#### Window Control function is used to control the corresponding Window DC motor that is used to Open and Close the corresponding Window.

indow behavior will be model with a 10 RED LED BAR that will be used to indicate window position and window operation indow behavior will be controlled using 10 digital outputs.

Indiow Actuation will be displayed as an animation with 500ms delay between transitions on the LED arrangement

ow Actuation will be displayed as an animation with DURING delay detection amount and a reason and a second animation of the Commission of

WindowOp is a signal that reports the Windows current Operation

WindowOp is a signal that reports the Windows current Operation.

WindowOp JUE is the value that reports that the Window is not moving.

If there is not a Window Control Actuation on the Driver Door, then ECU shall report on the CAN frame DCU\_1. WindowOp (CAN frame DCU\_2 Byte 2) as WINDOW JUE to the CAN frame DCU\_2 Byte 2) as WINDOW JUE to the CAN frame DCU\_2. WindowOp (CAN frame DCU\_2 Byte 2) as WINDOW JUE to the CAN frame DCU\_2. WindowOp (CAN frame DCU\_3 Byte 2) as WINDOW JUE to the CAN frame DCU\_3. WindowOp (CAN frame DCU\_3 Byte 2) as WINDOW JUE to the CAN frame DCU\_3. WindowOp (CAN frame DCU\_3 Byte 2) as WINDOW JUE there is not a Window Control Actuation on the Reartight Door, then ECU shall report on the CAN frame DCU\_3. WindowOp (CAN frame DCU\_4 Byte 2) as WINDOW JUE there is not a Window Control Actuation on the Reartight Door, then ECU shall report on the CAN frame DCU\_4. WindowOp (CAN frame DCU\_4 Byte 2) as WINDOW JUE to the CAN frame DCU\_5 by

or WINDOW\_POSTION (CAN frame DCU\_1 byte ()) is different than COMPLETELY\_OPEN value ((bid3) and WINDOW\_POSTION (CAN frame DCU\_1 byte ()) is different than ERROR value ((bid3), then OPEN\_WINDOW\_ACTUATION function shall be

enger boor

monowy PostriON (CAN frame DCU\_2 byte 0) is different than COMPLETELY\_OPEN value (bid2) and WINDOW\_POSTRION (CAN frame DCU\_2 byte 0) is different than ERROR value (bid3), the relation of the post of the CAN frame DCU\_2 Arriver (a) with CAN frame DCU\_2 byte 0) is different than ERROR value (bid3), the relation of the post of the CAN frame DCU\_2 byte 0) is endered as COMPLETELY open value (bid3).

The post of the

PERSONATE VIOLENT TRANSPORT OF THE PROPERTY OF

VINDOW\_ACTUATION on the RearLeft Door, then I DOW\_POSITION (CAN frame DCU\_3 Byte 0) is consi ceft Door, then ECU shall report on the CAN frame DCU\_3.WindowOp (CAN frame\_DCU\_3.BYTE 2) as WINDOW\_DOWN value (0x002).

8 Byte 0) is considered as COMPLETELY\_OPEN value (0x01) and WINDOW\_POSITION (CAN frame DCU\_3.Byte 0) is considered as ERROR value.

Restrict Door Windows, Position (CAN frame DCU, 4 Byte b) is consistence as LAMPLETEL, VERY time (plot)) and Windows, Position (CAN frame DCU, 4 Byte b) is different than ENROR value (plot)), then OPEN\_WINDOW\_ACTUATION function in the Barriagist Door.

WINDOW, ACTUATION to the Barriagist Door, then ECU and report to the CAN frame DCU, 4 Windows (plot) is more DCU, 4 Byte b) is different than ENROR value (plot)), then OPEN\_WINDOW\_ACTUATION function in the Barriagist Door, then ECU and report to the CAN frame DCU, 4 Windows (plot) is more DCU, 4 Byte b) is consistence as DEOR value (plot)), then OPEN\_WINDOW\_ACTUATION function will be sufficient to the CAN frame DCU, 4 byte b) is consistence as DEOR value (plot)), then OPEN\_WINDOW\_ACTUATION function will be sufficient to the DCU, 4 byte b) is consistence as DEOR value (plot)), then OPEN\_WINDOW\_ACTUATION function of the LED arrangement to the CAN frame DCU, 4 byte b) is consistence as DEOR value (plot)), then OPEN\_WINDOW\_ACTUATION function is described when the EDD arrangement and the DATE of the DAT

INSEPTION TO A Frame DCU\_1 Byte (9) is different than COMMATELY\_OPEN value (0x0) and WINDOW\_POSITION (CAN frame DCU\_1 Byte (9) is different than ERROR value (0x03), then GLOBAL\_OPEN\_WINDOW\_ACTUATION function shall be executed there is a GLOBAL\_OPEN\_WINDOW\_ACTUATION on the Driver Down, then CLU shall report on the CAN frame DCU\_1. Mindows (CAN frame DCU\_1 Byte (9) is considered as COMMATELY\_OPEN value (0x02). There Down WINDOW\_ACTUATION on the Driver Down WINDOW\_DOWN Value (0x02). The CAN FRAME CONTROL (1) Byte (9) is considered as COMMATELY\_OPEN value (0x01). The GLOBAL\_OPEN\_WINDOW\_ACTUATION to the Driver Down WINDOW\_DOWN Value (0x02). The CAN FRAME CONTROL (1) Byte (9) is different than ERROR value (0x02). The CAN FRAME CONTROL (1) Byte (9) is different than ERROR value (0x02). The CAN FRAME CONTROL (1) Byte (9) is different than ERROR value (0x02). The CAN FRAME CONTROL (1) Byte (9) is different than ERROR value (0x02). The CAN FRAME CONTROL (1) Byte (9) is different than ERROR value (0x02). The CAN FRAME CONTROL (1) Byte (9) is different than ERROR value (0x02). The CAN FRAME CONTROL (1) Byte (9) is different than ERROR value (0x02). The CAN FRAME CONTROL (1) Byte (9) is different than ERROR value (0x02). The CAN FRAME CONTROL (1) Byte (9) is different than ERROR value (0x02). The CAN FRAME CONTROL (1) Byte (9) is different than ERROR value (0x02). The CAN FRAME CONTROL (1) Byte (9) is different than ERROR value (0x02). The CAN FRAME CONTROL (1) Byte (

r WINDOW\_POSITION (CAN frame DCU\_2 Byte 0) is considered as COMPLETELY\_OPEN value (0x01), then GLOBAL\_OPEN\_WINDOW\_ACTUATION fu

n ERROR value (0x03), then GLOBAL\_OPEN\_WINDOW\_ACTUATION function

artleft Boor 
MINDOW\_POSITION (CAN frame DCU\_3 Byte 0) is different than COMPLETLY\_OPEN value (0.01) and WINDOW\_POSITION (CAN frame DCU\_3 Byte 0) is different than ERROR value
here is a GLOBAL\_OPEN\_WINDOW\_ACTUATION on the Resulted Boor, then ECU shall report on the CAN frame DCU\_3 MindowOp(CAN frame DCU\_3 Byte) is 0.000W value (0.02).
here is a GLOBAL\_OPEN\_WINDOW\_ACTUATION on the Resulted Boor, then ECU shall report on the CAN frame DCU\_3 Byte 0) is considered as COMPLITELY\_OPEN value (0.01).
here is a GLOBAL\_OPEN\_WINDOW\_ACTUATION in the Incident Shall be in the In

It serright Door WINDOW\_POSTION (CAN frame DC)\_4. Spt-cills different than COMPLETEX\_OPEN value (Dold) and WINDOW\_POSTION (CAN frame DC)\_4. Spt-cills different than ERROR value (Dold), then GLOBAL\_OPEN\_WINDOW\_ACTUATION function shall be execute (finer is a GLOBAL\_OPEN\_WINDOW\_ACTUATION on the Rearright Door, then ECLI shall report on the CaN frame DC)\_4. A Window-Op(CAN frame DC)\_4. Spt-cills different than ERROR value (Dol3), then GLOBAL\_OPEN\_WINDOW\_ACTUATION on the Rearright Door, then ECLI shall report on the CaN frame DC)\_4. Spt-cills different than ERROR value (Dol3), then GLOBAL\_OPEN\_WINDOW\_ACTUATION on the Searright Door, then ECLI shall report on the CaN frame DC)\_4. Spt-cills different than ERROR value (Dol3), then GLOBAL\_OPEN\_WINDOW\_ACTUATION (AN frame DC)\_4. Spt-cills different than ERROR value (Dol3), then GLOBAL\_OPEN\_WINDOW\_ACTUATION (AN frame DC)\_4. Spt-cills different than ERROR value (Dol3), then GLOBAL\_OPEN\_WINDOW\_ACTUATION (AN frame DC)\_4. Spt-cills different than ERROR value (Dol3), then GLOBAL\_OPEN\_WINDOW\_ACTUATION (AN frame DC)\_4. Spt-cills different than ERROR value (Dol3), then GLOBAL\_OPEN\_WINDOW\_ACTUATION (AN frame DC)\_4. Spt-cills different than ERROR value (Dol3), then GLOBAL\_OPEN\_WINDOW\_ACTUATION (AN frame DC)\_4. Spt-cills different than ERROR value (Dol3), then GLOBAL\_OPEN\_WINDOW\_ACTUATION (AN frame DC)\_4. Spt-cills different than ERROR value (Dol3), then GLOBAL\_OPEN\_WINDOW\_ACTUATION (AN frame DC)\_4. Spt-cills different than ERROR value (Dol3), then GLOBAL\_OPEN\_WINDOW\_ACTUATION (AN frame DC)\_4. Spt-cills different than ERROR value (Dol3), then GLOBAL\_OPEN\_WINDOW\_ACTUATION (Dol4). Spt-cills different than ERROR value (Dol3), then GLOBAL\_OPEN\_WINDOW\_ACTUATION (Dol4). Spt-cills different than ERROR value (Dol3), then GLOBAL\_OPEN\_WINDOW\_ACTUATION (Dol4). Spt-cills different than ERROR value (Dol3), then GLOBAL\_OPEN\_WINDOW\_ACTUATION (Dol4). Spt-cills different than ERROR value (Dol3), then GLOBAL\_OPEN\_WINDOW\_ACTUATION (Dol4). Spt-cills different than ERROR value (Dol3), then GLOBAL\_OPEN\_WI

There for WNDOW\_POSTION (CN frame DCU 1 Syte 0) is different than COMPLETELY\_CLOSE value (bid2) and WNDOW\_POSTION (CN frame DCU 1 Syte 0) is different than EBROR value (bid3), then CLOSE\_WNDOW\_ACTUATION function shall be executed there is a CLOSE\_WNDOW\_ACTUATION on the Driver Door, then ECU shall report on the CN frame DCU 1 Syte 0) is considered as EBROR value (bid3), then CLOSE\_WNDOW\_ACTUATION function shall be executed there is a CLOSE\_WNDOW\_POSTION (CN frame DCU 1 Syte 0) is considered as EBROR value (bid3), then CLOSE\_WNDOW\_ACTUATION function shall stop.

The CN WNDOW\_POSTION (CN frame DCU 1 Syte 0) is considered as EBROR value (bid3), then CLOSE\_WNDOW\_ACTUATION function shall stop.

Something the CN System of the CN System Syste

steeps Door
steeps Door MONOW, POSITION (CAN frame DCU\_2 byte 0); a different than COMPLETEY\_CLOSE value ((bid2); and WINDOW\_POSITION (CAN frame DCU\_2 byte 0); a different than ERBOR value ((bid2); then CLOSE\_WINDOW\_ACTUATION function shall be ore in a CLOSE\_WINDOW\_ACTUATION function shall stee the considered as CLOSE\_WINDOW\_ACTUATION function shall stee.

\*\*TOTAL CLOSE\_WINDOW\_ACTUATION function shall be ore in a CLOSE\_WINDOW\_ACTUATION function shall stee the considered as CLOSE\_WINDOW\_ACTUATION function shall

sertified book

Are using those with those the second of t

recommendation of the Control of the

Passenger Door "MINDOW\_POSITION (Frame DCU\_2 Syste 0) is different than COMPLETEY\_CLOSE value (0x02) and WINDOW\_POSITION (CAN frame DCU\_2 Syste 0) is different than ERRON value (0x03), then GLOBAL\_CLOSE\_WINDOW\_ACTUATION function shall be executed. If there is a GLOBAL\_CLOSE\_WINDOW\_ACTUATION in the Passenger Door, then ECU 3 bit (9x on considered as COMPLITEY\_CLOSE value (0x03), then GLOBAL\_CLOSE\_WINDOW\_ACTUATION (and the passenger Door, then ECU 3 bit (9x on considered as COMPLITEY\_CLOSE value (0x03), then GLOBAL\_CLOSE\_WINDOW\_ACTUATION (and then COMPLITEY\_CLOSE value (0x03), then GLOBAL\_CLOSE\_WINDOW\_ACTUATION (and then COMPLITEY\_CLOSE value (0x02) and WINDOW\_POSITION (CAN frame DCU\_3 Syste 0) is different than ERRON value (0x03), then GLOBAL\_CLOSE\_WINDOW\_ACTUATION function shall be executed.

here is a GLOBAL\_CLOSE\_WINDOW\_ACTUATION on the RearLeft Door, then ECU shall report on the CAN frame DCU\_3.WindowOp (CAN frame DCU\_3 BYTE 2) as WINDOW\_UP value (0x01).

RearLeft Door WINDOW\_POSITION (CAN frame DCU\_3 Byte 0) is considered as COMPLETELY\_CLOSE value (0x02), then GLOBAL\_CLOSE\_WINDOW\_ACTUATION function shall stop.

whight bow
entingth Door
window POSITION (CAN frame DCU\_4 byte 0) is different than COMPLETELY CLOSE value (bid2) and Windows POSITION (CAN frame DCU\_4 byte 0) is different than EBRON value (bid3), then GLOBAL\_CLOSE\_WINDOW\_ACTUATION function shall be executed nee is a GLOBAL\_CLOSE\_WINDOW\_ACTUATION on the Rearright Door, then ECU\_4 bit frame DCU\_4 windows (p) (CN frame DCU\_4 byte 0) is different than EBRON value (bid3), then GLOBAL\_CLOSE\_WINDOW\_ACTUATION not be Rearright Door. Then ECU\_4 bit frame DCU\_4 byte 0) is different than EBRON value (bid3), then GLOBAL\_CLOSE\_WINDOW\_ACTUATION not be Rearright Door.

\*\*TOTAL CLOSE\_WINDOW\_ACTUATION on the Rearright Door, then ECU\_4 bit frame DCU\_4 byte 0) is different than EBRON value (bid3), then GLOBAL\_CLOSE\_WINDOW\_ACTUATION not be rearright Door.

\*\*TOTAL CLOSE\_WINDOW\_ACTUATION on the Rearright Door, then ECU\_4 bit frame DCU\_4 byte 0) is different than EBRON value (bid3), then GLOBAL\_CLOSE\_WINDOW\_ACTUATION not be rearright Door.

\*\*TOTAL CLOSE\_WINDOW\_ACTUATION on the Rearright Door, then ECU\_4 bit frame DCU\_4 byte 0) is different than EBRON value (bid3), then GLOBAL\_CLOSE\_WINDOW\_ACTUATION not be rearright Door.

\*\*TOTAL CLOSE\_WINDOW\_ACTUATION on the Rearright Door, then ECU\_4 bit frame DCU\_4 byte 0) is different than EBRON value (bid3), then GLOBAL\_CLOSE\_WINDOW\_ACTUATION not be rearright Door.

\*\*TOTAL CLOSE\_WINDOW\_ACTUATION on the Rearright Door, then ECU\_4 byte 0) is different than EBRON value (bid3), then GLOBAL\_CLOSE\_WINDOW\_ACTUATION not be rearright Door.

\*\*TOTAL CLOSE\_WINDOW\_ACTUATION on the Rearright Door.

\*\*TOTAL CLOSE\_WINDOW\_ACT

There is a Window Control Actuation On Going on the Driver Door, then CANCEL\_WINDOW\_ACTUATION can be executed to abort current actuation.

CANCEL\_WINDOW\_ACTUATION on the Driver Door, then ECU shall report on the CAN frame DCU\_1.WindowOp (CAN frame DCU\_1 BYTE 2) as WINDOW\_IDLE value ((

s a CANCEL WINDOW, ACTUATION in the Passenger Door, then ECU shall report on the CAN frame DCU 2.WindowOp (CAN frame DCU 2.8YTE 2) as WINDOW DLE value (0x0)

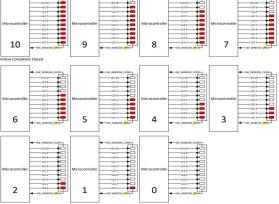
oor
There is a Window Control Actuation On Going on the Rearleft Door, then CANCEL\_WINDOW\_ACTUATION can be executed to abort current actuation.

CANCEL\_WINDOW\_ACTUATION on the Rearleft Door, then ECU shall report on the CAN frame DCU\_3.WindowOp (CAN frame DCU\_3 BYTE 2) as WINDOW\_IDLE value (0x00)

regist Loop.

When there is a Window Control Actuation On Going on the RearRight Door, then CANCEL\_WINDOW\_ACTUATION can be executed to abort current actuation.

Ter is a CANCEL\_WINDOW\_ACTUATION on the RearRight Door, then ECU shall report on the CAN frame DCU\_4.WindowOp (CAN frame DCU\_4.8 VITE 2) as WINDOW\_IDLE value ((bo0)).



#### Manual Mode

ors are allowed to execute manual Window Control from its corresponding OPEN\_BTN and CLOSE\_BTN states.

owControl is signal used to control other Door Control Modules on the network. INDOW NO REQ is the value that indicates No Window Request. WINDOW UP REQ is the value that indicates Window Close INDOW\_DOWN\_REQ is the value that indicates Window Open arWindowLock is a signal that reports the status to block the Window Control operation for Rear Windows. REAR\_WINDOW\_UNBLOCK is the value that indicates that Rear Windows are allowed to operate. REAR\_WINDOW\_BLOCK is the value that indicates that Rear Windows shall not operate.

Button Configuration DID 0111. StuckBtnCfg resolution is 10 ms DID 0111. StuckBtnCfg default value is 1000 (10 000ms) DID 0111. LongBtnCfg resolution is 10 ms. DID\_0111. LongBtnCfg default value is 50 (500 ms)

Button HW Diagnostics ered as STUCK, the corresponding DTC for Driver Door – Window Control Buttons Error shall be set as DTC: 0x901100 If Button is considered as STUCK, the corresponding DTC for Passenger Door – Window Control Buttons Error Detected shall be set as DTC: 0x902100.
If Button is considered as STUCK, the corresponding DTC for RearRight Door – Window Control Buttons Error Detected shall be set as DTC: 0x903100. If Button is considered as STUCK, the corresponding DTC for Reartight Door – Window Control Buttons Error Detected shall be set as DTC: 0x004100.

Door Looking Buttons Error

To Detected shall be set as DTC: 0x004100. utton is considered as STUCK, the corresponding DTC for Driver Door – Door Locking Buttons Error shall be set as DTC: 0x901200. considered as STUCK, the corresponding DTC for Passenger Door – Door Locking Buttons Error shall be set as DTC: 0x902200. If BUTTONS are no longer considered as Stuck, then the corresponding DTC shall be clear. utton transitions from BTN\_NOT\_PRESSED to BTN\_PRESSED and BTN\_NOT\_PRESSED within a time <= 500 milliseconds, then it shall be considered as a SHORT\_BTN\_PRESS. the OPEN RTN state on Driver Door is equal to SHORT RTN PRESS, then Driver Door shall execute OPEN WINDOW ACTUATION ine OPE\_0 in state on interestors a equal as anotat\_on in Practs, intel birter book state receivable over invitation in state on invitation in equal as a consistence over invitation in the OPE\_0 BT state on RearteR Door is equal to SHORT\_BTN\_PRSS and DCU\_1.ReartWindowLock\_(CAN frame DCU\_1 Byte 3) is equal to REAR\_WINDOW\_UNBLOCK value (0x00), then RearteR Door shall execute OPEN\_WINDOW\_ACTUATION. te OPEN\_BTN state on RearRight Door is equal to SHORT\_BTN\_PRESS and DCU\_1.RearWindowLock (CAN frame DCU\_1 Byte 3) is equal to REAR\_WINDOW\_UNBLOCK value (0x00), then RearRight Door shall execute OPEN\_WINDOW\_ACTUATION the CLOSE\_BTN state on Driver Door is equal to SHORT\_BTN\_PRESS, then Driver Door shall execute CLOSE\_WINDOW\_ACTUATION.
the CLOSE\_BTN state on Passenger Door is equal to SHORT\_BTN\_PRESS, then Passenger Door shall execute CLOSE\_WINDOW\_ACTUATION. the CLOSE\_ENVIATE on Passanger Door is equal to SHORT\_ENT\_PRESS, then Passanger Door shall execute CLOSE\_WINDOW\_ACTUATION.

The CLOSE\_ENVIATE on Passanger Door is equal to SHORT\_ENT\_PRESS, and DOU\_L Review (Door is not pressed to EARLY WINDOW\_LINBLOCK value (0x00), then Rearlight Door is equal to SHORT\_ENT\_PRESS and DOU\_L Review (not pressed to EARLY WINDOW\_LINBLOCK value (0x00), then Rearlight Door is equal to SHORT\_ENT\_PRESS and DOU\_L Review (not pressed to EARLY WINDOW\_LINBLOCK value (0x00), then Rearlight Door is equal to SHORT\_ENT\_PRESS and DOU\_L Review (not pressed to EARLY WINDOW\_LINBLOCK value (0x00), then Rearlight Door is equal to SHORT\_ENT\_PRESS and DOU\_L Review (not pressed to EARLY WINDOW\_LINBLOCK value (0x00), then Rearlight Door is equal to SHORT\_ENT\_PRESS and DOU\_L Review (not pressed to EARLY WINDOW\_LINBLOCK value (0x00), then Rearlight Door is equal to SHORT\_ENT\_PRESS and DOU\_L Review (not pressed to EARLY WINDOW\_LINBLOCK value (0x00), then Rearlight Door is equal to SHORT\_ENT\_PRESS and DOU\_L Review (not pressed to EARLY WINDOW\_LINBLOCK value (0x00)). The Passanger (0x00) is the Review (0x00) in the Rearlight Door is equal to SHORT\_ENT\_PRESS and DOU\_L Review (not pressed to EARLY WINDOW\_LINBLOCK value (0x00)). The Review (0x00) is the Review (0x00) in Button transitions from BTN\_NOT\_PRESSED to BTN\_PRESSED and BTN\_NOT\_PRESSED within a time > 500 milliseconds and <= 10 000 milliseconds, then it shall be considered as a LONG\_BTN\_PRESSED. the OPEN\_ETN state on Driver Door is equal to LONG\_ETN\_PRESS, then Driver Door shall execute GLOBAL\_OPEN\_WINDOW\_ACTUATION.

the OPEN\_ETN state on Passenger Door is equal to LONG\_ETN\_PRESS, then Passenger Door shall execute GLOBAL\_OPEN\_WINDOW\_ACTUATION.

the OPEN\_ETN state on Passenger Door is equal to LONG\_ETN\_PRESS, then Passenger Door shall execute GLOBAL\_OPEN\_WINDOW\_ACTUATION.

THE OPEN\_ETN state on Passenger Door is equal to LONG\_ETN\_PRESS, then Davisor Door is all execute GLOBAL\_OPEN\_WINDOW\_ACTUATION.

THE OPEN\_ETN state on Driver Door is equal to LONG\_ETN\_PRESS.

THE OPEN\_ETN state on Driver Door is equal to LONG\_ETN\_PRESS.

THE OPEN\_ETN state on Driver Door is equal to LONG\_ETN\_PRESS.

THE OPEN\_ETN state on Driver Door is equal to LONG\_ETN\_PRESS.

THE OPEN\_ETN state on Driver Door is equal to LONG\_ETN\_PRESS.

THE OPEN\_ETN state on Driver Door is equal to LONG\_ETN\_PRESS.

THE OPEN\_ETN state on Driver Door is equal to LONG\_ETN\_PRESS.

THE OPEN\_ETN state on Driver Door is equal to LONG\_ETN\_PRESS.

THE OPEN\_ETN state on Driver Door is equal to LONG\_ETN\_PRESS.

THE OPEN\_ETN state on Driver Door is equal to LONG\_ETN\_PRESS.

THE OPEN\_ETN state on Driver Door is equal to LONG\_ETN\_PRESS.

THE OPEN\_ETN state on Driver Door is equal to LONG\_ETN\_PRESS.

THE OPEN\_ETN state on Driver Door is equal to LONG\_ETN\_PRESS.

THE OPEN\_ETN state on Driver Door is equal to LONG\_ETN\_PRESS.

THE OPEN\_ETN state on Driver Door is equal to LONG\_ETN\_PRESS.

THE OPEN\_ETN state on Driver Door is equal to LONG\_ETN\_PRESS.

THE OPEN\_ETN state on Driver Door is equal to LONG\_ETN\_PRESS.

THE OPEN\_ETN state on Driver Door is equal to LONG\_ETN\_PRESS.

THE OPEN\_ETN state on Driver Door is equal to LONG\_ETN\_PRESS.

THE OPEN\_ETN state on Driver Door is equal to LONG\_ETN\_PRESS.

THE OPEN\_ETN state on Driver Door is equal to LONG\_ETN\_PRESS.

THE OPEN\_ETN state on Driver Door is equal to LONG\_ETN\_PRESS.

THE OPEN\_ETN state on Driver Door is equal to LONG\_ETN\_PRESS.

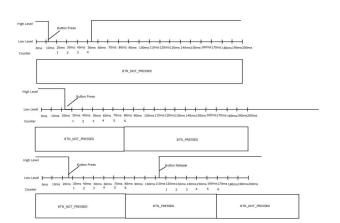
THE OPEN\_ETN state on Driver Door is equal to LONG\_ETN\_PRESS.

THE OPEN\_ETN state on If the OPEN BTN state on RearRight Door is equal to LONG BTN PRESS and DCU 1.RearWindowLock (CAN frame DCU 1 Byte 3) is equal to REAR\_WINDOW\_UNBLOCK value (0x00), then RearRightDoor shall execute GLOBAL\_OPEN\_WINDOW\_ACTUATION. the CLOSE\_BTN state on Driver Door is equal to LONG\_BTN\_PRESS, then Driver Door shall execute GLOBAL\_CLOSE\_WINDOW\_ACTUATION.

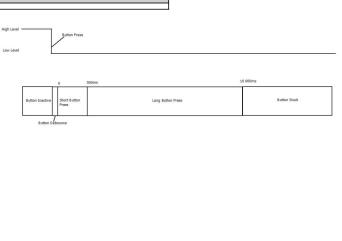
the CLOSE\_BTN state on Passenger Door is equal to LONG\_BTN\_PRESS, then Passenger Door shall execute GLOBAL\_CLOSE\_WINDOW\_ACTUATION. the CLOSE\_BTN state on RearLeft Door is equal to LONG\_BTN\_PRESS and DCU\_1.RearWindowLock (CAN frame DCU\_1 Byte 3) is equal to REAR\_WINDOW\_UNBLOCK value (0x00), then RearLeft Door shall execute GLOBE\_WINDOW\_ACTUATION. the CLOSE BTN state on RearRight Door is equal to LONG\_BTN\_PRESS and DCU\_1.RearWindowLock (CAN frame DCU\_1 Byte 3) is equal to REAR\_WINDOW\_UNBLOCK value (0x00), then RearRight Door shall execute GLOBAL\_CLOSE\_WINDOW\_ACTUATION. If a Button is equal to BTN PRESSED > 10 000 milliseconds, then it shall be considered as a BTN STUCK. WINDOW LIP DEO PASSINGER\_COSE\_BTM state is equal to SHORT\_BTM\_PRESS or LONG\_BTM\_PRESS, then Driver Door shall report WINDOW, UP\_REQ value ((hid.1) on WindowControl\_Passenger bits position ((8):1.4 y Bit.5) on the CAN frame DCU\_1.WindowControl (CAN frame DCU\_1 Byte.5).
(REARLEST\_CLOSE\_BTM state is equal to SHORT\_BTM\_PRESS or LONG\_BTM\_PRESS, then Driver Door shall report WINDOW, UP\_REQ value ((hid.1) on WindowControl\_Passenger bits position ((8):1.2 y Bit.3) on the CAN frame DCU\_1.WindowControl (CAN frame DCU\_1 Byte.5). REARRIGHT CLOSE BTN state is equal to SHORT\_BTN\_PRESS or LONG\_BTN\_PRESS, then Driver Door shall report WINDOW\_UP\_REQ\_value ((0.01) on WindowControl\_RearRight bits position (Bit 0 y Bit 1) on the CAN frame DCU\_1WindowControl (CAN frame DCU\_1) Byte 5 PRESSMENT, OPEN, BYN State is equal to SHORT, BYN PRESS or LONG, BYN PRESS, then Driver Door shall report WINDOW, DOWN, REQ value (0x02) on WindowControl Passenger bits position (8it 4 y 8it 5) on the CAN frame DCU\_1WindowControl (CAN frame DCU\_1 Byte 5). If REARLEFT\_OPEN\_BTN state is equal to SHORT\_BTN\_PRESS or LONG\_BTN\_PRESS, then Driver Door shall report WINDOW\_DOWN\_REQ value (0x02) on WindowControl Rearleft bits position (8it 2 y 8it 3) on the CAN frame DCU\_1WindowControl (CAN frame DCU\_1 Byte 5).

If REARRIGHT\_OPEN\_BTN state is equal to SHORT\_BTN\_PRESS or LONG\_BTN\_PRESS, then Driver Door shall report WINDOW\_DOWN\_REQ value (0x02) on WindowControl (Rearleft bits position (8it 0 y 8it 3) on the CAN frame DCU\_1WindowControl (CAN frame DCU\_1 Byte 5).

Beautiful to the Department of the Department REAR\_WINDOW\_UNBLOCK While REAR\_WINDOW\_LOCK, BTN state is equal to BTN\_NOT\_PRESSED, then Driver Door shall report REAR\_WINDOW\_UNBLOCK value (0x00) on DCU\_1.RearWindowLock bits position (CAN frame DCU 1 Byte 3). REAR\_WINDOW\_BLOCK



While REAR\_WINDOW\_LOCK\_BTN state is equal to BTN\_PRESSED, then Driver Door shall report REAR\_WINDOW\_BLOCK value (0x01) on DCU\_1.RearWindowLock bits position (CAN frame DCU\_1 Byte 3).



All Doors are allowed to execute Door Locking for Remote Operation from BCM request via CAN network

ssenger Door is allowed to execute Door Locking for Remote Operation from DCU 1 request via CAN network Rearleft Door is allowed to execute Door Locking for Remote Operation from DCU 1 request via CAN network

arRight Door is allowed to execute Door Locking for Remote Operation from DCU 1 request via CAN networ

If BCM 2.ConfortCmd signal (CAN frame BCM 2 Byte 2) is received with a UnlockAllCmd value (0x02) consecutively at least during 500 milliseconds, then OPEN WINDOW ACTUATION shall be executed.

FDCU\_1.WindowControl (CAN frame DCU\_1 Byte 5) signal is received with a WINDOW\_DOWN\_REQ value (0x02) on WindowControl\_Passenger bits position (Bit 4 y Bit 5), then OPEN\_WINDOW\_ACTUATION shall be executed on Passenger Door. f DCU 1.WindowControl (CAN frame DCU 1 Byte 5) signal is received with a WINDOW\_DOWN\_REQ value (0xx2) on WindowControl (RearLeft bits position (8lt 2 y 8lt 3), then OPEN\_WINDOW\_ACTUATION shall be executed on RearLeft Down

If DCU 1.WindowControl (CAN frame DCU 1 Byte 5) signal is received with a WINDOW DOWN REQ value (0x02) on WindowControl RearRight bits position (Bit 0 y Bit 1), then OPEN WINDOW ACTUATION shall be executed on RearRight Door

If BCM\_2.ConfortCmd signal (CAN frame BCM\_2 Byte 2) is received with a LockCmd value (0x01) consecutively at least during 500 milliseconds, then CLOSE\_WINDOW\_ACTUATION shall be executed.

If DCU\_1.WindowControl (CAN frame DCU\_1 Byte 5) signal is received with a WINDOW\_UP\_REQ value (0x01) on WindowControl\_Passenger bits position (8it 4 y 8it 5), then CLOSE\_WINDOW\_ACTUATION shall be executed on Passenger Door.

If DCU\_1.WindowControl (CAN frame DCU\_1 Byte 5) signal is received with a WINDOW\_UP\_REQ value (0x01) on WindowControl\_Rearteft bits position (Bit 2 y Bit 3), then CLOSE\_WINDOW\_ACTUATION shall be executed on Rearteft Door.

If DCU\_1.WindowControl (CAN frame DCU\_1 Byte 5) signal is received with a WINDOW\_UP\_REQ value (0x01) on WindowControl\_Rearteft bits position (Bit 0 y Bit 1), then CLOSE\_WINDOW\_ACTUATION shall be executed on Rearteft Door.

Driver Door

If BCM\_2 ConfortCmd signal (CAN frame BCM\_2 Byte 2) transitions from LockCmd value (0x01) to No Cmd value (0x00) or Driver Door WINDOW\_POSTION (CAN frame DCU\_1 Byte 0) is equal to COMPLETELY\_CLOSE value (0x02) during a CLOSE\_WINDOW\_ACTUATION, then CANCEL\_WINDOW\_ACTUATION shall be executed. f BCM\_2.ConfortCmd signal (CAN frame BCM\_2 Byte 2) transitions from UnlockAllCmd value (0x02) to No Cmd value (0x02) to No Cmd value (0x00) or Driver Door WINDOW\_POSITION (CAN frame DCU\_1 Byte 0) is equal to COMPLETELY\_OPEN value (0x01) during an OPEN\_WINDOW\_ACTUATION, then CANCEL\_WINDOW\_ACTUATION shall be executed.

Passenger Door If ECM\_2.Confort.cnd signal (CAN frame BCM\_2 Byte 2) transitions from LockCond value (0x01) to No Cmd value (0x00) or Passenger Door WINDOW\_POSITION (CAN frame DCU\_2 Byte 0) is equal to COMPLETELY\_CLOSE value (0x02) during a CLOSE\_WINDOW\_ACTUATION, then CANCEL\_WINDOW\_ACTUATION, that Devecuted. 1 BCM\_2.ConfortCmd signal (CAN frame BCM\_2 Byte 2) transitions from UnlockAllCmd value (0x02) to No Cmd value (0x00) or Passenger Door WINDOW\_POSITION (CAN frame BCU\_2 Byte 0) is equal to COMPLETELY\_OPEN value (0x01) during an OPEN\_WINDOW\_ACTUATION, then CANCEL\_WINDOW\_ACTUATION shall be executed.

If DCU\_LWindowControl (CAN frame DCU\_1 Byte 5) signal is received with a WINDOW\_NO\_REQ value (0x00) on WindowControl\_Passenger bits position (Bit 4 y Bit 5) or Passenger Door.

If DCU\_LWindowControl (CAN frame DCU\_2 Byte 5) signal is received with a WINDOW\_NO\_REQ value (0x00) on WindowControl\_Passenger bits position (Bit 4 y Bit 5) or Passenger Door.

If DCU\_LWindowControl (CAN frame DCU\_1 Byte 5) signal is received with a WINDOW\_NO\_REQ value (0x00) on WindowControl\_Passenger bits position (Bit 4 y Bit 5) or Passenger Door.

Rearleft Door

If BCM\_2. ConfortCmd signal (CAN frame BCM\_2 Byte 2) transitions from LockCmd value (0x01) to No Cmd value (0x00) or Rearleft Door WINDOW\_POSITION (CAN frame DCU\_3 Byte 0)) is equal to COMPLETELY\_CLOSE value (0x02) during a CLOSE\_WINDOW\_ACTUATION, then CANCEL\_WINDOW\_ACTUATION, then CANCEL\_WINDOW\_ACTUATION, then CANCEL\_WINDOW\_ACTUATION, then CANCEL\_WINDOW\_ACTUATION shall be executed.

If BCM\_2.ConfortCmd signal (CAN frame BCM\_2 Byte 2) transitions from UnlockAlCmd value (0x02) to No Cmd value (0x0 If DCU\_L.WindowControl (CAN frame DCU\_1 Byte 5) signal is received with a WINDOW\_NO\_REQ value (0x00) on WindowControl\_Rearleft bits position (Bit 2 y Bit 3) or Rearleft Door WINDOW\_POSITION (CAN frame DCU\_3 Byte 0) is equal to COMPLETELY\_CLOSE value (0x02) during a CLOSE\_WINDOW\_ACTUATION, then CANCEL\_WINDOW\_ACTUATION shall be executed on Rearleft Door.

RearRight Door
If SCH\_2\_ConfortCmd signal (CAN frame BCM\_2 Byte 2) transitions from LockCmd value (0x01) to No Cmd value (0x00) or RearRight Door WINDOW\_POSTTION (CAN frame DCU\_4 Byte 0) is equal to COMPLETELY\_CLOSE value (0x02) during a CLOSE\_WINDOW\_ACTUATION, then CANCEL\_WINDOW\_ACTUATION shall be executed.

If SCM\_2\_ConfortCmd signal (CAN frame BCM\_2 Byte 2) transitions from UnlockAllCmd value (0x02) to No Cmd value (0x00) or RearRight Door WINDOW\_POSTTION (CAN frame DCU\_4 Byte 0) is equal to COMPLETELY\_OPEN value (0x01) during an OPEN\_WINDOW\_ACTUATION, then CANCEL\_WINDOW\_ACTUATION shall be executed.

If DCU\_LWindowControl (CAN frame DCU\_1 Byte 5) signal is received with a WINDOW\_NO\_REQ value (0x00) on WindowControl, RearRight bits position (Bit 0 y Bit 1) or RearRight Door WINDOW\_POSITION (CAN frame DCU\_4 Byte 0) is equal to COMPLETELY\_CLOSE value (0x02) during an OPEN\_WINDOW\_ACTUATION, then CANCEL\_WINDOW\_ACTUATION, shall be executed on RearRight Door.

If DCU\_LWindowControl (CAN frame DCU\_1 Byte 5) signal is received with a WINDOW\_NO\_REQ value (0x00) on WindowControl, RearRight bits position (Bit 0 y Bit 1) or RearRight Door.

If DCU\_LWindowControl (CAN frame DCU\_1 Byte 5) signal is received with a WINDOW\_NO\_REQ value (0x00) on WindowControl, RearRight bits position (Bit 0 y Bit 1) or RearRight Door.

### AntiPinch Operation

ANTIPINCH\_SIGNAL is a digital Input on the system that reports when an Anti-pinch Event has occurred.

ANTIPINCH\_SIGNAL has a dedicated instance per Door.

ANTIPINCH\_SIGNAL will report the Anti-pinch Event using an Analog input 10 bits resolution.

ANTIPINCH\_SIGNAL shall be detected if the Analog signal transitions from below the threshold to above the threshold. Use 820 ADC counts as threshold reference.

Only during CLOSE\_WINDOW\_ACTUATION or GLOBAL\_CLOSE\_WINDOW\_ACTUATION, the ANTIPINCH\_SIGNAL shall report the Anti-pinch Event.

If ANTIPINCH\_SIGNAL is present, then an immediate CANCEL\_WINDOW\_ACTUATION shall be executed. Then a GLOBAL\_OPEN\_ACTUATION shall be executed.

WindowPos is a signal that reports to the network the Window Position.

IN\_BETWEEN value (0x00) indicates that Window is in between, which means the Window is not completely OPEN neither Completely CLOSE.

COMPLETELY\_OPEN value (0x01) indicates that Window is Completely OPEN.

COMPLETELY\_CLOSE value (0x02) indicates that Window is Completely CLOSE.

ERROR value (0x03) indicates that Window is on an ERROR state.

All Doors are allowed to execute Door Locking for Remote Operation from BCM request via CAN network.

For Driver Door, it shall report the determined Lock Status Via DCU\_1.WindowPos (CAN frame DCU\_1 Byte 0).

For Passenger Door, it shall report the determined Lock Status Via DCU\_2.WindowPos (CAN frame DCU\_2 Byte 0). For RearLeft Door, it shall report the determined Lock Status Via DCU\_3.WindowPos (CAN frame DCU\_3 Byte 0).

For **RearRight Door**, it shall report the determined Lock Status Via **DCU\_4.WindowPos** (CAN frame DCU\_4 Byte 0).

WINDOW\_IN\_BETWEEN

If SW\_WINDOW\_OPEN is determined as SW\_ACTIVE and SW\_WINDOW\_CLOSE is determined as SW\_INACTIVE, then Window shall be considered as IN\_BETWEEN.

WINDOW\_COMPLETELY\_OPEN If SW\_WINDOW\_OPEN is determined as SW\_INACTIVE and SW\_WINDOW\_CLOSE is determined as SW\_INACTIVE, then Window shall be considered as COMPLETELY\_OPEN.

WINDOW\_COMPLETELY\_CLOSE

If SW\_WINDOW\_OPEN is determined as SW\_ACTIVE and SW\_WINDOW\_CLOSE is determined as SW\_ACTIVE, then Window shall be considered as COMPLETELY\_CLOSE.

WINDOW\_ERROR

If SW\_WINDOW\_OPEN is determined as SW\_INACTIVE and SW\_WINDOW\_CLOSE is determined as SW\_ACTIVE during 10 samples of 10 milliseconds consecutively each, then Window shall be considered as WINDOW\_ERROR.

if SW\_WINDOW\_OPEN is determined as SW\_ACTIVE and SW\_WINDOW\_CLOSE is determined as SW\_INACTIVE after Window Control functionality is re-enable after power cycle (See HW Diagnostics), then WINDOW\_ERROR shall not be considered as present. HW Diagnostics

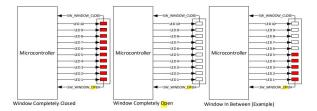
If window is considered as WINDOW\_ERROR, then Window Control functionality shall be disable until next power cycle. (Transition OFF -> RUN).

If window is considered as WINDOW\_ERROR, the corresponding DTC for Driver Window Position Error Detected shall be set as DTC: 0xB00100.

If window is considered as WINDOW\_ERROR, the corresponding DTC for Passenger Window Position Error Detected shall be set as DTC: 0x800200.

If window is considered as WINDOW\_ERROR, the corresponding DTC for RearRight Window Position Error Detected shall be set as DTC: 0xB00300. If window is considered as WINDOW\_ERROR, the corresponding DTC for RearLeft Window Position Error Detected shall be set as DTC: 0xB00400.

If **WINDOW\_ERROR** conditions are no longer detected, the corresponding DTC shall be clear.



#### Hardware - Software Requirements

#### Button Debounce

In order to use a mechanism to discard glitches on the buttons a debounce mechanism shall be used.

The debounce mechanism for buttons implies to monitor periodically a signal and increment counters to mature the state of a signal.

All the buttons used on the system shall use an inverted logic.

An inverted logic means that if the buttons are in Low State, then they will be considered as ACTIVE (Idle State shall be high).

Debounce mechanism for buttons consists to increment a counter if the Button State has not change from previous value.

A threshold shall be used to indicate if the Button can be considered as matured (BTN\_PRESSED) or dematured (BTN\_NOT\_PRESSED).

For Buttons, the threshold value to determine a BTN\_PRESSED will be 50ms (6 counts).

For Buttons, the threshold value to determine a BTN\_NOT\_PRESSED will be 50ms (6 counts).

The Button position will be evaluated periodically every 10ms.

#### Switch Position Debounce

It is required to use a mechanism to discard glitches on the switches used to determine position.

The debounce mechanism for switches implies to monitor periodically a signal and increment counters to mature the state of a signal.

All the switches used on the system shall use a positive logic.

A positive logic means that if the switches are in High State, then they will be considered as ACTIVE (Idle State shall be high).

Debounce mechanism for switches consists to increment a counter if the Switch State has not change from previous value.

A threshold shall be used to indicate if the Switch can be considered as matured or dematured.

For Switches, the threshold value to determine a BTN\_PRESSED will be 30ms (4 counts).

For Switches, the threshold value to determine a BTN\_NOT\_PRESSED will be 30ms (4 counts).

The Switch position will be evaluated periodically every 10ms.

### Frame BCM\_2

				Message La	ayout				
ID	ID BYTE 0 BYTE 1 BYTE 2 BYTE 3 BYTE 4 BYTE 5 BYTE 6 BYTE 7 PERIO							PERIOD	
0x252	BCM_2_MC	Х	ConfortCmd	Х		BCM_2_0	MAC		500 ms

	Signals Description						
BCM_2_MC	This is theMessag	This is theMessage Counter of the BCM_frame.					
	This signal shall go	o between 0 and 255 with increme	nts of 1.				
	This signal shall be	e updated every time the telegram	is transmitted.				
	If the signal reach	es its limit (255), then the counter	value shall initialize as 0.				
ConfortCmd	This Signal contain	This Signal contains the Confort Command and it represents the confort operation for the vehicle.					
	0x00	(No Cmd)	No command to excuse				
	0x01	(LockCmd)	Represents Lock Command				
	0x02	(UnlockAllCmd)	Represents Unlock Command for all Doors.				
	0x03	(UnlockDrvrCmd)	Represents Unlock Command for Driver Door only.				
	Values different tl	han this shall be considered as INV	ALID Data.				
BCM_2_CMAC:	This is a 32 bytes	This is a 32 bytes CMAC used to aauthenticat the source of this message.					
	If the CMAC is not	t valid then the content of the who	le message shall be ignored.				

				Message La	iyout				
ID	BYTE 0	BYTE 1	BYTE 2	BYTE 3	BYTE 4	BYTE 5	BYTE 6	BYTE 7	PERIOD
0x201	WindowPos	LockingReq	WindowOp	RearWindowLock	DoorLockSts	WindowControl	DCU_1_MC	DCU_1_CRC	100 ms

				Signals Description				Signals Description						
WindowPos:	This Signal report	s to the network tl	ne Driver Window P	osition.										
	0x00		ETWEEN)	Window is in betwe	en, this means the	window is not completely OF	PEN neither completely CLOSE							
	0x01	(COMPLE	TELY_OPEN)	Window is Complet	ely Open.									
	0x02	(COMPLE	TELY_CLOSE)	Window is Complet	ely Close.									
	0x03	(EI	RROR)	Window is on an ER	ROR state.									
	Values different t	han this shall be co	nsidered as INVALI	D Data.										
LockingReq:	This signal reports	s to the network th	the network the Lock or Unlock Request to Body Control Module.											
	0x00	(NO_LO	CKING_REQ)	There is no Lock or	Unlock command re	equested.								
	0x01	(LOC	K_REQ)	User has request a l										
	0x02	(UNLC	CK_REQ)	User has request a	JNLOCK request op	eration.								
	Values different t	han this shall be co	nsidered as INVALII	D Data.										
WindowOp:	This signal reports	s the windows cur	ent Operation.											
	0x00	(WIND	OW_IDLE)	Window is not mov	U									
	0x01	(WINE	OOW_UP)	Window is doing a 0										
	0x02		W_DOWN)	Window is doing a Open Operation.										
			nsidered as INVALI											
RearWindowLock:				rol operation for Rear										
	0x00		OW_UNBLOCK)	Rear Windows are a	•									
	0x01		IDOW_BLOCK)	Rear Windows shall	not operate.									
			onsidered as INVALI	D Data.										
DoorLockSts:	This signal reports	s the Door Lock Sta												
	0x00		R_LOCK)	Door is currently Lo										
	0x01	-	_UNLOCK)	Door is currently Ur										
	0x02	_	JNKNOWN)	Door is in an Unkno										
	0x03	,	RROR)	Door Position is on	an ERROR state.									
			nsidered as INVALII											
WindowControl:			oor Control Modul											
	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0						
	X	X	WindowCor	ntrol_Passenger	Wind	owControl_RearLeft	WindowControl_Rea	rRight						
	Commands:													
	0x00		V_NO_REQ)	No Window Reques										
	0x01	•	<i>N</i> _UP_REQ)	Indicated Window (										
0x02 (WINDOW_DOWN_REQ) Indicated Window Open.														
Values different than this shall be considered as INVALID Data.														

DCU_1_MC:	This is the Message counter of the DCU_1 frame.			
	al shall go between 0 and 255 with increments of 1.			
	This signal shall be updated every time the telegram is transmitted.			
	If the signal reaches its limit (255), then the counter value shall initialize as 0.			
DCU_1_CRC:	This is the Cyclic Redundancy Check for DCU_1 frame.			
	This signal shall be calculated with an CRC8 algorithm from Byte0 to Byte5.			

				Message La	ayout				
ID	BYTE 0	BYTE 1	BYTE 2	BYTE 3	BYTE 4	BYTE 5	BYTE 6	BYTE 7	PERIOD
0x202	WindowPos	LockingReq	WindowOp	RESERVED	DoorLockSts	RESERVED	DCU_2_MC	DCU_2_CRC	100 ms

			Signals Description
WindowPos:	This Signal repor	ts to the network the Passenger Wind	dow Position.
	0x00	(IN_BETWEEN)	Window is in between, this means the window is not completely OPEN neither completely CLOSE.
	0x01	(COMPLETELY_OPEN)	Window is Completely Open.
	0x02	(COMPLETELY_CLOSE)	Window is Completely Close.
	0x03	(ERROR)	Window is on an ERROR state.
	Values different	than this shall be considered as INVA	LID Data.
LockingReq:	This signal report	ts to the network the Lock or Unlock	,
	0x00	(NO_LOCKING_REQ)	There is no Lock or Unlock command requested.
	0x01	(LOCK_REQ)	User has request a LOCK request operation.
	0x02	(UNLOCK_REQ)	User has request a UNLOCK request operation.
	Values different	than this shall be considered as INVAI	LID Data.
WindowOp:	This signal report	ts the windows current Operation.	
	0x00	(WINDOW_IDLE)	Window is not moving.
	0x01	(WINDOW_UP)	Window is doing a Close Operation.
	0x02	(WINDOW_DOWN)	Window is doing a Open Operation.
		than this shall be considered as INVA	LID Data.
RESERVED	Reserved bytes s	hall be transmitted ad 0xFF.	
DoorLockSts:	This signal report	ts the Door Lock Status.	
	0x00	(DOOR_LOCK)	Door is currently Locked.
	0x01	(DOOR_UNLOCK)	Door is currently Unlocked.
	0x02	(DOOR_UNKNOWN)	Door is in an Unknown State.
	0x03	(ERROR)	Door Position is on an ERROR state.
	Values different t	than this shall be considered as INVA	LID Data.
RESERVED	,	hall be transmitted ad 0xFF.	
DCU_2_MC:		ige counter of the DCU_2 frame.	
	This signal shall g	go between 0 and 255 with increment	ts of 1.
	-	pe updated every time the telegram is	
		hes its limit (255), then the counter va	alue shall initialize as 0.
DCU_2_CRC:		Redundancy Check for DCU_2 fame.	
	This signal shall b	oe calculated with an CRC8 algorithm	from Byte0 to Byte5.

				Message La	ayout				
ID	BYTE 0	BYTE 1	BYTE 2	BYTE 3	BYTE 4	BYTE 5	BYTE 6	BYTE 7	PERIOD
0x203	WindowPos	RESERVED	WindowOp	RESERVED	DoorLockSts	RESERVED	DCU_3_MC	DCU_3_CRC	100 ms

			Signals Description
WindowPos:	This Signal report	s to the network the Rear Left Wind	ow Position.
	0x00	(IN_BETWEEN)	Window is in between, this means the window is not completely OPEN neither completely CLOSE.
	0x01	(COMPLETELY_OPEN)	Window is Completely Open.
	0x02	(COMPLETELY_CLOSE)	Window is Completely Close.
	0x03	(ERROR)	Window is on an ERROR state.
	Values different t	han this shall be considered as INVA	LID Data.
RESERVED	Reserved bytes sl	hall be transmitted ad 0xFF.	
WindowOp:	This signal report	s the windows current Operation.	
	0x00	(WINDOW_IDLE)	Window is not moving.
	0x01	(WINDOW_UP)	Window is doing a Close Operation.
	0x02	(WINDOW_DOWN)	Window is doing a Open Operation.
	Values different t	han this shall be considered as INVA	LID Data.
RESERVED	Reserved bytes sl	hall be transmitted ad 0xFF.	
DoorLockSts:	This signal report	s the Door Lock Status.	
	0x00	(DOOR_LOCK)	Door is currently Locked.
	0x01	(DOOR_UNLOCK)	Door is currently Unlocked.
	0x02	(DOOR_UNKNOWN)	Door is in an Unknown State.
	0x03	(ERROR)	Door Position is on an ERROR state.
	Values different t	han this shall be considered as INVA	LID Data.
RESERVED	Reserved bytes sl	hall be transmitted ad 0xFF.	
DCU_3_MC:	This is the Messa	ge counter of the DCU_3 frame.	
	This signal shall g	o between 0 and 255 with incremen	ts of 1.
		e updated every time the telegram i	
		nes its limit (255), then the counter v	
DCU_3_CRC:		Redundancy Check for DCU_3 fame.	
	This signal shall b	e calculated with an CRC8 algorithm	from Byte0 to Byte5.

				Message La	ayout				
ID	BYTE 0	BYTE 1	BYTE 2	BYTE 3	BYTE 4	BYTE 5	BYTE 6	BYTE 7	PERIOD
0x203	WindowPos	RESERVED	WindowOp	RESERVED	DoorLockSts	RESERVED	DCU_4_MC	DCU_4_CRC	100 ms

			Signals Description
WindowPos:	This Signal reports	s to the network the Rear Right Win	dow Position.
	0x00	(IN_BETWEEN)	Window is in between, this means the window is not completely OPEN neither completely CLOSE.
	0x01	(COMPLETELY_OPEN)	Window is Completely Open.
	0x02	(COMPLETELY_CLOSE)	Window is Completely Close.
	0x03	(ERROR)	Window is on an ERROR state.
	Values different th	han this shall be considered as INVA	LID Data.
RESERVED	Reserved bytes sh	nall be transmitted ad 0xFF.	
WindowOp:	This signal reports	s the windows current Operation.	
	0x00	(WINDOW_IDLE)	Window is not moving.
	0x01	(WINDOW_UP)	Window is doing a Close Operation.
	0x02	(WINDOW_DOWN)	Window is doing a Open Operation.
	Values different th	han this shall be considered as INVA	LID Data.
RESERVED	Reserved bytes sh	nall be transmitted ad 0xFF.	
DoorLockSts:	This signal reports	s the Door Lock Status.	
	0x00	(DOOR_LOCK)	Door is currently Locked.
	0x01	(DOOR_UNLOCK)	Door is currently Unlocked.
	0x02	(DOOR_UNKNOWN)	Door is in an Unknown State.
	0x03	(ERROR)	Door Position is on an ERROR state.
	Values different th	han this shall be considered as INVA	LID Data.
RESERVED	Reserved bytes sh	nall be transmitted ad 0xFF.	
DCU_4_MC:	This is the Messag	ge counter of the DCU_4 frame.	
	This signal shall g	o between 0 and 255 with increme	nts of 1.
	This signal shall be	e updated every time the telegram i	s transmitted.
		es its limit (255), then the counter v	ralue shall initialize as 0.
DCU_4_CRC:		Redundancy Check for DCU $_4$ fame.	
	This signal shall be	e calculated with an CRC8 algorithm	from Byte0 to Byte5.

# **Data Identifier Lists**

DID \$0111:	Button Configur	ation					
This DID has th	This DID has the purpose to indicate the value for Stuck Button Detection.						
This DID shall s	support service Read DID \$22.						
This DID shall s	support service Write DID \$2E.						
Write DID oper	ration shall be protected by Extend	ded session.					
Write DID oper	ration shall be protected by securi	ty level \$01.					
ID	Byte 0	Byte 1 Byte 2					
0x0111	Stu	uckBtnCfg	LongBtnCfg				
DID_0111. Stu	ckBtnCfg:						
	Resolution:	10 ms					
	Default value:	1000 (10 000 ms)					
DID_0111. Lon	DID_0111. LongBtnCfg:						
	Resolution: 10 ms						
	Default value:	50 ( 500 ms)					