



AmbianceBOX

Logic Module for advanced master lighting control

ZLMABOX

Application program version: [1.2]

User manual edition: [1.2]_a

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DOCUMENT UPDATES

Version	Changes
[1.2]_a	Changes in the application program: - New object "BMS Information"
[1.1]_a	Changes in the application program: - Update of the advanced master lighting control functionality.

1 INTRODUCTION

1.1 AMBIANCEBOX

AmbianceBOX from Zennio is a logic module that facilitates the control of customised lighting environments. Its composition is as follows:

- **4 instances of advanced master lighting control**, which facilitate the regulation of luminaires for the purpose of creating ambience.
- **Heartbeat** or periodic “still-alive” notification.
- **KNX Secure**. For detailed information about the functionality and configuration of KNX Secure, consult the specific user manual “KNX Secure Guide”, available in the product section of the Zennio web portal (www.zennio.com).

1.2 START-UP AND POWER LOSS

During the start-up of the device, the Test/Prog. LED will blink in blue colour for a few seconds before AmbianceBOX is ready. External commands will not be executed during this time, but afterwards.

Depending on the configuration, some specific actions will also be performed during the start-up. For example, the integrator can set whether the output channels should switch to a particular state and whether the device should send certain objects to the bus after power is restored. Please consult the next sections of this document for further details.

On the other hand, when a bus power failure takes place, AmbianceBOX will interrupt any pending actions, and will save its state so it can be recovered once the power supply is restored.

2 CONFIGURATION

2.1 GENERAL

Following the importation of the relevant database into ETS and the addition of the device to the desired project topology, the configuration process is initiated by accessing the device parameters tab.

ETS PARAMETERISATION

The only screen that can be parameterised by default is the General screen. From this screen you can enable/disable all the necessary functions.

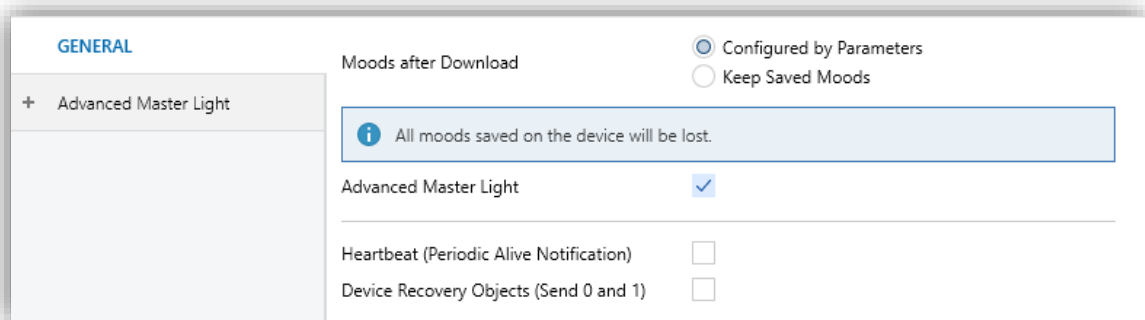


Figure 1. General parameters

- **Moods after Download** [[Configured by Parameters](#) / [Keep Saved Moods](#)]¹: allows the user to define whether the mood values are those configured by parameter or whether the previously saved values are kept after download.

Note: if the [“Keep Saved Moods”](#) option has been configured, but it is the first download of the device or a different version from the current one, the values configured by parameter will be adopted. If new Moods are added in successive downloads, it will be necessary to perform a download by checking the option [“Configured by Parameters”](#) to ensure the correct operation of these Moods.

- **Advanced Master Lighting Control** [[disabled](#) / [enabled](#)]: enables or disables “Advanced master lighting control” tab in the left menu. See section 2.2 for more details.

¹ The default values of each parameter will be highlighted in blue in this document, as follows: [\[default / rest of options\]](#).

- **Heartbeat (Periodic Alive Notification)** [*enabled* / *disabled*]: lets the integrator incorporate a one-bit object to the project (“**[Heartbeat] Object to Send ‘1’**”) that will be sent periodically with value “1” to notify that the device is still working (*still alive*).

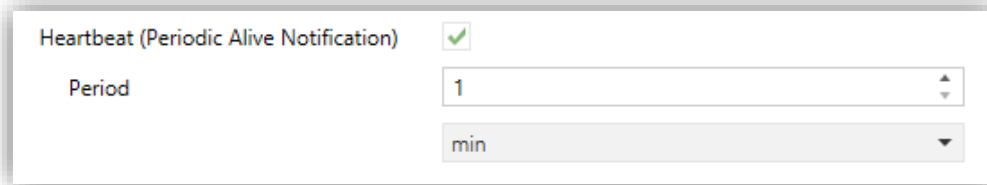


Figure 2. Heartbeat (Periodic Alive Notification).

Note: the first sending after download or bus failure takes place with a delay of up to 255 seconds, to prevent bus overload. Subsequent transmissions follow the configured period.

- **Device Recovery Objects (Send 0 and 1)** [*disabled* / *enabled*]: this parameter lets the integrator activate two new communication objects (“**[Heartbeat] Device Recovery**”), which will be sent to the KNX bus with values “0” and “1” whenever the device begins operation (for example, after a bus power failure). It is possible to parameterise a certain **delay** [0...255][s] to this sending.

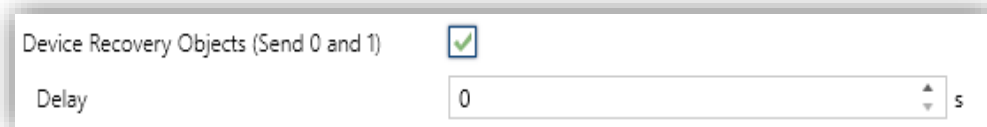


Figure 3. Device Recovery Objects

Note: After download or bus failure, the sending takes place with a delay of up to 6.35 seconds plus the parameterised delay, to prevent bus overload.

2.2 ADVANCED MASTER LIGHTING CONTROL

AmbianceBOX implements four instances of advanced lighting master control that can be enabled and independently configured to manage custom environments. This module provides the ability to manage up to 256 custom environments.

For detailed information, please refer to the specific document ‘**Advanced Master Lighting Control**’ available in the AmbianceBOX product section of the Zennio website (www.zennio.com).

ANNEX I. COMMUNICATION OBJECTS

- **“Functional range”** shows the values that, regardless of any other values permitted by the bus according to the object size, may be useful or have a particular meaning because of the specifications or restrictions by either the KNX standard or the application program itself.

Number	Size	I/O	Flags	Data type (DPT)	Functional Range	Name	Function
1	1 Bit	O	CR - T -	DPT_Trigger	0/1	[Heartbeat] Object to Send '1'	Sending of '1' Periodically
2	1 Bit	O	CR - T -	DPT_Trigger	0/1	[Heartbeat] Device Recovery	Send 0
3	1 Bit	O	CR - T -	DPT_Trigger	0/1	[Heartbeat] Device Recovery	Send 1
4, 263, 522, 781	1 Byte	I	C - W - -	DPT_SceneNumber	0 - 63	[AMLx] Scenes	0 - 63 (Execute 1 - 64)
5, 264, 523, 782	1 Bit	I	C - W - -	DPT_Ack	0/1	[AMLx] Cancel Timers	0 = No Action; 1 = Cancel Timers
6, 265, 524, 783	14 Bytes	O	CR - T -	DPT_String_ASCII		[AMLx] Diagnostic Information	BMS Information
7, 10, 13, 16, 19, 22, 25, 28, 31, 34, 37, 40, 43, 46, 49, 52, 55, 58, 61, 64, 67, 70, 73, 76, 79, 82, 85, 88, 91, 94, 97, 100, 103, 106, 109, 112, 115, 118, 121, 124, 127, 130, 133, 136, 139, 142, 145, 148, 151, 154, 157, 160, 163, 166, 169, 172, 175, 178, 181, 184, 187, 190, 193, 196, 266, 269, 272, 275, 278, 281, 284, 287, 290, 293, 296, 299, 302, 305, 308, 311, 314, 317, 320, 323, 326, 329, 332, 335, 338, 341, 344, 347, 350, 353, 356, 359, 362, 365, 368, 371, 374, 377, 380, 383, 386, 389, 392, 395, 398, 401, 404, 407, 410, 413, 416, 419, 422, 425, 428, 431, 434, 437, 440, 443, 446, 449, 452, 455, 525, 528, 531, 534, 537, 540, 543, 546, 549, 552, 555, 558, 561, 564, 567, 570, 573, 576, 579, 582, 585, 588, 591, 594, 597, 600, 603, 606, 609, 612, 615, 618, 621, 624, 627, 630, 633, 636, 639, 642, 645, 648, 651, 654, 657, 660, 663, 666, 669, 672, 675, 678, 681, 684, 687, 690, 693, 696, 699, 702, 705, 708, 711, 714, 784, 787, 790, 793, 796, 799, 802, 805, 808, 811, 814, 817, 820, 823, 826, 829, 832, 835, 838, 841, 844, 847, 850, 853, 856, 859, 862, 865, 868, 871, 874, 877, 880, 883, 886, 889, 892, 895, 898, 901, 904, 907, 910, 913, 916, 919, 922, 925, 928, 931, 934, 937, 940, 943, 946, 949, 952, 955, 958, 961, 964, 967, 970, 973	1 Bit	I	C - W - -	DPT_Ack	0/1	[AMLx][Mx] Trigger	0 = Do Nothing; 1 = Trigger
	1 Bit	I	C - W - -	DPT_Switch	0/1	[AMLx][Mx] Trigger	0 = Recover Previous State; 1 = Trigger
	1 Bit	I	C - W - -	DPT_Ack	0/1	[AMLx][Mx] Trigger	0 = Trigger; 1 = Do Nothing
	1 Bit	I	C - W - -	DPT_Switch	0/1	[AMLx][Mx] Trigger	0 = Trigger; 1 = Recover Previous State

8, 11, 14, 17, 20, 23, 26, 29, 32, 35, 38, 41, 44, 47, 50, 53, 56, 59, 62, 65, 68, 71, 74, 77, 80, 83, 86, 89, 92, 95, 98, 101, 104, 107, 110, 113, 116, 119, 122, 125, 128, 131, 134, 137, 140, 143, 146, 149, 152, 155, 158, 161, 164, 167, 170, 173, 176, 179, 182, 185, 188, 191, 194, 197, 267, 270, 273, 276, 279, 282, 285, 288, 291, 294, 297, 300, 303, 306, 309, 312, 315, 318, 321, 324, 327, 330, 333, 336, 339, 342, 345, 348, 351, 354, 357, 360, 363, 366, 369, 372, 375, 378, 381, 384, 387, 390, 393, 396, 399, 402, 405, 408, 411, 414, 417, 420, 423, 426, 429, 432, 435, 438, 441, 444, 447, 450, 453, 456, 526, 529, 532, 535, 538, 541, 544, 547, 550, 553, 556, 559, 562, 565, 568, 571, 574, 577, 580, 583, 586, 589, 592, 595, 598, 601, 604, 607, 610, 613, 616, 619, 622, 625, 628, 631, 634, 637, 640, 643, 646, 649, 652, 655, 658, 661, 664, 667, 670, 673, 676, 679, 682, 685, 688, 691, 694, 697, 700, 703, 706, 709, 712, 715, 785, 788, 791, 794, 797, 800, 803, 806, 809, 812, 815, 818, 821, 824, 827, 830, 833, 836, 839, 842, 845, 848, 851, 854, 857, 860, 863, 866, 869, 872, 875, 878, 881, 884, 887, 890, 893, 896, 899, 902, 905, 908, 911, 914, 917, 920, 923, 926, 929, 932, 935, 938, 941, 944, 947, 950, 953, 956, 959, 962, 965, 968, 971, 974	1 Bit	O	CR-T-	DPT_Switch	0/1	[AMLx][Mx] Status	0 = Off; 1 = On
9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51, 54, 57, 60, 63, 66, 69, 72, 75, 78, 81, 84, 87, 90, 93, 96, 99, 102, 105, 108, 111, 114, 117, 120, 123, 126, 129, 132, 135, 138, 141, 144, 147, 150, 153, 156, 159, 162, 165, 168, 171, 174, 177, 180, 183, 186, 189, 192, 195, 198, 268, 271, 274, 277, 280, 283, 286, 289, 292, 295, 298, 301, 304, 307, 310, 313, 316, 319, 322, 325, 328, 331, 334, 337, 340, 343, 346, 349, 352, 355, 358, 361, 364, 367, 370, 373, 376, 379, 382, 385, 388, 391, 394, 397, 400, 403, 406, 409, 412, 415, 418, 421, 424, 427, 430, 433, 436, 439, 442, 445, 448, 451, 454, 457, 527, 530, 533, 536, 539, 542, 545, 548, 551, 554, 557, 560, 563, 566, 569, 572, 575, 578, 581, 584, 587, 590, 593, 596, 599, 602, 605, 608, 611, 614, 617, 620, 623, 626, 629, 632, 635, 638, 641, 644, 647, 650, 653, 656, 659, 662, 665, 668, 671, 674, 677, 680, 683, 686, 689, 692, 695, 698, 701, 704, 707, 710, 713, 716, 786, 789, 792, 795, 798, 801, 804, 807, 810, 813, 816, 819, 822, 825,	1 Bit	I	C-W--	DPT_Trigger	0/1	[AMLx][Mx] Save Current State	0/1 = Save Current State

828, 831, 834, 837, 840, 843, 846, 849, 852, 855, 858, 861, 864, 867, 870, 873, 876, 879, 882, 885, 888, 891, 894, 897, 900, 903, 906, 909, 912, 915, 918, 921, 924, 927, 930, 933, 936, 939, 942, 945, 948, 951, 954, 957, 960, 963, 966, 969, 972, 975							
199, 201, 203, 205, 207, 209, 211, 213, 215, 217, 219, 221, 223, 225, 227, 229, 231, 233, 235, 237, 239, 241, 243, 245, 247, 249, 251, 253, 255, 257, 259, 261, 458, 460, 462, 464, 466, 468, 470, 472, 474, 476, 478, 480, 482, 484, 486, 488, 490, 492, 494, 496, 498, 500, 502, 504, 506, 508, 510, 512, 514, 516, 518, 520, 717, 719, 721, 723, 725, 727, 729, 731, 733, 735, 737, 739, 741, 743, 745, 747, 749, 751, 753, 755, 757, 759, 761, 763, 765, 767, 769, 771, 773, 775, 777, 779, 976, 978, 980, 982, 984, 986, 988, 990, 992, 994, 996, 998, 1000, 1002, 1004, 1006, 1008, 1010, 1012, 1014, 1016, 1018, 1020, 1022, 1024, 1026, 1028, 1030, 1032, 1034, 1036, 1038	1 Byte	O	C - - T -	DPT_Scaling	0% - 100%	[AMLx][Lx][x] Control	0% ... 100%
	1 Bit	O	C - - T -	DPT_Switch	0/1	[AMLx][Lx][x] Control	0 = Off; 1 = On
200, 202, 204, 206, 208, 210, 212, 214, 216, 218, 220, 222, 224, 226, 228, 230, 232, 234, 236, 238, 240, 242, 244, 246, 248, 250, 252, 254, 256, 258, 260, 262, 459, 461, 463, 465, 467, 469, 471, 473, 475, 477, 479, 481, 483, 485, 487, 489, 491, 493, 495, 497, 499, 501, 503, 505, 507, 509, 511, 513, 515, 517, 519, 521, 718, 720, 722, 724, 726, 728, 730, 732, 734, 736, 738, 740, 742, 744, 746, 748, 750, 752, 754, 756, 758, 760, 762, 764, 766, 768, 770, 772, 774, 776, 778, 780, 977, 979, 981, 983, 985, 987, 989, 991, 993, 995, 997, 999, 1001, 1003, 1005, 1007, 1009, 1011, 1013, 1015, 1017, 1019, 1021, 1023, 1025, 1027, 1029, 1031, 1033, 1035, 1037, 1039	1 Byte	I	C - W - U	DPT_Scaling	0% - 100%	[AMLx][Lx][x] Status	0% ... 100%
	1 Bit	I	C - W - U	DPT_Switch	0/1	[AMLx][Lx][x] Status	0 = Off; 1 = On



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