## SERIAL COMMUNICATION vs. TRADITIONAL WIRING

The examples makes a quick and basic overview of some of the pros and cons between the two principles. Individual wiring between BMS and VSDs have been used for many years and will no longer be cost effective, with new technologies proven and tested.

**Note:** Some BMS- and VSD brands has an open "protocol" built in as standard, which means that serial communication can be implemented without any additional hardware costs - on the contrary.



TRADITIONAL WIRING BETWEEN BMS AND VSDs

## Comments to the above principle:

Costs for control wire:	High
Installation costs:	High and risk to make wrong connection
Space	Needed due to the many wires (cable trays)
BMS	Many I/O-ports and in case of BMS failure - VSDs will stop
Commissioning	Each VSD to be programmed individually
Information available from BMS via	Limited, one for each "connection" between BMS/VSD
the VSD	
Flexibility	Difficult to add another VSD - require complete wiring
Trouble shooting	Difficult, because of the many wires



## Comments to the above principle:

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Costs for control wire:	Low
Installation costs:	Low
Space	Limited space required
BMS	Using standard serial communication and VSDs can still run in
	case of BMS failure (as stand alone)
Commissioning	Each VSD can be programmed from BMS
Information available from BMS via	Comprehensive (e.g. energy consumption, motor temp., motor
the VSD	current, speed reference, static pressure, running hours, alarm
	and failure history etc etc)
Flexibility	Easy to add another VSD - just two wires to nearest VSD
Trouble shooting	Easy - 2 wire and details available in BMS