

THE SHOT INTERFERENCE RELAY UNIT

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1. Functional description

The various ejection equipment for an ejection shot is each time started with prepulses deviated from the timing system in a preselected sequence.

The equipment required for an ejection shot may incorporate a part or all of the following accessories, each receiving their appropriate start pulse.

- 10 Kicker magnet supplies
- 2 Septum magnet supplies (MSM 24 + SSM 26)
- 1 Servoactuator program.

For 3 shots operation the total number of start pulses will thus be 39. All of the equipment, mentioned above, may not be operating in all 3 shots. However, the timing system will distribute its pulses continuously for all various purposes, therefore a simple means must be provided to switch the start pulses as desired to the equipment.

To make this switching possible all start pulses are passing through relays (dry reed), which can be operated from a push-button panel (one per shot) or possibly from a matrix programming panel, to simplify operation. The following grouping per ejection shot is foreseen :

- 12 relays for kicker magnets (2 spare)
- 2 relays for MSM 24 (1 spare)
- 2 relays for SSM 26 (1 spare)
- 2 relays for servoactuator program (1 spare)
- 2 relays (spare)

These groups are each switched on and off by one push-button. The number of operating kicker magnets can be selected on the kick and bunch selector. For matrix programming an entry to each kicker magnet supply can be foreseen.

2. Construction proposal

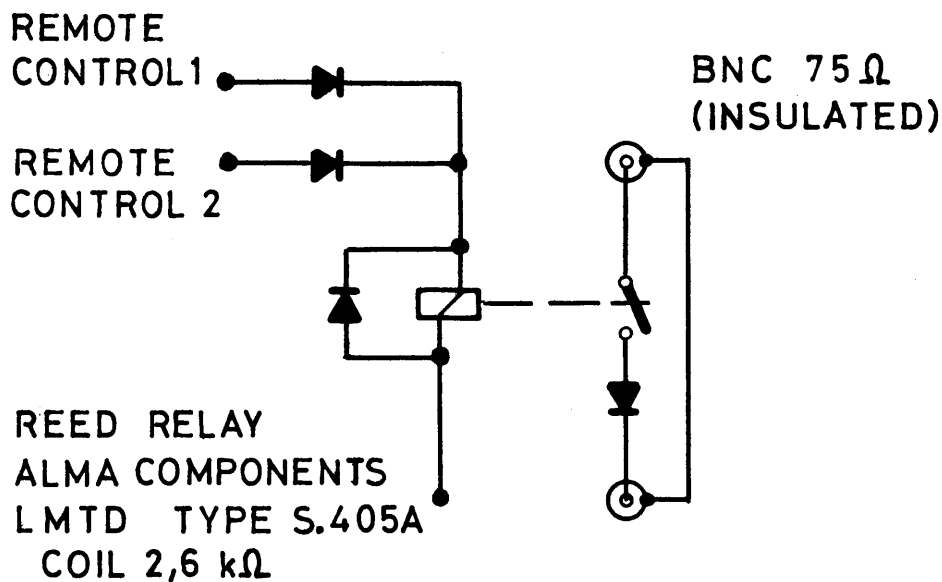
The most practical location of these units in a standard 19" rack would be on stand-offs, about 10 cm backwards into the rack.

As mounting plate a 5 H frontpanel can be used on which the BNC's can be mounted. The reed relays with in addition the diodes should be mounted on a printed circuit.

The printed circuit could either be a single or double face print, under the condition that the connections to the BNC's can be soldered without complications.

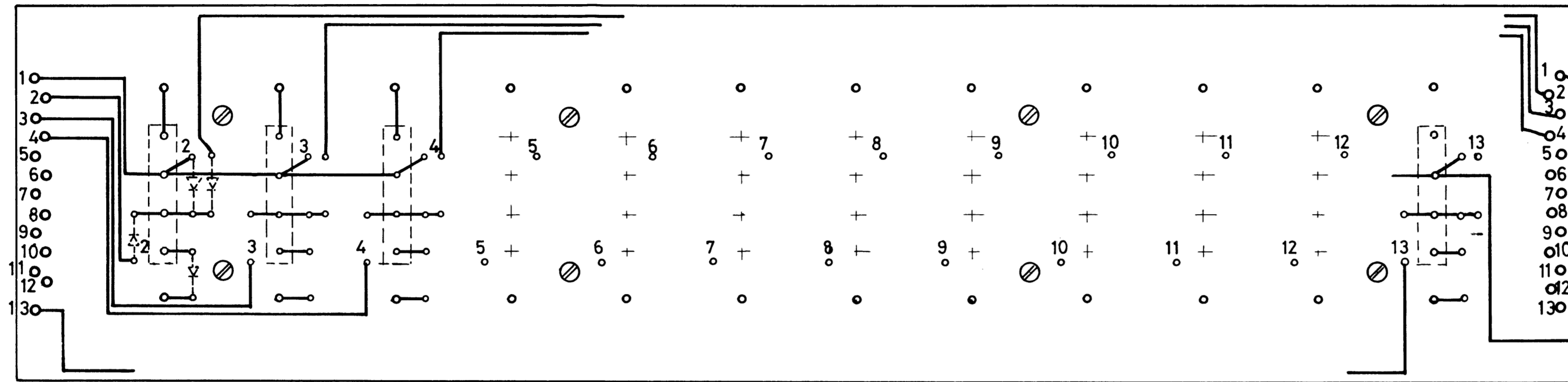
3. Drawings

363-300-2	Construction proposal
363-301-2	Frontpanel
363-100-4	Basic relay circuit.

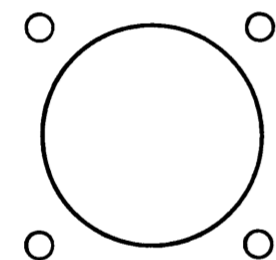


Nombre de pièces			Désignation		Pos.	Matière	Observations		
III	II	I	Mod.	Date	Nom	Tolérances générales			
			A			de	à	±	
			B			de	à	±	
			C			de	à	±	
			Ensemble		S. Ensemble		Dessiné	10-06-70 J. Braichet	
GENERAL INTERLOCKS SHOT INTERFERENCE RELAY UNIT BASIC RELAY CIRCUIT						Echelle		Contrôlé	
								Vu	
							Remplace		
							Remplacé par		
Dossier N° Dossier N° Dossier N°			ORGANISATION EUROPÉENNE POUR LA RECHERCHE NUCLÉAIRE CERN EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH				FES		363-100-4
			1211 GENÈVE 23						

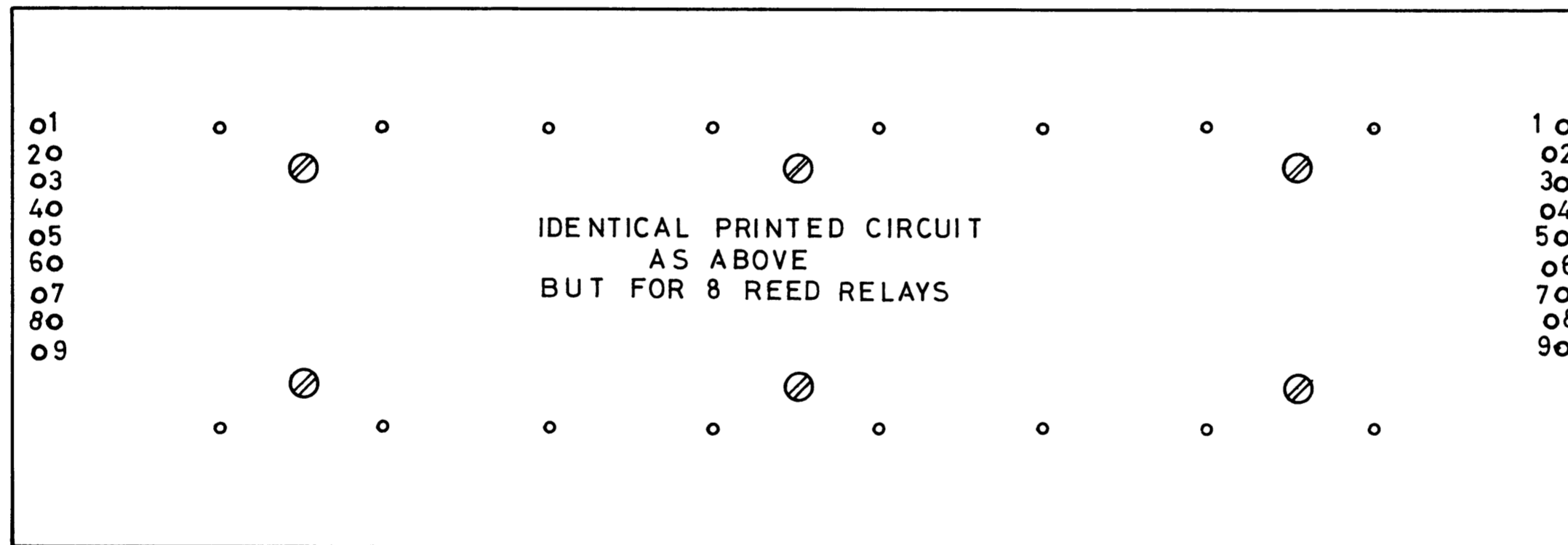
19''



BURNDY 28 PIN



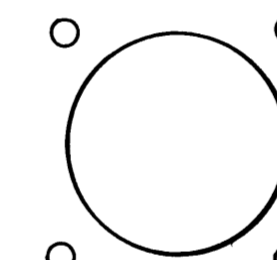
01
20
03
40
05
60
07
80
09



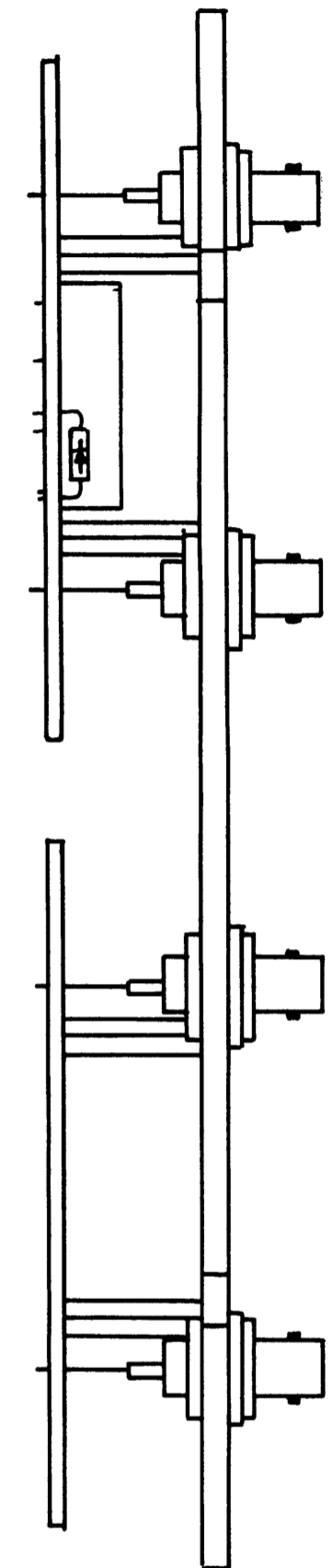
IDENTICAL PRINTED CIRCUIT
AS ABOVE
BUT FOR 8 REED RELAYS

10
02
30
04
50
06
70
08
90

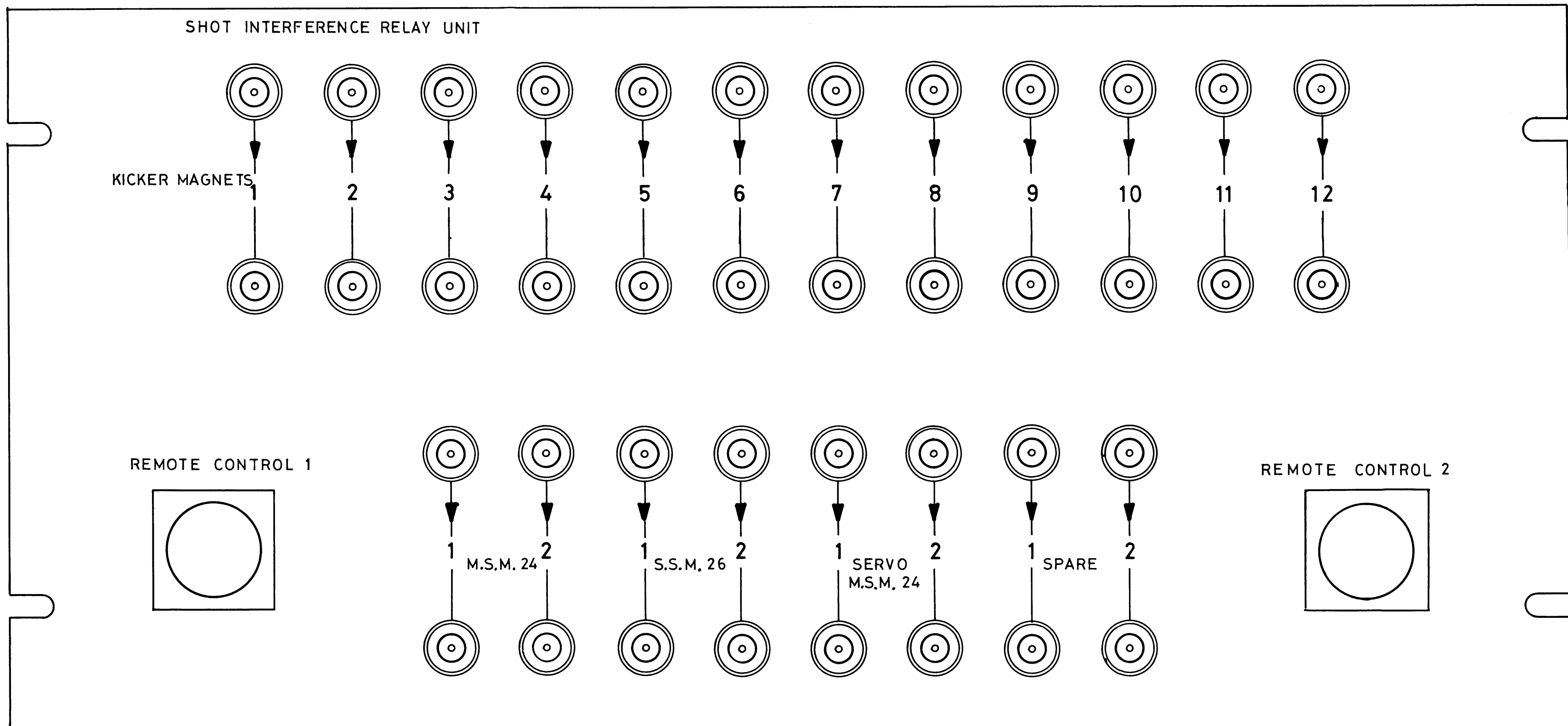
BURNDY 28 PIN



5H



Nombre de pièces		Désignation	Pos.	Matière	Observations		
III	II	I	Mod.	Date	Nom	Tolérances générales	
			A			de à ±	
			B			de à ±	
			C			de à ±	
			Ensemble		S. Ensemble		Dessiné 10-06-70 J. Braichet
			GENERAL INTERLOCKS		Echelle		Contrôlé
			SHOT INTERFERENCE				Vu
			RELAY UNIT				Remplace
			CONSTRUCTION PROPOSAL				Remplacé par
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			CERN EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH		FES		
			1211 GENÈVE 23				363-300-2



NOTE: BNC PLUGS 75 Ω (ISOLATED FROM PANEL)

Nombre de pièces		Désignation		Pos.	Matière	Observations
III	II	I	Mod. Date Nom	Tolérances générales		
			A	de	à	±
			B	de	à	±
			C	de	à	±
Ensemble				S. Ensemble		Dessiné 10-06-70 J. Braichef
GENERAL INTERLOCKS				S. Ensemble		Contrôlé
SHOT INTERFERENCE RELAY UNIT				S. Ensemble		Vu
FRONT PANEL				S. Ensemble		Remplace
				S. Ensemble		Remplacé par
ORGANISATION EUROPÉENNE POUR LA RECHERCHE NUCLÉAIRE				FES		363-301-2
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