FC131 - <offline>

"FC_Fault_Search"

Name: **Family:**
Author: **Version:** 0.1
Block version: 2
Time stamp Code: 10/11/2022 02:14:32 PM
Interface: 04/26/2007 10:31:05 AM
Lengths (block/logic/data): 00492 00342 00010

Object properties:
S7_language 7(1) Deutsch (Deutschland) 09/28/2011 09:55:29 AM

Name	Data Type	Address	Comment
IN		0.0	
DB_FAULT	Block_DB	0.0	Datablock for faults
DB_LEVEL	Block_DB	2.0	Datablock for fault levels
NO_FLTBYTE	Int	4.0	Number of fault byte
OUT		0.0	
RETVAL	Int	6.0	0=OK / 1= DB Level lenght error / 2= DB Fault lenght error
FLT_1	Bool	8.0	Fault level 1
FLT_2	Bool	8.1	Fault level 2
FLT_3	Bool	8.2	Fault level 3
FLT_4	Bool	8.3	Fault level 4
FLT_NO	Int	10.0	First fault number
IN_OUT		0.0	
TEMP		0.0	
DB_Lvl	Word	0.0	Datablock fault level
Byte_index	Int	2.0	
Shiftword	Word	4.0	
Flt_index	Int	6.0	Fault index
Flt_level	Int	8.0	Fault level
RETURN		0.0	
RET_VAL		0.0	

Block: FC131 Management to search/define fault levels

Network: 1 Initialize

```
      L     0              // Reset output
      T     #RETVAL                                  #RETVAL            -- 0=OK / 1= DB Level lengh
                                                     t error  / 2= DB Fault lenght error
      T     #FLT_NO                                  #FLT_NO            -- First fault number
      SET
      R     #FLT_1                                   #FLT_1             -- Fault level 1
      R     #FLT_2                                   #FLT_2             -- Fault level 2
      R     #FLT_3                                   #FLT_3             -- Fault level 3
      R     #FLT_4                                   #FLT_4             -- Fault level 4

      OPN   #DB_LEVEL                                #DB_LEVEL          -- Datablock for fault leve
                                                     ls
      L     DBNO
      T     #DB_Lvl                                  #DB_Lvl            -- Datablock fault level
      OPN   DI [#DB_Lvl]  // Open DI for level       #DB_Lvl            -- Datablock fault level
      L     #NO_FLTBYTE                              #NO_FLTBYTE        -- Number of fault byte
      SLW   3
```

```
      L     DILG
      <=I
      JC    Dbft          // Jump if DI lenght OK
      L     1
      T     #RETVAL       // RETVAL=1                                #RETVAL            -- 0=OK / 1= DB Level lengh
                                                                    t error  / 2= DB Fault lenght error
      SET
      S     #FLT_1        // Set Level 1                             #FLT_1             -- Fault level 1
      BE
Dbft: OPN   #DB_FAULT     // Open DB for fault                       #DB_FAULT          -- Datablock for faults
      L     #NO_FLTBYTE                                             #NO_FLTBYTE        -- Number of fault byte
      L     DBLG
      <=I
      JC    Init          // Jump if DB lenght OK
      L     2
      T     #RETVAL       // RETVAL=2                                #RETVAL            -- 0=OK / 1= DB Level lengh
                                                                    t error  / 2= DB Fault lenght error
      SET
      S     #FLT_1        // Set Level 1                             #FLT_1             -- Fault level 1
      BE

Init: L     0             // initialize index
      T     #Byte_index                                             #Byte_index
      LAR1  P#0.0
```

Network: 2 Scan datablock to define the Fault level

```
Loop: L     0
      L     DBB [AR1,P#0.0]
      ==I
      JC    Next              // jump if fault byte =0
      T     #Shiftword                                                #Shiftword
      L     #Byte_index                                               #Byte_index
      SLW   3
      T     #Flt_index        // Initialize Fault index               #Flt_index         -- Fault index

Shft: L     #Shiftword                                                #Shiftword
      SRW   1
      T     #Shiftword                                                #Shiftword
      JMZ   NBit              // jump if fault bit =0

      L     #FLT_NO                                                   #FLT_NO            -- First fault number
      L     0
      <>I                     // jump if FLT_NO <> 0
      JC    FLvl
      L     #Flt_index                                                #Flt_index         -- Fault index
      L     1
      +I
      T     #FLT_NO           // FLT_NO = Flt_index + 1               #FLT_NO            -- First fault number

FLvl: L     #Flt_index                                                #Flt_index         -- Fault index
      SLW   3
      LAR2                    // load pointer address for Flt level
      L     DIB [AR2,P#0.0]   // load Flt level
      T     #Flt_level                                                #Flt_level         -- Fault level
      L     1
      >I
      JC    Lvl2              // jump if fault level >1
      SET
      S     #FLT_1            // Set Level 1                          #FLT_1             -- Fault level 1
      JU    NBit

Lvl2: L     #Flt_level                                                #Flt_level         -- Fault level
      L     2
      >I
      JC    Lvl3              // jump if fault level >2
      SET
      S     #FLT_2            // Set Level 2                          #FLT_2             -- Fault level 2
      JU    NBit

Lvl3: L     #Flt_level                                                #Flt_level         -- Fault level
      L     3
      >I
      JC    Lvl4              // jump if fault level >3
      SET
      S     #FLT_3            // Set Level 3                          #FLT_3             -- Fault level 3
      JU    NBit
```

```
Lvl4: SET
      S     #FLT_4           // Set Level 4                              #FLT_4            -- Fault level 4

NBit: L     #Shiftword                                                   #Shiftword
      L     0
      ==I
      JC    Next             // jump if Flt byte =0
      L     #Flt_index                                                   #Flt_index        -- Fault index
      L     1
      +I
      T     #Flt_index       // increment Flt index                      #Flt_index        -- Fault index
      JU    Shft

Next: +AR1  P#1.0
      L     #Byte_index                                                  #Byte_index
      L     1
      +I
      T     #Byte_index      // increment Byte index                     #Byte_index
      L     #NO_FLTBYTE                                                  #NO_FLTBYTE       -- Number of fault byte
      <I
      JC    Loop             // jump if byte index < No of Flt byte
```