



THE LOGIC™ 24

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Simtek (UK)'s BodyLogic™ range is designed, specifically, to give greater functionality and reliability to a vehicle's electrical systems whilst at the same time reducing its physical size and complexity.

The Logic™ range allows the use of more modern switching, if preferred, and greatly simplifies the wiring, switching and control systems in the vehicle.

The complete range is built around the need to comply with vehicle type approvals (IVA ETC) and all have the option of approved immobiliser and alarms*

The BodyLogic™ range features a large number of smart but uncomplicated functions such as indicator lights "current draw learn" which allows the customer to have any combination of light types whilst retaining the light failure warning, smart daytime running light control as well as functions like customer configurable wiper intermittent control and on board approved immobiliser*. One new exciting feature is our wireless switch control allowing the use of steering-wheel-mounted switches or simply allowing the reduction of the number of hard wires needed in the system.



The BodyLogic™ range was designed so it can be incorporated into any harness design you or we can dream up. The range comes pre-configured to be used in a wiring system as a prescribed (Base model) or as a + model you were you can control the auxiliary channels as you choose. The + model also has the option of active software that allows you to use momentary switching and single buttons to activate multiple functions e.g. Single button Ignition/crank control.

The range also allows for complete customisation. The units can be configured, during manufacture, to suit your exact requirements.

The BodyLogic™ range has another trick up its sleeve, by using our wireless switch module (BodyLogic™ Smart RF), the control units can be

directly connected to a switch bank or steering wheel without the need for wires. Designed for vehicles with a number of switches mounted on the steering wheel this system can be expanded in a number of smart ways.

BODYLOGIC™ 24, 24+, 24I AND 24I+

This is the work horse in our range and is in a housing 150X210mmX55mm in dimension ABS box (machined aluminium version available).

The 24 range is ideally suited to the larger saloon/sports road car whilst being equally suited to well-equipped race and rally vehicles. With the 24's comprehensive specification there is little that can't be accomplished by using it. Its only rival is our logic 20 which betters the 24 only by its power handling capabilities.

The unit has all the functions required to control a road registered, well specified vehicle with a screen and lots of extras, it has all the necessary functions for IVA approval as well as the option to upgrade to on-board immobiliser / alarm*.

The unit incorporates all the control electronics, power switching and fuse protection in one unit and features self-resetting fusing as used by many OEM systems.

The Logic 24's physical layout is arranged so that the vehicles wiring harness could be simplified and designed in section allowing a "Dashboard harness" to be created for all the switching, gauges and other associated warning lights whilst a

"Chassis harness" could be created to cover all the powered components such as lights wipers, Fuel pump ETC. Battery power is supplied to the unit Via a M 6 power stud on the side which can be upgraded to an Amphenol RadSok™ to simplify and speed up installation in a motor sport or production environment.

THE UNIT FEATURES MANY SMART FUNCTIONS SUCH AS:

- Battery master switch input to cut ignition dead on deactivation of master switch (For motor sport applications) and fully compatible with all makes of master switch.
- Single button keyless ignition and crank
- Crank inhibit for vehicles with automatic gearboxes, Vehicles destined for export and vehicles where the risk of cranking the engine in gear is high to name but a few.
- Push to pass lights flash (Endurance racing).
- Single or multi head light unit configuration (Zenon and LED compatible)
- Indicator lights current draw Learn.
- Built in dead stop to allow the use of Any wiper motor / Wiper switch combination.
- Intermittent wiper control with customer setup to allow the adjustment of the intermittent function to suit switch type and time delay to customer preference DRL control.
- Head light wash wipe.
- Smart DRL control, Turns DRL off on the side the indicators are currently active.
- Programmable output unit, for functions such as heated screen timing, variable cooling fan / water

pump control or after run cooling system control.

- Split speed cooling fans.
- Direct Interface with wireless steering wheel switch unit (BodyLogic™ Smart RF).
- On-board Active or Passive Immobiliser*.
- On-board Active or Passive Alarm*.
- Data link for function control Via CAN.
- Electric Hand brake control (Current development).
- Electric window control (Current development).

THE BODYLOGIC™ 24 RANGE COVER ALL THE BASE FUNCTIONS.

The units are designed to have a range of fixed functions and a large amount of configurability in there off the shelf form, but the units can be tailor to an exact specification if required. This allows the less experienced customer to simply use it effectively as configured and directed or tailor it slightly to their requirements but for the professional system designer the unit can be configured to a specific requirement to simplify harness design and manufacture.



Functions covered are: -

- Side lights - Fused outputs for Left and Right
- Day Time Running Lights (DRL) with Indicator Defeat as per IVA requirements. Turns off DRL light on the side with the active indicator (Not required if DRL is outside the specified indicator area)
- Fused outputs for Left and Right
- Dipped beam - Fused outputs for Left and Right
- Main beam - Fused outputs for Left and Right
- Fog Light (With IVA compliant function)
- Auxiliary lights - Fused outputs for Left and Right
- Indicator and hazard control
- Wiper control
- Wash
- Brake lights
- Reverse lights
- Horns -Two fused outputs
- Ignition (Multiple outputs 7 or 11 dependent upon configuration)
- Fuel pumps -Two fused outputs
- Cooling fans - Two fused outputs
- Cooling fans - Low Low/High speed relay
- Batt + for Power point
- Bat + for Clock
- Bat + for Radio / Nav equipment
- Pass through fuses X 2 for special purposes.

THERE ARE FIFTEEN PRE-DEFINED CHANNELS TO BE USED FOR THE FOLLOWING:

STD 1 - Side lights - Smart outputs for Left and Right

STD 2 - DRL lights - Fused outputs for Left and Right

STD 3 - Dipped beam lights - Fused

outputs for Left and Right

STD 4 – Main beam lights – Fused outputs for Left and Right

STD 5 – Indicators Left – Smart output

STD 6 – Indicators Right – Smart output

STD 7 – Fog lights – Smart output

STD 8 – Brake Lights

STD 9 – Ignition (Run position) (Max 6 fused outputs)

STD 10 – Ignition (Aux position / EFI Out) (Max 4 fused outputs)

STD 11 – Crank – Fused output

STD 12 – Fuel pump – Two fused outputs

STD 13 – Wiper outputs – Fused outputs for Speed1 and Speed2

STD 14– Washer pump – Fused Output

STD 15 – Battery fused Out (Max 5 fused outputs)

THERE ARE ELEVEN OTHER AVAILABLE CHANNELS TO USE AS REQUIRED. WE HAVE SUGGESTED THEY BE USED AS FOLLOWS:

Spare 1 – Auxiliary Lights A – Fused outputs for Left and Right

Spare 2 – Auxiliary Lights B – Fused outputs for Left and Right

Spare 3 – Cooling Fan A,
–Cooling fan output 1 (12.5Amps)
–Cooling fan output 2 (12.5Amps)

–Combine the outputs to give 25Amps for one big fan.

Spare 5 – Change over relay – Multi use –Pin 30, 87 and 87A available. Fuse on Pin 30.

–Cooling fan speed control
–Heated screen Power control
–General purpose control

Spare 6 – Water pump

Spare 7 – Horn – Fused outputs for Left and Right

– Combine the outputs to give 25Amps for one Compressor Horn

Spare 8 – Reverse light – Fused output

Spare 9 – Interior Light / Ancillary power control

Spare 10 – AC compressor pump

Spare 11 – Heater blower – Fused output

Spare 12 – Heated rear screen

Spare 13 – Oil cooler fan

Spare 14– Dedicated High power output – (Up to 50 Amps across 3 Pins)

–Gear control compressor
–High power heated screen
–Diesel glow plugs

OTHER AVAILABLE FUNCTIONS ARE:
Auxiliary Side repeater indicators outputs

Trailer indicators and warning light support

2 X programmable I/O Channel – Its

control can be from a direct input or via a dedicated programmable control function (Programmable at Simtek) to control an output in a number of ways against the trigger or other inputs variables. (Programming is done at the Simtek)

- Heated window timer.
- Interfacing cooling fan control (Separate or piggybacked on to an existing temp sensor).
- After run cooling fan and water pump control.
- Interior light control



Park brake control (Current development).

Electric Window control (two windows) (Current development).

Bonnet & Boot lock control. (Current development).

RF Control (blip fob with control of lights for parking, and control for door locking).



Passive or active Immobiliser.

RF Control for switch functions (BodyLogic™ Smart RF).

CAN control – This can be used to either take in control inputs or to allow the unit to be used as a relay / Fuse node.



*(Under consideration for Thatcham approval)