Robotina d.o.o.
OIC Hrpelje 38
SI-6240 Kozina
Slovenia

1. Hardware

Code	Description	Quantity	Note
Basic	**Required for basic functionality**		
01_bm-gw	BTMS IOT Gateway	1 × BM-GW for up to 32 strings	All strings of one UPS should be on the same BM-GW
02_bm-ss	BTMS String master	1 × BM-SS for each string	
03_bm-hs	BTMS Hall sensor	1 × BM-HS for each string	Choose the type based on the maximum string current
04_bm-cs	BTMS Cell sensor	1 × BM-CS for each battery	Choose 2, 6 or 12 V sensors depending on the battery voltage
05_bm-ps	BTMS Power supply	1 × PS-60-24 for each BTMS	One power supply can power several devices, if there are fewer of them than allowed according to thespecification. Checks against the total consumption of powered devices.
05_ps-30-12	BM-GW Power supply	1 × PS-30-12 for each BM-GW	
Optional	**Depending on requirements**		
06_bm-mc	BTMS Master controller	1 × BM-MC for up to 32 strings	
06_bm-c-A1	BTMS Controller set	1 × BM-C-A1 for up to 32 strings	Consisting of 06_bm-mc, 07_bm-cad and software
07_bm-cad	BTMS COM converter	1 × BM-CAD per BM-HMI	They require BM-MC
07_bm-com	BTMS COM module	1 × BM-COM for up to 16 BM-CS	For more than 16 BM-CS (up to 32) use 2nd BM-COM
07_bm-lc	BTMS IO expansion module	1 × BM-LC for up to 8 strings	They require BM-MC
08_bm-th	BTMS Temperature and humidity sensor	1 × BM-TH for every string	They require BM-MC
08_bm-gs	BTMS Insulation monitoring sensor	1 × BM-GS for every string	They require BM-MC and BM-COM
09_bm-hmi	BTMS Human-Machine Interfaces	1 × BM-HMI for up to 32 strings	They require BM-C-A1 (BM-MC + BM-CAD), 1 per BM-C-A1

Code	Description	Quantity	Note
10_bm-ag	BTMS IOT Aggregator	1 × BM-AG per Data center	Needed when there are multiple BM-GWs on the Data Center
06_th-mc	Temperature and humidity monitoring Master controller	1 × TH-MC for up to 120 temperature-humidity sensors	
06_tm-c-A1	Temperature and humidity monitoring Controller set	1 × TH-MC for up to 120 temperature-humidity sensors	Consisting of 06_th-mc, 07_bm-cad and software

1.1. System limitations

Device	Supports up to
BM-AG	unlimited BM-GW
BM-GW	32 × BM-SS, 1 × BM-MC
BM-MC	32 × BM-TH, 4 × BM-LC, 1 × BM-HMI
BM-SS	120 × BM-CS

1.2. Standard cabinets - [[wiki:01_btms:11_hw:bm-ca]]