

NEW ZEALAND

# Engineering

THE JOURNAL  
OF THE NEW ZEALAND INSTITUTION OF ENGINEERS



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# Burgess

## Check your needs from the categories shown here.



**Compact metal-housed micro switches**  
V3HM6S, 2V3HM6S

These models have been developed to meet industry's demand for small-size, single or double pole, thoroughly dependable micro switches with rapid interior switch replacement facilities. General rating is 10 amp at 250V.A.C. Mounting holes 5.18 mm. Splashproof 6BA screw terminals. Conduit entry normally  $\frac{3}{4}$ " to BS31.



**3BRM and 4BRM metal housed micro switches**

These switches were designed and first produced over twenty years ago, and they continue to enjoy wide popularity. 3BRM and 4BRM switches have 6BA screw terminals located in 4 mm channels. The general current rating is 15 amp, 250 V.A.C. Their housings are of heavy-duty zinc alloy and have  $\frac{3}{4}$ " BS31 conduit entry. Two types of base plates are provided with each switch so that each is suitable for either side or base mounting.



**Heavy-duty metal-housed micro switches,**  
CTHMSA, 2V3CMSA.  
Robust housing and actuator mechanisms, coupled

with provision for strong mounting (three 6.7 mm holes), render these micro switches suitable for exceptionally arduous applications. Single-pole models incorporate one standard-size interior switch rated at 15 amp, 250 V. AC. 6-32 screw terminals. Double-pole units use an interior assembly consisting of two V3-series miniature switches rated at 10 amp, 250 V. AC. 6 BA screw terminals.



**CRLN metal-housed micro switches**

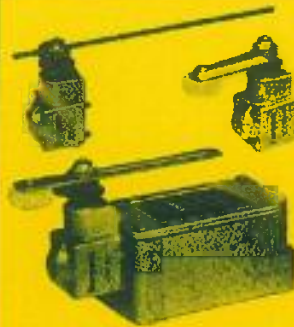
Robust switches with three P.V.C. cables factory-connected and all electrics sealed.

Changeover switching, 15 amp, 250 volt AC general rating. No provision is made for replacing the long-life interior switch on site as this operation might derange the sealing system. Mounting by two lugs, each with a 6.76 mm mounting hole and a smaller dowel or locating hole. The switches are handed: suffix '-LH' indicates left hand, i.e. plunger top left when viewed from the front, and suffix '-RH' indicates right hand.



**Thermostat units therm/C1**

Designed specifically for precise temperature control in incubators, brooders and similar agricultural and horticultural appliances, these units nevertheless have wider uses in general engineering and the laboratory. Within the temperature band of 21° to 43° C, they bring the accuracy of  $\pm 0.3$ ° C, temperature differential with complete reliability over a very long life. Adjustment is by a lockable knurled knob. Sensitive, 15 amp micro switches are used to ensure snap-action no matter how slow or hesitant the temperature change.



**L25 series plug-in limit switches 'The down-time misers'**

Burgess have developed

the L25 series plug in limit switches specifically for industrial use, where precision performance, reliability, resistance to machine environment, full adjustment capability and down-time minimisation are of prime importance.

The series comprises four types of complete switch and actuator assemblies, each one available with a choice of conduit entries. One type has an in-line plunger actuator and the other three have rotary action actuators. Additionally, a switch unit without actuator and the actuator heads are offered as separate items.

## Burgess - switches for every application

5.307



# N. Z. I. E.

## news section

A supplement to "New Zealand Engineering" sent to all members of the N.Z. Institution of Engineers  
President: E. W. de Lisle, M.Sc.(Hons), C.Eng., F.I.E.E., F.N.Z.I.E.  
Secretary: R. W. K. Stevens, C.B.E.

## The Secretary's Newsletter

### VISIT OF THE PRESIDENT AND SECRETARY, INSTITUTION OF CIVIL ENGINEERS

THE President of the Institution of Civil Engineers, R. L. Hetherington, and the secretary, J. G. Watson, visited New Zealand early in May. The main object of the visit was to attend the centennial celebrations at the University of Canterbury, but the President and secretary took the opportunity to meet as many as possible of their members resident in New Zealand. On 8 May the visitors attended a luncheon meeting of the Wellington branch and during the afternoon met the Wellington-based members of the Council. This was followed by a small reception at which Mrs Hetherington and Mrs Watson were present.

On 9 May the visitors were taken to Wairakei by road, calling en route at the Tongariro power development project and the Wairakei geothermal project. The following day they drove to Auckland via Hamilton, where they met members of the Waikato/Bay of Plenty branch and finished the day with a meeting of the Auckland branch. They left for England on Friday, 11 May.

### N.Z. INSTITUTE OF CLERKS OF WORKS

The N.Z. Institute of Clerks of Works has announced that it will extend its associate membership to persons qualified and experienced in mechanical and electrical supervision in the building industry. Although associate membership does not confer full membership of the Institute, it does recognise the qualifications and experience of those supervising electrical and mechanical services in some of the larger building contracts now being negotiated. Application forms can be obtained from the Institute secretary, P.O. Box 1818, Wellington.

### N.Z.I.E. SUBSCRIPTIONS—REMINDER

Approximately 500 members have not yet paid their subscriptions for the current year amounting in total to about \$10 000. Such members are reminded that under Rule 8.4(a) they have until 1 July to meet their dues, after which date they will be deleted from the mailing list and their rights of membership suspended.

### 1974 N.Z.I.E. CONFERENCE

The 1974 conference will be held in Wellington during the period 7 to 11 February 1974. As H.M., the Queen and H.R.H. the Duke of Edinburgh will be in New Zealand at the time, an invitation to address the conference has been extended to Prince Philip through the Secretary for Internal Affairs. It may be some months before it is known whether Prince Philip will be able to accept the invitation.

### NEW ZEALAND ROADING CONFERENCE 1973

The National Roads Board is sponsoring a roading conference to be held in the Wellington town hall on 31 July and 1 August 1973. An open invitation is extended to representatives of organisations and others with an interest in roading to register with the conference secretary their intention to attend. There is no registration fee. Registration forms can be obtained from the conference secretary, N.Z. Roading Conference, P.O. Box 12041, Wellington, and should be submitted by 29 June 1973.

The conference is intended to critically examine the policies and procedures relating to roading administration in their broadest context.

●To ensure that they are attuned to present-day requirements and the needs of the next 10 years.

- To ensure that full value is obtained for money expended.
  - To consider the extent to which the National Roads Board's functions and responsibilities should be changed.
- The Government has decided that the time has come to take stock—to review the National Roads Act and other relevant legislation in the light of experience to date and having regard to present-day requirements.

### Conference content

Written submissions will be welcomed from national organisations and others with an interest in roading covering any topic relevant to the development of the New Zealand roading system. Priority will be given to submissions dealing with overall policy in preference to those dealing with matters of local interest. The conference will deal with submissions by grouping them into four main sessions which will be considered in sequence:

- (a) *Needs and objectives*  
What improvements and changes to the roading system are necessary in the next 10 years and to what extent should the spheres of activity of a central roading authority be changed?
- (b) *Administration*  
What changes should be made in administration arrangements and formal procedures to decide how roading funds should be spent?
- (c) *Finance*  
How much finance should be made available for roading, where should it come from and what limits should be placed on its expenditure?
- (d) *Organisational requirements*  
Which organisations should be responsible for the maintenance, improvements and operational control of state highways, roads and streets and what planning, design, construction and supervision resources should they use?