APLISENS - PEM-1000 SERIES FLOW METER

Electromagnetic (Magflow)

PEMDN0050PN16.1

- 0,085..28,274,3 m3/h
- 3/8" up to 40" pipe size
- 1,6 MPa
- Acids, alkalis, paints, pastes, water etc
- 4-20mA or Pulse/frequency





Product description

The Aplisens PEM-1000 'Mag flow meter' is a very robust flowmeter for a wide range of applications at a competitive price.

The magnetic flowmeter is for bidirectional measurement of liquids with a minimum conductivity 5µS/cm such as acid/alkalis, paints, pastes and water/wastewater.

The PEM-1000 is available in two versions, one with a direct mounted display/sensor and the other with a separate display/sensor. The pipe size starts at 3/8" (DN10) which gives 1m3/h all the way up to 40" (DN1000) which offers 8000m3/h with a total of twenty one different pipe size/m3/h options inbetween. There is a choice of lining from soft or hard rubber to teflon and a choice of elctrode materials which are 316Ti, Platinium Hastelloy, Tantalum and Titanium. Application examples:

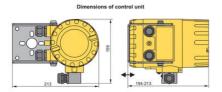
• Utility, water and wastewater processing

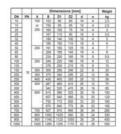
Please refer to the datasheet further down the page under Downloads.

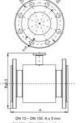
Specifications

Classification accuracy	± 0.5% of scale value according to EN837-1
Connection Thread	DN50 PN16
IP Class	IP67
Material of body	Carbon steel
Materials Wetted Parts	PTFE
Operating Voltage AC Max	260
Operating Voltage AC Min	90
Signal type	4-20 mA
Temperature ambient from	-20

Temperature ambient to	60
Temperature range of media from	-25
Temperature range of media to	130
Trykmodstand max	16
Weight	3.5







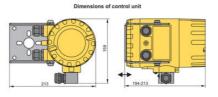


Power supply	2	90260VAC	(*) 1038V DC (*) (m request)		
Binary output 1	3	reverse polarity pr	otection, galvanic insulation,		
Binary output 1	4		passive		
Pulse/frequency output	5	reverse polarity pr	otection, galvanic insulation,		
and the document of the first	6		passive		
Current output 4+20 mA	- 7	(+)	active		
and the same of the same	8.	(-)	(passive on request)		
	9	RS 485 A			
Communication	10	RS 485 B	1		
Communication	11	RS 485	1		
		GND / shield			
Binary input (passive)	12	reverse polarity protection, galvanic insula			
oracy report grossively	13				
Binary output 2	14	reverse polarity p	rotection, galvanic insulation		
perary output 2	15		passive		

			Dimensions [mm] Weigh					Weight									
DN	PN	A	- 8	D1	02	đ		kg									
10		.150	253	90	60	54	- 4	2.5									
15		or	155	95	65	54	4	2.5	_	_							
20		200	160	105	75	54	4	3				Di	mensk	ons (m	m]		Weight
25			167	115	85	56	- 4	3.5	ON	PN	A		01	0.2	d		Ng
32 40			580	140	100	18	- 6	5	10		150	153	90	60	14	- 4	2,5
40			185	150	110	18	- 6	6.	15		or.	155	-95	65	14	- 4	2,5
(Q) (S)		200	591	165	125	58	4	T.	20		200	160	105	75	14	4	3
65		. 20%	209	185	145	18	- 4	8	25		127	167	115	85	14	4	3.5
60			224	200	160	18	- 8	9.5	32		200	180	140	100	18	4	5
100		250	245	235	190	22	8	12	40			185	150	110	18	4	6
3		0.0	276	270	220	26	8	15	50	40		191	165	125	18	4	1.
50	25	300	305	300	250	- 26	8	20	65			209	185	145	18	4	
50		350	375	360	310	29	172	36	80			224	200	160	18.	- 8	9.5
50		400	430	425	339	30	.12	58	100		250	245	235	790	22	8.	12
100		500	487	485	430	30	16	70	125	40		276	279	. 229	26	8.	15
155		355	542	555	490	33	16	85	150		300	305	300	250	26	8	20
		600	415	620	550	36	16	100	200		350 400 500	375	375	320	30	12.	36
069			657	\$70	600	36	20	120	250			430	450	385	33	12	58
100		- 8	750	730	660	36	20	160	300			487	515	450	33	16	70
100			870	845	770	30	20	190	350			542	580	510	. 30	16	85
100		700	927	960	875	42	24	260	400		600	615	660	585	39	16	100
100		800	1050	1085	000	46	24	350	450		100	188	685	610	30	20	120
900		900	1145	1185	1090	48	28	450	500			750	755	670	42	20	160
000	- 3	1000	1265	1320	1210	56	28	550	600			870	890	790.	42	20	190







			Dimensions [mm]					Weight									
DN	PN	A		Dt	02	6	. 10	kg -				30	-	1	de		
10		150	153	90	60	141	4	2.5			- 3	1.3	-	460	1		
		or	155	95	65	14:	- 4	2.5			1	11	-	εX	1.		
		200	160	105	75	14	4	3			119	W /	1 1	X	16X		
8			567	155	85	14	- 6	3.5			- 13	17.	200	-1	10.1		
2000			180	140	100	18	- 4	5			- 1		100	- 1	101		
40			185	150	110	18	4	6			- 12	1-4	14 1	1	431		
50		200	-191	165	125	18	- 4	7			1.	1	>-	50	S		
65			209	185	145	18	4	- 8				1.0	2	36			
100			224	200	160	18	- 8	9,5				10	9	45	*		
00		250	245	220	180	18	8	12				2	_				
25		_	279	250	210	-53	8	15			_	*	-	2			
50 50 50 50 50	-35	300	305	295	240	22	-8-	.0		1	400			_	-	36	
99		350	375	340	256	-22	12	36			п		1.5		- 1	19	
82		400	430	405	355	- 2	12	58		- 1	ni I		_		1 1	ln .	
99.		500	487	450	470	-8	12				Π'n	1			ш	l	
50		****	615	520	430 525	30	16	85			ш	1			ш	l	
S0 50		600	657	580	585	30	20	100		15	ш				ш		
20			750	715	650	33	20	160		9.0	1.1	1000			1.1		
00			870	840	770	36	20	190		-	ш				ш	ll .	
00		700	927	950	540	36	24	260							11		
00		800	1050	1025	900	79	24	350		- 1		1			\Box	II.	
00		900	1145	1125	1050	29	28	450		11	111	_			- 1	п	
										1.	ш		A			и.	
00.1		1000	1.1285	1255	1170	42	28	550				10 - C	N 150			-	
			Die	mensie	ons (m	m)		Weight					N 150			-	
in.	PN	A	Di	mensis	one (m	m)		Weight kg					N 150				
N O	PN	A 150	Di B 153	D1 60	02 60	m) 5	n 4	Weight kg					N 150			1	
N O	PN	A 150 or	Dis B 153 156	D1 60	02 60 65	m) d 14	n 4	Weight kg 2.5 2.5				00 - D	N 150 N 1000	Azī	0 mm	_	Wein
N 0 5	PN	A 150	Dis B 153 156 560	D1 (60 (15) 105	02 60 65 75	m] 5 14 14	n 4 4	Weight kg 2.5 2.5 3	-	- Au	DN 2	00 - D	N 150 N 1000 mensi	A ± 1	0 mm		
N 0 5	PN	A 150 or	Dis B 153 155 560 567	D1 90 95 105 115	02 60 65 75	m] 56 54 54	n 4 4	Weight kg 2.5 2.5 3 3.5	ON	PN	DN 2	00 - D	N 150 N 1000 mensis	A ± 1	o mm		kg
N 0 5 0 5 0 5 0 5	PN	A 150 or	Dis B 153 156 160 167	01 90 95 105 115	00 60 65 75 85	m) 54 54 54 54 54	8 4 4 4 4	Weight kg 2.5 2.5 3 3.5 5	10	PN	DN 2	Di B	0N 150 N 1000 mensis	A z 1	mm]	4	kg 2,5
8 0 5 0 5 0 5 0 0 0 0 0 0 0 0 0 0 0 0 0	PN	A 150 or 200	Dis 8 153 156 156 1567 1560 1567	01 90 95 105 115 140	02 60 65 75 85 100	m) 54 54 54 54 56	8 4 4 4 4 4	Weight kg 2:5 2:5 3 3 3:5 5 6	10	PN	A 150 or	Di B 153	0N 150 N 1000 mensis	A = 1	0 mm	4	kg 2,5 2,5
15 10 15 10 15 10	PN	A 150 or	98 153 155 160 167 188 186 187	01 60 95 105 115 140 150	02 60 65 75 85 100 110	m) 50 54 54 54 54 55 55 55 55	8 4 4 4 4 4 4 4	Weight kg 2:5 2:5 3 3.5 5 6 7	15 20	PN	DN 2	DI B 153 155 160	0N 150 N 1000 mensis 01 90 95	A ± 1 ons (m b0 60 65 75	omm d 14 14	4	2,5 2,5 3
N 0 5 0 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PN	A 150 or 200	Dis B 153 155 560 567 580 585 191 209	01 90 95 105 115 140 150 185	02 60 65 75 85 100 110 125 145	m) 6 54 54 54 54 54 55 55 55 55 55 55 55 55	8 4 4 4 4 4	Weight kg 2:5 2:5 3 3.5 5 6 7 8	10 15 20 25	PN	A 150 or	B 153 155 160	mensis 90 90 90 105 115	A ± 1 60 65 75 85	0 mm	4 4	2,5 2,5 3 3,5
100 15 10 15 10 15 10 15 10	PN	A 150 or 200	Dis B 153 155 560 567 580 585 191 209 224	01 90 95 105 115 140 150 165 185	02 60 65 75 85 100 110 125 145	56 54 54 54 55 55 55 55 55 55 55 55 55 55	8 B	Weight kg 2.5 2.5 3 3.5 5 6 7 8 9.5	10 15 20 25 32	PN	A 150 or	DI B 153 155 160 167 160	mensis 90 90 90 105 115	A ± 1 00 00 00 00 00 00 00 00 00 0	omm d 14 14 14 14	4 4	2,5 2,5 3 3,5 5
N 0 5 0 0 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PN	A 150 or 200	98 153 155 155 167 180 185 191 209 224 245	95 95 105 115 140 150 185 185 200	900 (m 60 60 65 75 85 100 110 125 145 160	6 54 54 54 54 55 55 55 55 55 55 55 55 55	8 8 8	Weight kg 2:5 2:5 3 3.5 5 6 7 7 8 9:5 12	10 15 20 25 32 40	PN	A 150 or 200	DI B 153 155 160 185	mensis 01 100 100 100 105 115 140 150	A ± 1 00 60 65 75 85 500 110	omm d 14 14 14 15 18	4 4 4	2,5 2,5 3 3,5
00 15 10 10 10 10 10 10 10 10 10 10 10 10 10	200	A 150 or 200 200 200	Dis B 153 156 156 156 156 156 156 156 156 156 156	01 60 65 105 115 140 150 155 200 235 270	900 (m 900 60 60 65 75 85 100 110 125 145 160 100 200	m) 54 54 54 54 55 55 55 55 55 55 55 55 55	8 8 8	Weight kg 2.5 2.5 3 3.5 6 7 7 8 9.5 12 15	10 15 20 25 32 40 50	PN	A 150 or	Di B 153 155 160 185 181	mensis 01 100 100 105 115 140 165	A ± 1 00 60 65 75 85 100 110 125	o mm	4 4 4 4	2,5 2,5 3 3,5 5 6
00 15 10 10 10 10 10 10 10 10 10 10 10 10 10	PN 25	A 150 or 200	98 153 155 155 167 180 185 191 209 224 245	95 95 105 115 140 150 185 185 200	02 60 65 75 85 100 110 125 145 160 110 200 200 210	m) 5 14 14 14 15 15 15 15 15 15	8 8 8 8	Weight kg 2.5 2.5 2.5 3.5 5 6. 7 7 8 9.5 122 35 35 35 35 35 35 35 35 35 35 35 35 35	10 15 20 25 32 40 50	PN	A 150 or 200	Di B 153 155 160 185 181 209	mensis 01 90 95 115 140 150 150 150 150 150 155 155 155 155 15	A ± 1 00 60 65 75 85 500 110	omm d 14 14 14 15 18	4 4 4	2,5 2,5 3 3,5 5 6 7
00 15 10 10 10 10 10 10 10 10 10 10 10 10 10	200	A 150 or 200 200 200 200 200 200 200 200 200 20	Dis B 153 156 156 156 156 156 156 156 156 156 156	01 90 95 105 115 140 150 155 155 200 205 200 205 200 200	900 (m 900 60 60 65 75 85 100 110 125 145 160 100 200	# 54 54 54 54 55 55 55 55 55 55 55 55 55	8 8 8 8 8	Weight kg 2.5 2.5 3.5 5 6 7 7 8 9.5 122 15 30 30 38	10 15 20 25 32 40 50		A 150 or 200	Di B 153 155 160 165 165 165 165 165 165 165 165 165 165	mensis 01 90 95 105 1150 150 150 150 150 150 150 150 150 150	A ± 1 50 60 60 65 75 85 85 110 125 125	omm) d 14 14 14 15 18 18 18 18	4 4 4 4 4 4 4 8	3.5 2.5 3.5 5 8 7
00 15 10 10 10 10 10 10 10 10 10 10 10 10 10	200	A 150 or 200 200 200 200	Dis 8 153 156 156 156 156 156 156 156 156 156 156	01 90 95 105 115 140 150 155 200 235 270	02 60 65 75 85 100 110 125 145 160 110 200 200 210	# 54 54 54 54 55 55 55 55 55 55 55 55 55	8 8 8 8	Weight kg 2.5 2.5 3.5 5 6 7 7 8 9.5 122 15 30 30 38	10 15 20 25 32 40 50 65 80	PN 40	A 150 or 200	Di B 153 155 160 165 165 160 224 225	mensis 51 100 100 100 100 100 115 140 150 160 160 160 160 160 160 160 160 160 16	A ± 1 50 60 65 75 85 85 110 125 145 160	ommin	4 4 4 4 4 4 4 8 8	kg 2,5 2,5 3 3,5 5 6 7 7 8 9,5
100 100 100 100 100 100 100 100 100 100	200	A 150 or 200 200 200 200 200 200 200 200 200 20	98 153 156 567 180 185 191 209 224 245 276 305 315 430	01 90 95 105 115 140 150 155 200 235 270 300 455 465	02 60 65 85 85 100 110 125 145 160 200 200 200 200 200	# 54 54 54 54 55 55 55 55 55 55 55 55 55	8 8 8 8 172 172	Weight N2 2.5 2.5 3 3.5 6 7 7 8 9.5 12 12 15 30 30 50 50 50 50 50 50 50 50 50 50 50 50 50	10 15 20 25 32 40 50 65 80 100 125		A 150 or 200 200	DA B 153 155 160 167 165 160 167 165 165 165 165 165 165 165 165 165 165	mensis 01 100 01 100 01 105 105 115 140 150 165 165 200 235	A ± 1 50 60 60 65 75 85 500 110 125 126 126 126 126 126 126 126 126	o mm	4 4 4 4 4 8 8 8	kg 2.5 2.5 3 3.5 5 6 7 7 9.5 12 15
15 10 10 10 10 10 10 10 10 10 10 10 10 10	200	A 150 or 200 200 200 200 200 200 200 200 200 20	Dis B 153 156 156 156 156 156 156 156 156 156 156	01 90 95 105 115 140 150 200 200 200 200 425	900 (60 65 75 65 100 110 125 145 140 110 120 120 120 120 120 120 120 120 12	# 54 54 54 54 55 55 55 55 55 55 55 55 55	8 8 8 8 77 71 716	Weight kg 2.5 2.5 3.5 5 6 7 7 8 9.5 122 15 30 30 38	10 15 20 25 32 40 50 65 80		A 150 or 200	Di B 153 155 160 165 165 160 224 225	mensis 51 100 100 100 100 100 115 140 150 150 150 150 150 150 150 150 150 15	A ± 1 50 60 65 75 85 85 110 125 145 160	ommin	4 4 4 4 4 4 4 8 8	kg 2,5 2,5 3 3,5 5 6 7 7 8 9,5
60 15 15 10 15 15 15 15 15 15 15 15 15 15 15 15 15	200	A 150 200 200 200 200 200 200 300 400 500	98 153 155 160 167 180 185 191 185 274 285 276 375 375 430 487 542	90 90 95 115 140 150 150 150 200 205 270 300 425 435 565	92 60 65 75 85 100 110 123 145 160 110 200 200 200 200 200 200 200 200 20	## (54 54 54 54 54 54 54 55	8 8 8 8 172 173 175 175 175 175 175 175 175 175 175 175	Weight kg 2.5. 2.5. 2.5. 3.3.5. 5. 6. 7. 8. 9.5. 122. 15. 38. 38. 38. 38. 38. 38. 38. 38. 38. 38	10 15 20 25 32 40 50 65 80 100 125 150		A 150 or 200 250 250	00 - D 8 153 155 160 181 181 209 224 225 235 235	mensis 90 90 90 105 115 140 165 165 205 205 205 205 205 205	A ± 1 50 60 60 65 75 85 500 110 125 126 126 126 200	ommi d 14 14 14 15 18 18 18 18 18 18 22 23	4 4 4 4 4 8 8 8 8	kg 2,5 2,5 3, 3, 5 6 7 7 8 9,5 12 15 20 20
100 15 100 15 100 100 100 100 100 100 10	200	A 150 200 200 200 200 200 200 300 400 500	Dis B 153 155 160 167 180 180 180 209 224 245 276 276 276 276 430 430 430 445	D1 66 65 115 115 115 115 115 115 115 115	92 60 65 75 85 100 110 125 145 160 190 510 510 650 550	(a) (b) (c) (c) (c) (c) (c) (c) (c) (c) (c) (c	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	Weight kg 2.5 2.5 3 3.5 5 6 7 7 8 9.5 115 30 38 58 58 58 58 58 58 58 58 58 58 58 58 58	10 15 20 25 32 40 50 65 80 100 110 150 200		A 150 or 200 250 350	00 - D 8 153 155 156 160 181 209 224 225 235 235	mensis 91 90 105 115 140 155 200 235 230 375	A ± 1 50 60 65 85 85 110 125 145 160 200 200 200 200	ommi d 14 14 14 15 18 18 18 18 22 22 23 25	4 4 4 4 4 4 8 8 8 8	8g 2,5 2,5 3 3,5 5 6 7 9,5 15 20 20 20 20 20 20 20 20 20 20 20 20 20
100 15 100 15 100 15 100 100 100 100 100	200	A 150 200 200 200 200 200 200 300 400 500	98 153 156 156 156 156 156 156 156 156 156 156	01 105 105 105 105 105 105 105 105 105 1	000 [mm] 000 60	## 14 14 15 15 15 15 15 15 15 15 15 15 15 15 15	8 4 4 4 4 4 8 8 8 8 8 8 8 8 8 8 8 8 8 8	Weight kg 2:5 2:5 3:5 6:7 7 8:9:5 112 15:0 8:9:5 15:0 8:5	10 15 20 25 32 40 50 65 100 105 100 250		A 150 or 200 250 350 400	00 - D 8 8 153 155 160 160 161 161 161 163 163 163 163 163 163 163	mensis 01 150 01 100 01 100 100 115 140 150 150 20 215 20 20 305 450	A ± 1 DO 60 60 60 65 75 85 90 110 125 146 260 260 260 260 260	0 mm d d d 14 14 14 15 15 15 15 15 15 15 15 15 15 15 15 15	4 4 4 4 4 4 4 8 8 8 8 12 12 16	8g 2,5 2,5 3,5 5 6 7 9,5 12 20 36 70 85
100 15 100 15 100 15 100 100 100 100 100	200	A 150 200 200 200 200 200 200 300 400 500	Dis 155 156 156 156 157 156 156 156 156 156 156 156 156 156 156	701 66 66 65 105 115 115 115 125 200 300 300 415 505 600 770 770	02 660 660 660 660 660 660 660 660 660 6	## 1	R 4 4 4 4 4 4 4 8 8 8 8 8 8 12 12 15 16 16 16 16 16 16 16 16 16 16 16 16 16	Weight kg. 2.5.5 3.5.5 6.7 7.6.5 5.5.20, 38.5.5 5.12.2.5 5.5.20, 38.5.5 5.10.00 1.00 1.00 1.00 1.00 1.00 1.	10 15 20 25 22 40 50 65 80 100 100 200 200 200		A 150 or 200 250 350 400	00 = D Di 8 153 160 167 160 181 191 191 209 201 201 205 205 205 400 447	mensis 01 150 01 100 01 100 100 150 150 150 150 150 150 150 150 150 150	A ± 1 00 60 65 15 50 10 10 10 10 10 20 20 20 20 20 40 40 40 40 40 40 40 40 40 40 40 40 40	0 mm d 4 14 14 14 14 15 18 18 18 22 28 20 30 30 30	4 4 4 4 4 4 4 8 8 8 8 12 12 15	8g 2,5 2,5 3,5 5 6 7 9,5 12 20 36 70 85
15 15 15 15 15 15 15 15 15 15 15 15 15 1	200	200 200 200 200 200 200 200 200 200 200	98 153 156 156 156 156 156 156 156 156 156 156	701 (100 miles) (1	000 [mm] 000 60	## 14 14 15 15 15 15 15 15 15 15 15 15 15 15 15	8 4 4 4 4 4 8 8 8 8 8 8 8 8 8 8 8 8 8 8	Weight kg 2.5 2.5 3.5 5 6 7 7 6 9.5 122 135 150 150 150 150 150 150 150 150 150 15	15 25 25 22 40 50 65 80 150 150 250 250 250 250 250		DN 2 150 200 200 200 200 200 200 200 200 200	00 - D 8 8 153 155 160 160 161 161 161 163 163 163 163 163 163 163	meosis 91 90 90 90 90 90 90 90 90 90 90	A ± 1 90 60 65 75 65 75 65 110 125 125 126 126 126 127 128 128 128 128 128 128 128 128	0 mm d d d 14 14 14 15 15 15 15 15 15 15 15 15 15 15 15 15	4 4 4 4 4 4 4 8 8 8 8 12 12 16	2,5 2,5 3 3,5 6 7 8 9,0 12 15 20 36 58 70
000 000 110 115 100 125 120 125 120 125 120 125 125 126 126 126 126 126 126 126 126 126 126	200	A 150 or 200 200 200 300 500 600	90 8 153 156 156 156 156 156 156 156 156 156 156	700 (60 (60 (60 (60 (60 (60 (60 (60 (60 (00	m) 6 54 54 54 54 54 55 55 55 55	8 8 8 8 12 12 15 15 15 15 15 15 15 15 15 15 15 15 15	Weight kg 2.5 2.5 2.5 3.3 3.5 5 6 7 7 8 9.5 112 15 15 100 1100 1100 1100 1100 1100	15 15 20 25 25 26 26 26 26 26 26 26 26 26 26 26 26 26		DN 2 150 200 200 200 200 200 200 200 200 200	00 = D 8 153 155 160 167 168 181 209 245 236 236 236 237 437 437 437 447 615	mensis 91 90 90 90 90 90 90 90 90 90 90	A ± 1 60 60 65 75 85 100 110 125 200 200 385 450 385 450 385 450 385 450 385 450 385 450 385 450 385 385 385 385 385 385 385 385 385 385	0 mm d 14 14 15 15 15 15 15 15	4 4 4 4 4 4 4 8 8 8 12 12 16 16	8g 2,5 2,5 3,5 5 6 7 9,5 12 20 36 36 36 36 36 36 36 36 36 36 36 36 36



	Terminal		Pescription			
Power supply	1	90.260VAC	(-) 1038V DC			
count mobbed	2	99. E007 PEO	(*) (m request)			
Binary output 1	3	reverse polarity protection, galvanic insula				
Briary output 1	4		passive			
Pulse/frequency output	5.	reverse polarity protection, galvanic insulatio				
Lease sectionary outres	6		passive			
Current output 4+20 mA	7	(+)	active			
Comers output 4-50 miss	8.	(1)	(passive on request)			
0 0	8	RS 485 A				
Communication	10	RS 485 B	1			
Communication	11	RS 485 GND / shield				
Binary input (passive)	12	and the second second second	rotection, galvanic insulation			
arm) representati	13					
Binary output 2	14	reverse polarity p	rotection, galvanic insulation			

	Flow value table in [m*/h]										
DN	v=0,3m/s	v+tm/s	v=3m/s	v#Sm/s	vetesis	v+10m/r					
10	0.085	0,283	0.848	1,414	2,262	2.827					
15	0,191	0,636	1,909	2,545	3,181	3,817					
20	0.339	1,131	3,393	5,655	9,048	11,310					
25	0,530	1,767	5,301	8,636	14,137	17,671					
32	0.869	2.895	8,686	14,476	23,162	28.953					
40	1.357	4,524	13.572	22.619	36,191	45,239					
50	2.121	7,069	21,206	35.343	56,549	70.656					
65	3.584	11,946	35.838	59,729	95,567	-119.46					
80	5.429	18,096	54,287	90,478	144.76	180.96					
100	8.482	26.274	84.823	141.37	226,19	282.74					
125	13,254	44,179	132,54	220,69	353,43	441,787					
150	19,085	63,617	190,85	318,087	508,94	636,17					
200	33,929	113,10	339,30	565,49	904,78	1130,0					
250	53,014	176,71	530,14	883,57	1413,7	1767,1					
300	76,341	254,47	763,41	1272,3	2035,7	2544,7					
350	103,90	346,36	1039,1	1731,8	2770.9	3463,6					
400	135.72	452.39	1357.2	2261.9	3619.1	4523.9					
500	212.06	706.86	2120.6	3534.3	5654.9	7068.6					
600	305,36	1017,9	3053.6	5089,4	8143,0	10178.7					
800	542.87	1809.6	5428.7	9047.8	14476.4	18095.5					
1000	848.23	2627.4	8482.3	14137.1	22619.4	282743					

