

CAMDEB Line : Programmable LAM Grader

PLG 2113

Features

- * single width CAMAC module
- * compatible with the CERN EP 258 unit
- * high speed memory scanning

General description

This unit is intended to be used with all crate controllers, except with the CES CCA2 2111 where these features are already incorporated.

The unit is organised around a 32 word * 8bit RAM memory. The addresses correspond to the incoming LAMs either from the dataway or from the external LAM inputs. The contents correspond to the routing information, ie :

- the Graded LAM level
- the Mask
- a BUSY bit , set to activate an external trigger.
- a software LAM bit , used to simulate this LAM.

The updating of the 24 bit GL/pattern is executed within 3 microseconds.

The memory word format is :

MSB								LSB
B8	B7	B6	B5	B4	B3	B2	B1	

soft.L	Busy	Mask	GL16	GL8	GL4	GL2	GL1	

The content of the memory indicates which GL (amongst 24 GLs) is associated with the incoming LAM. The output GL pattern is then compared with an output Mask register, before being sent to the GL lines.

CAMAC Functions

All functions address N or N28 functions generate X answer.

F(0).A(0)

Read the Output Mask register. (24 bits). Q answer = 1

F(0).A(2)

Read data from the memory at the address specified by the address counter. The address counter is automatically incremented after read-out. Data is presented on R1-R8. Q answer = 1 if scanning stopped and address valid.

F(1).A(2)

Read the memory address counter on R1 to R5. Q answer = 1 if scanning is stopped.

F(10).A(0)

Clear the external LAM 0

F(10).A(1)

Clear the external LAM 1

F(10).A(2)

Clear the external LAM 2

F(16).A(0)

Write the Output Mask register on W1 to W24.
Q answer = 1

F(16).A(1)

Write address/content of the RAM. W1 to W8 is the content, (GLs), W9 to W13 is the address. Q answer = 1

F(16).A(2)

Write content of the RAM at the address specified by the address counter. W1 to W8 = content. Increments the memory address after the operation. Q answer = 1

F(17).A(2)

Load the memory address counter and stops the scanning.
W1 to W5 = address counter. Q answer = 1

F(18).A(0)

Selective set of the Output Mask register. A "zero" sets the mask. Q answer = 1

F(18).A(1)

Selective set of bits in the RAM.
W1 to W8 = content (selective set).
W9 to W13 = address (absolute).
Q answer = 1

F(21).A(0)

Selective reset of the Output Mask register. A "zero" clears the mask. Q answer = 1

F(21).A(1)

Selective clear of bits in the RAM
W1 to W8 = clear pattern.
W9 to W13 = address (absolute). Q answer = 1

F(24).A(2)

Disable scanning. Must be used before memory read/write

F(25).A(0)

Set the external LAM 0

F(25).A(1)

Set the external LAM 1

F(25).A(2)

Set the external LAM 2

F(26).A(2)

Enable scanning

F(27).A(2)

Test if scanning is active.
Q answer = 1 if scanning is active.

Z

Clear LAMs, set masks, clear the memory

Specifications

Front panel controls:

FD 1 In : LEMO 00, NIM

FD 1 Out: LEMO 00, NIM

FD 2 In : LEMO 00, NIM

FD 2 Out: LEMO 00, NIM

FD 3 In : LEMO 00, NIM

FD 3 Out: LEMO 00, NIM

BUSY Out: LEMO 00, NIM

Scanning active Led

Rear panel controls:

CANNON 52pin female -LAM connector

Ordering information.

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