


# MATERIAL DECLARATION SHEET



Material Number	86 C-P-L (Dual Cup)			
Product Line	Panel Control			
Compliance Date	September 30, 2005			
RoHS Compliant	Yes	MSL	N/A	

No.	Construction Element (subpart)	Homogeneous Material	Material weight [g]	Homogeneous Material/ Substances	CASRN if applicable	Materials Mass %	Material Mass % of total unit wt.	Subpart mass of total wt. (%)
1	Substrate	Ceramic	0.3	Aluminum Oxide	1344-28-1	95	2.228	2.345
				Silicon Oxide	7631-86-9	2	0.047	
				Magnesium Oxide	7309-48-4	2	0.047	
				Calcium Oxide	1305-78-8	1	0.023	
2	Conductive Ink	Ink	0.003	Silver	7440-22-4	75	0.018	0.023
				Palladium	7440-05-3	10	0.002	
				Disbismuth-trioxide	1304-76-3	10	0.002	
				Ruthenium(IV)oxide	12036-10-1	1	0.0002	
				Silicon dioxide	7631-86-9	1	0.0002	
				Nickel-monoxide	1313-99-1	1	0.0002	
				Lead-monoxide	1317-36-8	1	0.0002	
Proprietary Ingredients		1	0.0002					
3	Resistive Ink	Ink	0.0045	Phenolic Resin		67	0.024	0.035
				DAIP resin	1087-21-4	6	0.002	
				Carbon Black	1333-86-4	7	0.005	
				Barium Sulfate	7727-43-7	16	0.006	
			Graphite	7782-42-5	4	0.001		

# MATERIAL DECLARATION SHEET



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6	Rotor Driver	Zinc	0.968	Aluminum	7429-90-5	4	0.303	7.567
				Copper	7440-50-8	0.9	0.068	
				Magnesium	7439-95-4	0.0475	0.004	
				Lead	7439-92-1	0.0015	0.0001	
				Cadmium	7440-43-9	0.0015	0.0001	
				Tin	7440-31-5	0.0005	0.00004	
				Iron	7439-89-6	0.01	0.0008	
				Nickel	7440-02-0	0.0005	0.00004	
				Silicon	7440-21-3	0.01	0.0008	
				Zinc	7440-66-6	95.0285	7.189	
7	Shaft	Brass	1.45	Copper	7440-50-8	61.5	6.97	11.333
				Zinc	7440-66-6	35.5	4.023	
				Lead	7439-92-1	3	0.34	
	Plating	0.001324	Nickel	7440-02-0	100	0.01	0.01	
8	Rivet X 4	Aluminum	0.116	Aluminum	7429-90-5	95.95	0.869	0.907
				Chromium	7440-47-3	0.05	0.0005	
				Copper	7440-50-8	2.5	0.023	
				Iron	7439-89-6	0.5	0.005	
				Magnesium	7439-98-5	0.3	0.003	
				Manganese	7439-96-5	0.1	0.001	
				Silicon	7440-21-3	0.5	0.005	
				Zinc	7440-66-6	0.1	0.001	
9	Wire	Copper	0.03	Copper	7440-50-8	100	0.235	0.235
		Plating	0.0000273	Tin	7440-31-5	100	0.0002	0.0002

# MATERIAL DECLARATION SHEET



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10	Contact Spring	Strip	0.05	Copper	7440-50-8	70	0.274	0.391
				Zinc	7440-66-6	30	0.117	
		Spacer Strip	0.00756	Nickel	7440-44-0	18	0.011	0.059
				Copper	7440-50-8	55	0.033	
		Solder Inlay	0.0015	Zinc	7440-66-6	27	0.016	0.012
				Silver	7440-22-4	5	0.006	
				Bismuth	7440-69-9	0.3	0.00004	
		Wire	0.01548	Tin	7440-31-5	94.7	0.011	0.121
				Nickel	7440-02-0	18	0.022	
				Copper	7440-50-8	65	0.079	
11	Rotor	PBT	0.5293	Zinc	7440-66-6	17	0.021	4.137
				Glass	65997-17-3	30	1.241	
				Poly(butylene terephthalate)	30965-26-5	64	2.6348	
				Antimony Compounds	7440-36-0	3	0.124	
				Antimony Oxide	1309-64-4	3	0.124	
12	Body	PBT	0.577	Glass	65997-17-3	30	1.353	4.509
				Poly(butylene terephthalate)	30965-26-5	64	2.886	
				Antimony Compounds	7440-36-0	3	0.135	
				Antimony Oxide	1309-64-4	3	0.135	
				Glass	65997-17-3	30	4.608	
Poly(butylene terephthalate)	30965-26-5	64	9.831					
Antimony Compounds	7440-36-0	3	0.46					
Antimony Oxide	1309-64-4	3	0.46					
14	Shaft and Spring Washer Lube	Grease	0.003	Siloxanes and Silicones, di-Me, di-Ph	68083-14-7	68.947	0.016	0.023
				Lithium Stearate	4485-12-5	25.368	0.006	
				Silane, dichlorodimethyl-, reaction products with silica	68611-44-9	4.789	0.001	
				Diphenylamine	122-39-4	0.895	0.0002	

# MATERIAL DECLARATION SHEET



Reliable Electronic Solutions

15	Element Lube	Grease	0.003	Decanoic acid, mixed esters with heptanoic acid, octanoic acid	68130-53-0	54.4	0.013	0.023
				Lithium 12-hydroxystearate	7620-77-1	5.7	0.001	
				Isohexadecyl-isoctadecanoate	52006-45-8	33.7	0.007	
				Polyisobutylene	9003-27-4	6.2	0.001	
16	Bushing	Aluminum	0.9	Silicon	7440-21-3	0.7	0.049	0.173
				Iron	7439-89-6	0.34	0.024	
				Copper	7440-50-8	0.34	0.024	
				Manganese	7439-96-3	0.09	0.006	
				Magnesium	7439-98-5	0.9	0.063	
				Chromium	7440-47-3	0.09	0.006	
				Zinc	7440-66-6	0.05	0.004	
				Titanium	7440-32-6	0.02	0.001	
				Aluminum	7429-90-5	97.47	6.856	
	Plating	0.0008219	Nickel	7440-02-0	100	0.006	0.006	
17	Rear Cover	Stainless Steel	0.92	Carbon	7440-44-0	0.013	0.0009	5.596
				Manganese	7435-96-5	1.84	0.132	
				Phosphorus	7723-14-0	0.03	0.002	
				Sulfur	7704-34-9	0.002	0.0001	
				Silicon	7440-21-3	0.1	0.007	
				Chromium	7440-47-3	18.61	1.338	
				Nickel	7440-02-0	9.9	0.712	
				Molybdenum	7439-92-1	0.42	0.03	
				Copper	7440-50-8	0.37	0.027	
				Nitrogen	7727-37-9	0.05	0.004	
				Iron	7439-89-6	68.665	4.938	

# MATERIAL DECLARATION SHEET



Reliable Electronic Solutions

18	Front Cover	Stainless Steel	0.716	Carbon	7440-44-0	0.15	0.008	5.596
				Manganese	7435-96-5	2	0.111	
				Silicon	7440-21-3	1	0.056	
				Chromium	7440-47-3	18	1.007	
				Nickel	7440-02-0	9	0.504	
				Iron	7439-89-6	69.85	3.909	
19	Washer	PTFE	0.007	Polytetrafluoroathylene	9002-84-0	15	0.008	0.055
				1-Dichloro-1-Fluoroathane	1717-00-6	85	0.046	
20	Spring Washer	Copper Beryllium	0.031	Copper	7440-50-8	98.1	0.238	0.242
				Silicon	7440-21-3	0.2	0.0005	
				Beryllium	7440-41-7	1.5	0.004	
				Aluminum	7429-90-5	0.2	0.0005	
21	Blade Fixed X 2	Brass	0.078	Copper	7440-50-8	70	0.427	0.609
				Zinc	7440-66-6	30	0.183	
		Inlay	0.002	Silver	7440-22-4	100	0.016	0.016
		Plating	0.0002	Copper	7440-50-8	100	0.02	0.002
		Plating	0.0017	Nickel	7440-02-0	100	0.013	0.013
Plating	0.0023	Gold	7440-57-5	100	.018	0.018		
22	Rear Body	Diallyl Phthalate	1.45	Antimony Trioxide	1309-64-4	3	0.34	11.333
				Aluminum Trihydrate	21645-51-2	10	1.133	
				Diallyl Phthalate	1344-28-1	47	5.327	
				Glass Fiber	65997-17-3	40	4.533	
23	Cover	PBT	0.8	Glass	65997-17-3	30	1.876	6.253
				Antimony Oxide	1309-64-4	3	0.188	
				Antimony Compounds	7440-36-0	3	0.188	
				Poly(butylene terephthalate)	30965-26-5	64	4.002	

# MATERIAL DECLARATION SHEET



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24	Inner Rotor	PBT	0.55	Glass	65997-17-3	30	1.289	4.299
				Antimony Oxide	1309-64-4	3	0.129	
				Antimony Compounds	7440-36-0	3	0.129	
				Tetrohydrofuran	109-99-9	1	0.043	
				Poly(butylene terephthalate)	30965-26-5	63	2.708	
25	Outer Rotor	PBT	0.25	Glass	65997-17-3	30	0.586	1.954
				Antimony Oxide	1309-64-4	3	0.059	
				Antimony Compounds	7440-36-0	3	0.059	
				Poly(butylene terephthalate)	30965-26-5	64	1.251	
26	Detent Spring	Beryllium Copper	0.0428	Copper	7440-50-8	98.1	0.328	0.335
				Silicon	7440-21-3	0.2	0.0007	
				Beryllium	7440-47-7	1.8-2	0.005	
				Aluminum	7439-90-5	0.2	0.0007	
27	Spring Helper	Copper Beryllium	0.0187	Copper	7440-50-8	98.1	0.143	0.146
				Silicon	7440-21-3	0.2	0.0003	
				Beryllium	7440-47-7	1.5	0.002	
				Aluminum	7439-90-5	0.2	0.0003	
28	Moving Contact X 2	Silver	0.016	Silver	7440-22-0	100	0.125	0.125
		Plating	0.00004	Nickel	7440-02-0	100	0.003	0.003
		Plating	0.0003	Gold	7440-57-5	100	0.002	0.002
29	Contact X 2	Copper Beryllium	0.0748	Copper	7440-50-8	98.1	0.574	0.585
				Silicon	7440-21-3	0.2	0.001	
				Beryllium	7440-47-7	1.5	0.009	
				Aluminum	7439-90-5	0.2	0.001	
		Plating	0.0054	Tin	7440-31-5	100	0.042	0.042

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30	Rivet X 4	Aluminum	0.902	Aluminum	7429-90-5	95.95	6.765	7.05
				Chromium	7440-47-3	0.05	0.004	
				Copper	7440-50-8	2.5	0.176	
				Iron	7439-89-6	0.5	0.035	
				Magnesium	7439-98-5	0.3	0.021	
				Manganese	7439-96-5	0.1	0.007	
				Silicon	7440-21-3	0.5	0.035	
				Zinc	7440-66-6	0.1	0.007	
		Total weight	12.794					

**This Document was updated on:** March 22, 2007

**Important remarks:**

1. It is the responsibility of the user to verify they are accessing the latest version.