

ASPYRE® DT Power Conformal Coating
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Coating Level on **ASPYRE® DT** Printed Circuit Board Assemblies



For **ASPYRE® DT** power controllers ordered with the conformal coating option, the printed circuit board assemblies listed below are designed to be installed and maintained in a Harsh (G3) environment (defined by the Classifications shown below).

- 0XPCA001 – xx
- 0XPCA002 – xx
- 0XPCA003 – xx
- 0XPCA005 – xx
- 0XPCA006 – xx



Typical Pollutants in Industrial Atmospheres

Pollutant		Content in Industrial Atmosphere
Sulphur dioxide	SO ₂	0.1 – 1 ppm
Hydrogen sulfide	H ₂ S	0.01 – 0.1 ppm
Nitrogen monoxide and nitrogen dioxide	NO + NO ₂	0.01 – 0.1 ppm
Chlorine and hydrogen chloride	Cl + HCl	0.01 – 0.1 ppm
Ozone	O ₃	0.05 – 0.5 ppm
Ammonia	NH ₃	0.01 – 0.05 ppm
Formaldehyde	CH ₂ O	Approx. 0.02 ppm
Carbon monoxide	CO	2 – 100 ppm
Dust		0.1 mg/m ³

Typical Pollutants in Industrial Atmospheres

Severity Level	Reactivity Level	Cu Corrosion Rate	Ag Corrosion Rate	Expected Downtime of Unprotected Electronics
G1	Mild	<0.03 µm / month	<0.02 µm / month	No failures to be expected through corrosion; a trouble-free operation of over 10 years is predicted
G2	Moderate	<0.1 µm / month		Electronic components may show faults after 3-5 years, with risk of failure of components after 5-7 years; no disturbance if electrical components were coated
G3	Harsh	<0.2 µm / month		Electronic components can only be operated with extra effort; malfunctions may occur after several months, with risk of failure after 3-5 years
GX	Severe	>0.2 µm / month		Failure and downtime intervals may occur after a few months or weeks; without considerable effort, a trouble-free operation is impossible

The deposited thickness is 130 µm catalysed.

Further information is available at: www.watlow.com