

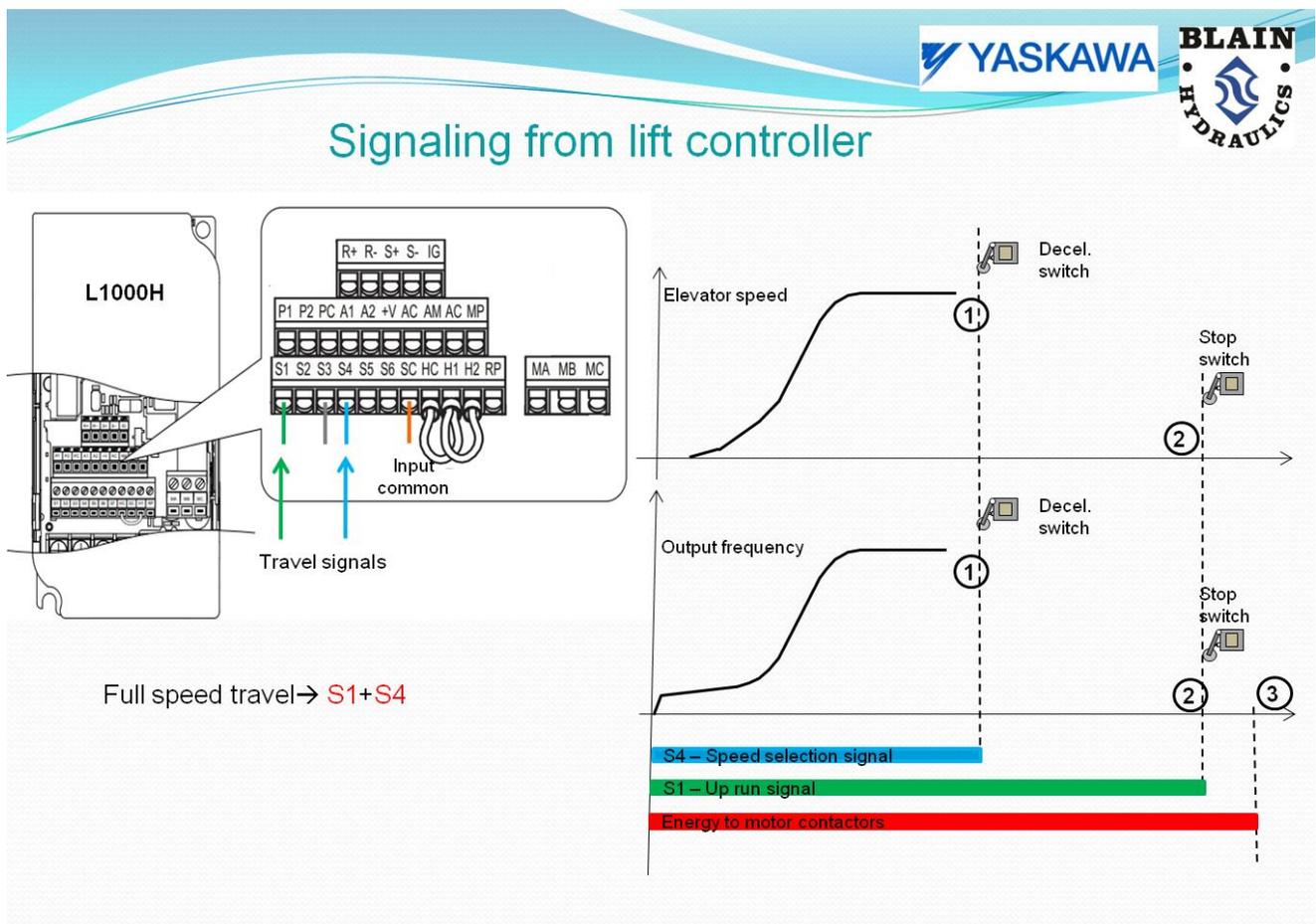
Signalling for EV4

It is very much similar than Blain's EV100 mechanical valve signalling. Existing hydraulic lift controllers can be used for EV4 with slight modifications in up signalling.

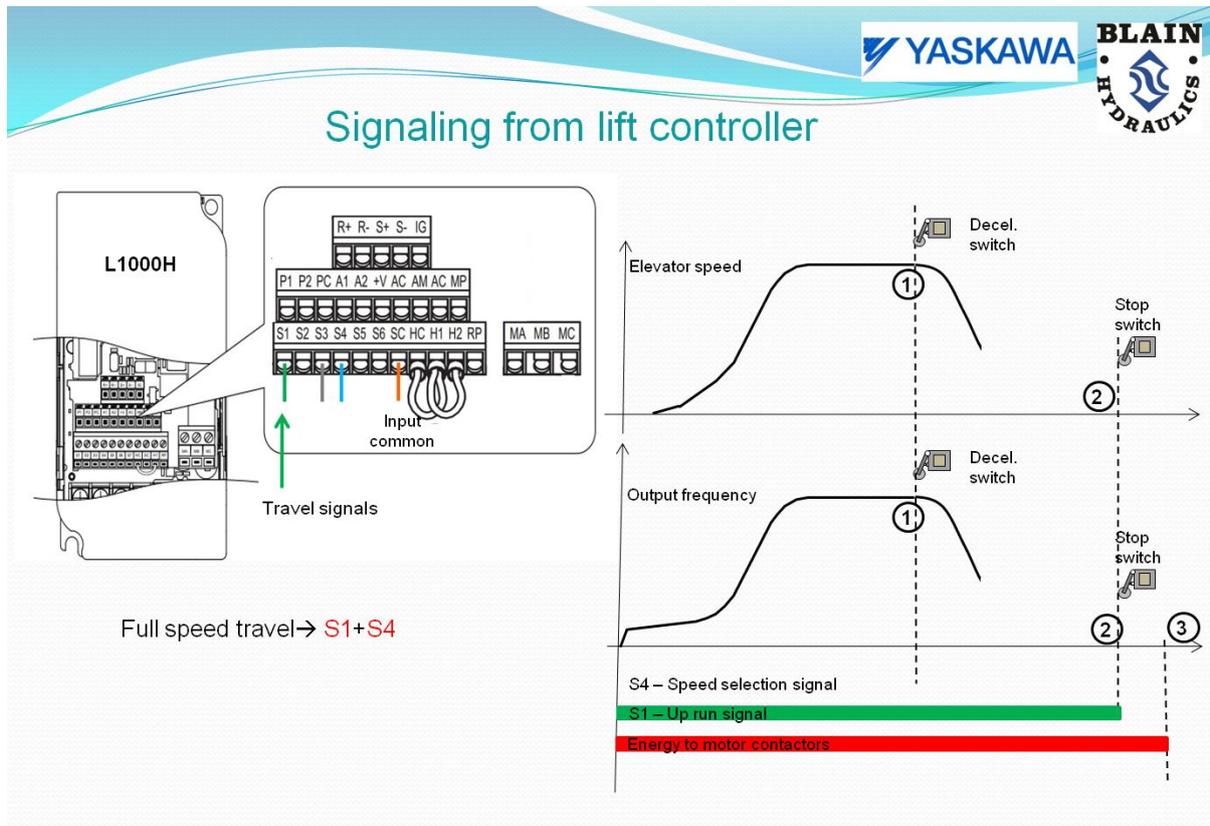
Down travel: Motor is not used for the down travel. Lift travels downwards with the gravitational force. Since down travel is mechanical with **EV4**, the down solenoid (coil) connections (**D & C**) are exactly the same as **EV100**. This means, both down coils are energized by the lift controller to initiate a nominal speed run. As the lift reaches to the deceleration switch, lift controller de-energizes the **C** coil. After that the lift decelerates to the levelling speed and travels at that speed until it reaches the stop switch. As the stop switch is reached then the lift controller de-energizes the **D** coil. For re-levelling only **D** coil is energized.

Up travel: For up travel, two signals (24Vdc) are sent to the inverter, to **S1 & S4**. Internal or external 24Vdc power supply can be used optionally. By default the drive is set to use internal power supply (see User Manual page 12, 13). The control behaviour of **S1** and **S4** signals is the same than the down travel. The supplied temperature converter should be connected to the inverter as shown in the user manual page 12 & 14. An example is given below for the nominal speed signalling.

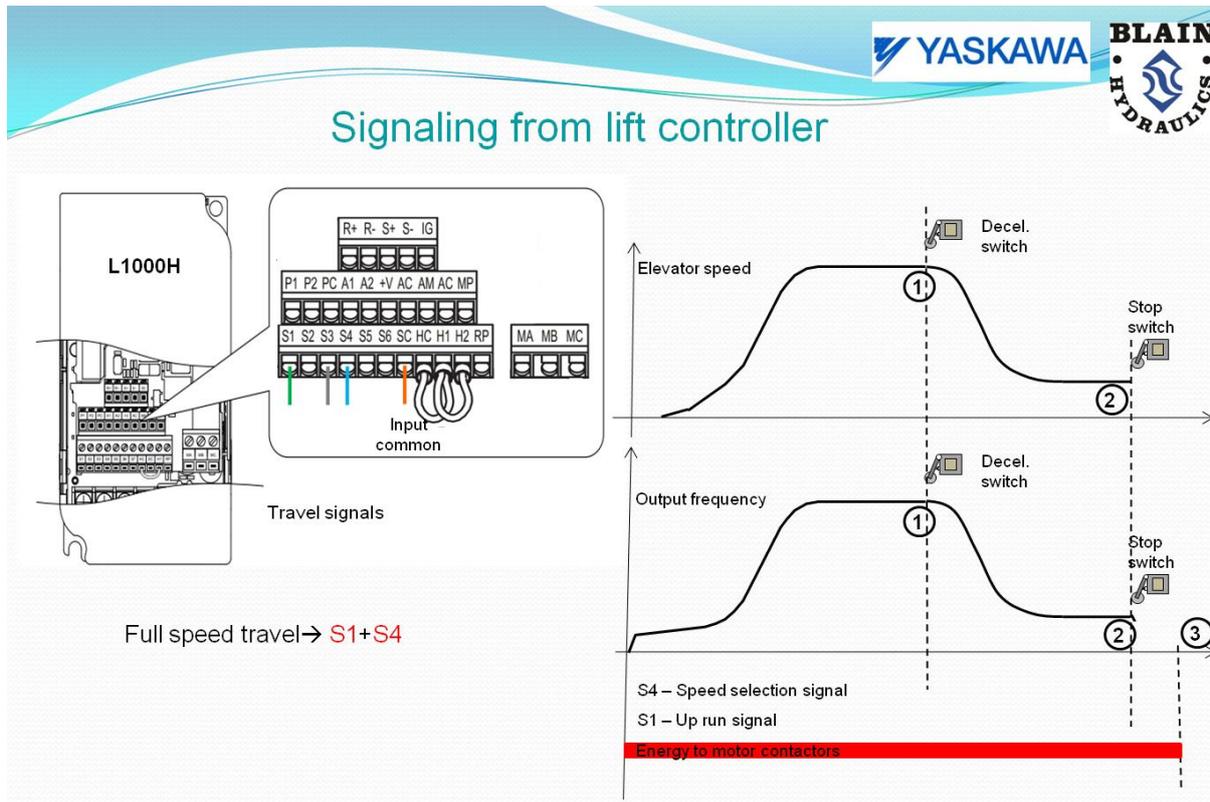
For nominal speed travel: Give **S1 & S4** signals to the inverter & energize motor contactors. Elevator will accelerate to the nominal speed.



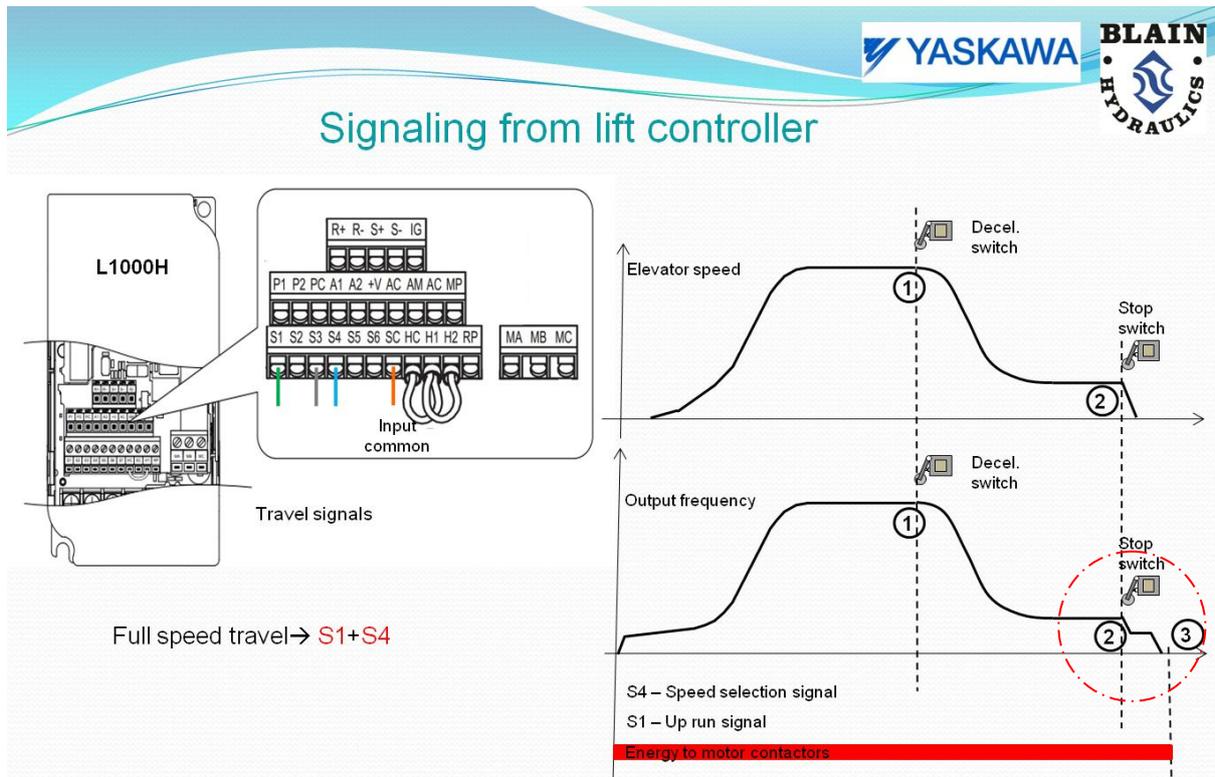
When the car reaches the deceleration switch the lift controller removes **S4** signal (speed selection signal). The car will then decelerate to the levelling speed.



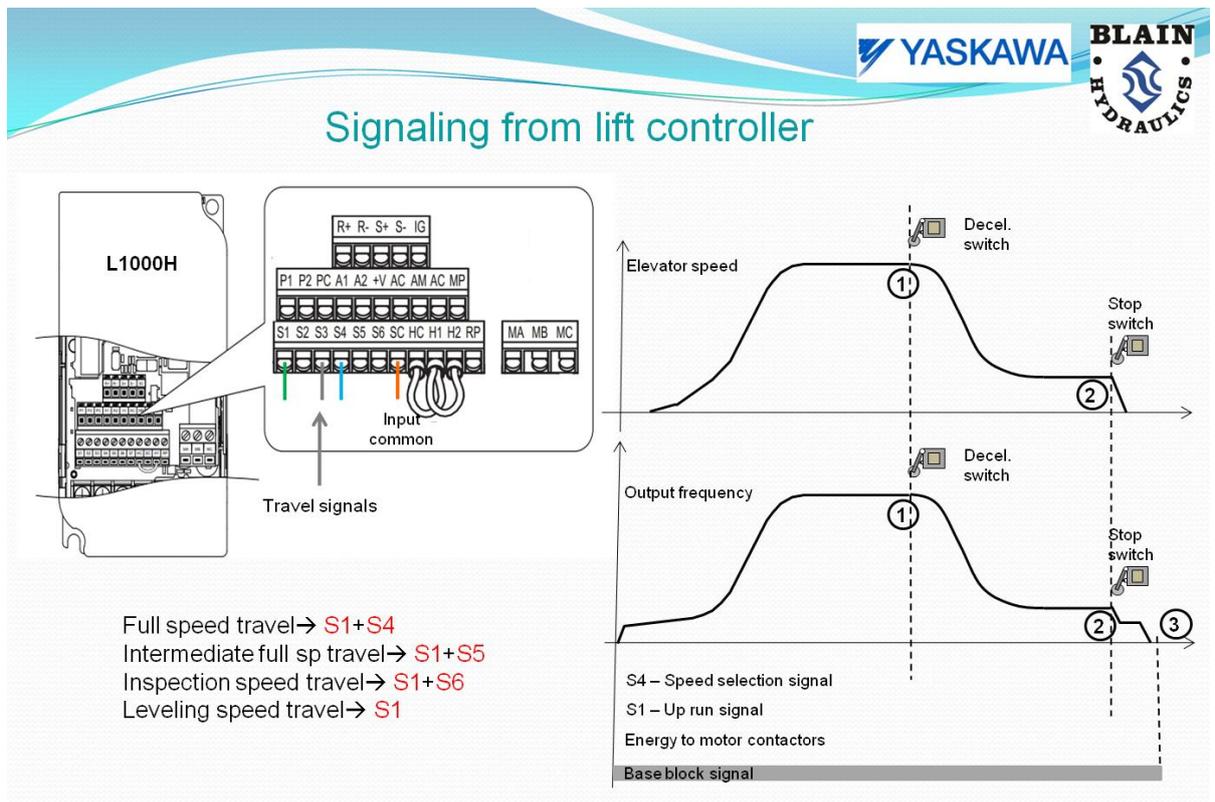
When the car reaches to the stop switch the lift controller removes **S1** signal (run signal). The drive starts to perform the stop-dwell function.



After delaying about 1s (until stop-dwell function has been executed) the lift controller de-energizes motor contactors.



After the stop-dwell function is executed, **when used**, the lift controller sends a base block signal to the **S3** port of the inverter (external failure signal, i.e., unless base-block signal is removed by the lift controller the inverter will not run).



Notes:

- 1- **S1** is the run signal. Without **S1** signal the elevator doesn't move.
- 2- When only **S1** signal is given to the inverter, the elevator travels at levelling speed.
- 3- In order to have a higher speed travel, one of the **speed selection signals** should be sent to the drive together with **S1** signal.
- 4- **S4, S5 and S6** are **speed selection signals** for nominal, intermediate & inspection speeds respectively. By choosing one of which will generate a travel at that speed. If there will be more than **one speed selections** smaller speed is executed. The lift controller is expected to send only **one speed selection signal (S4, S5 or S6)** at a time.
- 5- In up direction, motor contactors should be de-energized **1s** or **1.5s** after reaching the stop switch.