PLUS+1 J1939 Function Block Library SDL 10104786v500

Revision History

This file contains important supplementary and late-breaking information that may not appear in the main product documentation. We recommend that you read this file in its entirety.

Version 5.00 (September 2019)

What is Included
- PLUS+1 GUIDE® Function Blocks (In SDL)
- User Manual (In SDL)

What is New
- All blocks have had their descriptions updated to a standard look.
- The following defects and features have been addressed in this release:
    - AAI_Rx
        - Corrected SLOT handling, on NA or Fault, Data will switch to zero.
    - AddrClaim_Tx_Rx
        - Fixed an issue where the block failed to respond to an address claim if it had previously failed to claim an address.
        - Improved the timing logic used in the block.
    - AMB_Rx
        - Corrected SLOT handling, on NA or Fault, Data will switch to zero.
    - AT1S1_Rx
        - This function has been renamed from AT1S_Rx to AT1S1_Rx.
    - AT1T1I_Rx
        - Corrected SLOT handling, on NA or Fault, Data will switch to zero.
    - BJM1_Rx
        - Improved the fault logic relating to the axis signals.
    - BJM2_Rx
        - Improved the fault logic relating to the axis signals.
    - CM1_Rx
        - Destination Address now has an allowed range of 0 to 255.
        - Corrected SLOT handling, on NA or Fault, Data will switch to zero.
    - CM1_Tx
        - Added the capability to send an NA value for CabIntTempCmd
    - DM13_Rx

- Corrected an issue where the block did not perform address filtering on the destination.
- Corrected the time base used for clearing the hold signal, hold should now clear after 6 seconds.
- Hold signals were held true at boot, this is no longer the case. The block now requires a message before a hold is activated.
- Byte 3 in the message had the upper and lower nibble flipped resulting in an issue with the hold and suspend signals.
- DM1_DM2_Tx_Rx
  - Added the TP_Priority signal to allow for a different priority when sending transport protocol messages.
- DM1_Tx
  - Added functionality that allows On-Change of Active bits to send a message sequence, only one message sequence will be sent between normal repetition.
  - Added the TP_Priority signal to allow for a different priority when sending transport protocol messages.
- DM2_Tx
  - Added the TP_Priority signal to allow for a different priority when sending transport protocol messages.
- EEC1_Rx
  - Corrected SLOT handling, on NA or Fault, Data will switch to zero.
- EEC1_Tx
  - Corrected an issue where invalid parameters did not trigger a status flag.
- EEC2_Rx
  - Corrected SLOT handling, on NA or Fault, Data will switch to zero.
- EEC3_Rx
  - Corrected SLOT handling, on NA or Fault, Data will switch to zero.
- EFL_P1_Rx
  - Corrected SLOT handling, on NA or Fault, Data will switch to zero.
- EJM1_Rx
  - Improved the fault logic relating to the axis signals.
- EJM2_Rx
  - This was previously set to receive EJM1, it is now corrected to receive EJM2.
  - Improved the fault logic relating to the axis signals.
- ET1_Rx
  - Corrected SLOT handling, on NA or Fault, Data will switch to zero.
- ET2_Rx
  - Corrected SLOT handling, on NA or Fault, Data will switch to zero
- ET3_Rx
  - Corrected SLOT handling, on NA or Fault, Data will switch to zero.
- ETC1_Rx

- Added High Resolution outputs for TrnInShfSpd and TrnOutShfSpd.
  - ETC2_Rx
    - Corrected SLOT handling, on NA or Fault, Data will switch to zero.
  - IC1_Rx
    - Corrected SLOT handling, on NA or Fault, Data will switch to zero.
  - NACK_Tx_Rx
    - Corrected Byte 1 of transmitter. Group function is now set to 255 instead of 0.
  - TD_Rx
    - Corrected SLOT handling, on NA or Fault, Data will switch to zero.
  - Transport_Protocol_Tx
    - Corrected an issue where BAM timing would switch from 50 ms to 1 ms.
    - Corrected an issue where high bus loads would cause messages in queue to be overwritten and lost.
  - TRF1_Rx
    - Corrected SLOT handling, on NA or Fault, Data will switch to zero.
  - TSC1_Tx
    - Added additional parameters to disable the checksum and counter used in the message.
    - Added additional parameters to set the disabled values of speed and torque.
    - SPN 3350 incorrectly declared a status fault when values were set to a reserved value. The block no longer triggers a status fault in this condition.
    - Improved the description of EngReqTorq_HiRes to reduce confusion.
    - SPN 4191 can now be set to a Not Available value.
  - VDS_Rx
    - Corrected SLOT handling, on NA or Fault, Data will switch to zero.
  - VEP1_Rx
    - This function has been renamed from VEP_Rx to VEP1_Rx.
  - VF_Rx
    - Corrected SLOT handling, on NA or Fault, Data will switch to zero.
  - VP1_Rx
    - This function has been renamed from VP_Rx to VP1_Rx.
    - Corrected SLOT handling, on NA or Fault, Data will switch to zero.

- 29 new function blocks are introduced in this version.
  - A1DEFI1_Rx
  - A2DEFT1I1_Rx
  - ACCS_Rx
  - ACK_Tx
  - AT1S2_Rx

- BJM_Rx
- CA_Parser
- CI_Parser
- CM2_Tx
- DLCC1_Rx
- DM3_Rx
- DM4_Parser
- DTC_Parser
- EC1_Parser
- EJM_Rx
- EOI_Rx
- ERC1_Rx
- PGN_Rx
- PGN_Mask_Rx
- PGN_Tx
- SCRSC_Rx
- Select_TP_Msg
- SEP1_Rx
- Store_TP_Msg
- TP_BAM_Rx
- TP_RTS_CTS_Rx
- VEP1_Tx
- VF_Tx
- VIN_Parser

Known issues
- None

Minimum Requirements
- PLUS+1 GUIDE 10.1 or greater

Version 4.00 (June 2016)

What is Included
- PLUS+1 GUIDE® Function Blocks (In SDL)
- User Manual (In SDL)

What is New
- Support for Professional Licensing.

Known issues
- None

Minimum Requirements
- PLUS+1 GUIDE 8.1 or greater

Version 3.02 (December 2012)

What is Included
- PLUS+1 GUIDE® Function Blocks (In SDL)
- User Manual (In SDL)

What is New
- 2 new function blocks are introduced in this version for Tier IV engine support:
  - CM1_Tx
  - CM1_Rx
- The following defects are addressed in this release:
  - DM1_Tx
    - Internal checkpoints were not removed before the previous release, resulting in compiler warnings. These checkpoints have been removed.

Known issues
- None

Minimum Requirements
- PLUS+1 GUIDE 5.1 or greater

Version 3.01 (September 2012)

What is Included
- PLUS+1 GUIDE® Function Blocks (In SDL)

- User Manual (In SDL)

What is New
- The following defects are addressed in this release:
  - o BJM1_Rx, BJM2_Rx, EJM1_Rx, EJM2_Rx
    - The default timeout was equal to the maximum transmission interval for these messages. This timeout value was increased from 100 to 250 ms.
  - o User Manual
    - Certain fonts did not appear correctly for all users. Special fonts are now embedded in the pdf document.
  - o DM1_Tx
    - When multiple trouble codes were active and the enable is constantly true the DM1 message was not always transmitted. This defect has been corrected.
  - o Req_PGN_Rx
    - The PGN was misinterpreted if its input was not a U32 data type. The software is updated to handle all integer types.
  - o EEC1_Tx
    - The PGN shown on the inner function block was incorrect. This has been fixed.

Known issues
- None

Minimum Requirements
- PLUS+1 GUIDE 5.1 or greater

Version 3.00 (March 2012)

What is Included
- PLUS+1 GUIDE® Function Blocks (In SDL)
- User Manual (In SDL)

What is New
- 30 New function blocks including support for messages commonly used Tier IV Emissions Compliant systems and support for new Sauer-Danfoss products.
  - o AT1S_Rx
  - o AT2S_Rx
  - o DPFC1_Rx
  - o EBC1_Rx
  - o EEC3_Rx
  - o ET2_Rx

- ET3_Rx
- ETC5_Rx
- SHUTDN_Rx
- TCO1_Rx
- TD_Rx
- VDS_Rx
- VP_Rx
- WFI_Rx
- CCVS1_Tx
- DD_Tx
- DPFC1_Tx
- EBC1_Tx
- EEC1_Tx
- ETC2_Tx
- ETC5_Tx
- SHUTDN_Tx
- TRF2_Tx
- WFI_Tx
- Req_PGN_Rx
- Req_PGN_Tx
- DM1_Tx
- DM2_Tx
- PMI_Tx_Rx
- TransProtocol_Tx

- 12 Updated function blocks with defect fixes, protocol updates, and new features
  - DM1_Rx
    - Changed the lamp interface and added support for fast and slow blink patterns introduced in newer versions of J1939-73.
    - Optimized areas for RAM use.
    - Improved transport protocol session handling with more accurate rejection of packets received out of session.
    - Adjusted internal timeouts to match transport protocol specifications.
    - Fully support DM1 messages with 0xFF or 0x0 indicating no active faults, lamp states were previously not updated.
  - DM2_Rx
    - Changed the lamp interface and added support for fast and slow blink patterns introduced in newer versions of J1939-73.
    - Optimized areas for RAM use.
    - Improved transport protocol session handling with more accurate rejection of packets received out of session.
    - Adjusted internal timeouts to match transport protocol specifications.

- Fully support DM2 messages with 0xFF or 0x0 indicating no previously active faults, lamp states were previously not updated.
  - DM1_DM2_Tx_Rx
    - Changed the lamp interface and added support for fast and slow blink patterns introduced in newer versions of J1939-73.
    - Added DM1 request support
    - Added periodic broadcast of DM1 when no faults are active as defined in newer versions of J1939-73.
    - Fixed DM2 response to requests when DM1 transport session is active.
    - Now prevents DM3 acknowledgment when request was sent to global address.
    - Corrected DM3 acknowledgement message content.
  - Addr_Claim_Tx_Rx
    - Added Enable input, allows delayed address claim to be determined by the application.
    - Added Force input, allows the application to respond to its own PGN request for NAMES (claimed addresses).
  - AMB_Rx
    - Fixed incorrect comment for the RoadSurfaceT data type.
    - Names_Rx
    - Increased performance on receiving NAME messages. Now up to 4 responses can be received in a single application loop.
  - TSC1_Tx
    - Changed the default message priority from 6 to 3, matching the recommended default.
    - Added support for additional signals introduced in newer versions of J1939-71, SPNs 3349, 3350, 4191, 4206, 4207.
    - Addressed defect by setting unused bits in the CAN message to true.
  - LFE_Rx
    - Fixed incorrect comment for the EngineInstEcon and EngineAvrgEcon units.
  - DD_Rx
    - Added support for additional signal introduced in newer versions of J1939-71, SPN 38.
  - ETC1_Rx
    - Added support for additional signals introduced in newer versions of J1939-71, SPNs 4816, 5015.
  - FD_Rx
    - Added support for additional signals introduced in newer versions of J1939-71, SPNs 4211, 4212.
  - LFI_Rx
    - Added support for additional signal introduced in newer versions of

J1939-71, SPN 5458.

Known issues
- None

Minimum Requirements
- PLUS+1 GUIDE 5.1 or greater

Version 2.22 (June 2009)

What is Included
- PLUS+1 GUIDE® Function Blocks (In SDL)
- User Manual (In SDL)

What is New
- DM1_DM2_Tx_Rx function block issue resolved: Messages transmitted during high bus load can cause continual transmission of messages.
- DM1_DM2_Tx_Rx function block issue resolved: Notes contained within the function block gave incorrect values for the lamp codes. Also, additional lamp codes are provided per the updates to J1939-73.
- DM1_Rx function block issue resolved: Improper parsing of SPN values from alternate conversion methods.
- DM2_Rx function block issue resolved: Improper parsing of SPN values from alternate conversion methods.

Known issues
- None

Minimum Requirements
- PLUS+1 GUIDE 4.1 or greater

Support

Web

https://www.danfoss.com/en/products/software/dps/plus1-software-services-support-and-training/plus1-support-and-services/

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