TECHNICAL MANUAL

RIVERMINI4 - RIVERMICRO2

Serial line concentrators with 4 and 2 programmable inputs with fast inputs

090020635

IT08020000001624

IMQ-SISTEMI DI SICUREZZA

EL.MO. SPA

FOREWORD

FOR THE INSTALLER:

Please follow carefully the specifications relative to electric and security systems realization further to the manufacturer's prescriptions indicated in the manual provided. Provide the user the necessary indication for use and system's limitations, specifying that there exist precise specifications and different safety performance levels that should be proportioned to the user needs. Have the user view the directions indicated in this document.

FOR THE USER:

Periodically check carefully the system functionality making sure all enabling and disabling operations were made correctly. Have skilled personnel make the periodic system's maintenance. Contact the installer to verify corect system operation in case its conditions have changed (e.g.: variations in the areas to protect due to extension, change of the access modes, etc.).

This device has been projected, assembled and tested with the maximum care, adopting control procedures in accordance with the laws in force. The full correspondence to the functional characteristics is given exclusively when it is used for the purpose it was projected for, which is as follows:

Serial line concentrators with 4 and 2 programmable inputs with fast inputs for intrusion detection systems controlled by compatible microprocessor-based control units

Any use other than the one mentioned above has not been forecasted and therefore it is not possible to guarantee its correct operativeness. The manufacturing process is carefully controlled in order to prevent defaults and bad functioning. Nevertheless, an extremely low percentage of the components used is subjected to faults just as any other electronic or mechanic product. As this item is meant to protect both property and people, we invite the user to proportion the level of protection that the system offers to the actual risk (also taking into account the possibility that the system was operated in a degraded manner because of faults and the like), as well as reminding that there are precise laws for the design and assemblage of the systems destinated to these kind of applications.

The system's operator is hereby advised to see regularly to the periodic maintenance of the system, at least in accordance with the provisions of current legislation, as well as to carry out checks on the correct running of said system on as regular a basis as the risk involved requires, with particular reference to the control unit, sensors, sounders, dialler(s) and any other device connected. The user must let the installer know how well the system seems to be operating, based on the results of periodic checks, without delay.

Design, installation and servicing of systems which include this product, should be made by skilled staff with the necessary knowledge to operate in safe conditions in order to prevent accidents. These systems' installation must be made in accordance with the laws in force. Some equipment's inner parts are connected to electric main and therefore electrocution may occur if servicing was made before switching off the main and emergency power. Some products incorporate rechargeable or non rechargeable batteries as emergency power supply. Their wrong connection may damage the product, properties and the operator's safety (burst and fire).

EU DECLARATION OF CONFORMITY

The products comply with current European EMC and LVD directives. The full text of the EU declaration of conformity is available at the following Internet address: elmospa.com – registration is quick and easy.

DISPOSAL INSTRUCTIONS - USER INFORMATIONS

According to Directive 2012/19/EU on the Waste of Electric and Electronic Equipment (WEEE), it is here specified that this Electrical-Electromechanic Device started to be commercialized after 13th August 2005, and it shall be disposed of separately from ordinary waste products.

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1. GENERALS

Control units of ETR series and derived versions can control a high number of inputs, which are partly directly connected to the main board, and partly to many expansions modules identified with the term "CONCENTRATORS". To optimize the installation and laying of the cables, serial concentrators have many options for connecting the inputs, which are placed far from the main board.

This manual refers to two particular small-dimensioned concentrators that can be flush mounted, devised to manage double-balanced programmable inputs, for volumetric sensors or perimeter contacts or of "fast" type for the connection o inertial sensors and/or for roll-up shutters; a typical example of use may be the management of two windows near RIVERMINI4 or of a single window near RIVERMICRO2.

Base configuration features:

- for RIVERMINI4 inputs 1 and 3 as double-balanced, inputs 2 and 4 as "fast" type.
- for RIVERMICRO2 input 1 as double-balanced and input 2 as "fast".

The programming of the types of inputs, the sensitivity and integration of "fast" inputs of RIVERMINI4 and RIVERMICRO2 must be programmed **ONLY** with the browser of compatible control units reporting the specific compatibility. The following are the compatible control units in detail:

ETR48, ETR48M and version /Q fw 2.1 and successive, browser 2.1 and successive.

ETR100, ETR100M and version/Q fw 3.1 and successive browser 3.0 and successive.

ETR128, 256, 512 fw 4.1 and successive browser 4.0 and successive.

NET832, NET9 and **VIDOMO** series

If the control unit and the browser are not compatible, the configuration of inputs, the sensitivity and the integration will stay at default level.

The concentrators are not compatible with series CP80, CP90, CP100 and series ET8/48x control units.

As in the other concentrators models, electronic outputs are available, four for RIVERMINI4 with standard connector terminations, two with open collector type and terminal board terminations for RIVERMICRO2.

It is possible to connect a CP8/REL to RIVERMINI4 and four UNIREL relay cards for different kinds of signallings; alternatively, it is possible to connect mod. ETR/REL using it just for four ouputs out of eight.

As the other RIVER concentrators, also RIVERMINI4 and RIVERMICRO2 may be used as modules only for remote repetition of signals with respect to the principal concentrator.

2. FEATURES

Model:	RIVERMINI4	RIVERMICRO2
Performance level:	I°	none.
Power supply:	12 V ⎓ (from 10 to 15V)	
Power consumption:	25 mA, only board.	17 mA, only board
Inputs number:	4	2
Inputs interface:	programmable as double-balanced or "fast" single-balanced.	
Default settings:	inputs 1 and 3 are double-balanced, inputs 2 and 4 of "fast" type are singlebalanced. All inputs are also programmable as NC..	input 1 as double-balanced, input 2 of "fast" type is single-balanced. All inputs are also programmable as NC.
Outputs:	connector for four electronic outputs for CP8/REL with UNIREL or ETR/REL.	terminals for two open collector outputs.
Selections:	dipswitch for the programming of identification code, repetition function, Tamper exclusion only in RIVERMINI4.	
Signallings:	internal LED indicators for the display of data transmitted by serial line, serial line activity, Tamper protection status.	internal LED indicators for the display of data transmitted by serial line, serial line activity.

Housing:	plastic in ABS	none, only board.
Housing protection:	microswitch against lid opening.	
Recommended cable:	standard 2 x 0,75 mm2 + 2 x 0,22 mm2 (power supply + signal) shielded, to cover long distances use sections 2 x 1 mm2 + 2 x 0,5 mm2 or superior.	
Connection:	1000 meters maximum length.	
Parts supplied:	8 x 1500 Ohm resistances, technical manual, side fixing brackets (not assembled), 2 screws to close the housing (2,9 × 16 mm).	4 x 1500 Ohm resistances, technical manual.
Dimensions:	W 120 x H 43 x D 37 mm (housing).	W 45 x H10 x D 25 mm (board).
Weight:	100 g.	30 g.
Temperature and operating humidity:	+5° / +40° certified by IMQ-SISTEMI DI SICUREZZA. -10° / +55°C certified by the constructor - 93% U.R.	

The RIVERMINI4 and RIVERMICRO2 concentrators are equipped with IMQ alarm certification.

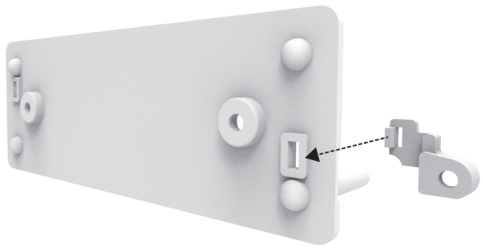
3. INSTALLATION

RIVERMINI4 and RIVERMICRO2 concentrators are small-dimensioned.
RIVERMINI4 is supplied with a RIVER series plastic housing, and when needed it is possible to remove the electronic board and separate the right part, which is free from components, bending it around the weak-point. In this way one can obtain a small-dimensioned board, which can be inserted for example in a junction box, also for flush mounting, as for example mod. 503. For this kind of installation of the box, the anti-opening protection of the housing should be disabled, setting dipswitch n°7 on ON.
The electronic board must be properly insulated and the junction box must be supplied with Tamper protection against opening; these operations should be carried out by the fitter.
If only the board is used, one no longer has a Ist level performance.

Side bracket assembling (optional)

Slot each bracket into its designated area.

See picture below.

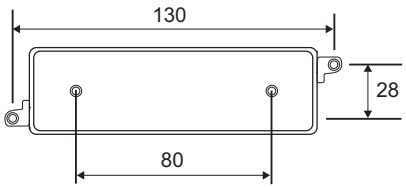


Cable feeding

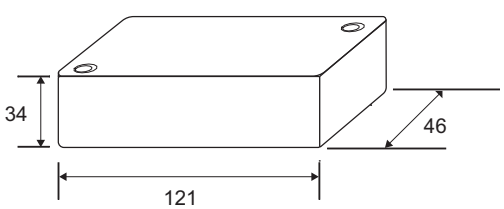
Remove the plastic from one of the areas indicated below (on the inner side of the cover).

View of the housing

BOTTOM:

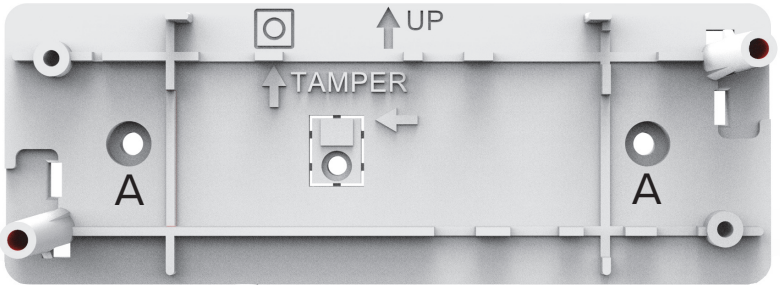


COVER:



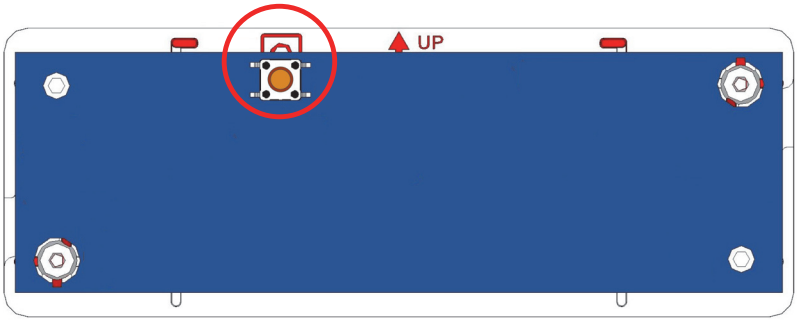
DIMENSIONS IN mm

Assembling operations



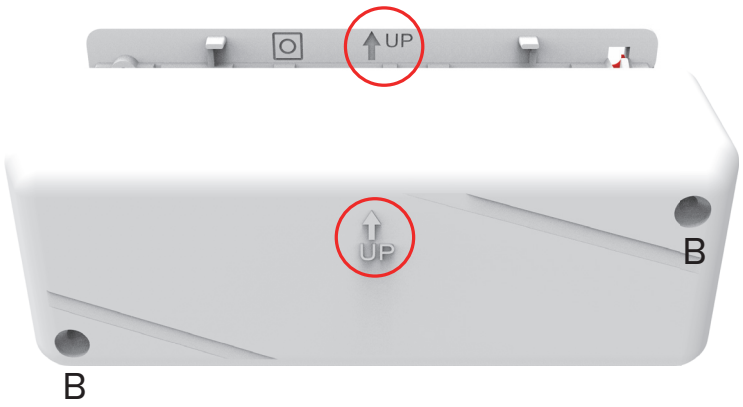
Fix the case base to the mounting surface with screws and plugs, using holes A.

Make sure the UP arrow is on the upper side.



Insert the PCB on the plastic supports (the board in the picture is for reference only).

Make sure the tamper switch against opening (on board top) is on the upper side as indicated by the symbol reported on case base.



Position the cover on the base.

Make sure the arrow on the cover is on the upper side, like the one on the base.

Insert screws on B holes to close the cover. Make sure the spring for tamper protection fits properly.

RIVERMICRO2 is supplied only as an electronic board, it must be properly insulated before being inserted in a junction box, also of 503 type. The junction box must be supplied with Tamper protection against opening, carried out by the fitter.

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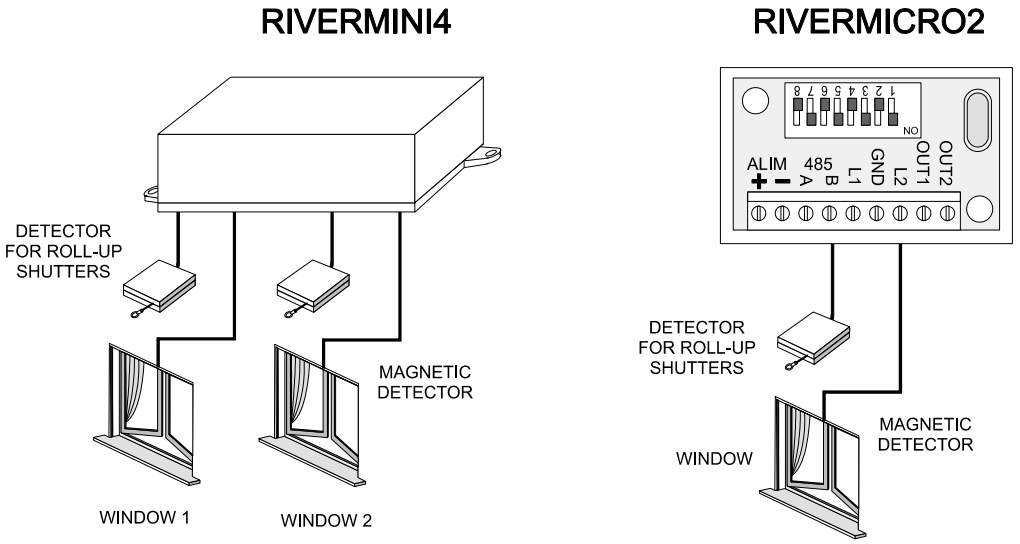
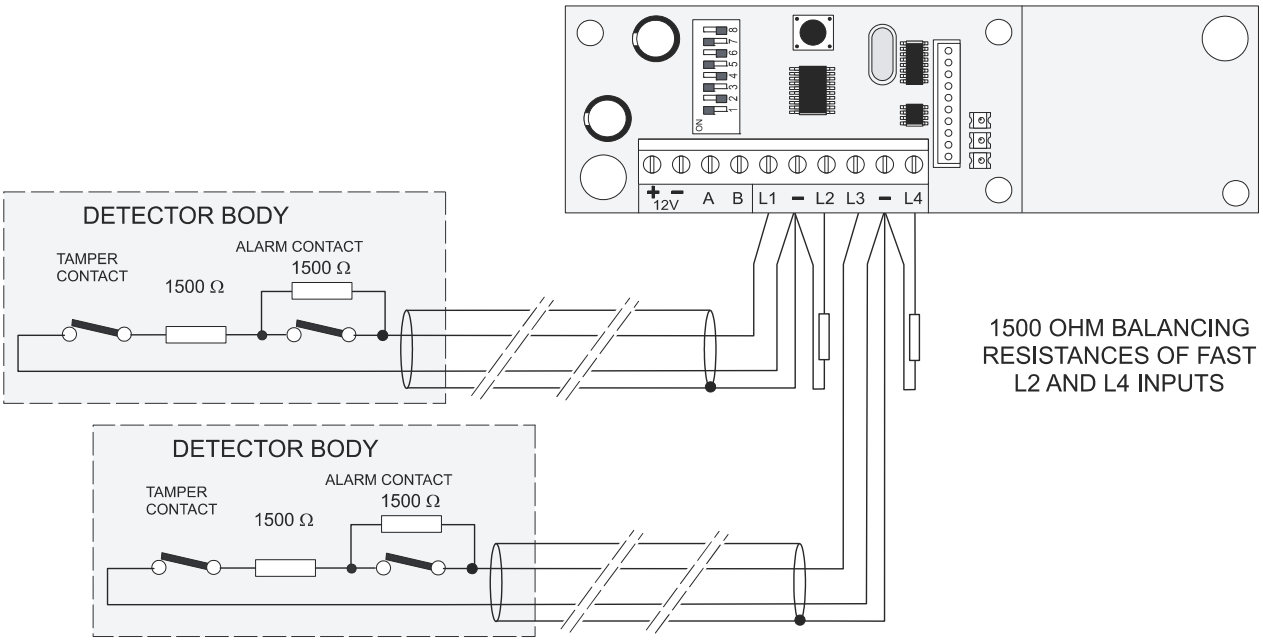
Possible use example:

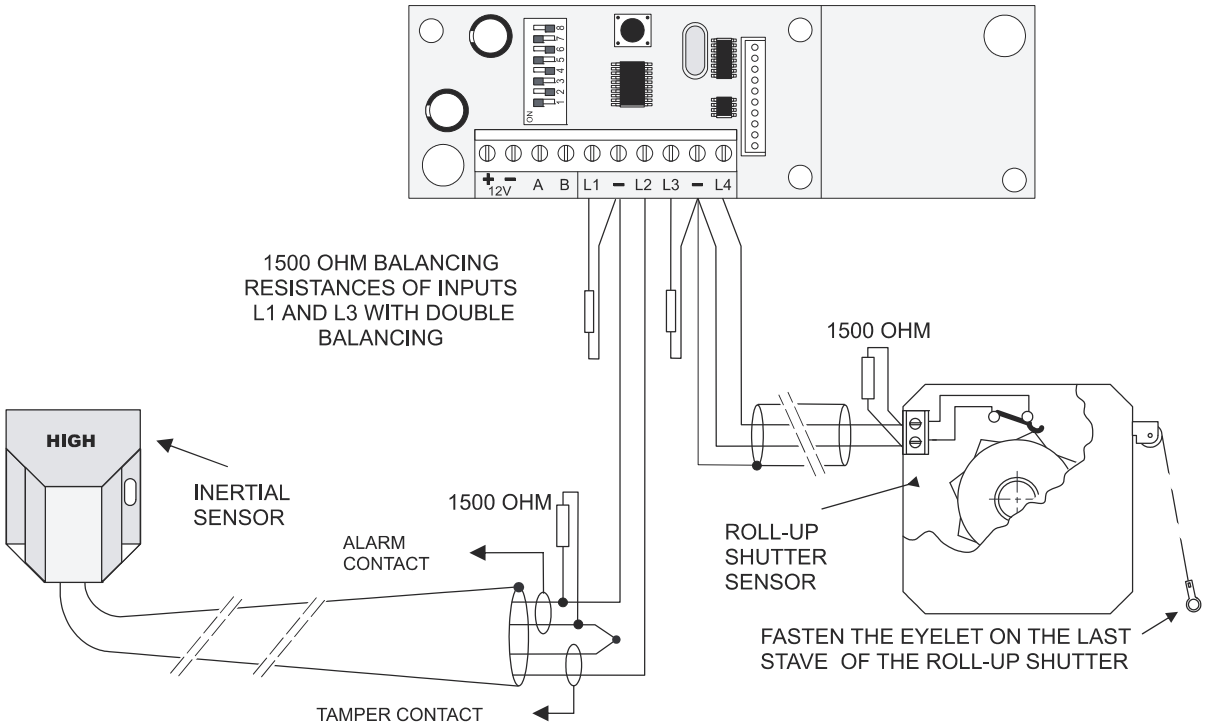


4. ELECTRICAL CONNECTIONS

RIVERMINI4, connections of the inputs

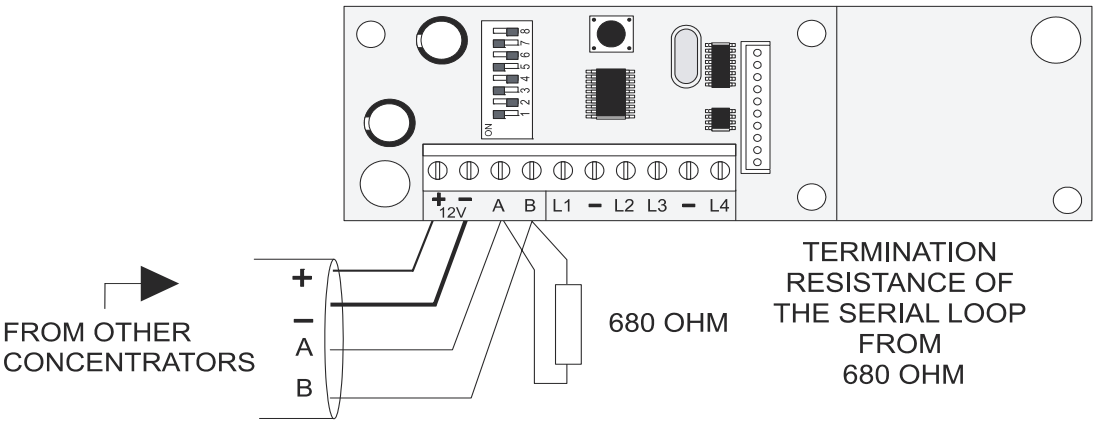


WARNING: THE SCHEME REFERS TO DEFAULT CONFIGURATION:
L1 AND L3 ARE DOUBLE-BALANCED, L2 AND L4 ARE SINGLE-BALANCED FOR CONNECTION WITH FAST SENSORS.
IF THE CONCENTRATOR IS CONNECTED WITH A CONTROL UNIT SUPPLIED WITH COMPATIBLE FIRMWARE, IT IS POSSIBLE TO SET UP THE TYPES OF INPUTS ACCORDING TO SPECIFIC NEEDS, UP TO 4 DOUBLE-BALANCED INPUTS, UP TO 4 INPUTS FOR FAST SENSORS, UP TO 4 NC INPUTS.



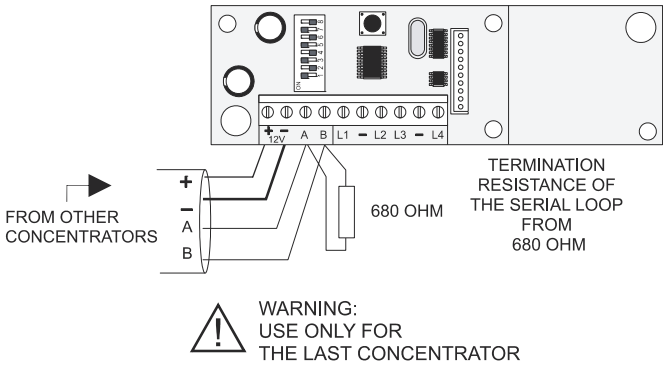
For the adjustment of sensitivity and integration read the note of chapter "SENSITIVITY AND INTEGRATION" on page 8.

RIVERMINI4, connections of the serial line,

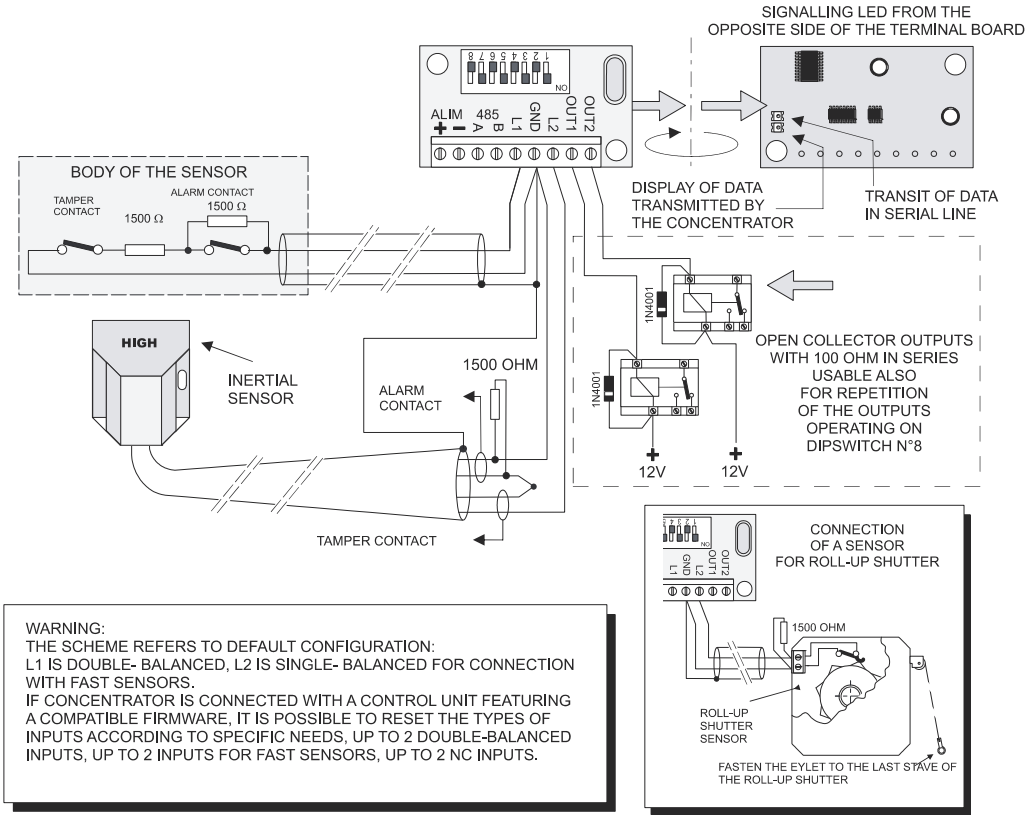


WARNING:
USE ONLY FOR
THE LAST CONCENTRATOR

RIVERMINI4, connection of the serial line

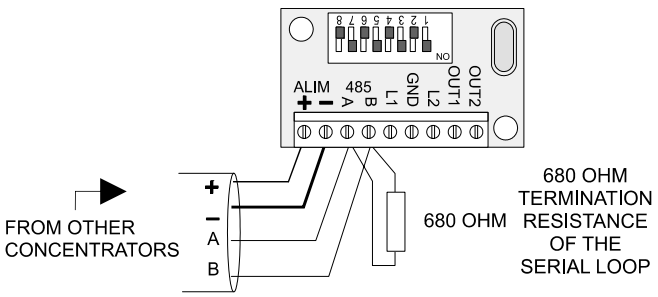


RIVERMICRO2, connection of the inputs and outputs



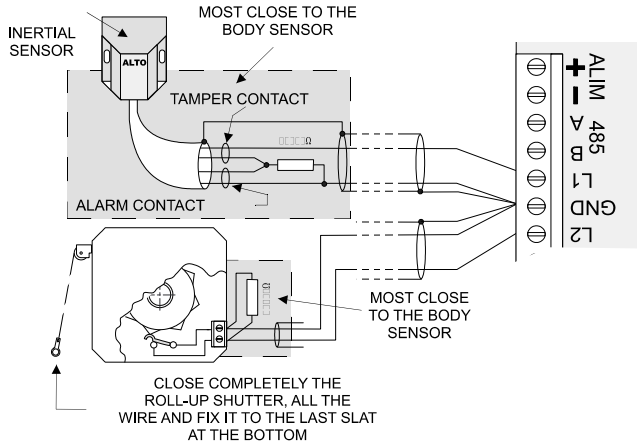
For the adjustment of sensitivity and integration read the note of chapter "SENSITIVITY AND INTEGRATION" on page 8.

RIVERMICRO2, connections of the serial line.



5. SENSITIVITY AND INTEGRATION

Connection of the fast input, example.



Explanatory notes for the programming and functionality of fast inputs on the concentrator with firmware v.1.1 or higher.

The input configuration as fast allows to manage the signals coming from the roll-up shutters or inertial sensors; these sensors operate generating a series of voltage pulses on the line that connects them to the input of the control unit and therefore require a dedicated management. The signals, generated by the roll-up shutter and inertial sensors, have features that change depending on the model of the sensor and installative conditions; therefore the fast inputs are configurable through the sensitivities and integration parameters. The default value (equal to 10 for each parameter) is suitable for common operation and with the most of the roll-up shutter detectors in the market.

In case of inertial sensors connection or particular situations is appropriate to vary the sensitivity and integration parameters to obtain an optimal response by the input.

Sensitivity: this parameter, as indicated by the same, is the main parameter that determinate the alarm condition detection. A low sensitivity value requires a more prolonged activation of the contact and a higher generation of pulses by the same to cause the alarm signalling.

Instead, a higher value of sensitivity enables a more immediate generation of the alarm with a lower pulse count.

Integration: this parameter determines the time within must be detected an alarm condition in order to be considered valid. A low value of integration increases the detection time, a high value of the integration shortens its.

In most cases, the optimization of system performance is carried out by acting exclusively on the sensitivity parameter leaving the integration to the default value of 10 (usually corresponding to 15-30 time seconds useful for the detection).

Using with roll-up shutter sensor

To obtain a faster response, increases sensitivity in steps of 10 (20, 30, 40,...), is recommended to increase the sensitivity over the 40 value to avoid false alarm due to unwanted changing of the sensor.

When there is a false alarm set a sensitivity less than 20; in some case is also possible to increase the integration up to 15 to reduce the detection temporal window.

WARNING: the low sensitivity setting with a high integration makes the input not very sensitive to slow movements of the roll-up shutter.

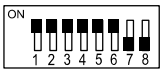
Using with the inertial sensor

It is recommended to use a sensitivity equal or higher to 40. To obtain a faster response increases sensitivity in steps of 10 (50, 60, ...). To have an alarm signalling with an only impact is normally necessary that the sensitivity is equal or higher than 50. To obtain a detection with spaced impacts is possible to halve the integration value bringing it to 5.

6. SETTING OF THE RIVERMINI4 IDENTIFICATION CODE

Code setting of the NET832 control units.

9-12



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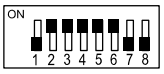

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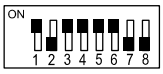

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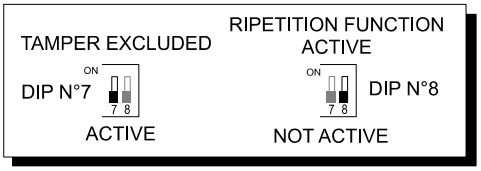

Code setting for NET9 control units.

INPUT

DIP POSITION

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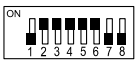

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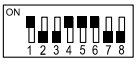
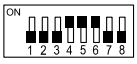


37-40



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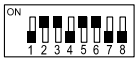

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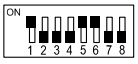
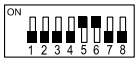
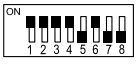


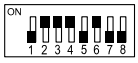
69-72



73-76



77-80



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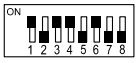

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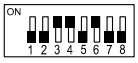

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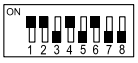

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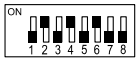

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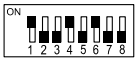

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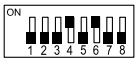

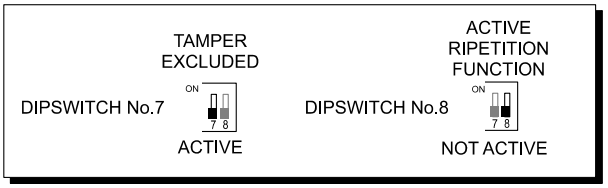

Code setting of the VIDOMO and PREGIO control units.

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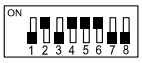
17-20

21-24



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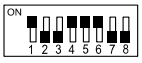
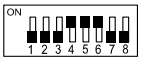


29-32



33-36

37-40

41-44

45-48
LIMIT FOR PREGIO1000

49-52

53-56

57-60

61-64
LIMIT FOR VIDOMO

65-68

69-72

73-76

77-80

81-84

85-88

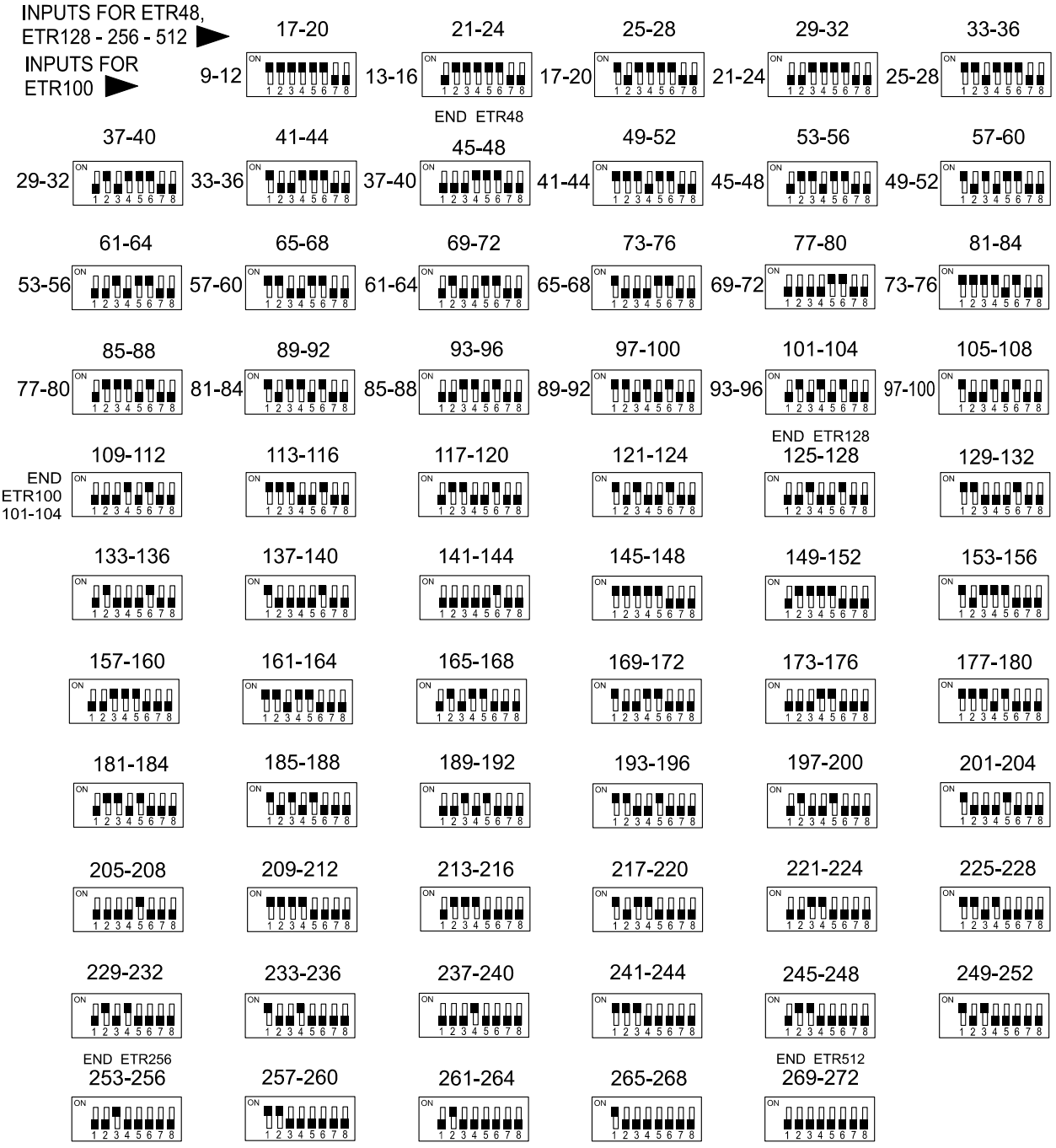
89-92

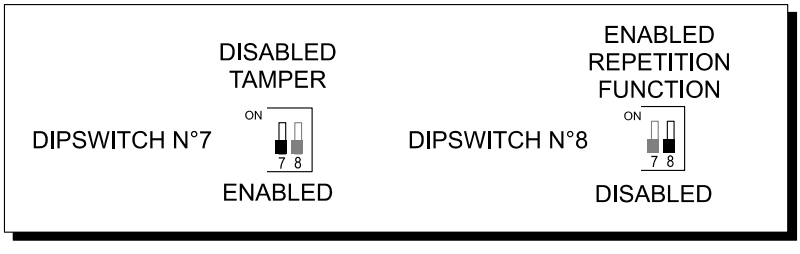
93-96

97-100

101-104
LIMIT FOR PREGIO2000

Code setting for ETR control unit.





NOTE: the repeat function of the outputs not allow to manage the concentrator inputs in question.

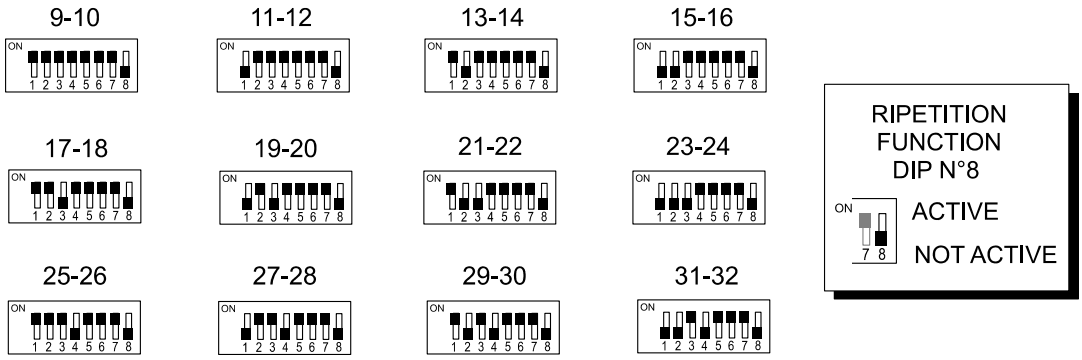
Code setting for PROXIMA control units.

Address range	ON dips	Address range	ON dips
1 - 4	1 2 3 4 5 6 - -	129 - 132	1 2 3 4 5 - - -
5 - 8	- 2 3 4 5 6 - -	133 - 136	- 2 3 4 5 - - -
9 - 12	1 - 3 4 5 6 - -	137 - 140	1 - 3 4 5 - - -
13 - 16	- - 3 4 5 6 - -	141 - 144	- - 3 4 5 - - -
17 - 20	1 2 - 4 5 6 - -	145 - 148	1 2 - 4 5 - - -
21 - 24	- 2 - 4 5 6 - -	149 - 152	- 2 - 4 5 - - -
25 - 28	1 - - 4 5 6 - -	153 - 156	1 - - 4 5 - - -
29 - 32	- - - 4 5 6 - -	157 - 160	- - - 4 5 - - -
33 - 36	1 2 3 - 5 6 - -	161 - 164	1 2 3 - 5 - - -
37 - 40	- 2 3 - 5 6 - -	165 - 168	- 2 3 - 5 - - -
41 - 44	1 - 3 - 5 6 - -	169 - 172	1 - 3 - 5 - - -
45 - 48	- - 3 - 5 6 - -	173 - 176	- - 3 - 5 - - -
49 - 52	1 2 - - 5 6 - -	177 - 180	1 2 - - 5 - - -
53 - 56	- 2 - - 5 6 - -	181 - 184	- 2 - - 5 - - -
57 - 60	1 - - - 5 6 - -	185 - 188	1 - - - 5 - - -
61 - 64	- - - - 5 6 - -	189 - 192	- - - - 5 - - -
65 - 68	1 2 3 4 - 6 - -	193 - 196	1 2 3 4 - - - -
69 - 72	- 2 3 4 - 6 - -	197 - 200	- 2 3 4 - - - -
73 - 76	1 - 3 4 - 6 - -	201 - 204	1 - 3 4 - - - -
77 - 80	- - 3 4 - 6 - -	205 - 208	- - 3 4 - - - -
81 - 84	1 2 - 4 - 6 - -	209 - 212	1 2 - 4 - - - -
85 - 88	- 2 - 4 - 6 - -	213 - 216	- 2 - 4 - - - -
89 - 92	1 - - 4 - 6 - -	217 - 220	1 - - 4 - - - -
93 - 96	- - - 4 - 6 - -	221 - 224	- - - 4 - - - -
97 - 100	1 2 3 - - 6 - -	225 - 228	1 2 3 - - - - -
101 - 104	- 2 3 - - 6 - -	229 - 232	- 2 3 - - - - -
105 - 108	1 - 3 - - 6 - -	233 - 236	1 - 3 - - - - -
109 - 112	- - 3 - - 6 - -	237 - 240	- - 3 - - - - -
113 - 116	1 2 - - - 6 - -	241 - 244	1 2 - - - - - -
117 - 120	- 2 - - - 6 - -	245 - 248	- 2 - - - - - -
121 - 124	1 - - - - 6 - -	249 - 252	1 - - - - - - -
125 - 128	- - - - - 6 - -	253 - 256	- - - - - - - -

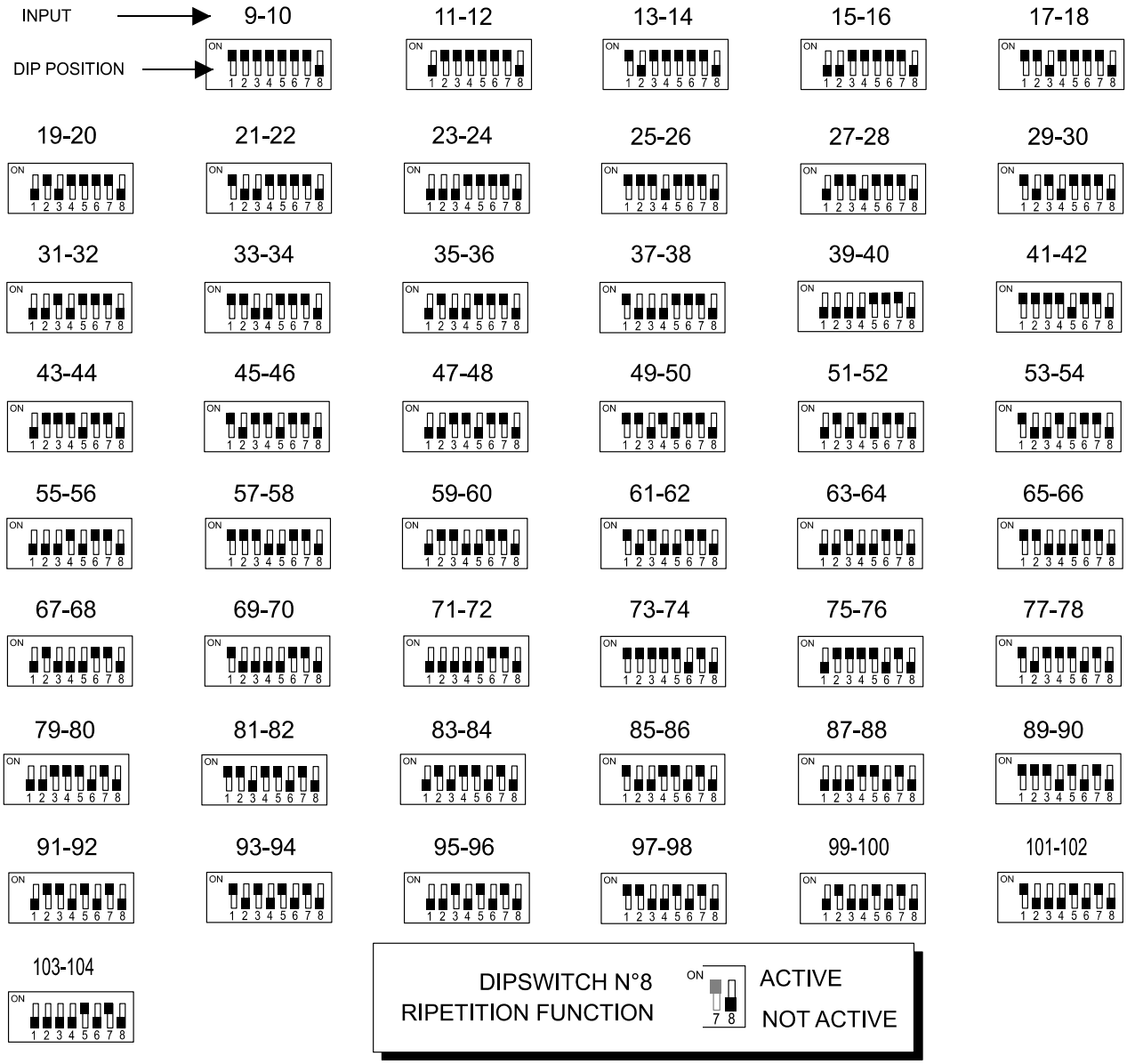
Limitations:
PRX128 up to 128 zones.
PRX256 up to 256 zones.
PRX1024 up to 256 zones.

7. SETTING OF THE RIVERMICRO2 IDENTIFICATION CODE

Code setting of the NET832 control units.



Code setting of the NET9 control units.



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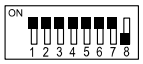
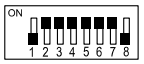
Code setting of the VIDOMO and PREGIO control units.

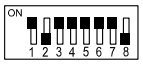
RIPETITION FUNCTION DIP N°8

ACTIVE

NOT ACTIVE

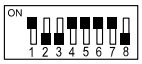
1-2 

3-4 

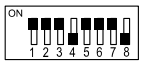
5-6 

7-8 

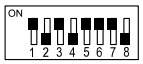
9-10 

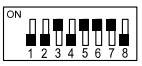
13-14 

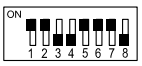
15-16 

17-18 

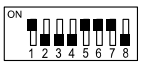
19-20 

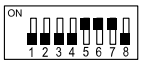
21-22 

23-24 

25-26 

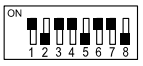
27-28 

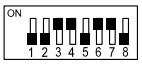
29-30 

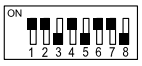
31-32 

33-34 

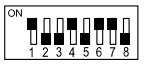
35-36 

37-38 

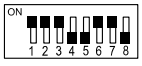
39-40 

41-42 

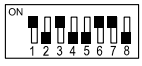
43-44 

45-46 

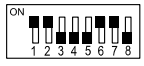
47 - 48
LIMIT FOR PREGIO1000

49-50 

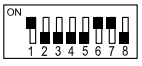
51-52 

53-54 

55-56 

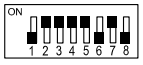
57-58 

59-60 

61-62 

63 - 64
LIMIT FOR VIDOMO

65-66 

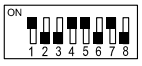
67-68 

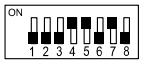
69-70 

71-72 

73-74 

75-76 

77-78 

79-80 

81-82

83-84

85-86

87-88

89-90

91-92

93-94

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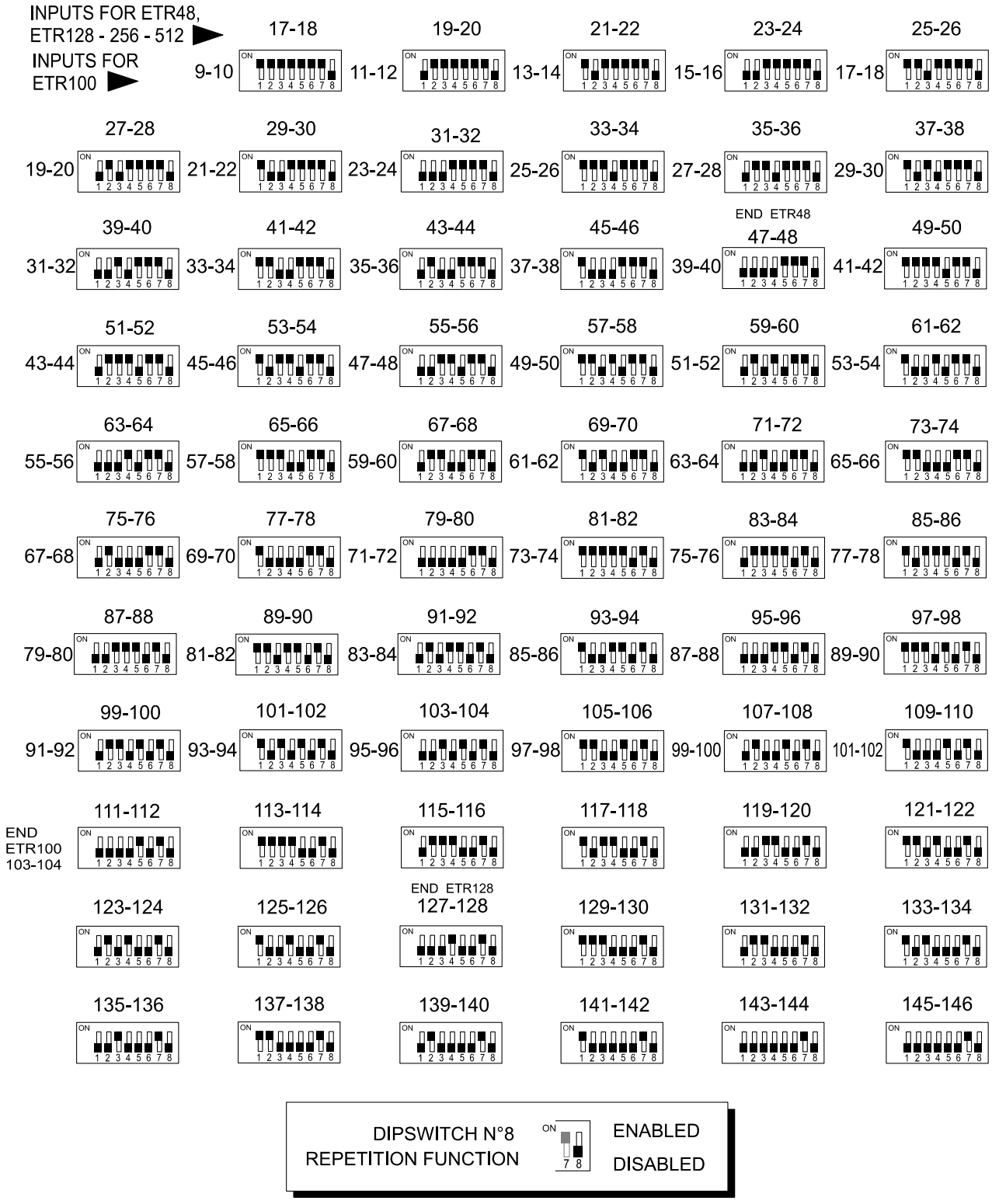
97-98

99-100

101-102

103 -104
LIMIT FOR PREGIO2000

Code setting for ETR control units



NOTE: the repeat function of the outputs not allow to manage the inputs of the concentrator in question.

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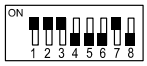
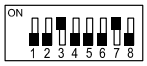
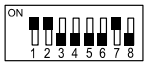
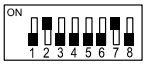
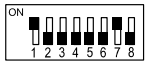
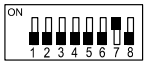
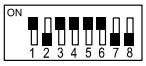
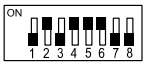
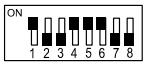
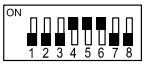
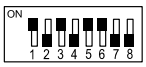
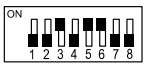
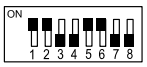
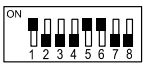
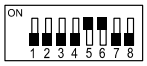
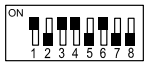
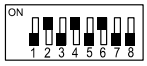
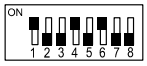
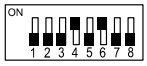
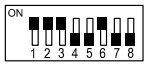
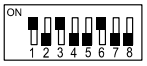
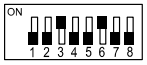
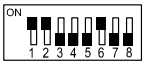
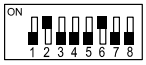
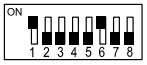
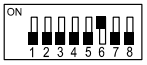
INPUTS FOR ETR256 - 512 ►

129-130 	131-132 	133-134 	135-136 	137-138 
139-140 	141-142 	143-144 	145-146 	147-148 	149-150 
151-152 	153-154 	155-156 	157-158 	159-160 	161-162 
163-164 	165-166 	167-168 	169-170 	171-172 	173-174 
175-176 	177-178 	179-180 	181-182 	183-184 	185-186 
187-188 	189-190 	191-192 	193-194 	195-196 	197-198 
199-200 	201-202 	203-204 	205-206 	207-208 	209-210
211-212	213-214	215-216	217-218	219-220	221-222
223-224	225-226	227-228	229-230	231-232	233-234
235-236	237-238	239-240	241-242	243-244	245-246
247-248	249-250	251-252	253-254	END ETR256 255-256	257-258
259-260	261-262	263-264	265-266	267-268	269-270
271-272					

DIPSWITCH N°8
REPETITION FUNCTION

ENABLED
DISABLED

NOTE: the repeat function of the outputs not allow to manage the inputs of the concentrator in question.

Code setting for PROXIMA control units.

Address range	ON dips
1 - 2	1 2 3 4 5 6 7 -
3 - 4	- 2 3 4 5 6 7 -
5 - 6	1 - 3 4 5 6 7 -
7 - 8	- - 3 4 5 6 7 -
9 - 10	1 2 - 4 5 6 7 -
11 - 12	- 2 - 4 5 6 7 -
13 - 14	1 - - 4 5 6 7 -
15 - 16	- - - 4 5 6 7 -
17 - 18	1 2 3 - 5 6 7 -
19 - 20	- 2 3 - 5 6 7 -
21 - 22	1 - 3 - 5 6 7 -
23 - 24	- - 3 - 5 6 7 -
25 - 26	1 2 - - 5 6 7 -
27 - 28	- 2 - - 5 6 7 -
29 - 30	1 - - - 5 6 7 -
31 - 32	- - - - 5 6 7 -
33 - 34	1 2 3 4 - 6 7 -
35 - 36	- 2 3 4 - 6 7 -
37 - 38	1 - 3 4 - 6 7 -
39 - 40	- - 3 4 - 6 7 -
41 - 42	1 2 - 4 - 6 7 -
43 - 44	- 2 - 4 - 6 7 -
45 - 46	1 - - 4 - 6 7 -
47 - 48	- - - 4 - 6 7 -
49 - 50	1 2 3 - - 6 7 -
51 - 52	- 2 3 - - 6 7 -
53 - 54	1 - 3 - - 6 7 -
55 - 56	- - 3 - - 6 7 -
57 - 58	1 2 - - - 6 7 -
59 - 60	- 2 - - - 6 7 -
61 - 62	1 - - - - 6 7 -
63 - 64	- - - - - 6 7 -
65 - 66	1 2 3 4 5 - 7 -

Address range	ON dips
67 - 68	- 2 3 4 5 - 7 -
69 - 70	1 - 3 4 5 - 7 -
71 - 72	- - 3 4 5 - 7 -
73 - 74	1 2 - 4 5 - 7 -
75 - 76	- 2 - 4 5 - 7 -
77 - 78	1 - - 4 5 - 7 -
79 - 80	- - - 4 5 - 7 -
81 - 82	1 2 3 - 5 - 7 -
83 - 84	- 2 3 - 5 - 7 -
85 - 86	1 - 3 - 5 - 7 -
87 - 88	- - 3 - 5 - 7 -
89 - 90	1 2 - - 5 - 7 -
91 - 92	- 2 - - 5 - 7 -
93 - 94	1 - - - 5 - 7 -
95 - 96	- - - - 5 - 7 -
97 - 98	1 2 3 4 - - 7 -
99 - 100	- 2 3 4 - - 7 -
101 - 102	1 - 3 4 - - 7 -
103 - 104	- - 3 4 - - 7 -
105 - 106	1 2 - 4 - - 7 -
107 - 108	- 2 - 4 - - 7 -
109 - 110	1 - - 4 - - 7 -
111 - 112	- - - 4 - - 7 -
113 - 114	1 2 3 - - - 7 -
115 - 116	- 2 3 - - - 7 -
117 - 118	1 - 3 - - - 7 -
119 - 120	- - 3 - - - 7 -
121 - 122	1 2 - - - - 7 -
123 - 124	- 2 - - - - 7 -
125 - 126	1 - - - - - 7 -
127 - 128	- - - - - - 7 -

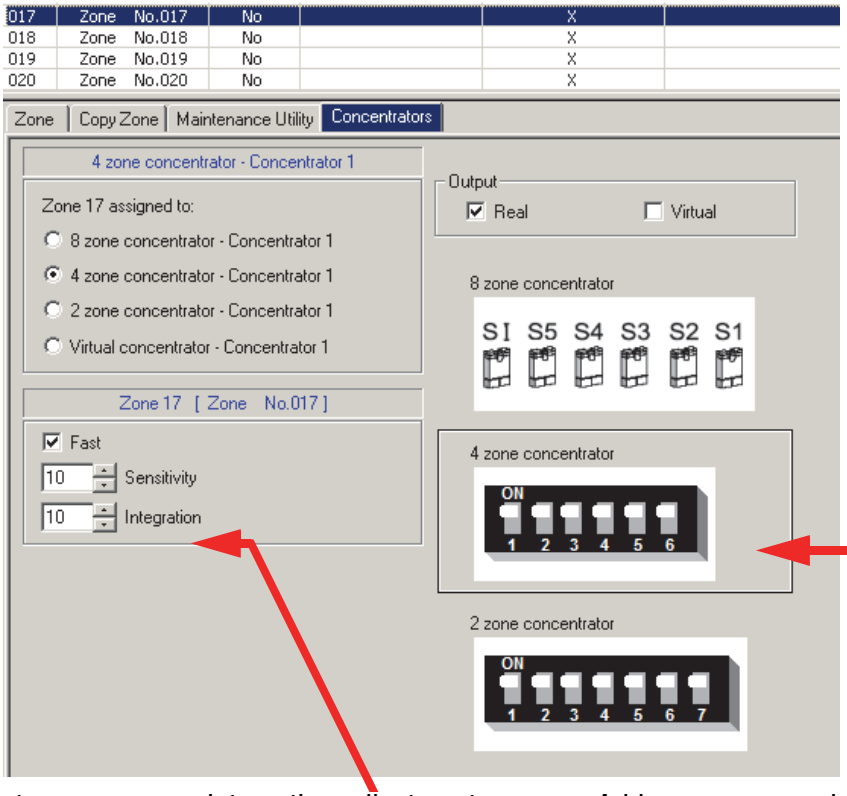
Address range	ON dips
129 - 130	1 2 3 4 5 6 - -
131 - 132	- 2 3 4 5 6 - -
133 - 134	1 - 3 4 5 6 - -
135 - 136	- - 3 4 5 6 - -
137 - 138	1 2 - 4 5 6 - -
139 - 140	- 2 - 4 5 6 - -
141 - 142	1 - - 4 5 6 - -
143 - 144	- - - 4 5 6 - -
145 - 146	1 2 3 - 5 6 - -
147 - 148	- 2 3 - 5 6 - -
149 - 150	1 - 3 - 5 6 - -
151 - 152	- - 3 - 5 6 - -
153 - 154	1 2 - - 5 6 - -
155 - 156	- 2 - - 5 6 - -
157 - 158	1 - - - 5 6 - -
159 - 160	- - - - 5 6 - -
161 - 162	1 2 3 4 - 6 - -
163 - 164	- 2 3 4 - 6 - -
165 - 166	1 - 3 4 - 6 - -
167 - 168	- - 3 4 - 6 - -
169 - 170	1 2 - 4 - 6 - -
171 - 172	- 2 - 4 - 6 - -
173 - 174	1 - - 4 - 6 - -
175 - 176	- - - 4 - 6 - -
177 - 178	1 2 3 - - 6 - -
179 - 180	- 2 3 - - 6 - -
181 - 182	1 - 3 - - 6 - -
183 - 184	- - 3 - - 6 - -
185 - 186	1 2 - - - 6 - -
187 - 188	- 2 - - - 6 - -
189 - 190	1 - - - - 6 - -
191 - 192	- - - - - 6 - -
193 - 194	1 2 3 4 5 - - -

Address range	ON dips
195 - 196	- 2 3 4 5 - - -
197 - 198	1 - 3 4 5 - - -
199 - 200	- - 3 4 5 - - -
201 - 202	1 2 - 4 5 - - -
203 - 204	- 2 - 4 5 - - -
205 - 206	1 - - 4 5 - - -
207 - 208	- - - 4 5 - - -
209 - 210	1 2 3 - 5 - - -
211 - 212	- 2 3 - 5 - - -
213 - 214	1 - 3 - 5 - - -
215 - 216	- - 3 - 5 - - -
217 - 218	1 2 - - 5 - - -
219 - 220	- 2 - - 5 - - -
221 - 222	1 - - - 5 - - -
223 - 224	- - - - 5 - - -
225 - 226	1 2 3 4 - - - -
227 - 228	- 2 3 4 - - - -
229 - 230	1 - 3 4 - - - -
231 - 232	- - 3 4 - - - -
233 - 234	1 2 - 4 - - - -
235 - 236	- 2 - 4 - - - -
237 - 238	1 - - 4 - - - -
239 - 240	- - - 4 - - - -
241 - 242	1 2 3 - - - - -
243 - 244	- 2 3 - - - - -
245 - 246	1 - 3 - - - - -
247 - 248	- - 3 - - - - -
249 - 250	1 2 - - - - - -
251 - 252	- 2 - - - - - -
253 - 254	1 - - - - - - -
255 - 256	- - - - - - - -

Limitations:
PRX128 up to 128 zones.
PRX256 up to 256 zones.
PRX1024 up to 256 zones.

8. PROGRAMMING WINDOWS

RIVERMINI4 and RIVERMICRO2 concentrators **must be** programmed using only an officially compatible browser.
Compatible control units are the following:
NET832 and NET9 control units.
VIDOMO control units.
ETR48, ETR48M and version /Q fw 2.1 and successive browser
2.1 and successive.
ETR100, ETR100M and version /Q fw 3.1 and successive
browser 3.0 and successive.
ETR128, 256, 512 fw 4.1 and successive browser 4.0 and successive.
The image on the side shows, as an example, the particular of a compatible browser of a ETR series control unit; in connection with the control unit a menu entry enables to read selectively the configuration of any fast concentrators installed in the system. This procedure is automatically requested during the reading of the general configuration.The possibility to enable it separately allows a faster maintenance if an adjustment session of sensitivity and integration values is in progress.
A similar procedure is enabled also during the writing of the control unit configuration, this allows to download the configuration of any fast concentrators (RIVERFASTPLUS, RIVERMINI4, RIVERMICRO2) installed in the system. This procedure allows a faster maintenance when an adjustment session of sensitivity and integration values is in progress.
Example windows with programming of RIVERMINI4 concentrator.



Sensitivity adjustment. Integration adjustment. Address programming.

IMPORTANT: it is necessary to underline that instead of one RIVER it is possible to connect two RIVERMINI4 or four RIVERMICRO2. For example, it will not be possible to install a RIVER concentrator after a RIVERMINI4 because like that four addresses will remain unused.
For the effective programming from browser referring to browser of the specific compatible control unit.

9. CONTENTS

Serial line concentrators with 4 and 2 programmable inputs with fast inputs mod. RIVERMINI4/ RIVERMICRO2 - TECHNICAL MANUAL
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