

1. Hardware

Code	Description	Quantity	Note
Basic	Required for basic functionality		
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 or BM-SM	BTMS String master	1 × BM-SS or BM-SM 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
05.01.ps-60-24	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 the specification. Checks against the total consumption of powered devices.
05.02.ps-30-12	BM-GW Power supply	1 × PS-30-12 for each BM-GW	
Optional	Depending on requirements		
06.02.bm-mc	BTMS Master controller	1 × BM-MC for up to 32 strings	
06.03.tm-c-a1	BTMS Controller set	1 × BM-C-A1 for up to 32 strings	Consisting of 06.02.bm-mc , 07.cad-232-a2-iq and software
07.cad-232-a2-iq	BTMS COM converter	1 × BM-CAD per BM-HMI	They require BM-MC
08.com-pgm	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
09.bm-lc	BTMS IO expansion module	1 × BM-LC for up to 8 strings	They require BM-MC
11.bm-th	BTMS Temperature and humidity sensor	1 × BM-TH for every string	They require BM-MC
10.bm-gs	BTMS Insulation monitoring sensor	1 × BM-GS for every string	They require BM-MC and BM-COM

Code	Description	Quantity	Note
12.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
13.bm-ag	BTMS IOT Aggregator	1 × BM-AG per Data center	Needed when there are multiple BM-GWs on the Data Center
06.04.th-mc	Temperature and humidity monitoring Master controller	1 × TH-MC for up to 120 temperature-humidity sensors	
06.03.tm-c-a1	Temperature and humidity monitoring Controller set	1 × TH-MC for up to 120 temperature-humidity sensors	Consisting of 06.04.th-mc , 07.cad-232-a2-iq 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 or BM-SM	120 × BM-CS

1.2. Standard cabinets

BTMS Cabinet	14.bm-ca
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