Van Welleman Villas

WhitePaper
1-2-3 Simplicity Control ver. 1.0

"ensuring super-safe and super-simple home-automation"

The Van Welleman Villas® 1-2-3 Simplicity Control is a combination of two -at first sight- incompatible requirements. First there is the extremely complex Industrial Automation system consisting out of many thousands of logical building blocks that are the foundation for a reliable Home Automation System. Second there is the simplicity in manipulation so that children, visitors as well as the elderly or blind people can operate the system intuitively as is the case with a traditional lighting system.

"1-2-3 Simplicity Control" is all about controlling your lights, home appliances, your residential environment and finally activating the personal protection system. All of the above with the utmost simplicity and reliability. "1-2-3 Simplicity Control" enables children, elderly, blind people but also foreign-language visitors to interact with your home automation system.

Using "tablets" and/or small panels with touch-screens as an interface for your home automation system is very tempting. However, although very fancy and high-tech they have the following major disadvantages:

- vulnerable to bugs, viruses and hackers
- not suitable for blind people or foreign languages
- do not perform well with wet hands (e.g. blood on hands)
- not reliable enough for live-threatening situations
- they age very quickly (i.e. design & economically)
- too slow & too complex for panic situations

Besides the fact that traditional Home Automation systems do not meet -by far- our security requirements (also see our WhitePaper on Industrial Automation), they are not simple enough to be used in "panic" situations. Even the simples actions we perform multiple times a day (e.g. browsing through menu's, entering ID codes, passwords etc.) become impossible under extreme stress and/or in panic situations.

That is why Van Welleman Villas® opted for 1-2-3 Simplicity Control based upon industrial automation, industrial Human Machine Interfaces with tactile switches (i.e. industrial tablets) and simple to use light-switches.

The following advantages arise out of this approach :

- user friendly and intuitive
- very simple to use, also for (foreign) visitors
- extremely stable, no "blue screens" or crashes
- works also when sitting on the ground or in heavy smoke
- works also when blind or disabled sight (no "menu's")
- optimized for use in "panic" situations
- protected against "hacking", "tasers", "burglary", "attacks"
- works also with blood and/or fat on the fingers

All of the above is done with one purpose only … ensuring the very best and safest electrical systems for our customers.

1-Button: Light_On/Light_Off/Dim

Pressing **ONE button** only, turns lights ON or OFF. If the selected light has a dimmer, then the last used DIMMER level will be used. Keeping a button pressed starts the dimmer fluctuating between 20% and 100%. Turning a light OFF, always DISCONNECTS both wires (Phase as well as Neutral) for maximum safety.

2-Button: Room_Off/Zone_Off/All_Off

Pressing **TWO buttons** simultaneously turns all lights in the room off. Keeping the two buttons pressed for an additionally 1/2 second will turn all lights in the same zone off (e.g. living & dining room & library). After an additional 1,5 seconds all lights in the house will turn off.

3-Button: Alarm/Panic/Reset

Pressing **THREE buttons** simultaneously (regardless where or when) activates the general (redundant) alarm action-plan:

1. ***LIGHTS OFF*** *to make "you" less visible*
2. ***DISTRACT*** *the "unwanted" visitors*
3. ***START*** *smoke-canon to make you invisible*
4. ***OPEN*** *the nearest escape-duct*
5. ***ACTIVATE*** *the external alarm sound*
6. ***CLOSE*** *all security curtains & doors*
7. *send* ***ALARM MESSAGE*** *to the Guards*
8. ***OPEN*** *the "listen-in" channel*
9. ***INFORM*** *neighbors & friends-list*
10. ***RAISE*** *the floor in the swimming pool*
11. ***CLOSE*** *all gas valves*
12. *turn all high-power electro devices* ***OFF***
13. *all external lights* ***ON*** *to attract attention*

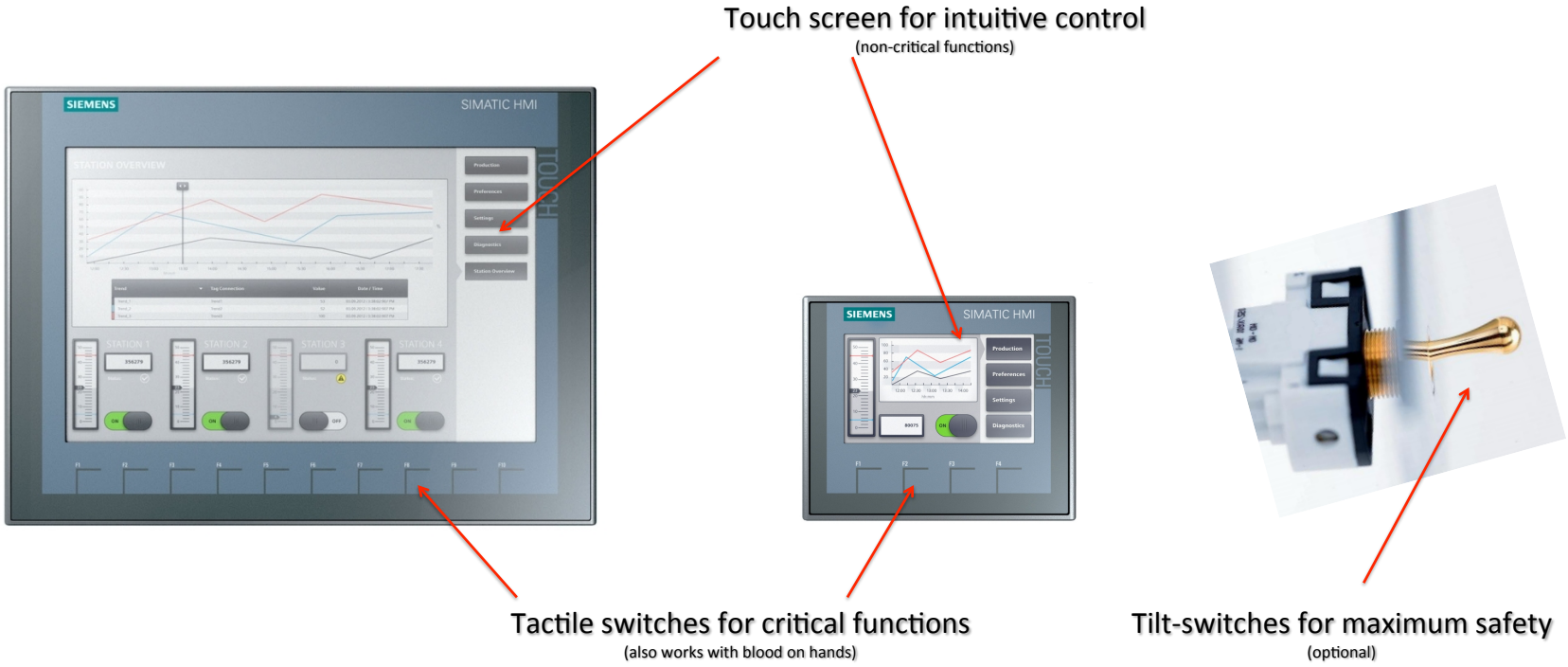

fig 1. "1-2-3 Simplicity" logic on industrial Human-Machine Interface's from Siemens.
("Total Control" units (left) for Panic Rooms and Bunker and "Basic Control" units (right) for public area's)

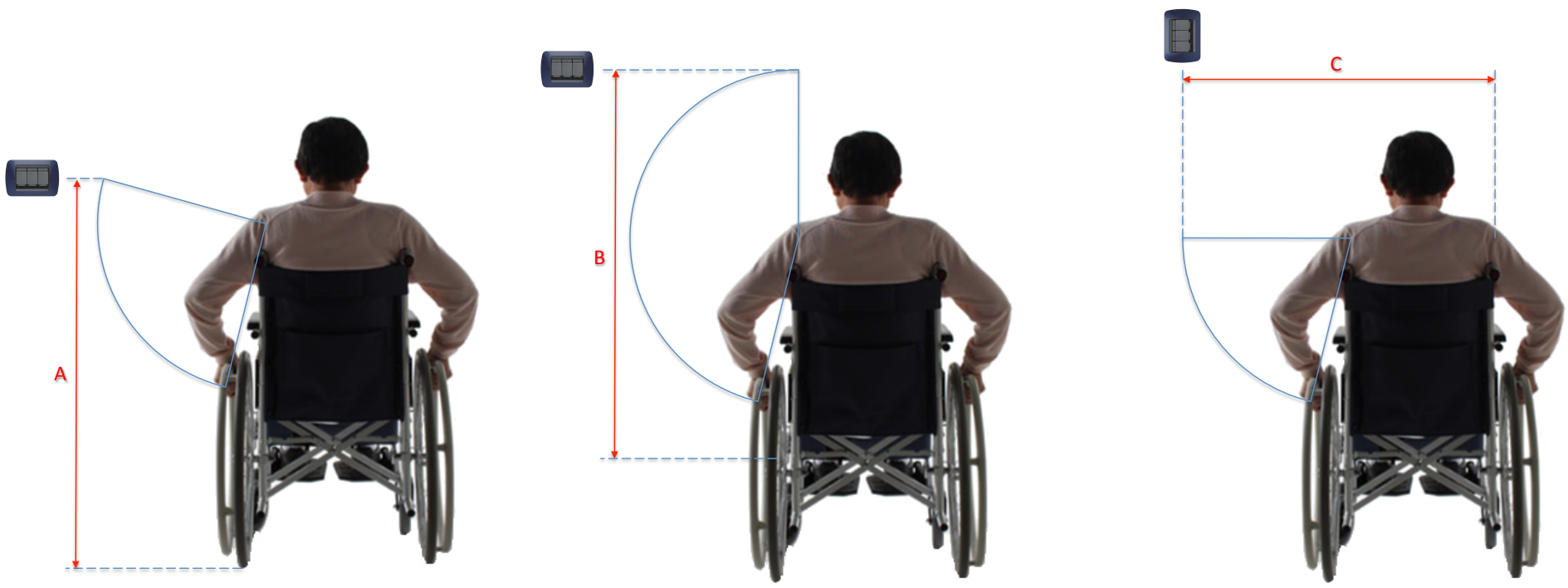

fig 2. Three dimensions are important when defining the center-height of tactile switches (i.e. 115 cm)
(required dimensions for A: in-chair, B: sitting on floor against wall, C: lying on shoulder on the floor)

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