KOSMOS SERIES

MAIN MANUAL ADENDUM

MODEL BETA-MP

MODBUS-RTU PROTOCOL COMPATIBLE

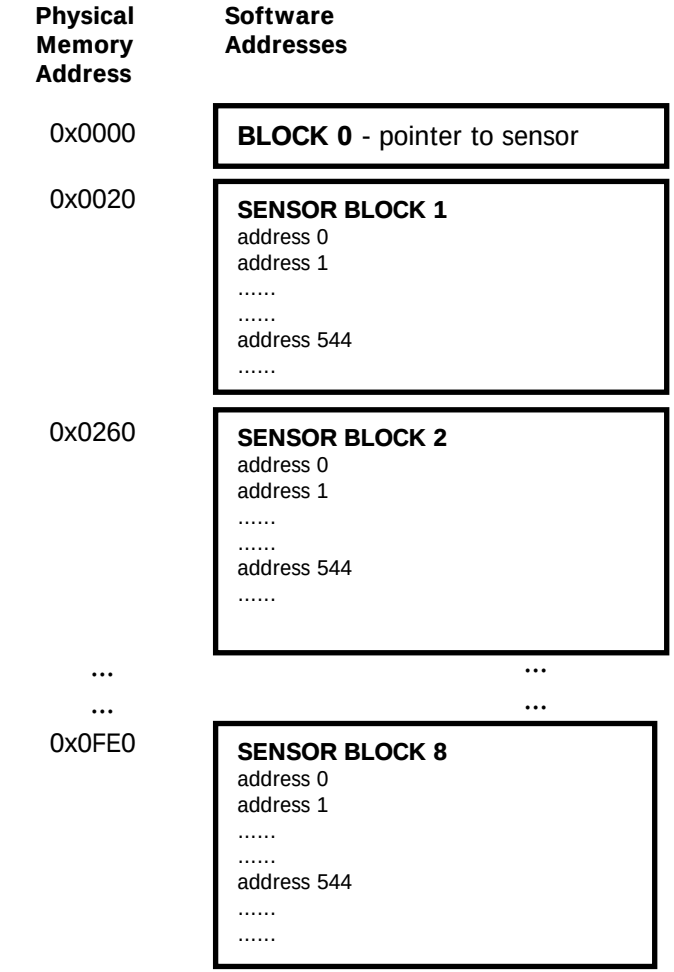
CODE: 30727311 EDITION: 19-01-2011

INDEX

MEMORY LAYOUT

The physical memory is divided into 8 blocks of 566 bytes.
Each block includes the PROGRAMMING DATA necessary to configure the meter for a particular sensor, and the DYNAMIC VARIABLES such as PEAK, VALLEY, TARE, TOTAL and BATCH that are obtained during the operation of the meter in a specific configuration.
All this data is repeated 8 times into the memory, and saved within each sensor block.

There is also a special block of memory common to all configurations where it is saved the address of the block being used.



SENSOR SELECTION

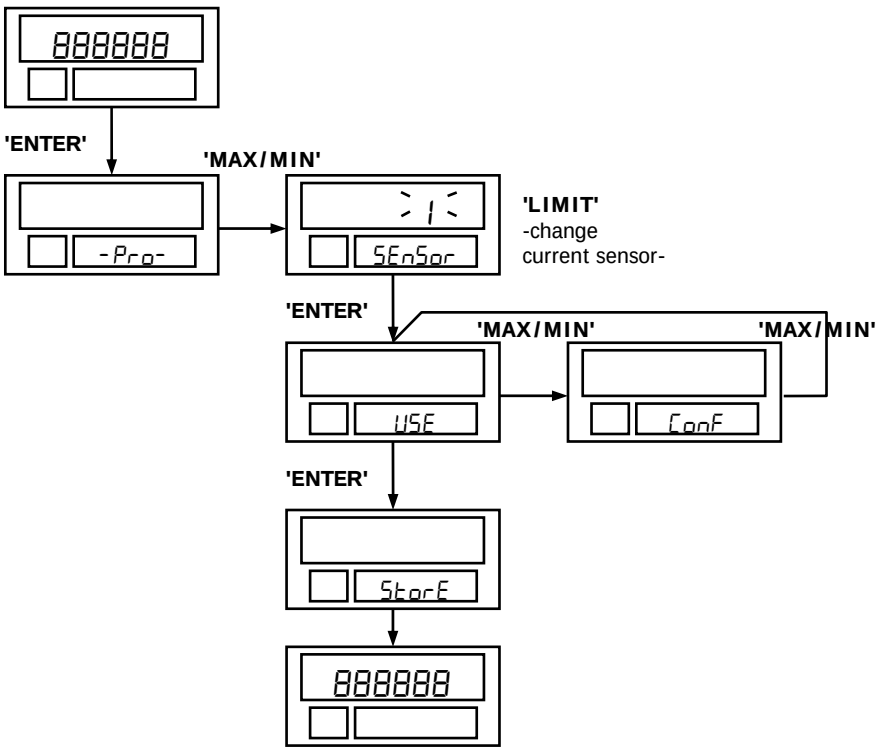
From the normal operating mode, press "ENTER" to get access to the "-Pro-" level.

Press "MAX/MIN" to see the sensor configuration being used. It is represented by the number of the sensor block in flash. Set the desired block number by means of the "LIMIT" key.

Press "ENTER" to display the message "USE" and press "ENTER" to store the new sensor selection and return to the normal operation. The meter is now working with the data of the selected sensor.

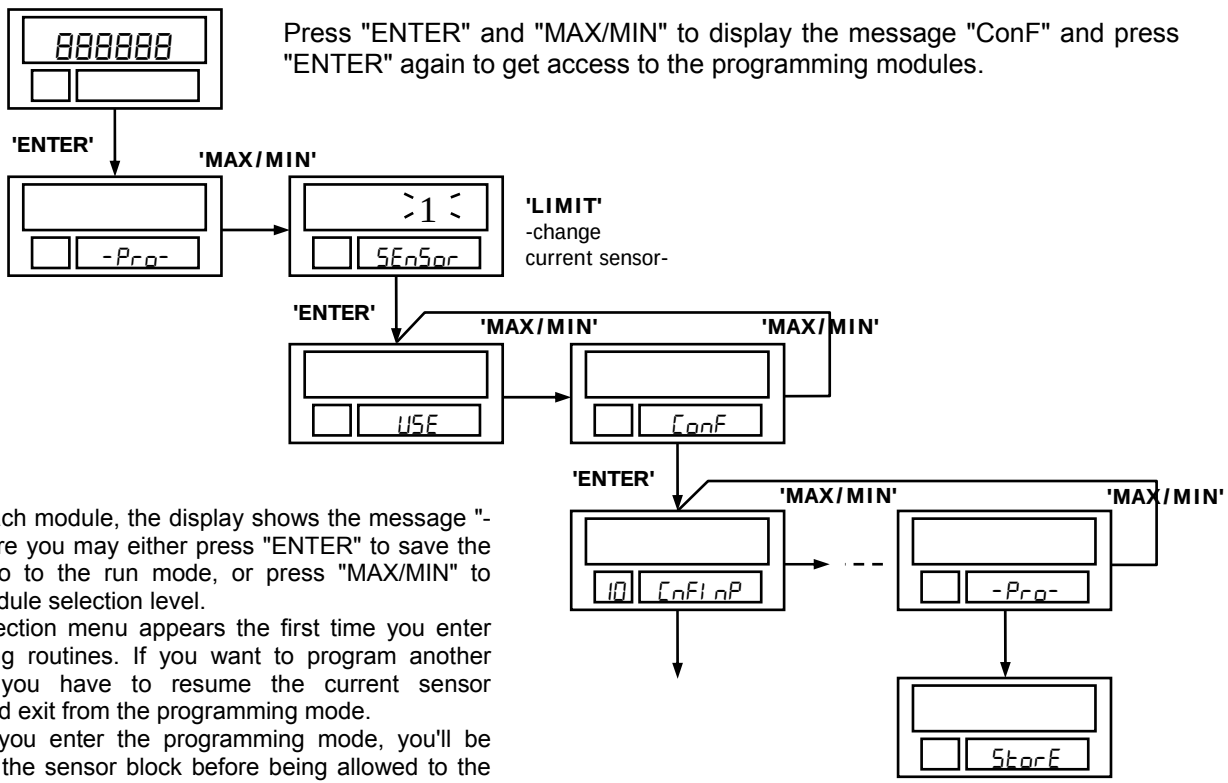
The dynamic variables such as PEAK, VALLEY, TARE, TOTAL and BATCH are not transferred from one to other configuration when the sensor block is changed.

They are automatically saved ON POWER-DOWN within the data of the block BEING IN USE, while in a specific sensor block configuration. When you change to another sensor configuration without saving them, they are lost.



SAVING/ CHANGING A SENSOR CONFIGURATION

To change the programming data of a specific sensor block, go to the "SEnSor" menu and select the number of the block to be programmed.



Press "ENTER" and "MAX/MIN" to display the message "ConF" and press "ENTER" again to get access to the programming modules.

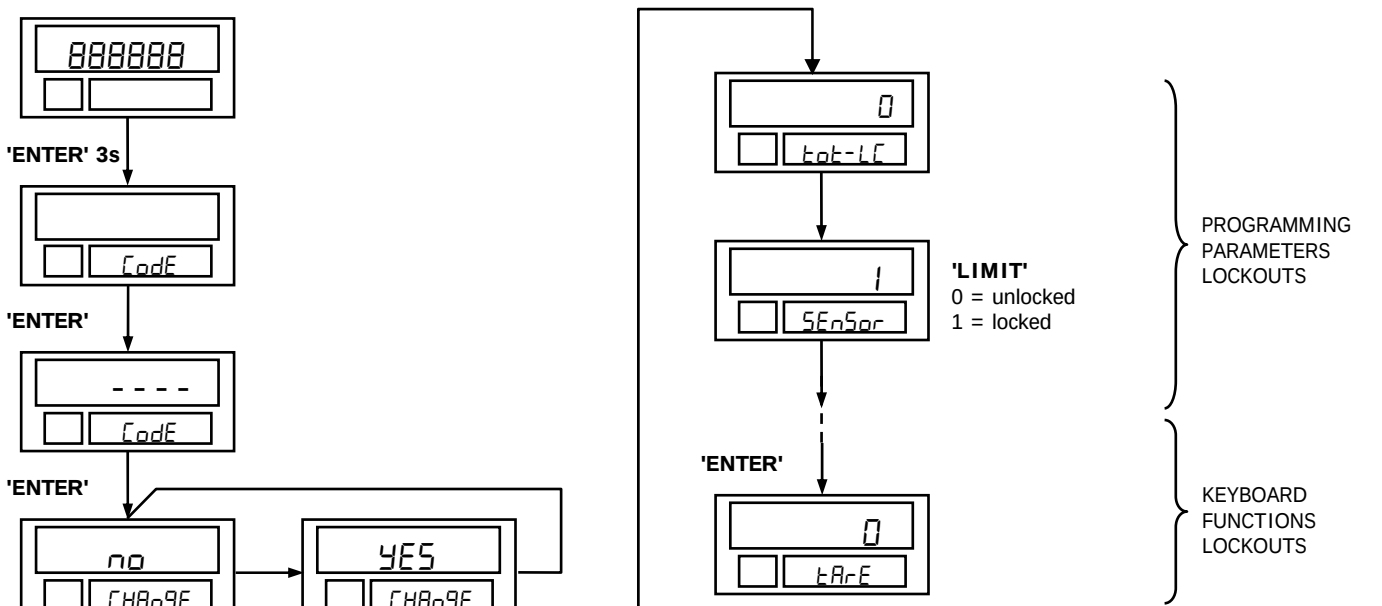
At the end of each module, the display shows the message "-Pro-", from where you may either press "ENTER" to save the changes and go to the run mode, or press "MAX/MIN" to return to the module selection level.

The sensor selection menu appears the first time you enter the programming routines. If you want to program another sensor block, you have to resume the current sensor configuration and exit from the programming mode.

The next time you enter the programming mode, you'll be asked to select the sensor block before being allowed to the configuration modules.

LOCKOUT

The possibility of changing the sensor block can be disabled by locking the function in the "CodE" menu. Enter the list of parameters to get to the "SEnSor" message and use the "LIMIT" key to change the flashing digit to the desired value;
0 = function unlocked, 1 = function locked.



When the "SENSOR" function is disabled, it is not possible to change to another configuration, but the current sensor configuration data can be changed within the "ConF" menu

PROGRAMMING THE MEMORY BLOCKS VIA THE SERIAL CHANNEL

The BETA-MP keeps all commands available via the serial channel, as well as the positions of the programming and dynamic variables into each block of memory but they are valid only for the sensor configuration being used, that is that you can't make actions nor ask for variables not belonging to the memory block of the sensor in use.

However you can program all the sensor blocks from a PC by means of two new comands that allow to read and write the configuration of any of the memory blocks. These comands must be sent using the communications protocol ISO1745.

SM# - Send Memory

RM# - Receive Memory

is the number of the sensor, -or memory block- from 1 to 8.

The data frame carried by these comands is slightly longer than the one used by the comands "SC" and "RC"; Apart from including the block number in the heading, the programming data is extended to the parameters of the serial output, -protocol, baud rate, address...-.
See on page 15 the number of bytes included in a standard frame (comands "SC" and RC") and an extended frame (comands "SM#" and "RM#").

EXAMPLES FOR READING SENSOR CONFIGURATION

Since the serial output parameters can be different for each sensor, make sure that the PC software uses the baud rate and device address configuration of the current sensor block.
This will allow communication between the instrument and the PC.
The protocol used must be ISO 1745, -"Prot-2"-, which is 7 data bits and 1 even parity bit.

The command used to read configuration is **SM#**, where "**#**" is the number of the sensor block to read.
The message format is as follows (see serial output user's manual) :

01	device address	02	command	03	checksum

Supposing the device address is 01 and the sensor block to be read is nº1 :

01	**30 31**	**02**	**53 4D 31**	**03**	**2C**

These data corresponds to the following :

Field	ASCII hex	String chars
SOH -start of heading-	01	☺
device address -tens-	30	0
device address -units-	31	1
STX -start of text-	02	☻
Command	53	S
	4D	M
	31	1
ETX -end of text-	03	♥
checksum	2C	,

The response of the meter to an **SM#** command contains the following fields :

01	device address	02	data	03	checksum

The "data" field contains the 542 characters conforming the sensor configuration according to the table given on pages 9 to 17.

01	**30 31**	**02**	**xx ..... xx**	**03**	**xx**

NOTE : When reading a sensor configuration, byte nº 534 of the table is an identification of the sensor block number.

Sensor Block	Byte 534
1	hex 30, char '0'
2	hex 32, char '2'
3	hex 34, char '4'
4	hex 36, char '6'
5	hex 39, char '9'
6	hex 3B, char ';'
7	hex 3D, char '='
8	hex 3F, char '?'

This is an example where only the first 6 and the last 6 characters of the table are shown.

Field	ASCII hex	String chars
SOH -start of heading-	01	☺
device address -tens-	30	0
device address -units-	31	1
STX -start of text-	02	☻
Data	3A	: (INPUT1 - SIGN, negative)
	31	1 (INPUT1 - DIGIT 4)
	30	0 (INPUT1 - DIGIT 3)
	30	0 (INPUT1 - DIGIT 2)
	30	0 (INPUT1 - DIGIT 1)
	30	0 (INPUT1 - DIGIT 0)
	32	2 (PROTOCOL)
	34	4 (BAUD RATE)
	30	0 (ADDRESS UNITS)
	31	1 (ADDRESS TENS)
	30	0 (DATA TRANS)
	31	1 (RS485 DELAY)
ETX -end of text-	03	♥
checksum	xx	

EXAMPLES FOR WRITING A SENSOR CONFIGURATION

The command used to write a sensor configuration is **RM#**, where "#" is the number of the sensor block to write. The message format contains the command and a string of 542 data bytes (see serial output user's manual) :

01	device address	02	command	data	03	checksum

Supposing the device address is 01 and the sensor block to be read is n°2 :

01	**30 31**	**02**	**52 4D 32**	**xx ..... xx**	**03**	**xx**

The response of the meter to a RM# command is a three character message containing its address and an acknowledge code

For example :

30 31	**06**

if the message was OK, or

30 31	**15**

if the message was not valid (bad CRC, wrong command...)

In the following example, we have represented the first 6 characters and the last 6 characters of the table but it is mandatory to send the whole data (542 bytes) for the meter to interpret the message.

Field	ASCII hex	String chars
SOH -start of heading-	01	☺
device address -tens-	30	0
device address -units-	31	1
STX -start of text-	02	☻
Command	52	R
	4D	M
	32	2
Data	30	0 (INPUT1 - SIGN, positive)
	31	1 (INPUT1 - DIGIT 4)
	30	0 (INPUT1 - DIGIT 3)
	30	0 (INPUT1 - DIGIT 2)
	30	0 (INPUT1 - DIGIT 1)
	30	0 (INPUT1 - DIGIT 0)
	32	2 (PROTOCOL)
	34	4 (BAUD RATE)
	30	0 (ADDRESS UNITS)
	31	1 (ADDRESS TENS)
	30	0 (DATA TRANS)
	31	1 (RS485 DELAY)
ETX -end of text-	03	♥
checksum	xx	

TABLE OF MEMORY ADDRESSES

ISO1745 address (byte)	VARIABLE	**MODBUS** address (word)	Definition
0	INPUT POINT 1	0	sign (pos = 0, neg = 10)
1			digit 4
2		1	digit 3
3			digit 2
4		2	digit 1
5			digit 0
6	INPUT POINT 2	3	sign
7			digit 4
8		4	digit 3
9			digit 2
10		5	digit 1
11			digit 0
12	INPUT POINT 3	6	sign
13			digit 4
14		7	digit 3
15			digit 2
16		8	digit 1
17			digit 0
18	INPUT POINT 4	9	sign
19			digit 4
20		10	digit 3
21			digit 2
22		11	digit 1
23			digit 0
24	INPUT POINT 5	12	sign
25			digit 4
26		13	digit 3
27			digit 2
28		14	digit 1
29			digit 0

30	INPUT POINT 6	15	sign
31			digit 4
32		16	digit 3
33			digit 2
34		17	digit 1
35			digit 0
36	INPUT POINT 7	18	sign
37			digit 4
38		19	digit 3
39			digit 2
40		20	digit 1
41			digit 0
42	INPUT POINT 8	21	sign
43			digit 4
44		22	digit 3
45			digit 2
46		23	digit 1
47			digit 0
48	INPUT POINT 9	24	sign
49			digit 4
50		25	digit 3
51			digit 2
52		26	digit 1
53			digit 0
54	INPUT POINT 10	27	sign
55			digit 4
56		28	digit 3
57			digit 2
58		29	digit 1
59			digit 0

60	INPUT POINT 11	30	sign
61			digit 4
62		31	digit 3
63			digit 2
64		32	digit 1
65			digit 0
66	INPUT POINT 12	33	sign
67			digit 4
68		34	digit 3
69			digit 2
70		35	digit 1
71			digit 0
72	INPUT POINT 13	36	sign
73			digit 4
74		37	digit 3
75			digit 2
76		38	digit 1
77			digit 0
78	INPUT POINT 14	39	sign
79			digit 4
80		40	digit 3
81			digit 2
82		41	digit 1
83			digit 0
84	INPUT POINT 15	42	sign
85			digit 4
86		43	digit 3
87			digit 2
88		44	digit 1
89			digit 0

90	INPUT POINT 16	45	sign
91			digit 4
92		46	digit 3
93			digit 2
94		47	digit 1
95			digit 0
96	INPUT POINT 17	48	sign
97			digit 4
98		49	digit 3
99			digit 2
100		50	digit 1
101			digit 0
102	INPUT POINT 18	51	sign
103			digit 4
104		52	digit 3
105			digit 2
106		53	digit 1
107			digit 0
108	INPUT POINT 19	54	sign
109			digit 4
110		55	digit 3
111			digit 2
112		56	digit 1
113			digit 0
114	INPUT POINT 20	57	sign
115			digit 4
116		58	digit 3
117			digit 2
118		59	digit 1
119			digit 0

120	INPUT POINT 21	60	sign
121			digit 4
122		61	digit 3
123			digit 2
124		62	digit 1
125			digit 0
126	INPUT POINT 22	63	sign
127			digit 4
128		64	digit 3
129			digit 2
130		65	digit 1
131			digit 0
132	INPUT POINT 23	66	sign
133			digit 4
134		67	digit 3
135			digit 2
136		68	digit 1
137			digit 0
138	INPUT POINT 24	69	sign
139			digit 4
140		70	digit 3
141			digit 2
142		71	digit 1
143			digit 0
144	INPUT POINT 25	72	sign
145			digit 4
146		73	digit 3
147			digit 2
148		74	digit 1
149			digit 0

150	INPUT POINT 26	75	sign
151			digit 4
152		76	digit 3
153			digit 2
154		77	digit 1
155			digit 0
156	INPUT POINT 27	78	sign
157			digit 4
158		79	digit 3
159			digit 2
160		80	digit 1
161			digit 0
162	INPUT POINT 28	81	sign
163			digit 4
164		82	digit 3
165			digit 2
166		83	digit 1
167			digit 0
168	INPUT POINT 29	84	sign
169			digit 4
170		85	digit 3
171			digit 2
172		86	digit 1
173			digit 0
174	INPUT POINT 30	87	sign
175			digit 4
176		88	digit 3
177			digit 2
178		89	digit 1
179			digit 0

180	DISPLAY POINT 1	90	sign
181			digit 4
182		91	digit 3
183			digit 2
184		92	digit 1
185			digit 0
186	DISPLAY POINT 2	93	sign
187			digit 4
188		94	digit 3
189			digit 2
190		95	digit 1
191			digit 0
192	DISPLAY POINT 3	96	sign
193			digit 4
194		97	digit 3
195			digit 2
196		98	digit 1
197			digit 0
198	DISPLAY POINT 4	99	sign
199			digit 4
200		100	digit 3
201			digit 2
202		101	digit 1
203			digit 0
204	DISPLAY POINT 5	102	sign
205			digit 4
206		103	digit 3
207			digit 2
208		104	digit 1
209			digit 0

210	DISPLAY POINT 6	105	sign
211			digit 4
212		106	digit 3
213			digit 2
214		107	digit 1
215			digit 0
216	DISPLAY POINT 7	108	sign
217			digit 4
218		109	digit 3
219			digit 2
220		110	digit 1
221			digit 0
222	DISPLAY POINT 8	111	sign
223			digit 4
224		112	digit 3
225			digit 2
226		113	digit 1
227			digit 0
228	DISPLAY POINT 9	114	sign
229			digit 4
230		115	digit 3
231			digit 2
232		116	digit 1
233			digit 0
234	DISPLAY POINT 10	117	sign
235			digit 4
236		118	digit 3
237			digit 2
238		119	digit 1
239			digit 0

240	DISPLAY POINT 11	120	sign
241			digit 4
242		121	digit 3
243			digit 2
244		122	digit 1
245			digit 0
246	DISPLAY POINT 12	123	sign
247			digit 4
248		124	digit 3
249			digit 2
250		125	digit 1
251			digit 0
252	DISPLAY POINT 13	126	sign
253			digit 4
254		127	digit 3
255			digit 2
256		128	digit 1
257			digit 0
258	DISPLAY POINT 14	129	sign
259			digit 4
260		130	digit 3
261			digit 2
262		131	digit 1
263			digit 0
264	DISPLAY POINT 15	132	sign
265			digit 4
266		133	digit 3
267			digit 2
268		134	digit 1
269			digit 0

270	DISPLAY POINT 16	135	sign
271			digit 4
272		136	digit 3
273			digit 2
274		137	digit 1
275			digit 0
276	DISPLAY POINT 17	138	sign
277			digit 4
278		139	digit 3
279			digit 2
280		140	digit 1
281			digit 0
282	DISPLAY POINT 18	141	sign
283			digit 4
284		142	digit 3
285			digit 2
286		143	digit 1
287			digit 0
288	DISPLAY POINT 19	144	sign
289			digit 4
290		145	digit 3
291			digit 2
292		146	digit 1
293			digit 0
294	DISPLAY POINT 20	147	sign
295			digit 4
296		148	digit 3
297			digit 2
298		149	digit 1
299			digit 0

300	DISPLAY POINT 21	150	sign
301			digit 4
302		151	digit 3
303			digit 2
304		152	digit 1
305			digit 0
306	DISPLAY POINT 22	153	sign
307			digit 4
308		154	digit 3
309			digit 2
310		155	digit 1
311			digit 0
312	DISPLAY POINT 23	156	sign
313			digit 4
314		157	digit 3
315			digit 2
316		158	digit 1
317			digit 0
318	DISPLAY POINT 24	159	sign
319			digit 4
320		160	digit 3
321			digit 2
322		161	digit 1
323			digit 0
324	DISPLAY POINT 25	162	sign
325			digit 4
326		163	digit 3
327			digit 2
328		164	digit 1
329			digit 0

330	DISPLAY POINT 26	165	sign
331			digit 4
332		166	digit 3
333			digit 2
334		167	digit 1
335			digit 0
336	DISPLAY POINT 27	168	sign
337			digit 4
338		169	digit 3
339			digit 2
340		170	digit 1
341			digit 0
342	DISPLAY POINT 28	171	sign
343			digit 4
344		172	digit 3
345			digit 2
346		173	digit 1
347			digit 0
348	DISPLAY POINT 29	174	sign
349			digit 4
350		175	digit 3
351			digit 2
352		176	digit 1
353			digit 0
354	DISPLAY POINT 30	177	sign
355			digit 4
356		178	digit 3
357			digit 2
358		179	digit 1
359			digit 0

360	SETPOINT 1	180	digit 7 / sign
361			digit 6
362		181	digit 5
363			digit 4
364		182	digit 3
365			digit 2
366		183	digit 1
367			digit 0
368	SETPOINT 2	184	digit 7 / sign
369			digit 6
370		185	digit 5
371			digit 4
372		186	digit 3
373			digit 2
374		187	digit 1
375			digit 0
376	SETPOINT 3	188	digit 7 / sign
377			digit 6
378		189	digit 5
379			digit 4
380		190	digit 3
381			digit 2
382		191	digit 1
383			digit 0
384	SETPOINT 4	192	digit 7 / sign
385			digit 6
386		193	digit 5
387			digit 4
388		194	digit 3
389			digit 2
390		195	digit 1
391			digit 0

397	DELAY / HYSTERESIS SETPOINT 2		digit 4
398		199	digit 3
399			digit 2
400		200	digit 1
401			digit 0
402	DELAY / HYSTERESIS SETPOINT 3	201	digit 4
403			digit 3
404		202	digit 2
405			digit 1
406		203	digit 0
407	DELAY / HYSTERESIS SETPOINT 4		digit 4
408		204	digit 3
409			digit 2
410		205	digit 1
411			digit 0
412	SET SET1	206	0=off, 1=on, 2=rscom
413	SET SET2		0=off, 1=on, 2=rscom, 3=track
414	SET SET3	207	0=off, 1=on, 2=rscom
415	SET SET4		0=off, 1=on, 2=rscom, 3=track
416	COMP SET1	208	0=net, 1=gross, 2=peak, 3=valley, 6=total
417	COMP SET2		0=net, 1=gross, 2=peak, 3=valley, 4=max, 5=max filter, 6=total
418	COMP SET3	209	0=net, 1=gross, 2=peak, 3=valley, 6=total
419	COMP SET4		0=net, 1=gross, 2=peak, 3=valley, 6=total
420	HI-LO SET1	210	0=hi, 1=lo
421	HI-LO SET2		0=hi, 1=lo
422	HI-LO SET3	211	0=hi, 1=lo
423	HI-LO SET4		0=hi, 1=lo
424	RET/HYS SET1	212	0=delay, 1=hysteresis-1, 2=hysteresis-2
425	RET/HYS SET2		0=delay, 1=hysteresis-1, 2=hysteresis-2
426	RET/HYS SET3	213	0=delay, 1=hysteresis-1, 2=hysteresis-2
427	RET/HYS SET4		0=delay, 1=hysteresis-1, 2=hysteresis-2

428	LATCH SET1	214	0=no, 1=yes
429	LATCH SET2		0=no, 1=yes
430	LATCH SET3	215	0=no, 1=yes
431	LATCH SET4		0=no, 1=yes
432	BLINK SET1	216	0=LED, 1=LED+blink
433	BLINK SET2		0=LED, 1=LED+blink
434	BLINK SET3	217	0=LED, 1=LED+blink
435	BLINK SET4		0=LED, 1=LED+blink
436	TRACK AUTO	218	0=no, 1=yes
437	Nº LINEARIZATION PTS		2 to 30
438	DELAY PEAK 2	219	digit 1
439			digit 0
440	ANALOG OUTPUT LO	220	sign
441			digit 4
442		221	digit 3
443			digit 2
444		222	digit 1
445			digit 0
446	ANALOG OUTPUT HI	223	sign
447			digit 4
448		224	digit 3
449			digit 2
450		225	digit 1
451			digit 0
452	ANA OUTPUT TYPE	226	0=Vdc, 1=Idc
453	ANA OUTPUT FILTER		0=off, 1=on
454	DIAMETER 1 VOL	227	digit 4
455			digit 3
456		228	digit 2
457			digit 1
458		229	digit 0

459	LENGTH 1 VOL		digit 4
460		230	digit 3
461			digit 2
462		231	digit 1
463			digit 0
464	DIAMETER 2 VOL	232	digit 4
465			digit 3
466		233	digit 2
467			digit 1
468		234	digit 0
469	LENGTH 2 VOL		digit 4
470		235	digit 3
471			digit 2
472		236	digit 1
473			digit 0
474	DIAMETER 3 VOL	237	digit 4
475			digit 3
476		238	digit 2
477			digit 1
478		239	digit 0
479	LENGTH 3 VOL		digit 4
480		240	digit 3
481			digit 2
482		241	digit 1
483			digit 0
484	SHAPE	242	0=no, 1=sphera, 2=cylinder, 3=ovoid, 4=tank
485	DEC. POINT VOL		0=88888, 1=8888.8, 2=888.88, 3=88.888, 4=8.8888
486	EXCITATION	243	0=24V, 1=10V
487	INPUT		0=process, 1=load, 2=tc, 3=Pt100, 4=pot
488	PROCESS INPUT	244	0=volt, 1=amp
489	TC INPUT		0=TCJ, 1=TCK, 2=TCT, 3=TCR, 4=TCS, 5=TCE
490	PROCESS RANGE	225	0=1V/1mA, 1=10V/20mA

491	LOAD CELL RANGE		0=300mV, 1=60mV, 2=30mV, 3=15mV
492	TEMP SCALE	246	0=ºC, 1=ºF
493	TEMP RESOLUTION		0=0.1º, 1=1º
494	OFFSET	247	sign
495			digit 1
496		248	digit 0
497	DECIMAL POINT		0=88888, 1=8888.8, 2=888.88, 3=88.888, 4=8.8888
498	FILTER P	249	0 to 9
499	FILTER E		0 to 9
500	AVERAGE	250	digit 2
501			digit 1
502		251	digit 0
503	BRIGHT		0=HI, 1=LO
504	LEFT ZERO	252	0=no, 1=yes
505	RATE		0=16/s, 1=4/s, 2=1/s
506	ROUND	253	0=001, 1=002, 2=005, 3=010, 4=020, 5=050, 6=100
507	PRINT DATE TIME		0=off, 1=on
508	INTEGRATOR	254	0=no, 1=yes
509	TIMEBASE		0=sec, 1=min, 2=hour, 3=day
510	FACTOR TOTAL	255	digit 3
511			digit 2
512		256	digit 1
513			digit 0
514	DEC. POINT FACTOR	257	0=88888, 1=8888.8, 2=888.88, 3=88.888
515	DEC.POINT TOTAL		0=88888888, 1=8888888.8, 2=888888.88, 3=88888.888, 4=8888.8888
516	LO-CUT	258	sign
517			digit 4
518		259	digit 3
519			digit 2
520		260	digit 1
521			digit 0

526	SOFT LOCK 1	263	bit 0 =setpoint 1 bit 1 =setpoint 2 bit 2 =setpoint 3 bit 3 =setpoint 4	
527	SOFT LOCK 2		bit 0 =input bit 1 =scaling bit 2 =filters & round bit 3 = -	
528	SOFT LOCK 3	264	bit 0 =analog output bit 1 =serial output bit 2 =logic inputs bit 3 =setpoint values (direct programming)	
529	SOFT LOCK 4		bit 0 =tare key lock bit 1 =sensor function lock bit 2 = - bit 3 =total lock	standard memory frame
530	LOGIC FUNC. CN2.1	265	0 to 33	
531	LOGIC FUNC. CN2.2		0 to 33	
532	LOGIC FUNC. CN2.4	266	0 to 33	
533	LOGIC FUNC. CN2.5		0 to 33	
534	*BLOCK IDENTIFICATION*	267	*reserved (read-only)*	
535	-		*reserved (read-only)*	
536	PROTOCOL	268	1=ditel, 2=iso1745, 3=modbus	
537	BAUD RATE		1=1200, 2=2400, 3=4800, 4=9600, 5=19200	
538	ADDRESS UNITS	269	0 to 9	
539	ADDRESS TENS		0 to 9	
540	DATA TRANS	270	0=no, 1=yes	
541	RS485 DELAY		1=30ms, 2=60ms, 3=100ms, 4=300ms, 5=no delay	extended memory frame

NEW LOGICAL FUNCTIONS

Function **37**, available available on instrumments with software version from: bmp2.03
Description: Enables control of the decimal point display value from table below.

Logical inputs				Decimal point position
PIN 5 (INP 4)	PIN 4 (INP 3)	PIN 2 (INP 2)	PIN 1 (INP 1)	
0	0	0	0	99999
0	0	0	1	9999.9
0	0	1	0	999.99
0	1	0	0	99.999
1	0	0	0	9.9999

0= input not active, 1= input active (fixed)

The 4 logical inputs have to be programmed all with logical function 37 according the Beta-M manual (Page 61)

Only have to be one input activated.

The decimal point position activated by logical function 37 afects only to display of measured value, peak, valley, setpoints and RS output.

NEW LOGICAL FUNCTIONS

Function **38**, available available on instrumments with software version from: **bmp2.04**
Description:

Allows selection from the logic inputs of the desired configuration by programming 1, 2 or 3 logic inputs, so according to the needs of logic inputs and providing for other functions.

The settings you can select how many sensors should be in the configuration of the logic functions for the sensor 1 where each of the pins selected for this function you must set the function 38, and all the sensors with the same programming 38 function in these pins.

When changing a sensor to the other main display appears on the display **SENSOR** and the selected number, for the time needed to load the new configuration (approx. 3 seconds).

The table below shows the relationship between logic inputs and configurations.

SELECTION 2 SENSORS

Connector Logical functions	Selected Sensor
PIN 1	
0	Sensor 1
1	Sensor 2

SELECTION 4 SENSORS

Connector Logical functions		Selected Sensor
PIN 1	PIN 2	
0	0	Sensor 1
1	0	Sensor 2
0	1	Sensor 3
1	1	Sensor 4

SELECTION 8 SENSORS

Connector Logical functions			Selected Sensor
PIN 1	PIN 2	PIN 4	
0	0	0	Sensor 1
1	0	0	Sensor 2
0	1	0	Sensor 3
1	1	0	Sensor 4
0	0	1	Sensor 5
1	0	1	Sensor 6
0	1	1	Sensor 7
1	1	1	Sensor 8

0= Input not activated, 1= Input activated (fixed)

The function 38 can only be assigned to pins 1, 2 and 4 of Logical Functions in this order, 1 if you want to Select the sensors 1 and 2. Pins 1 and 2 if you want to select sensors from 1 to 4, and pins 1, 2 and 4 if you want to select the 8 sensors.

The instrument once programmed, each time you launch the configuration of the sensor reads 1 and if you have programmed the logic function 38 in any of the entries will look at the state of pins programmed with this function and load the appropriate sensor configuration (see table p. 27)

Keyboard can manually select any sensor, but if you have activated the 38 in any of the Pines, when you re-connect the instrument or change the status of logic inputs act as indicated in the preceding paragraph.

It should be noted that each sensor has a global setting, ie input type, sensor excitation, acting relays, analog output type so that when changing a distance by means of the logic functions without physical change of the sensor must have the same schedule. Example: sensor Load Cell Sensor 1, Sensor 2 should also be a load cell to avoid damage to the sensor in the case had been scheduled input excitation process with 24 V or another.

Blocking Sensor selection, affects keyboard selection not logic functions.