PS/LI/Note Techn. 84-1

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A BEAM DESTINATION READ-OUT FOR BH3/BH4

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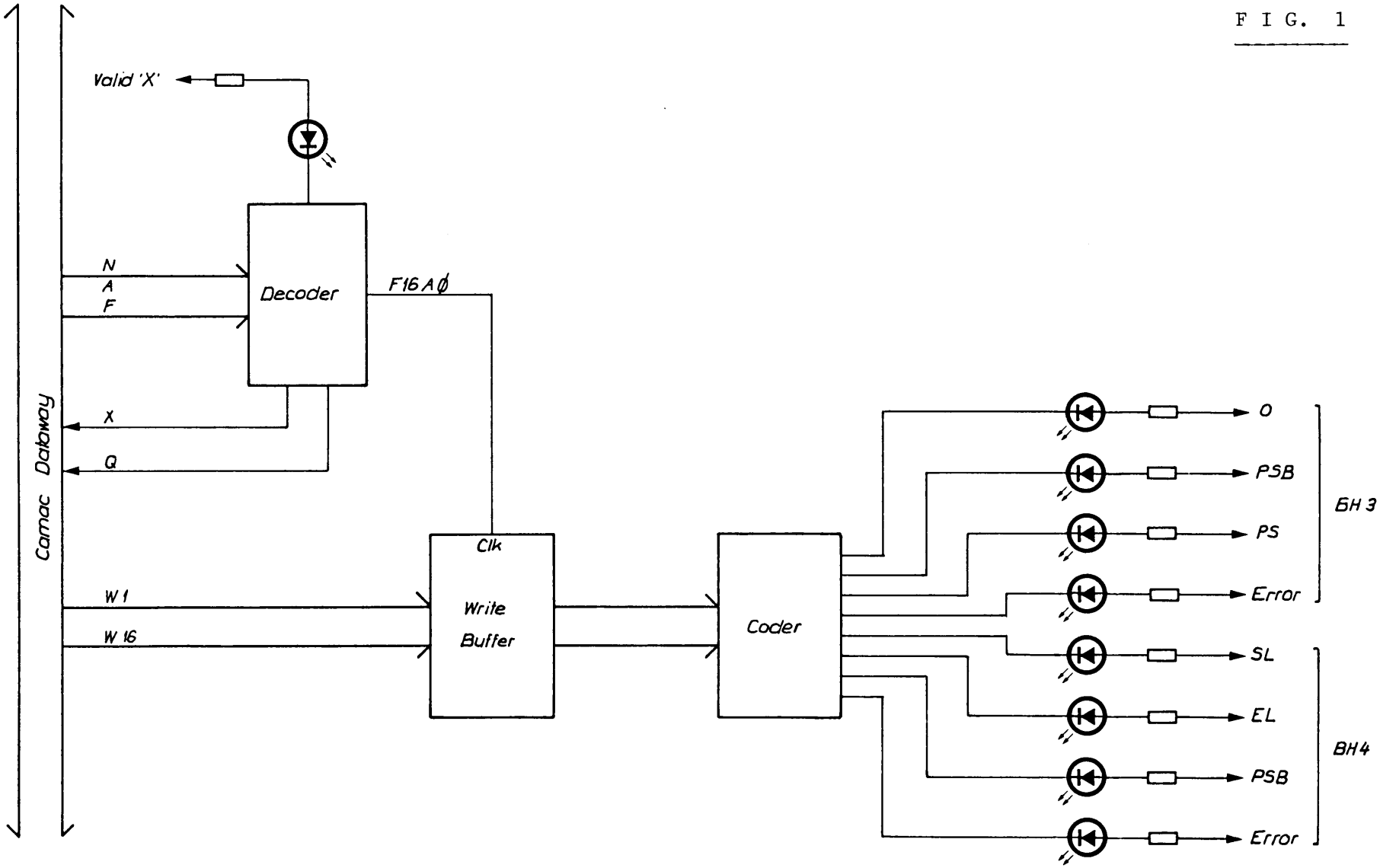
1. Introduction

For the control and acquisition of the bending magnets BH3/BH4 an in-crate microprocessor was installed, running an assembler program burnt in EPROM. Since the microprocessor changes the magnet currents (i.e. the beam destination) in real time, a tool which helps solving possible problems during operation becomes vital. For this purpose we designed a CAMAC module allowing real time read-out of the beam destination for each of the two bending magnets.

ITIONS

13.6.91 padova

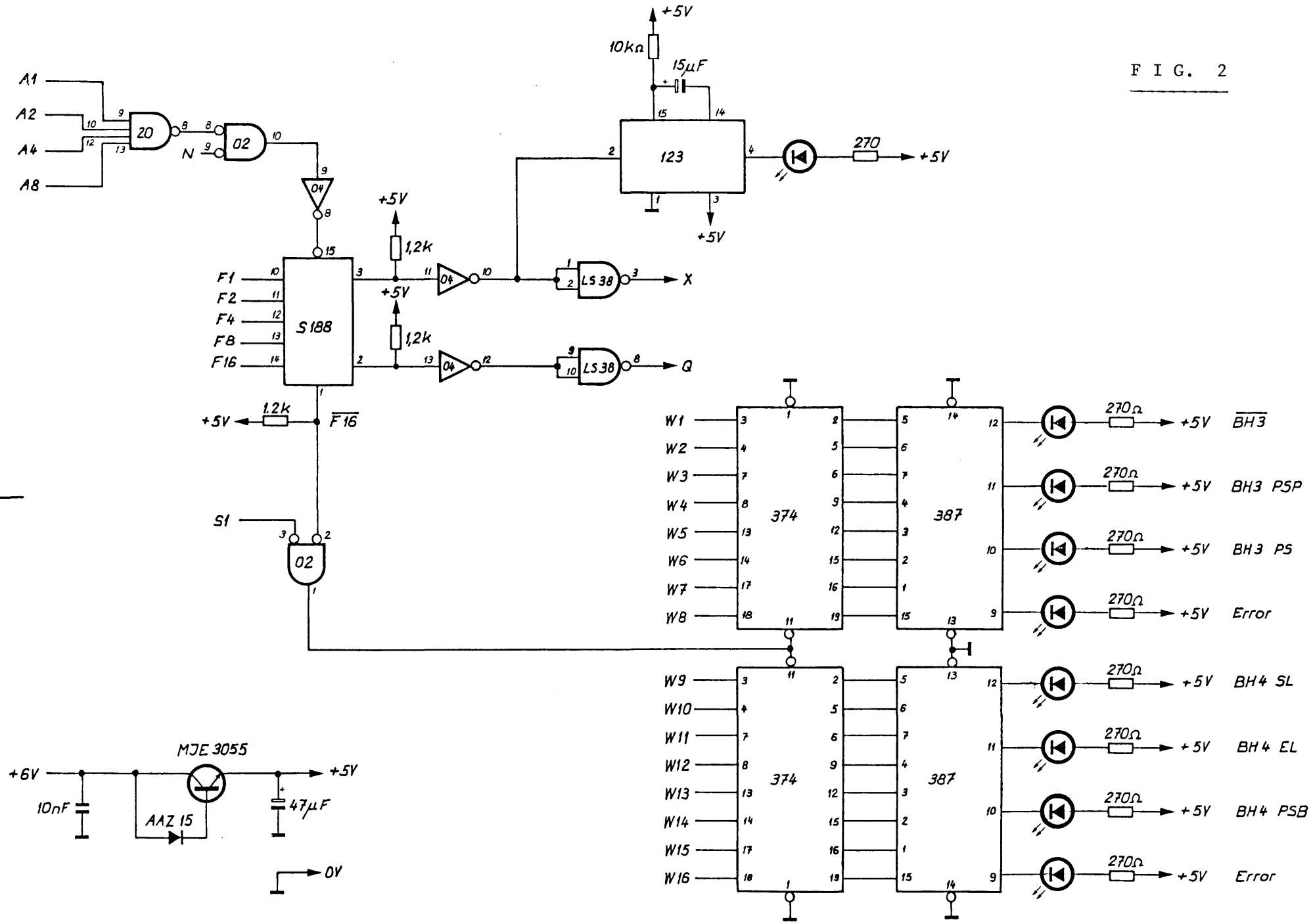
F I G. 1



TITLE BH3/BH4 beam destination	SCALE	CERN MPS DOCU	5 2 5.0 1 7	L E	1 0 1	3
OLD NUMBER						3

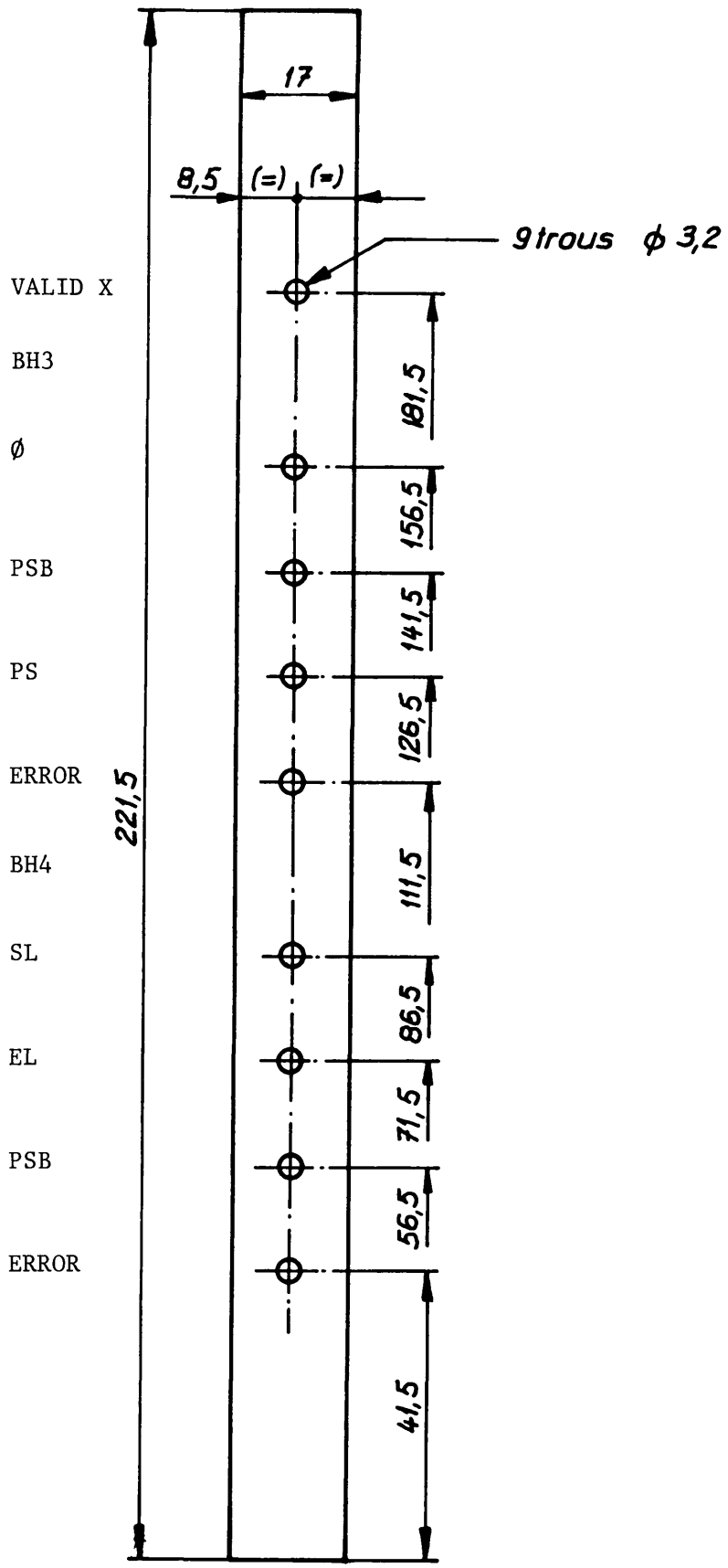
EDITIONS

FIG. 2



TITLE BH3/BH4 beam destination	SCALE	CERN MPS DOCU	5.25.017	LE201	3
OLD NUMBER					3

F I G. 3



1). 18.6.81 Headon

DESSIN, RUGOSITÉ, TOLÉRANCES
SELON NORMES ISO

Projection européenne
First angle projection

BH3/4 beam destination

ÉCHELLE SCALE	DESSINÉ		
1:1	CONTRÔLÉ		
	REMPLACE		
	REMPLACÉ PAR		
	RÉDUCTION		

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525.017 LE 301.4

INDICE

2. Description

The asembler program expects the module to be in station 9 of crate 52. After obtaining the beam destination by reading a timing module, this information is written into the module in station 9 by using the CAMAC function F16A0. A decoder will give X and Q on receiving this function and the "VALID X" LED will light up (Fig. 1). In order to have the beam destination written into the coder, the CAMAC function F16A0 is used to clock the right buffer. The coder will then process the input pattern and drive the appropriate LEDs.

Whenever an incorrect pattern is found on the coder's input, the "ERROR" LED will light up.

Figures 2 and 3 show the detailed electronics and the front panel, respectively.

Remark: Whenever BH3 is set to zero, the BH3 "0" LED will light up. If no action is undertaken on BH4, all BH4 LEDs will be off.

Distribution:

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PS Operation