

# GEC Electrical Projects Limited

## GEC Industrial Controls Limited

### GEM 80



#### DESCRIPTION

The 8966 d.c. input block is intended primarily for use with the 8843 pulse train input equipment which typically requires a rapid response to input signal changes. In such an application it plugs into a special termination panel as described in the 8843 data sheet.

The 8966 (fast response) block is mechanically and electrically interchangeable with the 8963 and 8965 blocks, but has a lower noise immunity associated with its faster response.

#### FEATURES

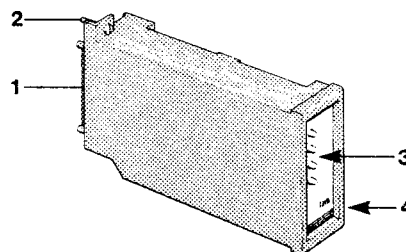
- Suitable for industrial applications.
- Rugged plug-in moulded block.
- Optical isolation.
- Input state indication.
- Fast response.
- Mechanical coding of block type.
- Suitable for a range of plant voltages including 12V, 24V and 48V.
- Low power consumption.

#### SPECIFICATION (whole block)

|                                        |                                                  |
|----------------------------------------|--------------------------------------------------|
| Number of inputs                       | : 4                                              |
| Temperature                            | : 0 to 70°C operating.<br>: -20 to 70°C storage. |
| Humidity                               | : 10 to 90% non-condensing                       |
| Dimensions                             | : 112 x 48 x 198mm<br>(high x wide x deep)       |
| Weight                                 | : 0.37kg                                         |
| Front panel colour code                | : Blue                                           |
| Power dissipation (all inputs ON)      | : 3.75W typical for 66V supply.                  |
| Power consumption from host controller | : 6mA @ +15V                                     |

#### 8966

#### 9-66V D.C. Input Block (Fast Response)



1. Plug for electrical connections to panel.
2. Captive screw to retain block on panel.
3. State indicating lamps for four inputs.
4. Colour code and type number.

#### SPECIFICATION (each of four inputs)

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| Input voltage for ON state              | : 9V minimum<br>: 66V maximum                  |
| Input current for ) On state-typically) | : 7mA at 9V<br>: 14mA at 66V                   |
| Input voltage for OFF state             | : 0V nominal<br>: 4.5V maximum                 |
| Input current for OFF state             | : 0.7mA maximum                                |
| Common mode isolation voltage           | : 2 kV pk transient                            |
| Differential no damage voltage          | : 66V pk continuous including supply reversal. |
| Response time ON                        | : 1 ms maximum                                 |
| Response time OFF                       | : 1 ms maximum                                 |

## APPLICATION NOTES

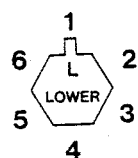
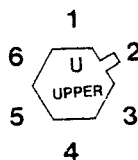
### 1. WARNING.

BLOCKS SHOULD NOT BE REMOVED WITH POWER ON.

### 2. MECHANICAL CODING

The mechanical coding recesses in the rear of the 9-66V d.c. input block are factory preset with slots in positions U2 and L1.

The user is advised to set the keys on the mechanical coding pillars of the I/O termination panel to the corresponding positions. This ensures that only blocks of the same type are interchangeable.

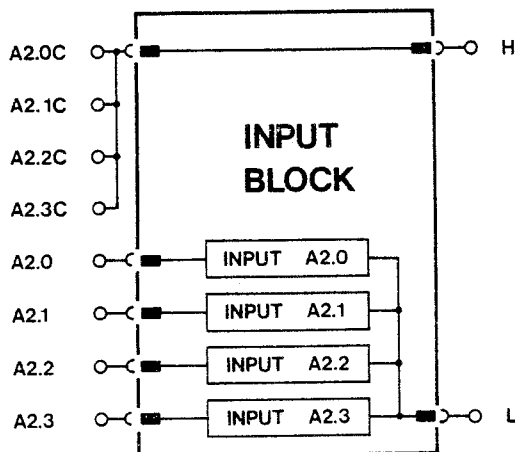


PANEL KEY POSITIONS

### 3. USER CONNECTIONS

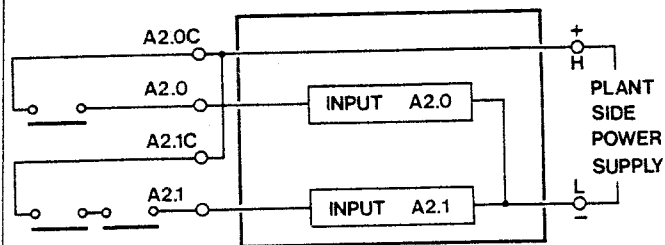
All user connections are made to terminals on the I/O block termination panel.

The input point designations and terminal numbers are determined by the position of the block on the panel. The example below illustrates the connections to the first block on a typical panel referenced A2.

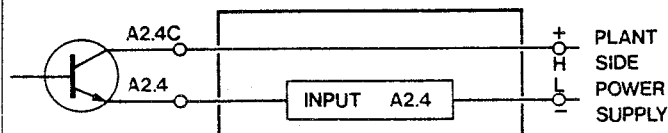


### 4. TYPICAL CIRCUITS

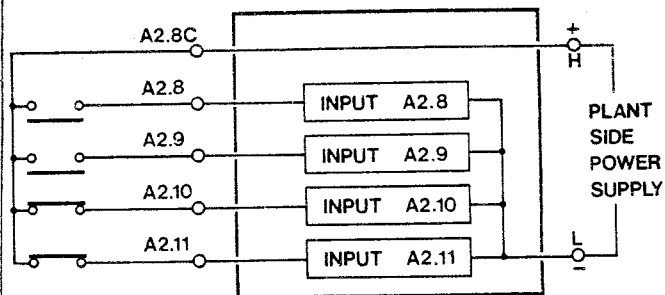
#### 4.1 Individual contact (or series chain)



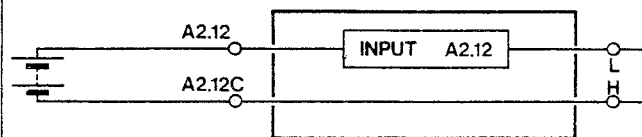
#### 4.2 Solid state switch.



#### 4.3 Input group with common wire.



#### 4.4 D.C. power supply sensing.



### 5. ORDERING CODE

9-66V d.c. input block (fast response) 8966

Note: The Company's policy is one of continuous development and improvement and, therefore, the right is reserved to supply products which may differ in detail from those described and illustrated in this publication. All our products and materials are sold subject to Conditions of Sale available from us on request.

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Printed in England



Parent Company—The General Electric Company Limited

Issue 1 04.81