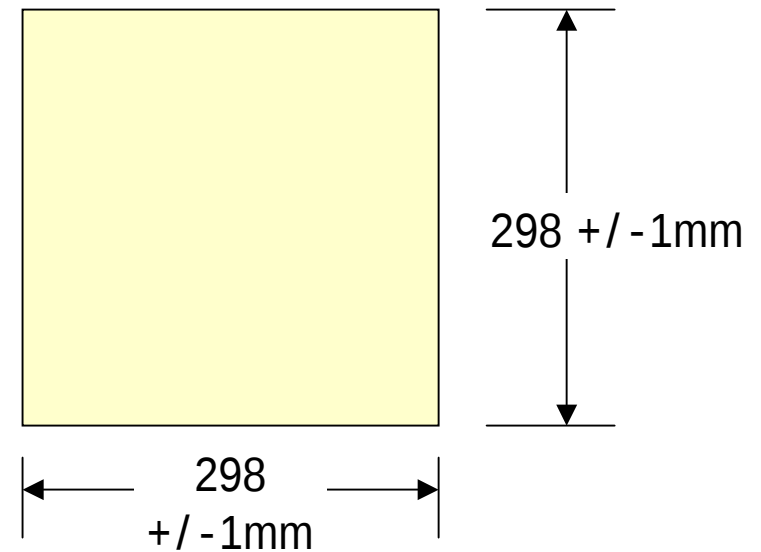


Panel Cutout

Side View

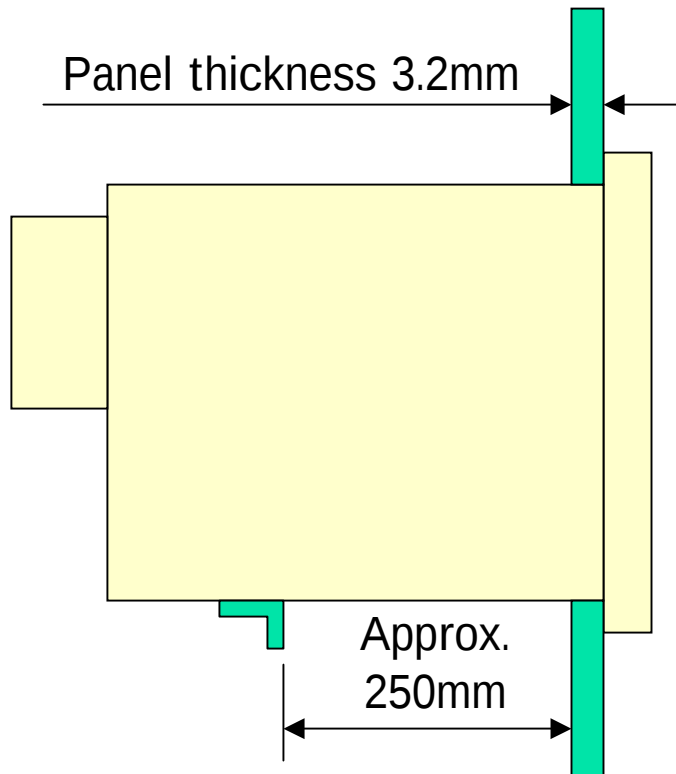


Panel Cutout

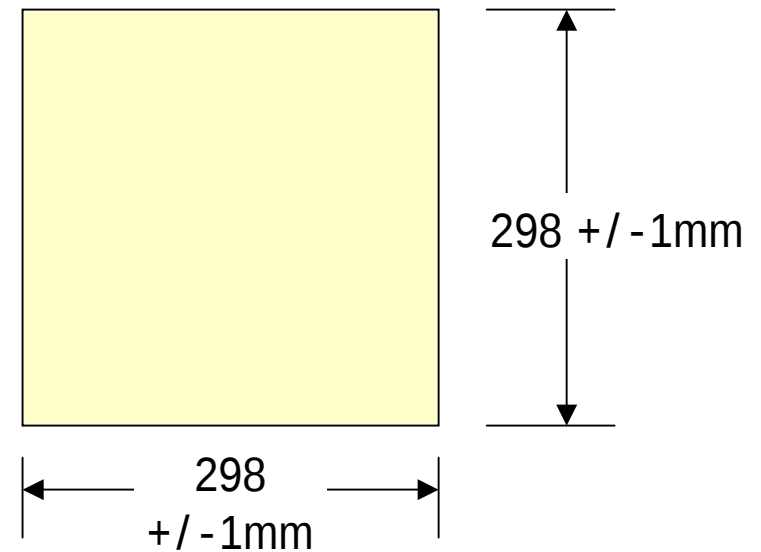


Panel Cutout

Side View



Panel Cutout



Appearance



MX1-A vs MK5/Z

Model	MX1-A	MK5 / Z
Principle	Hersch Galvanic Cell	
Measuring Ranges	One user-settable range 0-1ppb to 0-1000ppb	Four user-settable ranges 0-50ppb to 0-10ppm
LDL	0.02ppb (20ppt)	0.5ppb
Stability	+/-5% FS/24hr	+/-5% FS/12hr
Repeatability	+/-2% FS	
Calibration	Internal (standard gases not required)	
Data Logging	Included	
Output / Communication / Contact	DC 0-20 or 4-20mA / RS232C / NPN open collector	
Water Addition	Automatically added from built-in water tank	
Dimensions (WxDxH) / Weight	335 x 425 x 335mm / 15kg	482 x 416 x 355mm / 30kg