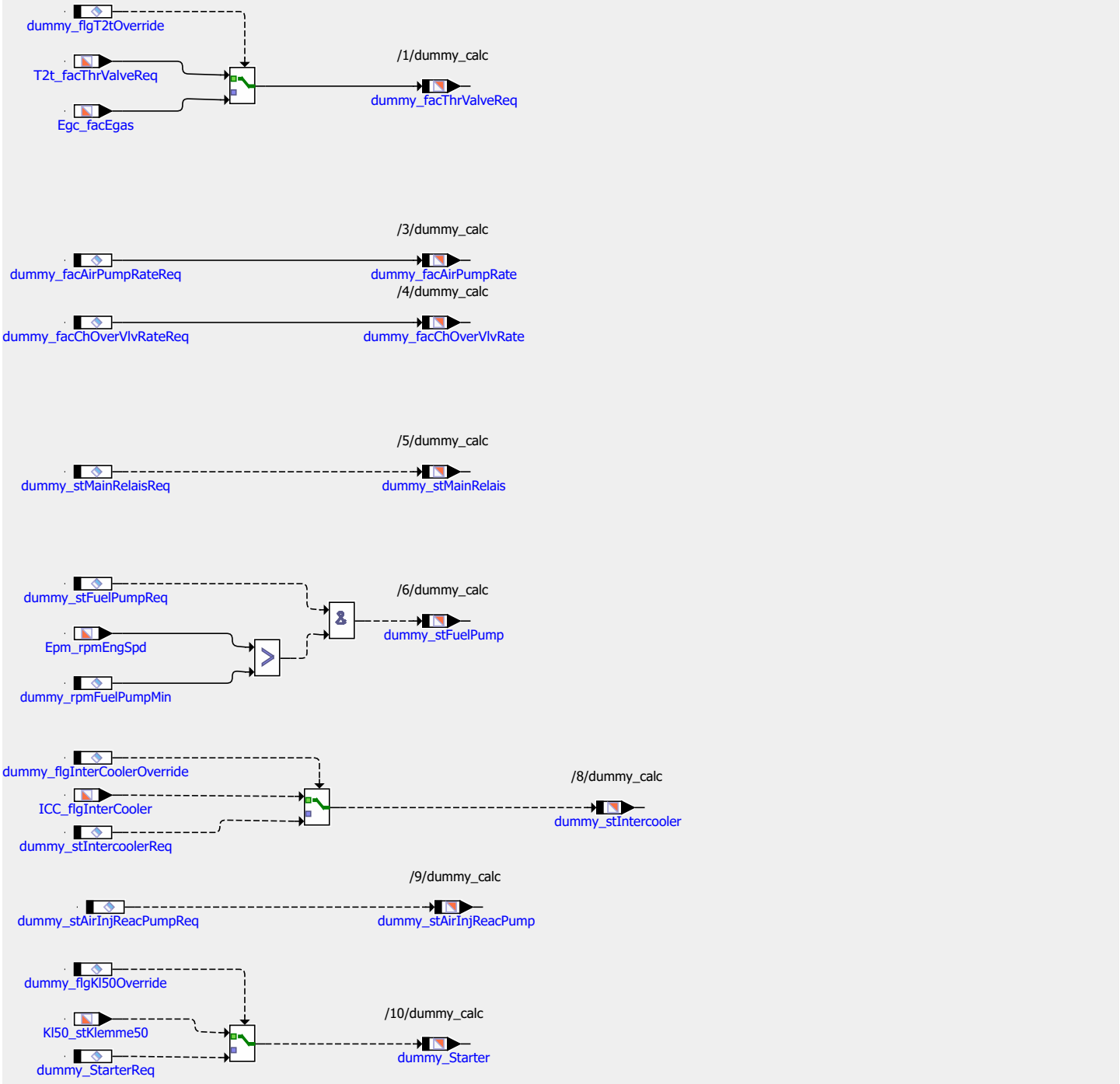
Dummy - Component Control

1 [Component Control] Component Control

1.1 [Overview]

Figure 1: [Dummy Function Overview]

Figure 2: [Dummy.Main]



1.2 [Dummy]

Das Modul Dummy stellt einen Platzhalter für alle noch nicht vollständig integrierten Komponentenansteuerungen dar. Hier werden Parameter als Nachrichten weitergereicht um die Aktuatorikmodule zubedienen.

Dazu gehören:

- das Tastverhältnis des Umschaltventils Sekundärluft dummy_facAirPumpRate
- das Tastverhältnis des Umschaltventils Druckgeber dummy_facChOverVlvRate
- der Zustand (true/false) des Hauptrelais dummy_stMainRelais
- der Zustand (true/false) der Kraftstoffpumpe dummy_stFuelPump
- der Zustand (true/false) des Ladeluftkühlers dummy_stIntercooler
- der Zustand (true/false) der Sekundärluftpumpe dummy_stAirInjReacPump

Außerdem ist es zu Test- und Demonstrationszwecken möglich durch Setzen des Flags dummy_flgT2tOverride auf einen direkten Durchgriff des Egas-Stellers zur Drosselklappe umzuschalten, d. h., die Positionsanforderung dum

my_facThrValveReq an die Drosselklappe entspricht eins zu eins der Position des Egas-Stellers Egc_facEgas . Im Regelfall kommt diese Stellgröße aus der Funktion Momentenumrechnung (T2t_facThrValveReq).

Die Auswertung der Funktion dummy_calc erfolgt im 100ms-Raster.

2 [C-Code Source]

2.1 [Code Listing]

```
/* BEGIN: ASCET REGION "Generation Information" */
/*****************************************************************************
 * BEGIN: Generation Information
 *----------------------------------------------------------------------------
 * Component:.............Module
 * Name:..................."Dummy"
 * Implementation:........."Impl"
 * Dataset:................"Data"
 * Specification:.........Block Diagram
 * Version:...............<empty String>
 * Library Path:..........."smartm160\Project_SmartM160\Function_Modules"
 *----------------------------------------------------------------------------
 * Project Name:..........."FlexECU_M160"
 * Project Library Path:....."smartm160\Project_SmartM160\"
 *----------------------------------------------------------------------------
 * Generation Date:.......03.12.2014
 * Generation Time:.......13:41:34
 *----------------------------------------------------------------------------
 * ASCET Version:.........V6.1.4 RB-DGS 2.3
 * ASCET-MD Version:......V6.1.4
 * ASCET-RP Version:......V6.1.4
 * ASCET-SE Version:......V6.1.4.28.19 CID[610]
 *----------------------------------------------------------------------------
 * END: Generation Information
 *****************************************************************************/
/* END: ASCET REGION "Generation Information" */

/* BEGIN: ASCET REGION "Project Options" */
/*****************************************************************************
 * BEGIN: Project Options "Build"/"Code"
 *----------------------------------------------------------------------------
 *    Build
 *----------------------------------------------------------------------------
 * Code Generator:.......Object Based Controller Implementation
 * Compiler:.............Microsoft Visual C++ 2008
 * Operating System:.....GENERIC_OSEK
 * Target:...............ANSI-C
 *----------------------------------------------------------------------------
 *    Code
 *----------------------------------------------------------------------------
 * Add Comment with Generation Information for each Component [true]: true
 * Add Comment with Implementation Information for each Assignment Statement [true]: true
 * Add Comment with Specification Source for each Statement [true]:..true
 * Add parenthesis for readability [false]:.....................false
 * Casting [MISRA]:.............................................MISRA
 * Force Parenthesis for Binary Logical Operators [false]:.....false
 * Generate Define Directives for Enum Values [false]:..........false
 * Prefix for Component Names [<empty String>]:.................<empty String>
 * Protected against division by zero [true]:...................true
 * Protected Division against Signed Overflow [true]:...........true
 * Protected Vector Indices [true]:.............................true
 *----------------------------------------------------------------------------
 *    Code.Compiler
 *----------------------------------------------------------------------------
 * Division truncation direction [Zero (T-division)]:...........Zero (T-division)
 * Inline directive [__inline]:.................................__inline
 * Integer Bit Size [32]:.......................................32
 * Private directive [static]:..................................static
 * Public directive [<empty String>]:...........................<empty String>
 *----------------------------------------------------------------------------
 *    Code.FixedPoint
 *----------------------------------------------------------------------------
 * Allow Double bit Size for Division Numerators [true]:........true
 * Allow Limit Service for Assignment Limitation [true]:........true
 * Arithmetic Service Set [<None>]:.............................<None>
 * Generate Limiters (may be changed locally) [true]:...........true
 * Generate Round Operation on float to integer Assignment [true]:..true
 * Maximum bit Length (float) [64]:.............................64
 * Maximum bit Length (int) [32]:...............................32
 * Result on Division by Zero [numerator]:......................numerator
 * Temp Vars always 32 bit (integer) [false]:...................false
 * Use power of 2 approximations of literals [false]:...........false
 * Use SHIFT Operation on Signed Values instead of DIV Operation [true]: true
```

```
 * Use SHIFT Operation on Signed Values instead of MUL Operation [true]: true
 *-----------------------------------------------------------------------------
 *    Code.Optimizations
 *-----------------------------------------------------------------------------
 * Auto-inline private methods (Smaller code-size - may be changed locally) [false]: false
 * Generate well-formed switch [false]:.............................false
 * Hierarchical Code-Generation (may be changed locally) [false]:....false
 * Initialise history variable with zero [false]:...................false
 * Optimize Direct Access Methods (Multiple Levels) [false]:........false
 * Optimize Direct Access Methods (One Level) [false]:..............false
 * Optimize Static Actions (Restricted Modelling) [false]:..........false
 * Outline Generated Methods (may be changed locally) [false]:.......false
 *-----------------------------------------------------------------------------
 *    Code.Production
 *-----------------------------------------------------------------------------
 * Add Implementation Definitions [true]:...........................true
 * Generate Access Macros for [(variables, messages)]:..............(variables, messages)
 * Generate Access Methods for dT (Alternative: use OS dT directly) [true]: true
 * Generate Data Structures [USELOCAL]:.............................USELOCAL
 * Generate Map File [true]:........................................true
 * Generate OS Configuration [true]:................................true
 *-----------------------------------------------------------------------------
 *    Station.Build
 *-----------------------------------------------------------------------------
 * Use Customized Data Type Names [false]:..........................false
 *-----------------------------------------------------------------------------
 * END: Project Options "Build"/"Code"
 ******************************************************************************/
/* END: ASCET REGION "Project Options" */
/* BEGIN: ASCET REGION "ASCET-SE AddOn Options" */
/*******************************************************************************
 * BEGIN: ASCET-SE AddOn Options
 * -----------------------------------------------------------------------------
 *     Code
 * -----------------------------------------------------------------------------
 * checkMemSectionVolatility [true]:................................false
 * checkMultipleSend [false]:.......................................false
 * distribVarMemClass ["DISTRRAM"]:.................................."RAM"
 * genAlwaysInitValues [false]:.....................................true
 * genLogicElementsAs [PACKED_BITFIELD]:............................PACKED_BITFIELD
 * genObjList [false]:..............................................false
 * implInfoComments [true]:.........................................true
 * initTaskMemClass ["ASD_INIT_TASK_MEM"]:..........................."ASD_INIT_TASK_MEM"
 * isrMemClass ["ASD_ISR_MEM"]:....................................."ASD_ISR_MEM"
 * mainMemClass ["ASD_EXT_CODE_MEM"]:..............................."ASD_EXT_CODE_MEM"
 * optimizeUnusedCode [true]:.......................................true
 * paramAsSysConst [false]:.........................................false
 * pragmaMemClassAtDecl [false]:....................................false
 * pragmaMemClassEnabled [true]:....................................false
 * referenceMemClass ["REFRAM"]:....................................."RAM"
 * shortNames [false]:..............................................false
 * taskMemClass ["ASD_TASK_MEM"]:...................................."ASD_TASK_MEM"
 * virtualParameterMemClass ["VIRT_PARAM"]:.........................."VIRT_PARAM"
 * -----------------------------------------------------------------------------
 *     Code.Appearance
 * -----------------------------------------------------------------------------
 * braceLineFeed [true]:............................................true
 * genDate [<undef>]:...............................................<undef>
 * genTime [<undef>]:...............................................<undef>
 * generateSignatureDecorationComments [true]:......................true
 * lineFeedPosition [LEFT]:.........................................LEFT
 * maxIdentLength [0]:..............................................40
 * maxRightLength [60]:.............................................60
 * minLeftLength [8]:...............................................8
 * preventIndentStructInit [true]:..................................true
 * -----------------------------------------------------------------------------
 *     OS
 * -----------------------------------------------------------------------------
 * Os-Config-C_gen_declaration_alarms [false]:......................false
 * Os-Config-C_gen_declaration_appmodes [false]:....................false
 * Os-Config-C_gen_dt_calc [false]:.................................true
 * Os-Config-C_gen_initCOM [false]:.................................false
 * Os-Config-C_gen_inittask [false]:................................true
 * Os-Config-C_gen_main [false]:....................................false
 * Os-Config-C_gen_process_container [false]:.......................true
 * Os-Config-C_gen_startuphook [false]:.............................false
 * asd_exclusive_area ["ASD_EXCLUSIVE_AREA"]:........................"ASCET_exclusive_area"
 * messageDoInit [false]:...........................................false
 * messageExternalMessageCopies [false]:............................false
 * messageGenOSEKDeclarations [true]:...............................false
 * messageIgnoreUsageInInitTask [false]:............................false
 * messageOverloadInitValues [<undef>]:.............................<undef>
 * messageUsageVariant [OPT_COPY]:..................................NON_OPT_COPY
 * modularMessageUse [false]:.......................................false
 * osAppModePattern ["%name%"]:......................................"appmode_%name%"
```

```
 * osStartupFunction [<undef>]:.....................................<undef>
 * -------------------------------------------------------------------------
 *     OS.OIL
 * -------------------------------------------------------------------------
 * OIL-COOP-RESOURCE-name ["ASD_Cooperative_Res"]:...................."ASD_Cooperative_Res"
 * OIL-outputFile ["temp.oil"]:......................................"temp.oil"
 * -------------------------------------------------------------------------
 *     SERAP
 * -------------------------------------------------------------------------
 * SERAPRefPageMemoryClass ["SERAP_REF"]:..........................."SERAP_REF"
 * SERAPWorkPageMemoryClass ["SERAP_WORK"]:........................."SERAP_WORK"
 * serap [false]:.....................................................false
 * serapEmbedded [true]:..............................................true
 * -------------------------------------------------------------------------
 *     Virtual Address Tables
 * -------------------------------------------------------------------------
 * addressTable [true]:...............................................false
 * addressTableMemoryClass ["VATROM"]:..............................."VATROM"
 * -------------------------------------------------------------------------
 * END: ASCET-SE AddOn Options
 ***************************************************************************/

/* END: ASCET REGION "ASCET-SE AddOn Options" */
/* BEGIN: ASCET REGION "Module Data Definitions" */

/***************************************************************************
 * DEFINITION OF COMPONENT VARIABLE OMITTED
 * -------------------------------------------------------------------------
 * memory class:.............................'ROM'
 * model name:...............................'dummy'
 * reason:.....................................no local elements
 * -------------------------------------------------------------------------*/

/* END: ASCET REGION "Module Data Definitions" */

/* BEGIN: ASCET REGION "Exported Data Definitions" */

/***************************************************************************
 * BEGIN: DEFINITION OF VARIABLE 'dummy_StarterReq'
 * -------------------------------------------------------------------------*/
const uint8 dummy_StarterReq = false;
   /* min=0, max=1, Identity, limit=yes */
/* -------------------------------------------------------------------------
 * END: DEFINITION OF VARIABLE 'dummy_StarterReq'
 ***************************************************************************/


/***************************************************************************
 * BEGIN: DEFINITION OF VARIABLE 'dummy_facAirPumpRateReq'
 * -------------------------------------------------------------------------*/
const uint16 dummy_facAirPumpRateReq = 500;
   /* min=0.05, max=0.95, fac_10000, limit=yes */
/* -------------------------------------------------------------------------
 * END: DEFINITION OF VARIABLE 'dummy_facAirPumpRateReq'
 ***************************************************************************/


/***************************************************************************
 * BEGIN: DEFINITION OF VARIABLE 'dummy_facChOverVlvRateReq'
 * -------------------------------------------------------------------------*/
const uint16 dummy_facChOverVlvRateReq = 500;
   /* min=0.05, max=0.95, fac_10000, limit=yes */
/* -------------------------------------------------------------------------
 * END: DEFINITION OF VARIABLE 'dummy_facChOverVlvRateReq'
 ***************************************************************************/


/***************************************************************************
 * BEGIN: DEFINITION OF VARIABLE 'dummy_flgInterCoolerOverride'
 * -------------------------------------------------------------------------*/
const uint8 dummy_flgInterCoolerOverride = false;
   /* min=0, max=1, Identity, limit=yes */
/* -------------------------------------------------------------------------
 * END: DEFINITION OF VARIABLE 'dummy_flgInterCoolerOverride'
 ***************************************************************************/


/***************************************************************************
 * BEGIN: DEFINITION OF VARIABLE 'dummy_flgKl50Override'
 * -------------------------------------------------------------------------*/
const uint8 dummy_flgKl50Override = false;
   /* min=0, max=1, Identity, limit=yes */
/* -------------------------------------------------------------------------
 * END: DEFINITION OF VARIABLE 'dummy_flgKl50Override'
 ***************************************************************************/
```

```
/**************************************************************************
 * BEGIN: DEFINITION OF VARIABLE 'dummy_flgT2tOverride'
 * ------------------------------------------------------------------------*/
const uint8 dummy_flgT2tOverride = false;
   /* min=0, max=1, Identity, limit=yes */
/* ------------------------------------------------------------------------
 * END: DEFINITION OF VARIABLE 'dummy_flgT2tOverride'
 **************************************************************************/


/**************************************************************************
 * BEGIN: DEFINITION OF VARIABLE 'dummy_rpmFuelPumpMin'
 * ------------------------------------------------------------------------*/
const sint16 dummy_rpmFuelPumpMin = 200;
   /* min=0.0, max=16383.5, fac_2, limit=yes */
/* ------------------------------------------------------------------------
 * END: DEFINITION OF VARIABLE 'dummy_rpmFuelPumpMin'
 **************************************************************************/


/**************************************************************************
 * BEGIN: DEFINITION OF VARIABLE 'dummy_stAirInjReacPumpReq'
 * ------------------------------------------------------------------------*/
const uint8 dummy_stAirInjReacPumpReq = false;
   /* min=0, max=1, Identity, limit=yes */
/* ------------------------------------------------------------------------
 * END: DEFINITION OF VARIABLE 'dummy_stAirInjReacPumpReq'
 **************************************************************************/


/**************************************************************************
 * BEGIN: DEFINITION OF VARIABLE 'dummy_stFuelPumpReq'
 * ------------------------------------------------------------------------*/
const uint8 dummy_stFuelPumpReq = true;
   /* min=0, max=1, Identity, limit=yes */
/* ------------------------------------------------------------------------
 * END: DEFINITION OF VARIABLE 'dummy_stFuelPumpReq'
 **************************************************************************/


/**************************************************************************
 * BEGIN: DEFINITION OF VARIABLE 'dummy_stIntercoolerReq'
 * ------------------------------------------------------------------------*/
const uint8 dummy_stIntercoolerReq = false;
   /* min=0, max=1, Identity, limit=yes */
/* ------------------------------------------------------------------------
 * END: DEFINITION OF VARIABLE 'dummy_stIntercoolerReq'
 **************************************************************************/


/**************************************************************************
 * BEGIN: DEFINITION OF VARIABLE 'dummy_stMainRelaisReq'
 * ------------------------------------------------------------------------*/
const uint8 dummy_stMainRelaisReq = true;
   /* min=0, max=1, Identity, limit=yes */
/* ------------------------------------------------------------------------
 * END: DEFINITION OF VARIABLE 'dummy_stMainRelaisReq'
 **************************************************************************/

/* END: ASCET REGION "Exported Data Definitions" */

/**************************************************************************
 * BEGIN: DEFINITION OF MESSAGES
 * ------------------------------------------------------------------------
 * Total size is [bytes]:.....................11
 * ------------------------------------------------------------------------*/
/* messages of memory class:.....................................'RAM' */
/* messages of size [bytes]:.....................................2 */
/* modelled as 'dummy_facAirPumpRate' */
uint16 dummy_facAirPumpRate;
/* modelled as 'dummy_facChOverVlvRate' */
uint16 dummy_facChOverVlvRate;
/* modelled as 'dummy_facThrValveReq' */
sint16 dummy_facThrValveReq;
/* messages of size [bytes]:.....................................1 */
/* modelled as 'dummy_Starter' */
uint8 dummy_Starter;
/* modelled as 'dummy_stAirInjReacPump' */
uint8 dummy_stAirInjReacPump;
/* modelled as 'dummy_stFuelPump' */
uint8 dummy_stFuelPump;
/* modelled as 'dummy_stIntercooler' */
uint8 dummy_stIntercooler;
```

```
/* modelled as 'dummy_stMainRelais' */
uint8 dummy_stMainRelais;
/* ----------------------------------------------------------------------------
 * END: DEFINITION OF MESSAGES
 ****************************************************************************/

#define _dummy_facAirPumpRateReq dummy_facAirPumpRateReq
#define _dummy_facChOverVlvRateReq dummy_facChOverVlvRateReq
#define _dummy_flgInterCoolerOverride dummy_flgInterCoolerOverride
#define _dummy_flgKl50Override dummy_flgKl50Override
#define _dummy_flgT2tOverride dummy_flgT2tOverride
#define _dummy_rpmFuelPumpMin dummy_rpmFuelPumpMin
#define _dummy_stAirInjReacPumpReq dummy_stAirInjReacPumpReq
#define _dummy_StarterReq dummy_StarterReq
#define _dummy_stFuelPumpReq dummy_stFuelPumpReq
#define _dummy_stIntercoolerReq dummy_stIntercoolerReq
#define _dummy_stMainRelaisReq dummy_stMainRelaisReq

/* BEGIN: ASCET REGION "Component Functions" */
/****************************************************************************
 * BEGIN: FUNCTIONS OF COMPONENT
 ****************************************************************************/

/* BEGIN: ASCET REGION "Process Definition 'dummy_calc'" */
/****************************************************************************
 * BEGIN: DEFINITION OF PROCESS 'DUMMY_IMPL_dummy_calc'
 * --------------------------------------------------------------------------
 * model name:.................................'dummy_calc'
 * memory class:...............................'CODE'
 * --------------------------------------------------------------------------*/
//#if defined(COMPILE_UNUSED_CODE) || defined(COMPILE_UNUSED__DUMMY_IMPL_dummy_calc)
/* messages used by this process */

/* public dummy_calc []  */

void DUMMY_IMPL_dummy_calc (void)
{
   /* define local message copies */
   uint16 Egc_facEgas__DUMMY_IMPL_dummy_calc;
   sint16 Epm_rpmEngSpd__DUMMY_IMPL_dummy_calc;
   uint8 ICC_flgInterCooler__DUMMY_IMPL_dummy_calc;
   uint8 Kl50_stKlemme50__DUMMY_IMPL_dummy_calc;
   sint16 T2t_facThrValveReq__DUMMY_IMPL_dummy_calc;
   uint8 dummy_Starter__DUMMY_IMPL_dummy_calc;
   uint16 dummy_facAirPumpRate__DUMMY_IMPL_dummy_calc;
   uint16 dummy_facChOverVlvRate__DUMMY_IMPL_dummy_calc;
   sint16 dummy_facThrValveReq__DUMMY_IMPL_dummy_calc;
   uint8 dummy_stAirInjReacPump__DUMMY_IMPL_dummy_calc;
   uint8 dummy_stFuelPump__DUMMY_IMPL_dummy_calc;
   uint8 dummy_stIntercooler__DUMMY_IMPL_dummy_calc;
   uint8 dummy_stMainRelais__DUMMY_IMPL_dummy_calc;
   /* receive messages implicitly */
   {
      DisableAllInterrupts();
      Egc_facEgas__DUMMY_IMPL_dummy_calc = Egc_facEgas;
      Epm_rpmEngSpd__DUMMY_IMPL_dummy_calc = Epm_rpmEngSpd;
      ICC_flgInterCooler__DUMMY_IMPL_dummy_calc = ICC_flgInterCooler;
      Kl50_stKlemme50__DUMMY_IMPL_dummy_calc = Kl50_stKlemme50;
      T2t_facThrValveReq__DUMMY_IMPL_dummy_calc = T2t_facThrValveReq;
      dummy_Starter__DUMMY_IMPL_dummy_calc = dummy_Starter;
      dummy_facAirPumpRate__DUMMY_IMPL_dummy_calc = dummy_facAirPumpRate;
      dummy_facChOverVlvRate__DUMMY_IMPL_dummy_calc = dummy_facChOverVlvRate;
      dummy_facThrValveReq__DUMMY_IMPL_dummy_calc = dummy_facThrValveReq;
      dummy_stAirInjReacPump__DUMMY_IMPL_dummy_calc = dummy_stAirInjReacPump;
      dummy_stFuelPump__DUMMY_IMPL_dummy_calc = dummy_stFuelPump;
      dummy_stIntercooler__DUMMY_IMPL_dummy_calc = dummy_stIntercooler;
      dummy_stMainRelais__DUMMY_IMPL_dummy_calc = dummy_stMainRelais;
      EnableAllInterrupts();
   }
   /* dummy_calc: sequence call #1  */
   /* assignment to dummy_facThrValveReq: min=-66, max=512, hex=512phys+0, limit=(maxBitLength: true, assign:
 true), zero incl.=true  */
   dummy_facThrValveReq__DUMMY_IMPL_dummy_calc
      = ((_dummy_flgT2tOverride) ? (sint16)Egc_facEgas__DUMMY_IMPL_dummy_calc :
 T2t_facThrValveReq__DUMMY_IMPL_dummy_calc);
   /* dummy_calc: sequence call #3  */
   /* assignment to dummy_facAirPumpRate: min=500, max=9500, hex=10000phys+0, limit=(maxBitLength: true, assign:
 true), zero incl.=true  */
   dummy_facAirPumpRate__DUMMY_IMPL_dummy_calc = _dummy_facAirPumpRateReq;
   /* dummy_calc: sequence call #4  */
   /* assignment to dummy_facChOverVlvRate: min=500, max=9500, hex=10000phys+0, limit=(maxBitLength: true,
 assign: true), zero incl.=true  */
   dummy_facChOverVlvRate__DUMMY_IMPL_dummy_calc = _dummy_facChOverVlvRateReq;
   /* dummy_calc: sequence call #5  */
   dummy_stMainRelais__DUMMY_IMPL_dummy_calc = _dummy_stMainRelaisReq;
```

```
   /* dummy_calc: sequence call #6  */
   dummy_stFuelPump__DUMMY_IMPL_dummy_calc
      = _dummy_stFuelPumpReq && Epm_rpmEngSpd__DUMMY_IMPL_dummy_calc > _dummy_rpmFuelPumpMin;
   /* dummy_calc: sequence call #8  */
   dummy_stIntercooler__DUMMY_IMPL_dummy_calc
      = ((_dummy_flgInterCoolerOverride) ? _dummy_stIntercoolerReq : ICC_flgInterCooler__DUMMY_IMPL_dummy_calc);
   /* dummy_calc: sequence call #9  */
   dummy_stAirInjReacPump__DUMMY_IMPL_dummy_calc = _dummy_stAirInjReacPumpReq;
   /* dummy_calc: sequence call #10  */
   dummy_Starter__DUMMY_IMPL_dummy_calc
      = ((_dummy_flgKl50Override) ? _dummy_StarterReq : Kl50_stKlemme50__DUMMY_IMPL_dummy_calc);
   /* send messages implicitly */
   {
      DisableAllInterrupts();
      dummy_Starter = dummy_Starter__DUMMY_IMPL_dummy_calc;
      dummy_facAirPumpRate = dummy_facAirPumpRate__DUMMY_IMPL_dummy_calc;
      dummy_facChOverVlvRate = dummy_facChOverVlvRate__DUMMY_IMPL_dummy_calc;
      dummy_facThrValveReq = dummy_facThrValveReq__DUMMY_IMPL_dummy_calc;
      dummy_stAirInjReacPump = dummy_stAirInjReacPump__DUMMY_IMPL_dummy_calc;
      dummy_stFuelPump = dummy_stFuelPump__DUMMY_IMPL_dummy_calc;
      dummy_stIntercooler = dummy_stIntercooler__DUMMY_IMPL_dummy_calc;
      dummy_stMainRelais = dummy_stMainRelais__DUMMY_IMPL_dummy_calc;
      EnableAllInterrupts();
   }
}
/* ----------------------------------------------------------------------------
 * END: DEFINITION OF PROCESS 'DUMMY_IMPL_dummy_calc'
 ****************************************************************************/
#endif
/* END: ASCET REGION "Process Definition 'dummy_calc'" */


/* ****************************************************************************
 * END: FUNCTIONS OF COMPONENT
 ****************************************************************************/
/* END: ASCET REGION "Component Functions" */
```