

MAXIMUM CABLE PARAMETERS

(for the latest information see www.mtl-inst.com/support/certificates)

Model No.	ac ¹ /dc	Note ³ ref.	BASEEFA Group IIC			Matched Power (W)	FM (Grps A&B)			Matched Power (W)
			C (μF)	L ² (mH)	L/R (μH/Ω)		C (μF)	L ² (mH)	L/R (μH/Ω)	
MTL7706	+	a	0.083	3.05 (4.2)	56	0.65	0.083	4.2	56	0.65
MTL7707	+	a1/a2/b	0.083	3.05 (4.2)	56	0.65	0.083	4.2	56	0.65
MTL7710	+	a	3	0.91	74	0.50	3	0.91	74	0.50
MTL7715	+	a	0.58	1.45	66	0.56	0.58	1.45	66	0.56
MTL7715P	+	a	0.580	0.33	28	1.09	0.580	0.33	28	1.09
MTL7722	+	a	0.165	1.45	45	0.81	0.165	1.45	45	0.81
MTL7728	+/-/ac	a	0.083	3.05 (4.2)	56	0.65	0.083	3.05 (4.2)	56	0.65
MTL7728P	+	a	0.083	1.82 (2.51)	44	0.83	0.083	1.82 (2.51)	44	0.83
MTL774X		b3	2.86	96	742	—	2.86	96	742	0.039
MTL7755	ac	a1/a2	100	0.46	145	0.225	100	0.46	145	0.225
		b	100	0.13	69	0.45	40	0.13	69	0.45
		c	40	0.41	73	0.45	40	0.13	69	0.45
MTL7756	ac	a1/a2/a3	100	0.46	145	0.225	100	0.46	145	0.225
		b1	100	0.13	69	0.45	40	0.13	69	0.45
		b2	100	0.06	44	0.675	40	0.13	69	0.45
		c1	40	0.41	73	0.45	40	0.13	69	0.45
		c2	40	0.23	61	0.60	40	0.06	44	0.675
MTL7758	+/-	a1/a2	11.1	0.07	26	1.40	11.1	0.07	26	1.4
		b	11.1	0.02	10	2.8	8.8	0.02	10	2.8
MTL7760	ac	a1/a2	3	0.91	74	0.5	3	0.91	74	0.5
		b	3	0.20	27	1.00	3	0.20	35.6	1.00
MTL7761	ac	a1/a2	4.9	3.72	163	0.225	4.9	3.72	163	0.225
		b	4.9	0.91	62	0.45	0.31	0.91	62	0.45
		c	0.31	3.72	81	0.45	0.31	0.91	62	0.45
MTL7761P	ac	a1/a2	4.9	56	613	0.058	4.9	56	613	0.058
		b	4.9	14	236	0.115	0.31	14.0	236	0.115
		c	0.31	56	306	0.115	0.31	14.0	236	0.115
MTL7764	+	a1/a2	1.41	240	1000	0.036	1.41	240	1000	0.036
		b	1.41	61	360	0.072	1.0	61	360	0.072
MTL7764	ac	a1/a2	1.41	240	1000	0.036	1.41	240	1000	0.036
		b	1.41	61	360	0.072	0.125	61	360	0.072
		c	0.125	240	500	0.072	0.125	61	360	0.072
MTL7765	ac	a1/a2	0.580	1.45	66	0.56	0.580	1.45	66	0.56
		b	0.580	0.32	22	1.125	0.58	0.32	31.6	1.12
MTL7766	ac	a1/a2	1.41	5.8	151	0.24	1.41	5.8	151	0.24
		b	1.41	1.47	58	0.48	0.125	1.47	58	0.48
		c	0.125	5.8	75	0.48	0.125	1.47	58	0.48
MTL7766P	ac	a1	1.41	1.47	78	0.471	1.41	1.47	78	0.471
		b	1.41	0.34	29	0.942	0.125	0.34	29	0.942
		c	0.125	1.15	39	0.942	0.125	0.34	29	0.942
MTL7767	+	a1/a2	0.58	1.45	66	0.56	0.58	1.45	66	0.56
		b	0.58	0.32	22	1.125	0.58	0.32	22	1.125
MTL7778	ac	a1/a2	0.083	16	107	0.33	0.083	16	107	0.33
		b	0.083	3.05 (4.2)	42	0.33	0.083	4.0	107	0.654
MTL7779	+	a1/a2	0.083	3.05 (4.2)	56	0.65	0.083	3.05 (4.2)	56	0.65
		b	NOT PERMITTED							
MTL7787	+/-	a1	0.083	3.05 (4.2)	56	0.65	0.083	3.05 (4.2)	56	0.65
		a2	0.083	—	—	—	0.083	—	—	—
		b	0.083	3.05 (4.2)	56	0.65	0.011	4.2	56	0.65
MTL7787P	+	a1	0.083	1.82 (2.51)	44	0.835	0.083	1.82 (2.51)	44	0.83
		a2	0.083	—	—	—	0.083	—	—	—
		b	0.083	1.82 (2.51)	44	0.835	0.78	2.51	44	0.835
MTL7788	+	a1	0.083	3.05 (4.2)	56	0.65	0.083	3.05 (4.2)	56	0.65
		a2	3.0	0.91	74	0.5	3.0	0.91	74	0.5
		b	0.083	0.33	25	0.92	0.083	0.33	25	0.92
MTL7788R	+	a1	0.083	3.05 (4.2)	56	0.65	0.083	3.05 (4.2)	56	0.65
		a2	3.0	0.91	74	0.5	3.0	0.91	74	0.5
		b	0.083	0.33	25	0.92	0.083	0.33	25	0.92
MTL7789	+	C	0.083	16	106	0.33	0.083	16	106	0.33
MTL7796	+/-	a1	0.1	4.91	64	0.56	0.1	4.91	64	0.56
		a2	0.22	13	136	0.26	0.22	13	136	0.26
		b	0.1	1.94	34	0.81	0.096	1.94	34	0.81

Model No.	ac ¹ /dc	Note ³ ref.	BASEEFA Group IIB			Matched Power (W)	FM (Grps C-G)			Matched Power (W)
			C (μF)	L ² (mH)	L/R (μH/Ω)		C (μF)	L ² (mH)	L/R (μH/Ω)	
MTL7707P	+	a1	0.65	5.34	125	1.20	0.65	5.34	125	1.20
		b	0.65	5.34	125	1.20	0.587	5.34	125	1.20
MTL7729P	+	a1	0.65	5.65	127	1.19	0.65	5.65	127	1.19

Notes: 1 'ac' indicates a non-polarised, star-connected barrier configuration.

2 When the external circuit contains no lumped inductance greater than 10μH, the cable inductance may be increased to the values within parentheses.

3 See next page.

For further barrier channel configuration data, please refer to the relevant certificate.

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EPS7700 Rev 6 140410

Note 3 : The circuit configuration for the output parameters given in the table 'Maximum Cable Parameters' are as follows:-

- a Single channel barrier.
- a1 First channel of a dual/triple channel barrier.
- a2 Second channel of a dual/triple channel barrier.
- a3 Third channel of a dual/triple channel barrier.
- b Both channels of a dual channel barrier connected in parallel, with respect to earth.
- b1 Two channels of a triple channel barrier connected in parallel, with respect to earth.
- b2 Three channels of a triple channel barrier connected in parallel, with respect to earth.
- b3 Both channels of each switch input connected together
- c Both channels of a dual channel barrier interconnected, with no earth return.
- c1 Two channels of a triple channel barrier interconnected, with no earth return.
- c2 Three channels of a triple channel barrier interconnected, with no earth return. This assumes two of the channels are in parallel.

CORRELATION BETWEEN MTL7700 – MTL7000 – MTL700 BARRIERS (IIC)

Module No.	Bussed Power	MTL7000 Equivalent	MTL7000 Original Certificate Number(s)	MTL7000 ATEX Certificate Number(s)	MTL700 equivalent	MTL700 Original Certificate Number(s)	MTL700 ATEX Certificate Number(s)	Typical Application
MTL7710+	No	Half of MTL7162+	Ex95C2261	BAS99ATEX7285	MTL710+	Ex832452	BAS01ATEX7202	4/6V Systems
MTL7715+	No	N/A	N/A	N/A	MTL715+	Ex832452	BAS01ATEX7202	12V Systems
MTL7715P+	No	N/A	N/A	N/A	MTL715P+	Ex92C2373	BAS01ATEX7202	12V Systems
MTL7722+	No	MTL7122+	Ex95C2261	BAS99ATEX7285	MTL722+	Ex832452	BAS01ATEX7202	General Purpose
MTL7728+/-	No	MTL7028+/- MTL7128+/-	Ex95C2261	BAS99ATEX7285	MTL728+/-	Ex832452	BAS01ATEX7202	Analogue / Digital
MTL7728ac	No	N/A	N/A	N/A	MTL728ac	Ex832452	BAS01ATEX7202	General Purpose
MTL7728P+	No	MTL7128P+	Ex95C2261	BAS99ATEX7285	MTL728P+	Ex92C2373	BAS01ATEX7202	Analogue / Digital
MTL7755ac	No	MTL7055ac	Ex95C2261	BAS99ATEX7285	MTL755ac	Ex832452	BAS01ATEX7202	RTD, Grounded
MTL7756ac	No	MTL7056ac	Ex95C2261	BAS99ATEX7285	N/A	N/A	N/A	RTD, Grounded
MTL7758+/-	No	N/A	N/A	N/A	MTL758	Ex83453	BAS01ATEX7217	Active sensors,
MTL7760ac	No	N/A	N/A	N/A	MTL760ac	Ex832452	BAS01ATEX7202	Active sensors, Thermocouples
MTL7761ac	No	MTL7261ac	Ex95C2261	BAS99ATEX7285	MTL761ac	Ex832452	BAS01ATEX7202	Strain Gauges
MTL7761Pac	No	MTL7061Pac MTL7161Pac	Ex95C2261	BAS99ATEX7285	MTL761Pac	Ex92C2373	BAS01ATEX7202	Load cell
MTL7764+	No	MTL7164+	Ex95C2261	BAS99ATEX7285	MTL764+	Ex832452	BAS01ATEX7202	High resistance
MTL7764ac	No	MTL7264ac	Ex95C2261	BAS99ATEX7285	MTL764ac	Ex832452	BAS01ATEX7202	Strain / Level Gauges
MTL7765ac	No	N/A	N/A	N/A	MTL765ac	Ex832452	BAS01ATEX7202	General Purpose
MTL7766ac	No	N/A	N/A	N/A	MTL766ac	Ex832452	BAS01ATEX7202	Strain Gauges
MTL7766Pac	No	MTL7066Pac MTL7166Pac	Ex95C2261	BAS99ATEX7285	MTL766Pac	Ex92C2373	BAS01ATEX7202	Strain Gauges
MTL7767+	No	MTL7167+	Ex95C2261	BAS99ATEX7285	MTL767+	Ex832452	BAS01ATEX7202	Dual MTL715
MTL7779+	No	N/A	N/A	N/A	MTL779+	Ex832452	BAS01ATEX7202	Dual MTL728
MTL7787+/-	Yes	MTL7087+ MTL7187+	Ex95C2261	BAS99ATEX7285	MTL787S+	Ex832452	BAS01ATEX7202	Analogue / Digital
MTL7787P+	Yes	MTL7087P+ MTL7187P+	Ex95C2261	BAS99ATEX7285	MTL787SP+	Ex92C2373	BAS01ATEX7202	Analogue / Digital
MTL7788+	Yes	N/A	N/A	N/A	MTL788+	Ex832452	BAS01ATEX7202	Transmitters
MTL7788R+	Yes	N/A	N/A	N/A	MTL788R+	Ex832452	BAS01ATEX7202	1–5V systems
MTL7796+/-	No	MTL7096- MTL7196-	Ex95C2261	BAS99ATEX7285	MTL796+/-	Ex832452	BAS01ATEX7202	Vibration sensors

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