

Technical Note - 05

ATV 61 ATV 71

Environmental Resistance

Due to the environmental conditions prevalent in New Zealand, Schneider Electric New Zealand only stock conformal coated drives with **IEC 60721-3-3 class 3C2** certification for the entire Altivar 61 and 71 ranges.

Specifications for all drives are listed in our Catalogue. The 3C2 certified drives are summarised below and can be identified by their unique part number:

Drive Type	Reference / Part Number	Voltage Range
Altivar 61	ATV61●●●●M3S337 ⁽¹⁾	200 ...240V 50/60Hz
	ATV61H075N4S337 ...HD75N4S337	380 ...480V 50/60Hz
	ATV61HD90N4 ...HC63N4 ⁽²⁾	380 ...480V 50/60Hz
	ATV61W●●●N4A24 ⁽³⁾	380 ...480V 50/60Hz
Altivar 71	ATV71●●●●M3S337 ⁽¹⁾	200 ...240V 50/60Hz
	ATV71H075N4S337 ...HD75N4S337	380 ...480V 50/60Hz
	ATV71HD90N4 ...HC50N4 ⁽²⁾	380 ...480V 50/60Hz
	ATV71W●●●N4A24 ⁽³⁾	380 ...480V 50/60Hz
Options Cards	VW3 A3 ●●●	All

- (1) The suffix S337 denotes the drives are reinforced versions enabling them to operate in environmental conditions to IEC 60721-3-3 class 3C2.
- (2) The ATV61HD90 ...HC63N4 and ATV71HD90 ...HC50N4 drives come in a reinforced version as standard, enabling them to operate in environments conditions to IEC 60721-3-3 class 3C2.
- (3) The suffix A24 denotes an additional 250mA 24VDC internal power supply. All A24 drives are reinforced versions enabling them to operate in environmental conditions to IEC 60721-3-3 class 3C2.
- (4) In addition, all option cards (VW3 A3 ●●●) available for the ATV61 or ATV71 are conformal coated enabling them to operate in environmental conditions to IEC 60721-3-3 class 3C2 as standard.

The following table shows the requirements under the standard for each level of resistance. The highlighted area shows where the Altivar 61 and Altivar 71 drives meet the requirements.

Environmental Parameter	Unit	Class								
		3C1R	3C1L	3C1	3C2		3C3		3C4	
		Max Value	Max Value	Max Value	Mean Value	Max. Value	Mean Value	Max. Value	Mean Value	Max. Value
a) Sea Salts	None	No	No	No	Salt mist		Salt mist		Salt mist	
b) Sulphur dioxide	mg/m ³	0.01	0.1	0.1	0.3	1	5	10	13	40
	ppm	0.0037	0.037	0.037	0.11	0.37	1.85	3.7	4.8	14.8
c) Hydrogen sulphide	mg/m ³	0.0015	0.01	0.01	0.1	0.5	3 *	10 *	14	70
	ppm	0.001	0.0071	0.0071	0.071	0.36	2.1 *	7.1 *	9.9	49.7
d) Chlorine	mg/m ³	0.001	0.01	0.1	0.1	0.3	0.3	1	0.6	3
	ppm	0.00034	0.0034	0.034	0.034	0.1	0.1	0.34	0.2	1
e) Hydrogen chloride	mg/m ³	0.001	0.01	0.1	0.1	0.5	1	5	1	5
	ppm	0.00066	0.0066	0.066	0.066	0.33	0.66	3.3	0.66	3.3
f) Ammonia (NH ₃)	mg/m ³	0.03	0.3	0.3	1	3	10	35	35	175
	ppm	0.042	0.42	0.42	1.4	4.2	14	49	49	247
g) Nitrogen Oxide (NO ₂)	mg/m ³	0.01	0.1	0.1	0.5	1	3	9	10	20
	ppm	0.005	0.052	0.052	0.26	0.52	1.56	4.68	5.2	10.4

* Meets IEC 60721-3-3 class 3C3 for Hydrogen Sulphide.

For further information, Please contact us on 0800 652 999.

Written By :
Approved Technical:
Approved Marketing:

David Latimer
Michael Donaldson
Richard Pratley

Applications Engineer
Technical Team Leader
Product Manager

Date: 29-Aug-07
Ref: Tech Note 05
Version: 1.3