IVT S Shunt CAN Protocol

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The CAN protocol used between IVT-S Shunt and Master Controller

Messages

ID: 0x411 - Command Message

Parameter	Value
Direction	Master Controller -> Shunt
Transmission Rate	Aperiodically
Size [bits : bytes]	[64 : 8]

See datasheet for description of command message

ID: 0x521 - Current

Parameter	Value
Direction	Shunt -> Master Controller
Transmission Rate	Periodically: 100ms
Size [bits : bytes]	[48 : 6]

Variable Name	Offset	Length in bits	Value Type	Unit	Description
MuxID	0	8	uint	-	Multiplexer, describes which parameter is transmitted
IVT_MsgCount	8	4	uint	-	Cyclic counter individually for each channel
IVT_Result_state	12	4	uint	-	see IVT-S datasheet
Current	16	32	int	1 mA	Current in mA

ID: 0x522 - Voltage, phase 1

Parameter	Value
Direction	Shunt -> Master Controller
Transmission Rate	Periodically: 50ms
Size [bits : bytes]	[48 : 6]

Variable Name	Offset	Length in bits	Value Type	Unit	Description
MuxID	0	8	uint	-	Multiplexer, describes which parameter is transmitted
IVT_MsgCount	8	4	uint	-	Cyclic counter individually for each channel
IVT_Result_state	12	4	uint	-	see IVT-S datasheet
Voltage, Phase 1	16	32	int	1 mV	Phase 1 Voltage in mV

ID: 0x523 - Voltage, phase 2

Parameter	Value
Direction	Shunt -> Master Controller
Transmission Rate	Periodically: 50ms
Size [bits : bytes]	[48 : 6]

Variable Name	Offset	Length in bits	Value Type	Unit	Description
MuxID	0	8	uint	-	Multiplexer, describes which parameter is transmitted
IVT_MsgCount	8	4	uint	-	Cyclic counter individually for each channel
IVT_Result_state	12	4	uint	-	see IVT-S datasheet
Voltage, Phase 2	16	32	int	1 mV	Phase 2 Voltage in mV

ID: 0x526 - Power (current and voltage phase 1)

Parameter	Value
Direction	Shunt -> Master Controller
Transmission Rate	Periodically: 100ms
Size [bits : bytes]	[48 : 6]

Variable Name	Offset	Length in bits	Value Type	Unit	Description
MuxID	0	8	uint	-	Multiplexer, describes which parameter is transmitted
IVT_MsgCount	8	4	uint	-	Cyclic counter individually for each channel
IVT_Result_state	12	4	uint	-	see IVT-S datasheet
Power	16	32	int	1 W	Power (referring to current and voltage phase 1)

ID: 0x527 - Coulomb Counter

Parameter	Value
Direction	Shunt -> Master Controller
Transmission Rate	Periodically: 200ms
Size [bits : bytes]	[48 : 6]

Variable Name	Offset	Length in bits	Value Type	Unit	Description
MuxID	0	8	uint	-	Multiplexer, describes which parameter is transmitted
IVT_MsgCount	8	4	uint	-	Cyclic counter individually for each channel
IVT_Result_state	12	4	uint	-	see IVT-S datasheet
Coulomb Counter	16	32	int	1 As	Coulomb Counter

ID: 0x528 - Energy Counter

Parameter	Value
Direction	Shunt -> Master Controller
Transmission Rate	Periodically: 200ms
Size [bits : bytes]	[48 : 6]

Variable Name	Offset	Length in bits	Value Type	Unit	Description
MuxID	0	8	uint	-	Multiplexer, describes which parameter is transmitted
IVT_MsgCount	8	4	uint	-	Cyclic counter individually for each channel
IVT_Result_state	12	4	uint	-	see IVT-S datasheet
Energy Counter	16	32	int	1 Wh	Energy Counter (referring to current and voltage phase 1)

Template

ID: 0xXXX -

Parameter	Value
Direction	->
Transmission Rate	Periocally: 100ms/Aperiodically

Variable Name	Offset	Length in bits	Value Type	Unit	Description