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## ➤ TABLE OF STANDARD PROPERTIES OF USE AND MEASUREMENT

The properties defined in the table below, are set up according to the technical conditions of use and measurement. These properties are warranted within their variation range and in compliance with the standard technical conditions of use.

Properties LA75A-x	Standard technical conditions	Unit	Nominal values	Min. values	Max. values
Notes			x : number of channel		
Function			Linear amplifier		
Max. number of channels			3		
Cooling			Natural convection (Forced convection for 3 channels)		
Protection			Thermal		
Negative supply voltage	Standard environment	V	-36	-30.0	-40.0
Positive supply voltage	Standard environment	V	165	164.0	182.0
Min. input voltage	Standard environment	V	-1.2	-1.3	-1.1
Max. input voltage	Standard environment	V	7.7	7.6	7.9
Min. output voltage	Standard environment	V	-20	-19.0	-22.0
Max. output voltage	Standard environment	V	150	145.0	160.0
Gain	Standard environment	V/V	20	19.0	21.0
Max. output current		A	0.09	0.08	0.10
Max. output load capacitance		μF	400	360.0	440.0
Signal to noise ratio	Noise measurement conditions	dB	85	70.0	100.0
Unloaded output bandwidth (-3dB)		Hz	33000	29700	36300
Loaded Output bandwidth (-3dB)	Standard load	Hz	154	138.6	169.4
Input impedance		kOhms	10	9.5	10.5
Mass		g	1000	-	-
Dimensions		mm	10F wide, 3H high		

Option UC45	Standard technical conditions	Unit	Nominal values	Min. values	Max. values
Notes					
Function			Option on amplifier board - Numerical servo controller		
Size		mm	50*70		
Max. number of control channels			1 per channel		
Sampling frequency		Hz	10000		
A/D converters			16 bit @ +/-10V		
D/A converters			16 bit @ +/-10V		
Computer interface			USB		
Filter cells	2nd order low-pass or stop-band filter @ [150 2000]Hz		Selectable by the GUI HDPM45		

\*Bandwidth settled according to your specifications; by default 1 Hz.

Properties LC75A	Standard technical conditions	Unit	Nominal values	Min. values	Max. values
Notes			-		
Function			Bipolar AC/DC linear converter		
Cooling			Natural convection		
Protection			Thermal Overcurrent Overvoltage		
Main voltage	Standard main supply	VAC	230	190	250
Main frequency	Standard main supply	Hz	50	45	65
Negative output voltage	Standard environment	VDC	-35	-32.0	-38.0
Positive output voltage	Standard environment	VDC	170	160.0	180.0
Current limitation	Standard environment	A	0.12	0.114	0.126
Mass		g	680	-	-
Dimensions		mm	12F wide, 3H high	-	-

Properties SG75-x	Standard technical conditions	Unit	Nominal values	Min. values	Max. values
Notes			x : number of channel		
Function			Strain Gauges conditioner		
Max. number of channels			3		
Min. supply voltage		VDC	-15	-14.3	-15.8
Max. supply voltage		VDC	15	14.3	15.8
Min. output voltage		VDC	-12	-11.4	-12.6
Max. output voltage		VDC	12	11.4	12.6
Signal to noise ratio	Noise measurement conditions	dB	70	56.0	84.0
Output bandwidth (-3dB)*		Hz	2000	1600	2400
Mass		g	180	-	-
Dimensions		mm	6F wide, 3H high		

\*Bandwidth settled according to your specifications

Properties ECS75-x	Standard technical conditions	Unit	Nominal values	Min. values	Max. values
Notes			x : number of channel		
Function	Coupled with a planar coil with a stroke range of 500 µm or 1500 µm		Eddy current sensor conditioner		
Max. number of channels			3		
Min. supply voltage		VDC	-15	-14.3	-15.8
Max. supply voltage		VDC	15	14.3	15.8
Min. output voltage	adjusted with the nominal stroke of the mechanism	VDC	-10	-9.5	-10.5
Max. output voltage	adjusted with the nominal stroke of the mechanism	VDC	10	9.5	10.5
Signal to noise ratio	Noise measurement conditions	dB	85	80	90
Output bandwidth (-3dB)*		Hz	10000	8000	12000
Measurement range	Target is aluminium alloy (steel on request)	mm	0.5 or 1.5		
Linearity		%	+/- 1.5		
Mass		g	200	-	-
Dimensions		mm	6F wide, 3H high		

\*Bandwidth settled according to your specifications

## ➤ PROPERTIES STANDARD TECHNICAL CONDITIONS OF USE AND MEASUREMENT

<b>Quasistatic excitation</b>	: AC voltage between -20 and 150 V at 1 Hz
<b>Environment</b>	: Ambient temperature (15-25°C) and dry air (Humidity < 50 % rH)
<b>Standard main supply</b>	: Main according to directive HD472; could be adapted to 110 VAC on request
<b>Noise measurement conditions</b>	: Reading bandwidth 0.1 Hz to 10 kHz – Full range of measurement of the sensor

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**Standard load** : Actuator APA from series S or SM : 1.55  $\mu$ F (load test may be different)

Any technical conditions of use, different from those defined above, can lead to temporary or definitive alterations of properties. Thank you to contact CEDRAT TECHNOLOGIES before using actuators under non standard technical conditions.

➤ **FACTORY TESTS CARRIED OUT**

- Test 1: Load and discharge time
- Test 2: Linearity output voltage vs. input voltage

➤ **EXTRA FACTORY TESTS**

- Test 3: Gain and linearity in closed loop
- Test 4: Step response in closed loop (sensor output voltage versus command voltage)
- Test 5: Bode diagram

➤ **AVAILABLE OPTIONS**

- [ UC ] Servo controller
- [ PP ] Push-pull
- [ SG ] Strain gauge conditioner
- [ ECS ] Eddy Current Sensor conditioner