

5K3XP





Production Date: June 2020 – March 2022



Expected Time on the market : March 2022 – March 2025



KEY DIFFERENCES BETWEEN 5K3 LV/HV and 5K3-XP

	BMS Power Switch	Dual Voltage	Capacity 105Ah 52Vdc	HV BOX up to 1000Vdc	Single CAN + DI/DO RJ 45 cable	Installation Compatibility LV/HV XP (ADD ON)	BMS New Generation Pulse Equalizer	Whole Cluster FW Upgrade Via Master (LV)	Whole Cluster FW upgrade (HV BOX + Battery) via HV BOX	Calendar Data Logs Accessible in CSV from BMS	WiFi and Bluetooth Inbuilt	LV Parallel 15 modules	Serial Connection 16 Modules	HV BOX Start Up 80Vdc (2 Modules)	HV HUB Single Branch Comm (10 in parallel)
															
															

1. 5K3XP ha un formato FW diverso in **.bin.** e non può essere installato sul vecchio BMS che supporta solo i file **.hex.**
2. Un cluster esistente composto da 5K3LV/HV può essere espanso utilizzando 5K3XP seguendo determinate regole.
3. Un cluster misto non può essere monitorato da remoto tramite WiFi APP
4. Il BMS di nuova generazione del 5K3-XP può essere utilizzato come parte di ricambio del BMS che equipaggia il 5K3LV/HV
5. 5K3XP deve essere monitorato e programmato con il nuovo software per PC, il software ha la stessa interfaccia e funzionalità del software 5K3LV / HV.

5K3XP PC Software – Applicazioni LV



LOW VOLTAGE

USER FREE ACCESS

OPERATOR ACCESS

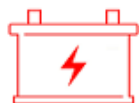


HIGH VOLTAGE

USER FREE ACCESS

OPERATOR ACCESS





Status Of Charge: ---%

Status: ---

Instant Power: ---kW



Charging Time: ---
Discharging Time: ---
Standby Time: ---



Battery Voltage: ---
Current: ---
Cell Delta Voltage: ---



Modules Connected: ---
Modules Delta SOC: ---
Modules Delta Temp: ---



Charge Energy : ---
Discharge Energy: ---
Energy Cycles: ---



Inverter protocol: ---
BMS Version: ---
Firmware Version: ---



COM Port:
Connect :
Status:

Search New Firmware

Load Firmware

Parallel Data									
System Power: ---	Max Voltage: ---	System Voltage Difference: ---	Max temp °C: ---	System Charge Current Sent: ---					
System SOC: ---	Min Voltage: ---	System Voltage: ---	Min Temp °C: ---	System Discharge Current Sent: ---	Modules Connected: ---				
Master		Slave1		Slave2		Slave3		Slave4	
Voltage(V): 0	0	Voltage(V): 0	0	Voltage(V): 0	0	Voltage(V): 0	0	Voltage(V): 0	0
Current(A): 0		Current(A): 0		Current(A): 0		Current(A): 0		Current(A): 0	
Max Cell(V): 0		Max Cell(V): 0		Max Cell(V): 0		Max Cell(V): 0		Max Cell(V): 0	
Min Cell(V): 0		Min Cell(V): 0		Min Cell(V): 0		Min Cell(V): 0		Min Cell(V): 0	
Max Temp(°C): 0		Max Temp(°C): 0		Max Temp(°C): 0		Max Temp(°C): 0		Max Temp(°C): 0	
Min Temp(°C): 0		Min Temp(°C): 0		Min Temp(°C): 0		Min Temp(°C): 0		Min Temp(°C): 0	
Capacity(AH): 0		Capacity(AH): 0		Capacity(AH): 0		Capacity(AH): 0		Capacity(AH): 0	
Main Contactor: 		Main Contactor: 		Main Contactor: 		Main Contactor: 		Main Contactor: 	
Slave5		Slave6		Slave7		Slave8		Slave9	
Voltage(V): 0	0	Voltage(V): 0	0	Voltage(V): 0	0	Voltage(V): 0	0	Voltage(V): 0	0
Current(A): 0		Current(A): 0		Current(A): 0		Current(A): 0		Current(A): 0	
Max Cell(V): 0		Max Cell(V): 0		Max Cell(V): 0		Max Cell(V): 0		Max Cell(V): 0	
Min Cell(V): 0		Min Cell(V): 0		Min Cell(V): 0		Min Cell(V): 0		Min Cell(V): 0	
Max Temp(°C): 0		Max Temp(°C): 0		Max Temp(°C): 0		Max Temp(°C): 0		Max Temp(°C): 0	
Discharge Time: 0		Min Temp(°C): 0		Min Temp(°C): 0		Min Temp(°C): 0		Min Temp(°C): 0	
Capacity(AH): 0		Capacity(AH): 0		Capacity(AH): 0		Capacity(AH): 0		Capacity(AH): 0	
Main Contactor: 		Main Contactor: 		Main Contactor: 		Main Contactor: 		Main Contactor: 	
Slave10		Slave11		Slave12		Slave13		Slave14	
Voltage(V): 0	0	Voltage(V): 0	0	Voltage(V): 0	0	Voltage(V): 0	0	Voltage(V): 0	0
Current(A): 0		Current(A): 0		Current(A): 0		Current(A): 0		Current(A): 0	
Max Cell(V): 0		Max Cell(V): 0		Max Cell(V): 0		Max Cell(V): 0		Max Cell(V): 0	
Min Cell(V): 0		Min Cell(V): 0		Min Cell(V): 0		Min Cell(V): 0		Min Cell(V): 0	
Max Temp(°C): 0		Max Temp(°C): 0		Max Temp(°C): 0		Max Temp(°C): 0		Max Temp(°C): 0	
Min Temp(°C): 0		Min Temp(°C): 0		Min Temp(°C): 0		Min Temp(°C): 0		Min Temp(°C): 0	
Capacity(AH): 0		Capacity(AH): 0		Capacity(AH): 0		Capacity(AH): 0		Capacity(AH): 0	
Main Contactor: 		Main Contactor: 		Main Contactor: 		Main Contactor: 		Main Contactor: 	

Save Log as XLS files and exit PC Program:

Save Exit

If the PC Program exit abnormal,the csv file can transfer to xls file:

Import csv file:

XLS File Generator:

Historical data parsing tools:

Import txt file:

XLS File Generator:

5K3XP PC Software – HV applications



LOW VOLTAGE

USER FREE ACCESS

OPERATOR ACCESS



HIGH VOLTAGE

USER FREE ACCESS

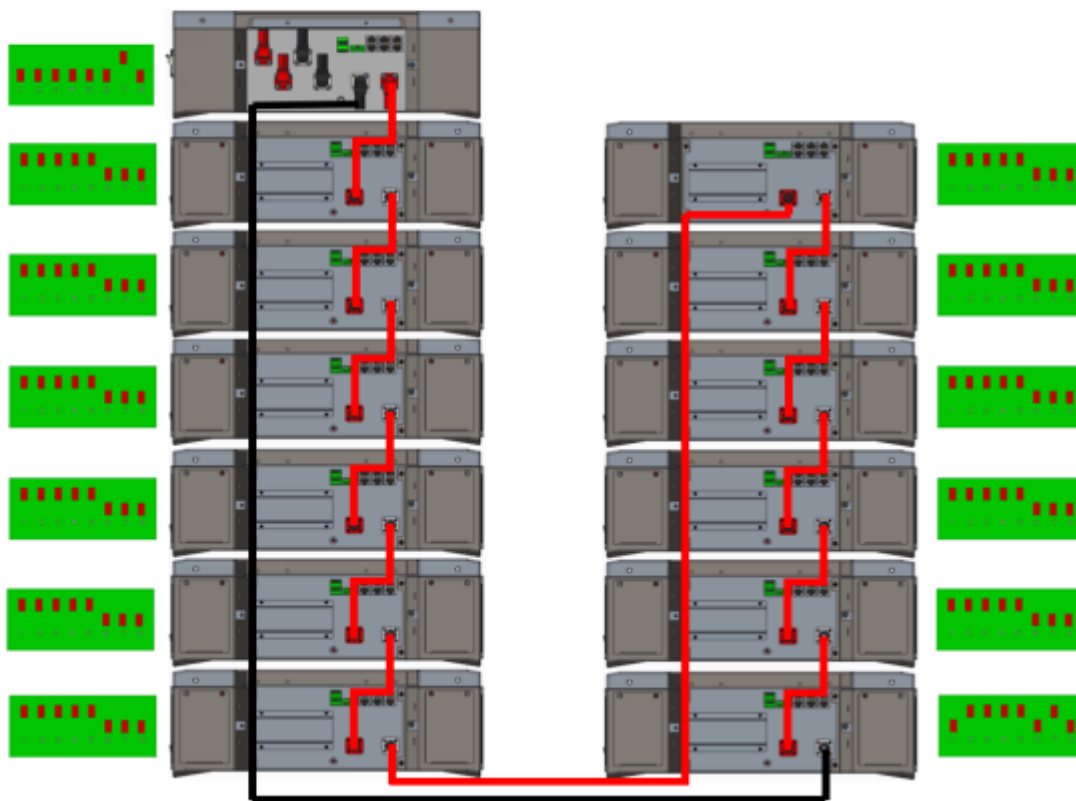
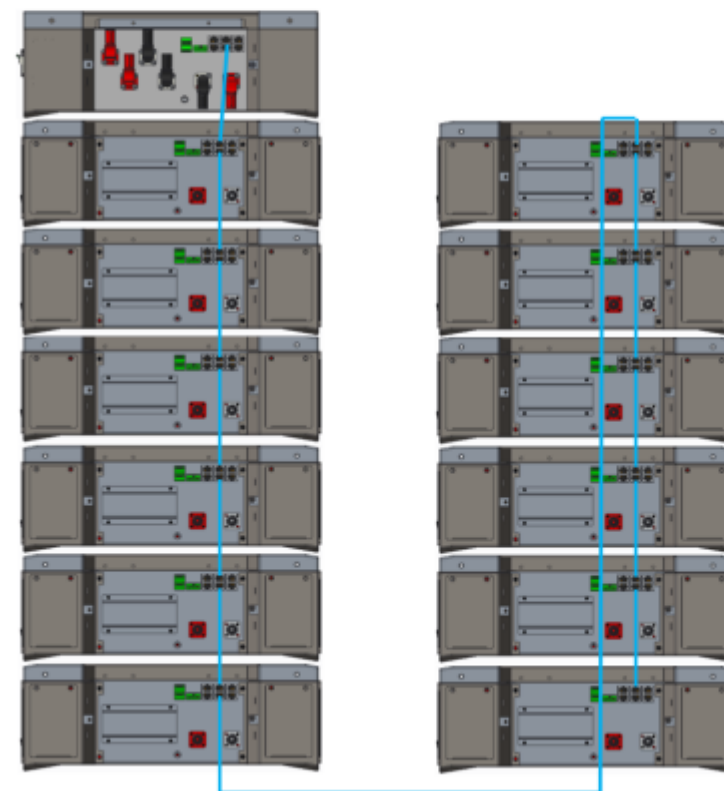
OPERATOR ACCESS



Step 1: Set the DIP switch as shown in the following figure.

Step 2: Connect each battery module in series and ensure that the polarity of the connection to the HV box is correct.

Step 3: Connect the RJ45 cable from the HV box CAN1-B port to the CAN-A port of the first battery module. Next, connect the CAN-B port of the previous battery module to the Can-A port of the next battery module through the RJ45 cable.



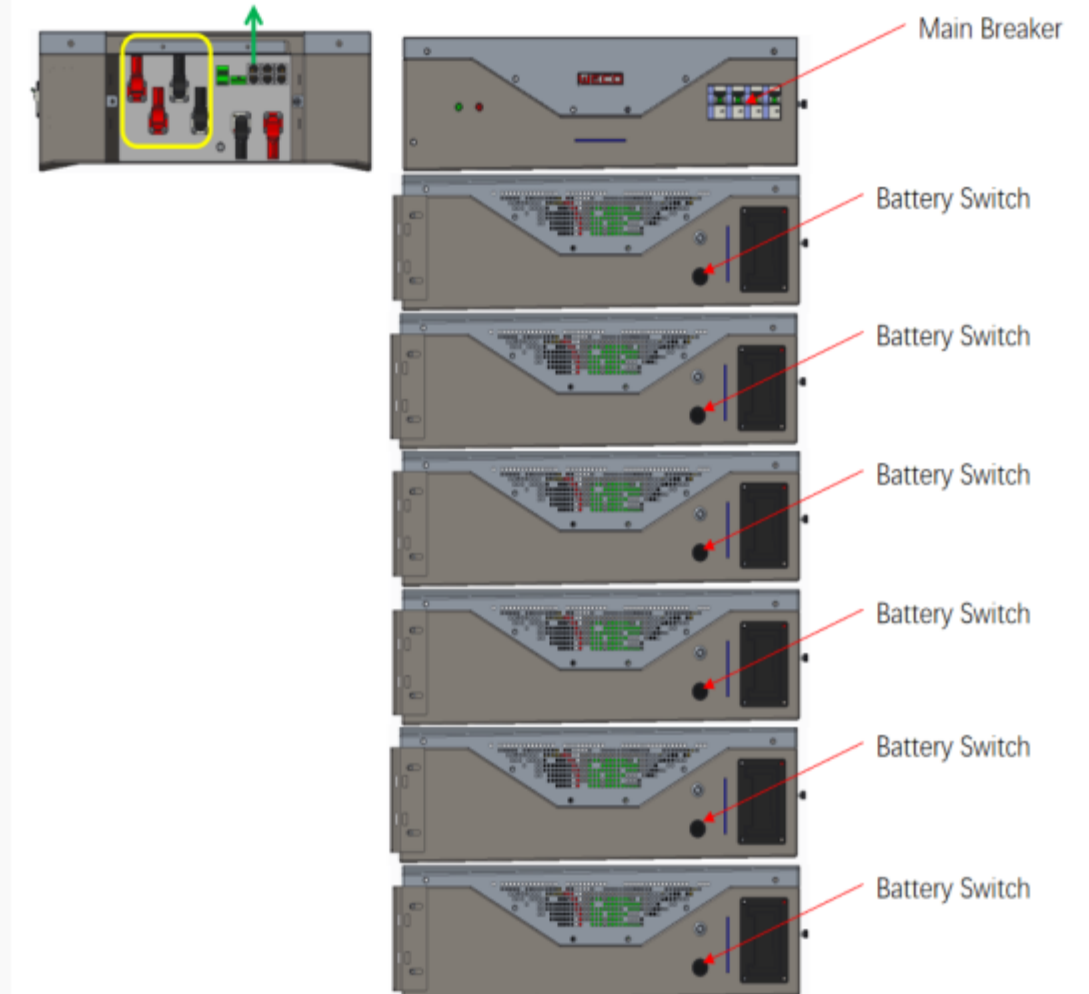
Step 4: Connect the inverter input channels to the HV sockets P+ and P- of the HV box.

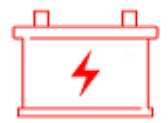
Step 5: Set the DIP switch of the HV box as shown right.

Step 6: Connect the RJ45 cable of inverter CAN communication to the CAN2-B port of the HV box.

Step 7: Turn on the boat switch on the side of each battery module.

Step 8: Power up the system by turning on the main breaker of the HV box.





Status Of Charge: ---%



Charging Time: ---
Discharging Time: ---
Standby Time: ---



Charging Energy : ---
Discharging Energy: ---
Number of Cycles: ---



Status: ---



System Voltage: ---
System Current: ---
System Insulation: ---



Inverter protocol: ---
BMS Version: ---
FW Version: ---



Instant Power: ---kW



Modules Connected: ---
Delta Voltage: ---
Delta Temperature: ---



COM Port:
Connect :
Status:



System SOC: ---

System Voltage: ---

System Current: ---

System Power: ---

System Insulation: ---

Charging Time: ---

Discharging Time: ---

Standby Time: ---



System Status: ---

Modules Connected: ---

Max Cell Voltage: ---

Min Cell Voltage: ---

Delta Voltage: ---

Max Cell Temperature: ---

Min Cell Temperature: ---

Delta Temperature.: ---



SumVol OV:

SumVol UV:

CellVol OV:

CellVol UV:

Charge OC:

Discharge OC:

Charge OT:

Discharge OT:

Discharge UT:

Internal COM:

External COM:

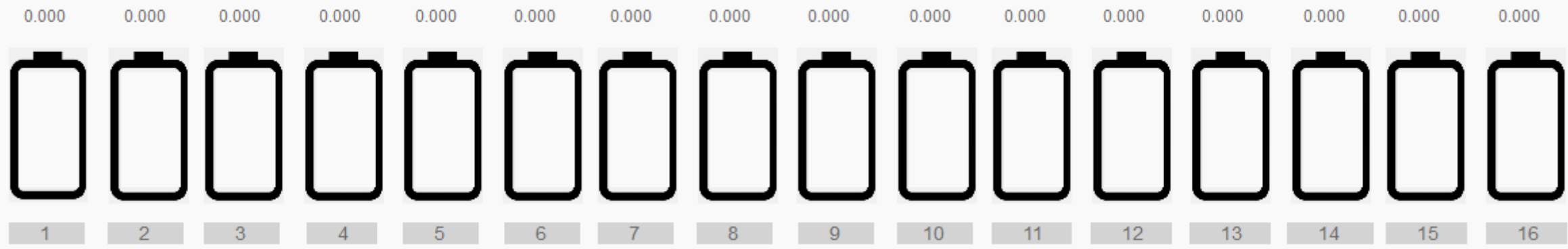
Insulation LOW:

SumVol Err:

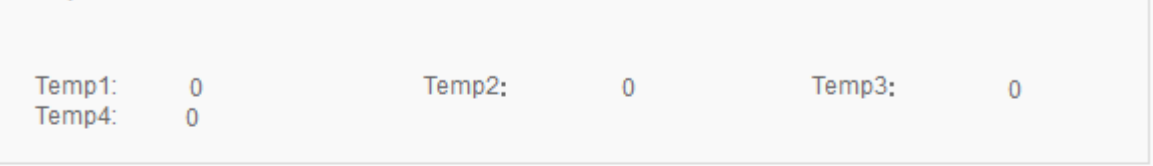
Breaker Interlock:

	CAN	Link	Status	Vdc	Current	SOC
1#			---	---	---	<div></div>
2#			---	---	---	<div></div>
3#			---	---	---	<div></div>
4#			---	---	---	<div></div>
5#			---	---	---	<div></div>
6#			---	---	---	<div></div>
7#			---	---	---	<div></div>
8#			---	---	---	<div></div>
9#			---	---	---	<div></div>
10#			---	---	---	<div></div>
11#			---	---	---	<div></div>
12#			---	---	---	<div></div>
13#			---	---	---	<div></div>
14#			---	---	---	<div></div>
15#			---	---	---	<div></div>
16#			---	---	---	<div></div>

Cell Voltage



Temperature



Voltage/Current



Module Select





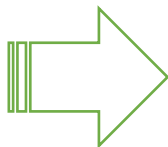
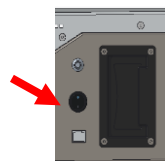
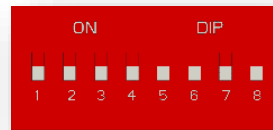
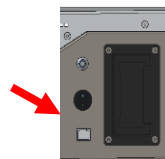
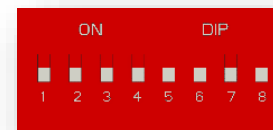
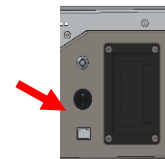
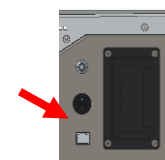
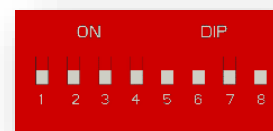
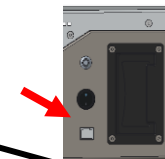
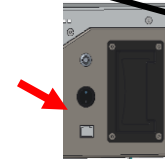
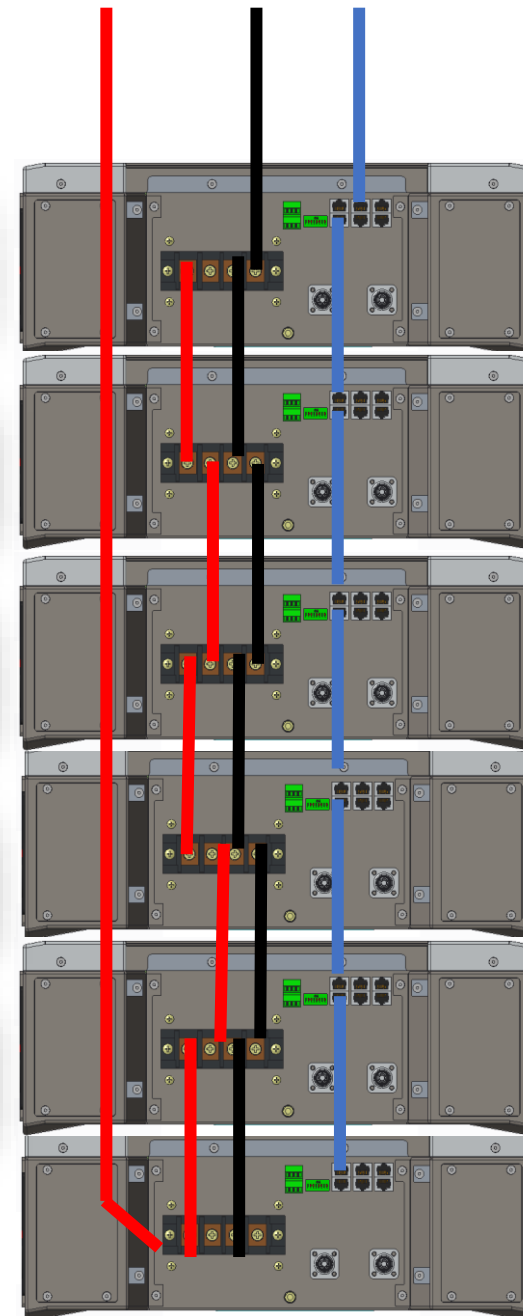
CONNESSIONE DEI MODULI

1. Tutti i DIP Switch IMPOSTATI su OFF (dal master al penultimo)
2. Impostare l'ultimo modulo come 00000100 (terminatore)
3. Collegare tutti i cavi RS 485 dalla porta B del master alla porta A del sub
4. Procedere con RS485 in Daisy Chain fino all'ultimo modulo
5. Collegare la connessione di alimentazione come di consueto
6. Collegare la potenza di uscita all'inverter
7. Accendere l'interruttore principale di ciascun modulo (situato sul lato sotto la maniglia)
8. Premere il PULSANTE RUN solo del Master
9. Attendere che tutti i sottomoduli si avviino automaticamente.



Information:

In ogni installazione LV, ricorda sempre che l'ultimo modulo DEVE avere DIP 6 ON, per abilitare la resistenza di terminazione da 120Ω.



5K3XP

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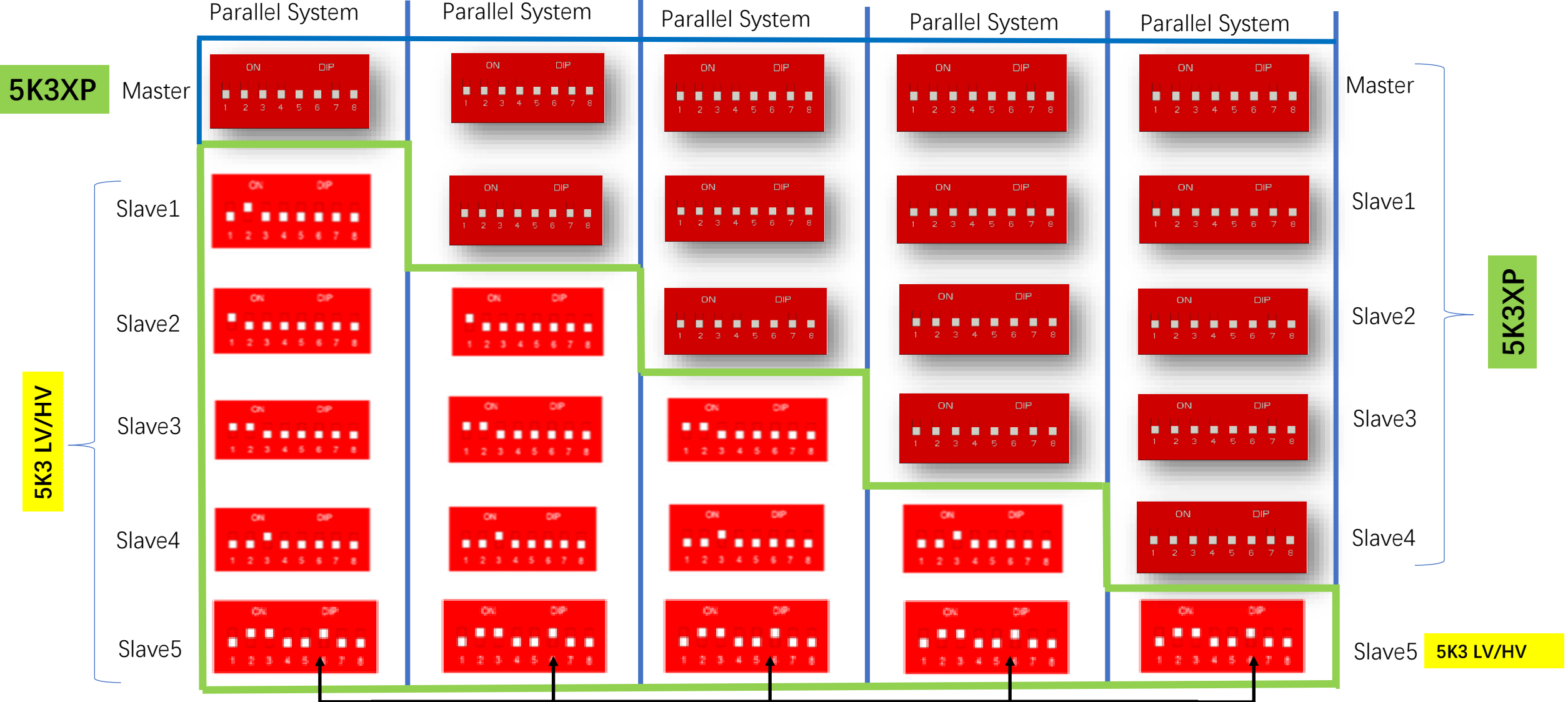
5K3XP

5K3XP

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Cluster LV misto 5K3XP e 5K3 LV/HV (max 6 unità)

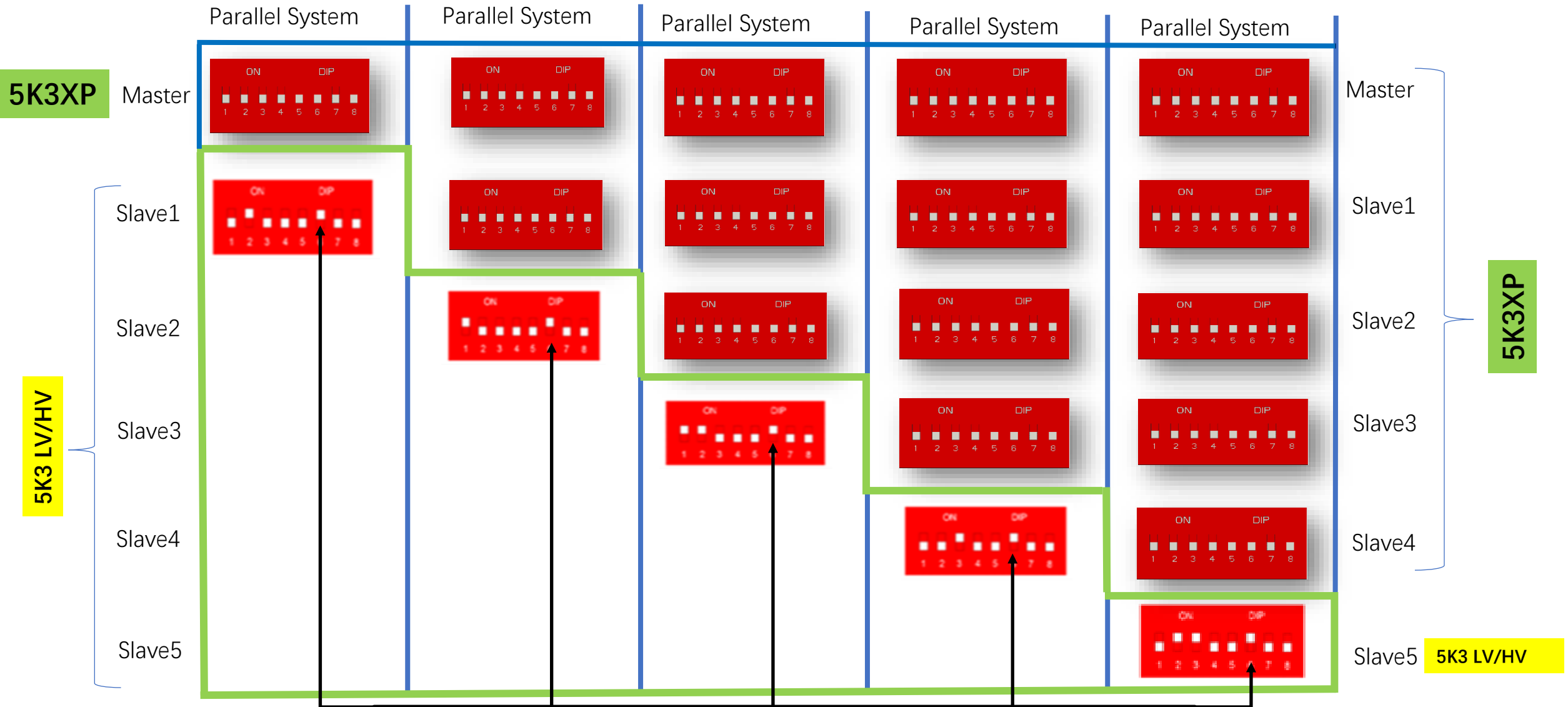


Information:

In ogni installazione LV, ricorda sempre che l'ultimo modulo DEVE avere DIP 6 ON, per abilitare la resistenza di terminazione da 120 Ω.



Cluster LV misto 5K3XP e 5K3 LV/HV (max 6 unità)



Information:

In ogni installazione LV, ricorda sempre che l'ultimo modulo DEVE avere DIP 6 ON, per abilitare la resistenza di terminazione da 120 Ω.



NON ALTERNARLE LUNGO LA TORRE

TUTTE LE 5K3 DEVONO ESSERE SETTATE 00000 000

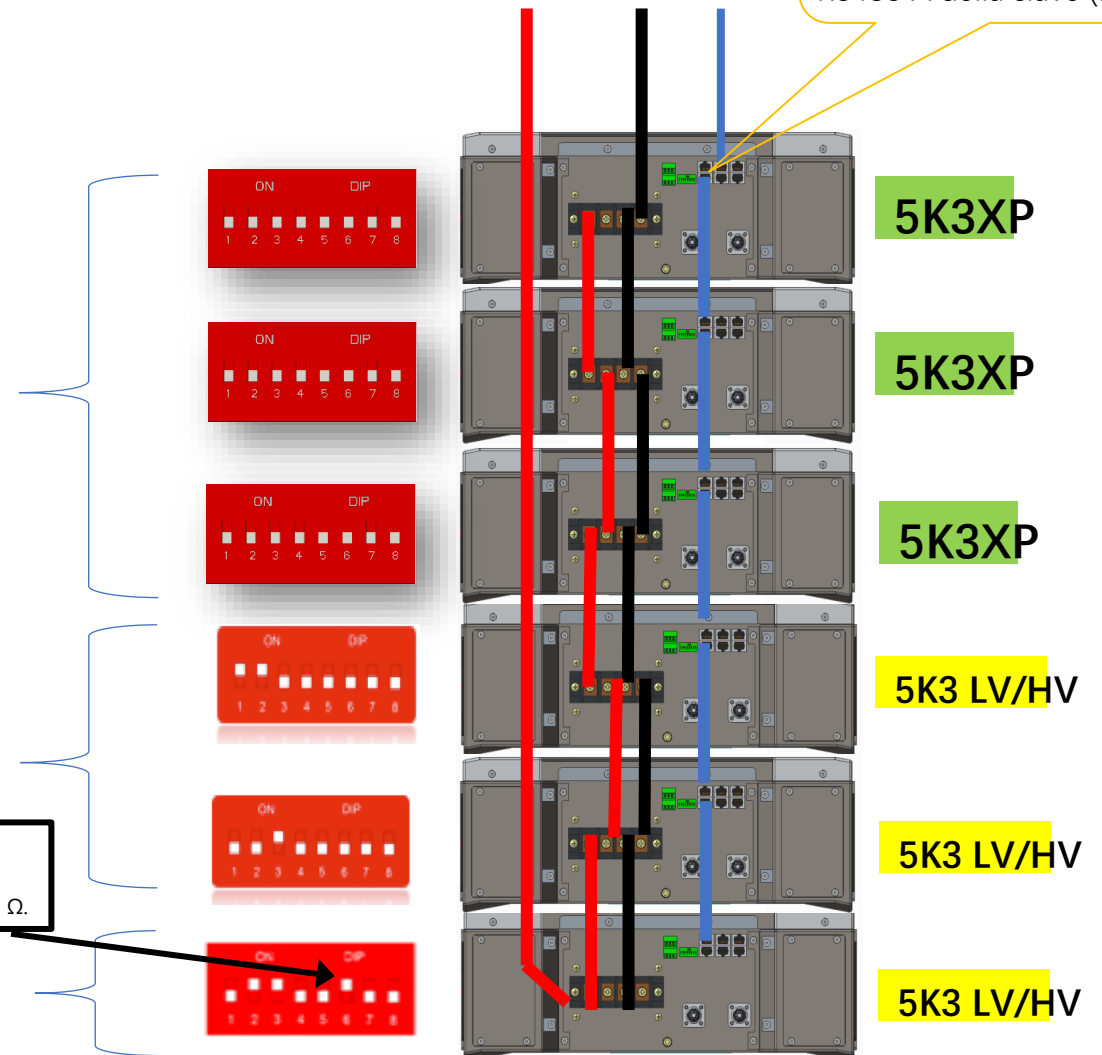
LE 5K3 LVHV DEVONO ESSERE SETTATE IN BASE ALLA LORO POSIZIONE COME DA MANUALE



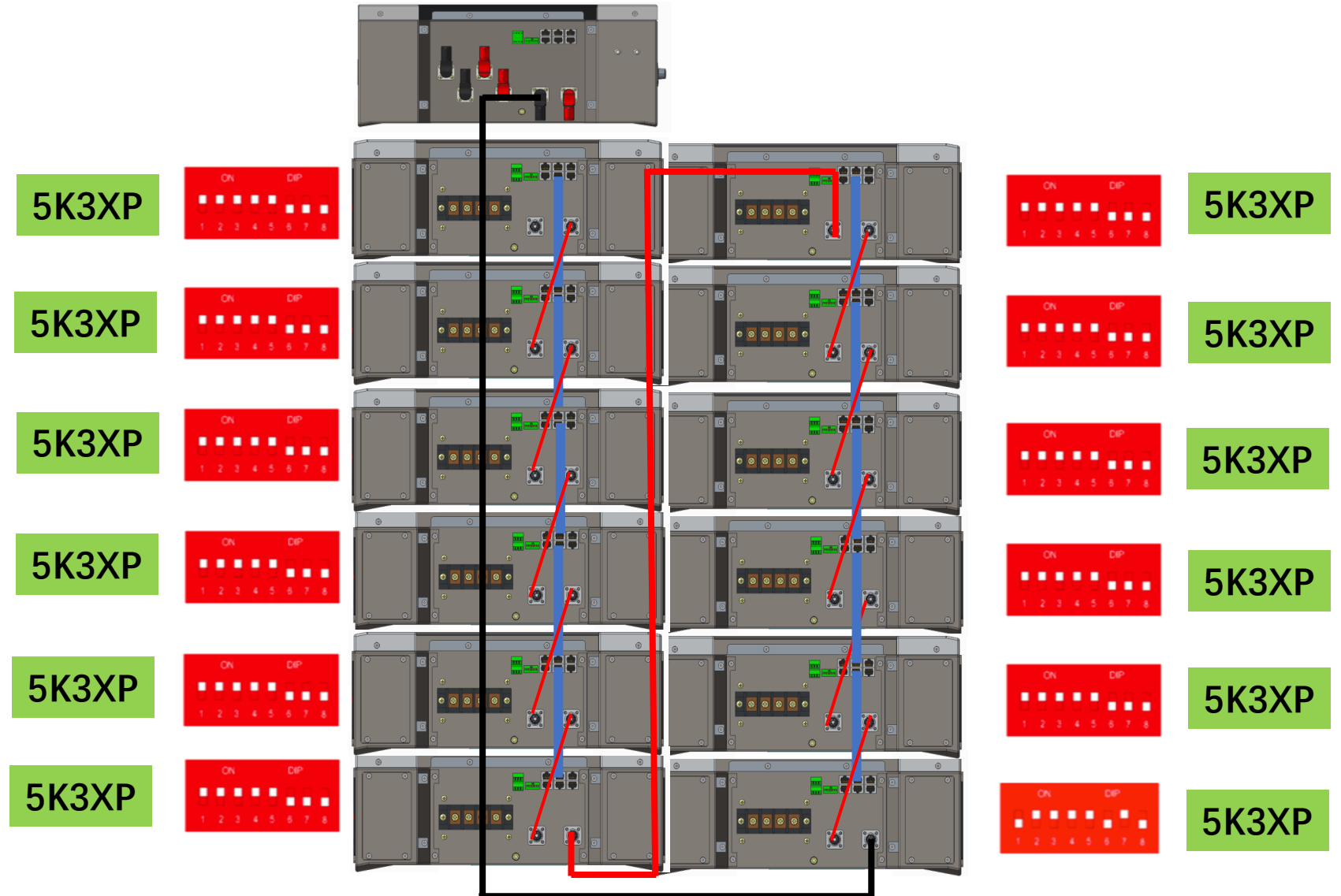
In ogni installazione LV, ricorda sempre che l'ultimo modulo DEVE avere DIP 6 ON, per abilitare la resistenza di terminazione da 120 Ω .

L'ULTIMA BATTERIA DEVE ESSERE UNA LVHV E SETTATA CON ID 06

Collegare, come di consueto, la porta RS485 B della batteria master (superiore) alla porta RS485 A della slave (inferiore).



5K3XP ALTO VOLTAGGIO





ESPANSIONE DI UN CLUSTER IN HV DI BATTERIE 5K3 LVHV con 5K3XP

ESEMPIO: 8*5K3XP + 4*5K3 LV/HV

MAX 12 MODULI HV

LE 5K3XP (Nuovo Modello) DEVONO FARE SEMPRE DA MASTER E OCCUPARE LE PRIME POSIZIONI DELLA TORRE

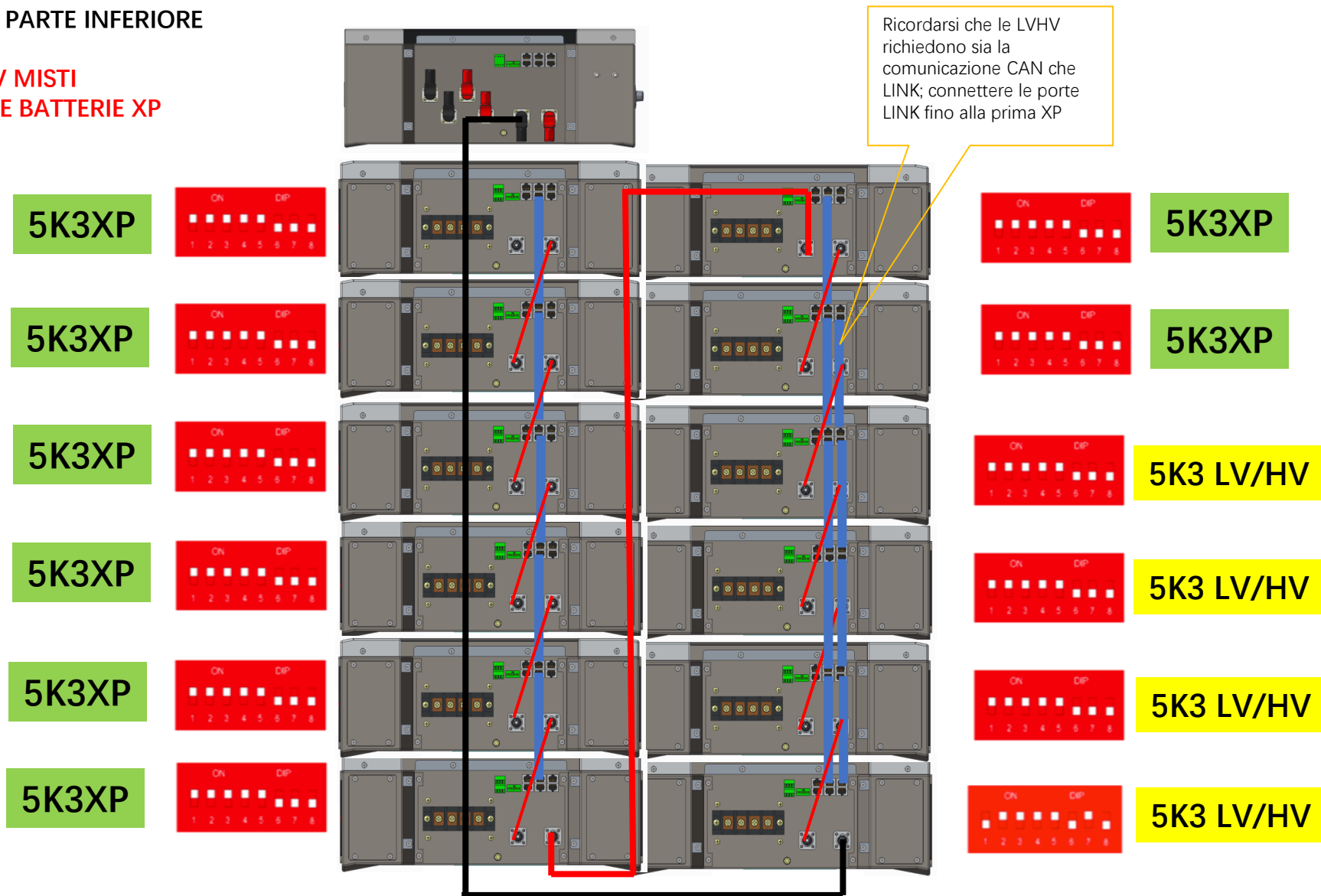
LE 5K3 LVHV DEVONO INVECE STARE NELLA PARTE INFERIORE

NON ALTERNARLE LUNGO LA TORRE

USARE SEMPRE L'HV BOX XP NEI SISTEMI HV MISTI

L'HV BOX LVHV NON È COMPATIBILE CON LE BATTERIE XP

I sistemi misti sono consentiti in caso di espansione di sistemi già esistenti.
Per le nuove installazioni usare sempre tutte batterie dello stesso modello.



5K3XP LOW VOLTAGE HUB

MASSIMO 7 CLUSTERS E 15 BATTERIE PER CLUSTER



5K3XP SET UP DI UN MULTI CLUSTER LV TRAMITE HUB LV

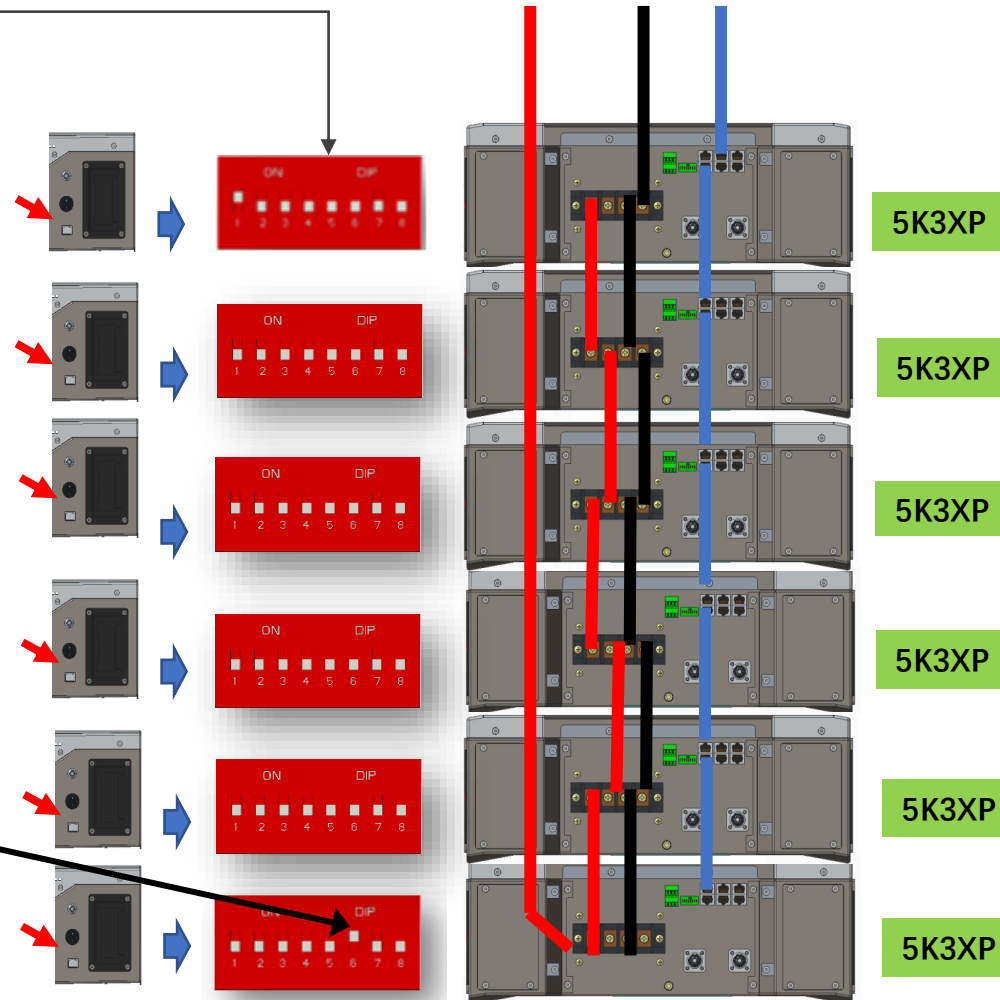
MAX 7 CLUSTERS E 15 BATTERIE PER CLUSTER

OGNI MASTER DEVE
ESSERE SETTATA CON
IL SUO CLUSTER ID
SPECIFICO PER
ESSERE RICONOSCIUTA
DALL'HUB LV



Information:

In ogni installazione LV, ricorda sempre che l'ultimo modulo DEVE avere DIP 6 ON, per abilitare la resistenza di terminazione da 120 Ω.



5K3XP SET UP DI UN MULTI CLUSTER LV TRAMITE HUB LV

MAX 7 CLUSTERS E 15 BATTERIE PER CLUSTER

Step 1: Impostare i cluster paralleli come al solito, collegare il sistema parallelo con i cavi RS485, collegare i cavi di alimentazione

Step 2: Impostare l'indirizzo del cluster sul **DIP** della batteria master per assegnare l'**ID cluster**

Step 3: Impostare l'indirizzo DIP dell'**ultima batteria** come 0000 0100 su tutti i cluster.

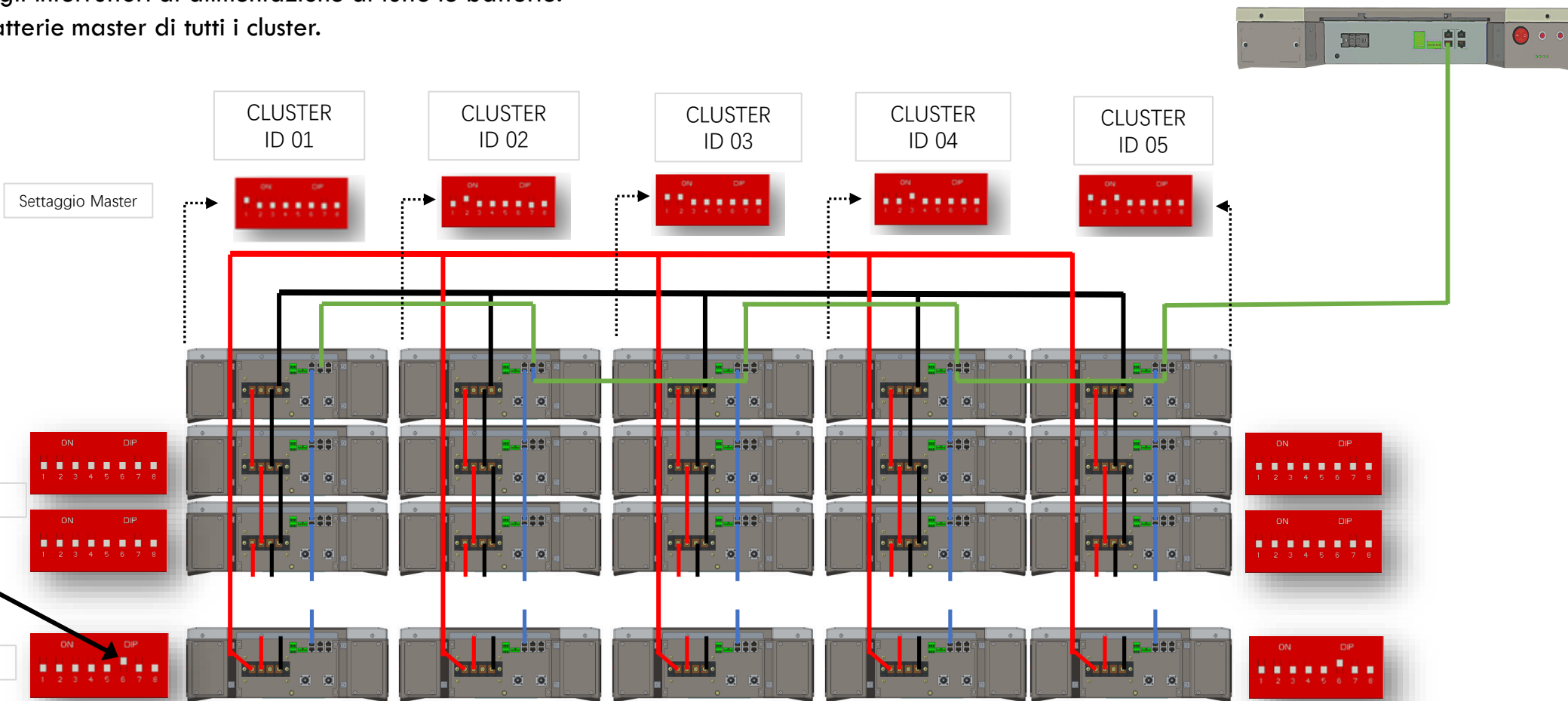
Step 4: Impostare l'indirizzo DIP di tutte le altre **batterie XP** come 0000 0000 di tutti i cluster.

Step 5: Accendere gli interruttori di alimentazione di tutte le batterie.

Step 6: Attiva le batterie master di tutti i cluster.

WEHUB Nuovo modello 2022

Information:
In ogni installazione LV,
ricorda sempre che
l'ultimo modulo DEVE
avere DIP 6 ON, per
abilitare la resistenza di
terminazione da 120 Ω.



COMPOSIZIONE DI UN SISTEMA MULTI-CLUSTERS HUB CON MODELLI MISTI 5K3 LV/HV E 5K3-XP



UN CLUSTER MISTO TRA 5K3 LV/HV E 5K3-XP È LIMITATO A **SEI** BATTERIE

5K3XP SET UP DI UN MULTI CLUSTER LV MISTO TRAMITE HUB LV

Multi cluster misto: MAX 7 CLUSTERS E 6 BATTERIE PER CLUSTER

Comporre il Cluster aggiungendo la nuova 5K3-XP come master battery sopra la torre esistente composta da moduli 5K3 LVHV

In un sistema multi-cluster misto ogni batteria master di ciascun cluster deve essere una 5K3XP

Imposta i DIP SWITCH della master del primo Cluster con ID 01

(Tutte le master dei Cluster successivi devono essere impostate con ID consecutivi)

LE MASTER 5K3XP DEVONO ESSERE SETTATE SECONDO IL CLUSTER ID

CLUSTER :

1#

2#

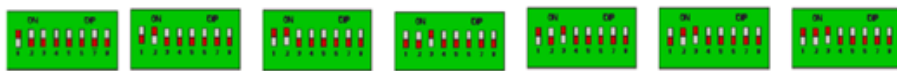
3#

4#

5#

6#

7#



LE 5K3XP INTERMEDIE VANNO SETTATE: 0000 0000

LE 5K3 LV/HV VANNO SETTATE IN BASE ALLA LORO POSIZIONE LUNGO LA TORRE COME DA MANUALE

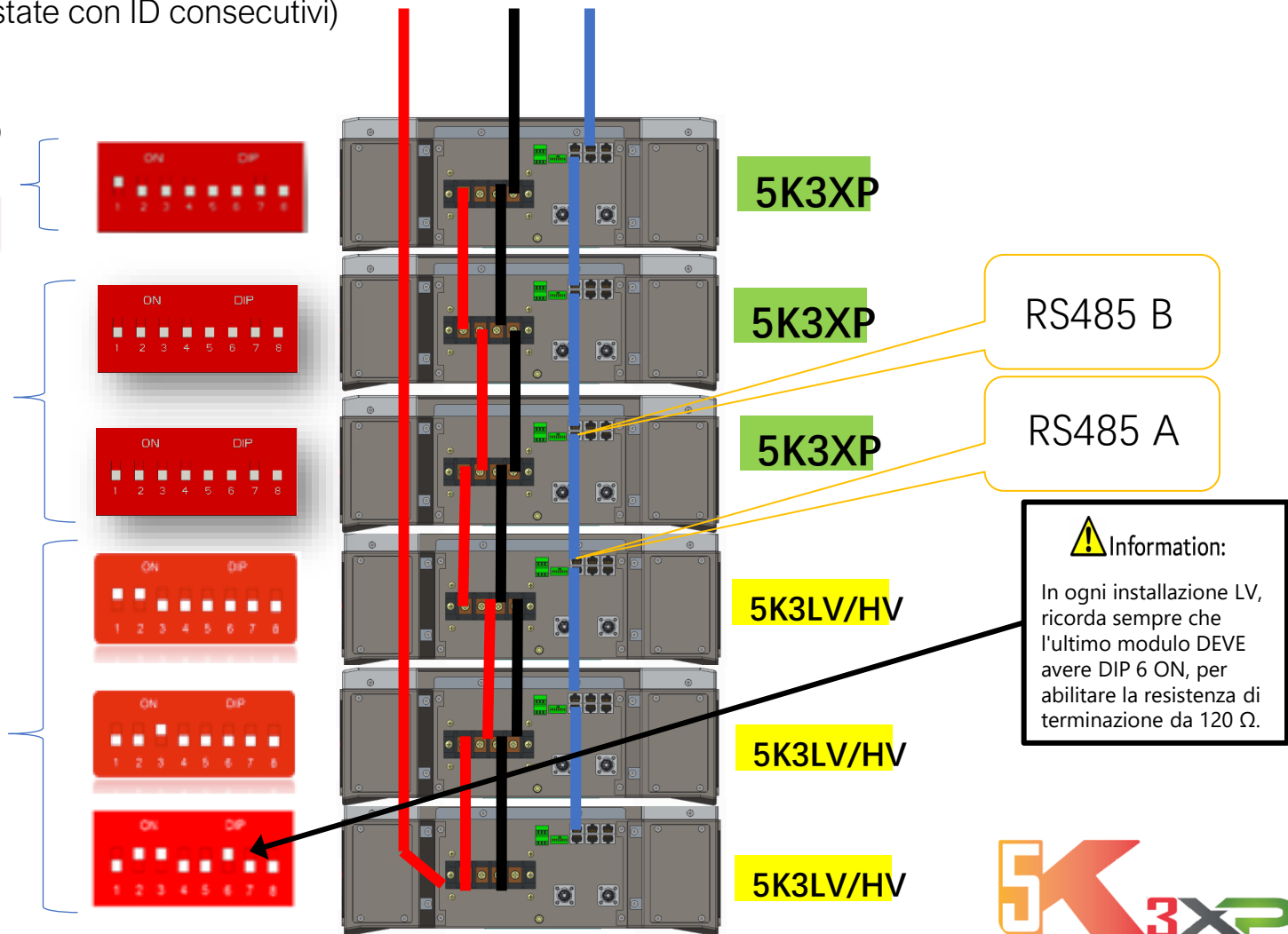
2#

3#

4#

5#

6#



5K3XP SET UP DI UN MULTI CLUSTER LV MISTO TRAMITE HUB LV

Multi cluster misto: MAX 7 CLUSTERS E 6 BATTERIE PER CLUSTER





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