

Altivar Process

This document gives the Ride Through time of Altivar 630/650/930/950 variable speed drives during a main supply interruption (micro-cut).

The time values are given at the nominal torque.

200-240V range	USF (Factory setting)		USF (Minimum value)	
	Minimum supply voltage 200V	Maximum supply voltage 240V	Minimum supply voltage 200V	Maximum supply voltage 240V
Commercial references				
ATV630U07M3 / ATV930U07M3	29 ms	59 ms	51 ms	85 ms
ATV630U15M3 / ATV930U15M3	15 ms	30 ms	25 ms	42 ms
ATV630U22M3 / ATV930U22M3	10 ms	20 ms	17 ms	29 ms
ATV630U30M3 / ATV930U30M3	11 ms	21 ms	18 ms	31 ms
ATV630U40M3 / ATV930U40M3	8 ms	16 ms	14 ms	23 ms
ATV630U55M3 / ATV930U55M3	14 ms	28 ms	24 ms	40 ms
ATV630U75M3 / ATV930U75M3	13 ms	26 ms	22 ms	37 ms
ATV630D11M3 / ATV930D11M3	9 ms	18 ms	15 ms	25 ms
ATV630D15M3 / ATV930D15M3	6 ms	13 ms	11 ms	18 ms
ATV630D18M3 / ATV930D18M3	6 ms	13 ms	11 ms	18 ms
ATV630D22M3 / ATV930D22M3.	6 ms	13 ms	11 ms	18 ms
ATV630D30M3 / ATV930D30M3.	9 ms	18 ms	15 ms	25 ms
ATV630D37M3 / ATV930D37M3.	7 ms	14 ms	12 ms	20 ms
ATV630D45M3 / ATV930D45M3C	7 ms	14 ms	12 ms	20 ms
ATV630D55M3 / ATV930D55M3C	4 ms	8 ms	7 ms	12 ms
ATV630D75M3 / ATV930D75M3C	3 ms	6 ms	5 ms	8 ms

380-480V range	USF (Factory setting)		USF (Minimum value)	
	Minimum supply voltage 380V	Maximum supply voltage 480V	Minimum supply voltage 380V	Maximum supply voltage 480V
ATV630U07N4 / ATV650U07N4. ATV930U07N4 / ATV950U07N4.	30	68	45	87
ATV630U15N4 / ATV650U15N4. ATV930U15N4 / ATV950U15N4.	15	34	23	44
ATV630U22N4 / ATV650U22N4. ATV930U22N4 / ATV950U22N4.	10	23	15	30
ATV630U30N4 / ATV650U30N4. ATV930U30N4 / ATV950U30N4.	13	30	20	38
ATV630U40N4 / ATV650U40N4. ATV930U40N4 / ATV950U40N4.	10	22	15	29
ATV630U55N4 / ATV650U55N4. ATV930U55N4 / ATV950U55N4.	9	20	13	25
ATV630U75N4 / ATV650U75N4. ATV930U75N4 / ATV950U75N4.	13	29	19	37
ATV630D11N4 / ATV650D11N4. ATV930D11N4 / ATV950D11N4.	9	20	13	25
ATV630D15N4 / ATV650D15N4. ATV930D15N4 / ATV950D15N4.	10	22	14	28
ATV630D18N4 / ATV650D18N4. ATV930D18N4 / ATV950D18N4.	8	18	12	23
ATV630D22N4 / ATV650D22N4. ATV930D22N4 / ATV950D22N4.	7	15	10	19
ATV630D30N4 / ATV650D30N4. ATV930D30N4 / ATV950D30N4.	8	18	12	23
ATV630D37N4 / ATV650D37N4. ATV930D37N4 / ATV950D37N4.	6	15	10	19
ATV630D45N4 / ATV650D45N4. ATV930D45N4 / ATV950D45N4.	6	14	10	19
ATV630D55N4 / ATV650D55N4. ATV930D55N4. / ATV950D55N4.	10	22	15	28
ATV630D75N4 / ATV650D75N4. ATV930D75N4. / ATV950D75N4.	7	16	11	21
ATV630D90N4 / ATV650D90N4. ATV930D90N4. / ATV950D90N4.	7	16	11	21
ATV630C11N4 / ATV930C11N4C	8	18	12	24
ATV630C13N4 / ATV930C13N4C	7	15	10	20
ATV630C16N4 / ATV930C16N4C	6	13	9	16
ATV630C22N4 / ATV930C22N4.	6	13	9	17
ATV630C25N4 / ATV930C25N4C	5	12	8	16
ATV630C31N4 / ATV930C31N4C	6	14	9	18

600V range	USF (Factory setting)
Commercial references	Supply voltage 600V
ATV630U22S6X / ATV930U22S6X	123 ms
ATV630U40S6X / ATV930U40S6X	68 ms
ATV630U55S6X / ATV930U55S6X	49 ms
ATV630U75S6X / ATV930U75S6X	36 ms
ATV630D11S6X / ATV930D11S6X	25 ms
ATV630D15S6X / ATV930D15S6X	18 ms
ATV630D18S6 / ATV930D18S6	16 ms
ATV630D22S6 / ATV930D22S6	13 ms
ATV630D30S6 / ATV930D30S6	30 ms
ATV630D37S6 / ATV930D37S6	24 ms
ATV630D45S6 / ATV930D45S6	20 ms
ATV630D55S6 / ATV930D55S6	16 ms
ATV630D75S6 / ATV930D75S6	12 ms

500-690V range	USF (Factory setting)		USF (Minimum value)	
	Minimum supply voltage 500V	Maximum supply voltage 690V	Minimum supply voltage 500V	Maximum supply voltage 690V
Commercial references				
ATV630U22Y6 / ATV930U22Y6	56 ms	173 ms	91 ms	221 ms
ATV630U30Y6 / ATV930U30Y6	41 ms	127 ms	67 ms	162 ms
ATV630U40Y6 / ATV930U40Y6	31 ms	95 ms	50 ms	121 ms
ATV630U55Y6 / ATV930U55Y6	23 ms	69 ms	36 ms	88 ms
ATV630U75Y6 / ATV930U75Y6	17 ms	51 ms	27 ms	65 ms
ATV630D11Y6 / ATV930D11Y6	11 ms	35 ms	18 ms	44 ms
ATV630D15Y6 / ATV930D15Y6	8 ms	25 ms	13 ms	32 ms
ATV630D18Y6 / ATV930D18Y6	7 ms	21 ms	11 ms	26 ms
ATV630D22Y6 / ATV930D22Y6	6 ms	17 ms	9 ms	22 ms
ATV630D30Y6 / ATV930D30Y6	4 ms	13 ms	7 ms	16 ms
ATV630D37Y6 / ATV930D37Y6	10 ms	32 ms	17 ms	41 ms
ATV630D45Y6 / ATV930D45Y6	9 ms	26 ms	14 ms	34 ms
ATV630D55Y6 / ATV930D55Y6	7 ms	22 ms	11 ms	28 ms
ATV630D75Y6 / ATV930D75Y6	5 ms	16 ms	8 ms	20 ms
ATV630D90Y6 / ATV930D90Y6	4 ms	13 ms	7 ms	17 ms

Globally, the behaviour of the Altivar Process in case of main supply micro-cut at full load is the following :

- 0-20ms : it works normally

- 20ms < T < 250ms : error code USF (Supply Mains Undervoltage)

- T > 250ms : error code USF (Supply Mains Undervoltage) + detected error relay will be Opened

Take care that these times are indicative, they can fluctuate regarding the main supply voltage, the load and the drive range.