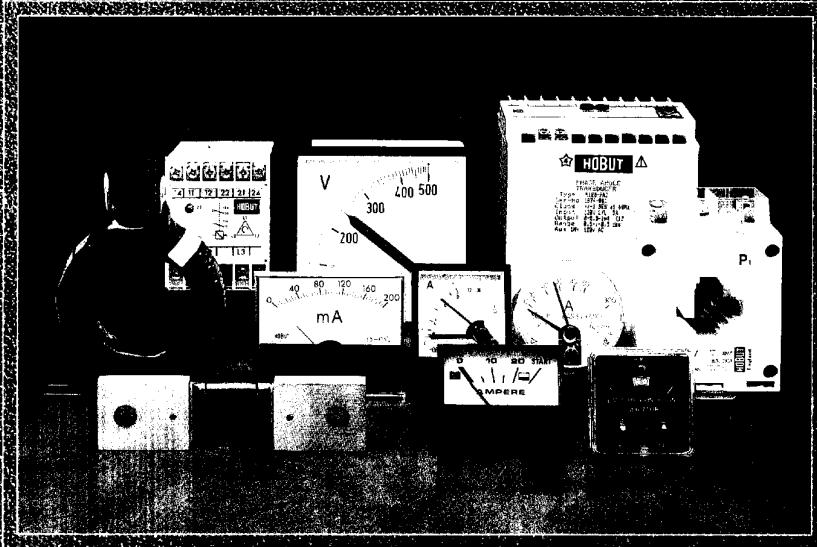


ANALOGUE PANEL METERS
DIGITAL PANEL METERS
HOURS COUNTERS
SELECTOR SWITCHES
PROTECTION RELAYS
TRANSDUCERS
SHUNTS
CURRENT TRANSFORMERS
POLARISED METERS
THERMAL CUT-OUTS
AUTOMOTIVE PRODUCTS

515-~~6~~
681

D72/85/001

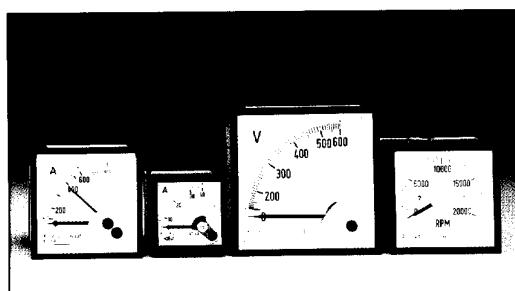


HOBUT

THE MEASURE OF QUALITY

ANALOGUE PANEL METERS, HOURS COUNTERS, SELECTOR SWITCHES & PROTECTION RELAYS

DIMENSIONS
mm

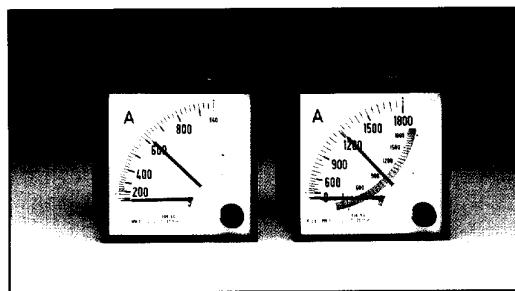


DIN RANGE

Available with moving iron or moving coil movements to measure a.c. or d.c. current or voltage, frequency, watts, power factor or elapsed time. These meters comply with BS89, IEC51 and DIN43700 and can be supplied with terminal covers. Popular ranges are available ex-stock and customised dials and specials to order.

Front Size Panel Cut-Out

D48 48x48 45x45
D72 72x72 68x68
D96 96x96 92x92

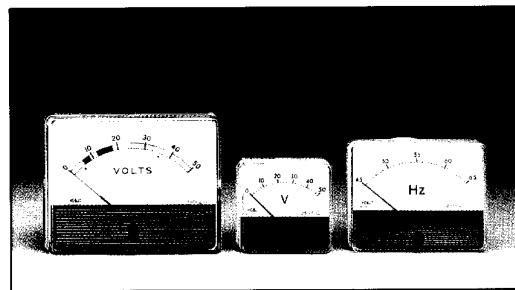


MAXIMUM DEMAND INDICATORS

Supplied either as maximum demand only or combined with a moving iron movement to measure instantaneous current, these indicators are available with a time lag of 30 min., 20 min., or 15 min. Maximum demand is indicated by a red slave pointer which can be manually re-set and sealed from the front of the meter.

Front Size Panel Cut-Out

D96 96x96 92x92

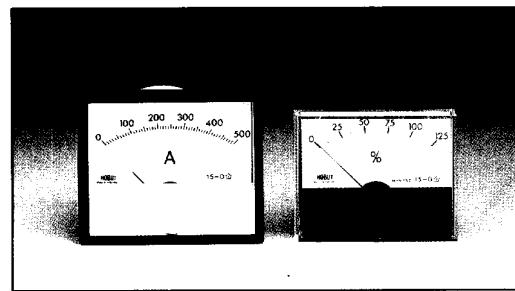


FP RANGE

A popular range complying with BS89 featuring 'crystal' fronts giving maximum visibility. Moving iron or moving coil movements are available to measure a.c. or d.c. current or voltage. Various fixing methods are possible and extras include red secondary pointer, overload scale, etc.

Front Size Panel Cut-Out

F4P 58x58 54Ø
FR6P 84x69 64Ø
FR8P 108x86 73Ø

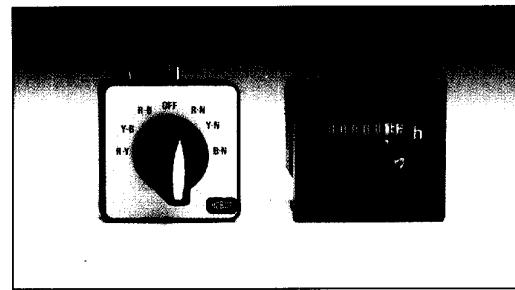


R59 & R68 RANGE

These panel meters combine modern appearance and a competitive price. The R59, available for d.c. use, has a 'crystal' front and is particularly valuable where panel space is limited. The R68, available for d.c. or a.c. use, combines a traditional upright scale with a modern black picture frame front.

Front Size Panel Cut-Out

R59 73x59 49Ø
R68 82x68 64Ø

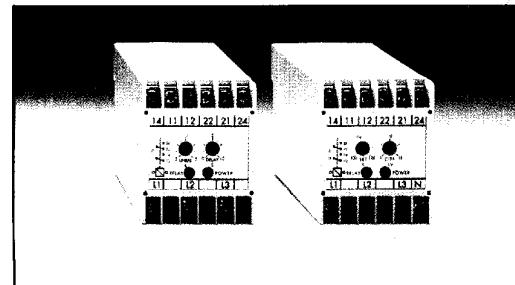


HOURS COUNTERS/SELECTOR SWITCHES

Various hours counters are offered for a.c. or d.c. use. Our standard product illustrated matches DIN range panel meters. Standard ammeter switches are four-position for switching between three phases and voltmeter switches are seven position for phase/phase and phase/neutral operation.

Front Size Panel Cut-Out

D48HR 52x52 45.5x45.5
R6A/R6V 48x48 Refer to data sheet



PROTECTION RELAYS

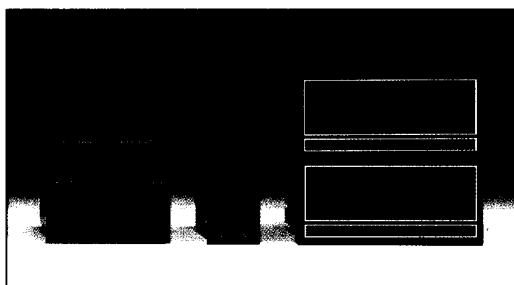
Designed mainly for the standby generator industry these relays provide monitoring and surveillance of a wide range of electrical functions, giving indication of trip and alarm conditions. Products include under, over or combined current, voltage or frequency. Comply with BS5420/4753, IEC 144/348. Terminal covers are supplied as standard.

Overall Size

Single Phase 55x70x111
Three Phase 100x70x111

DIGITAL PANEL METERS, TRANSDUCERS SHUNTS & CURRENT TRANSFORMERS

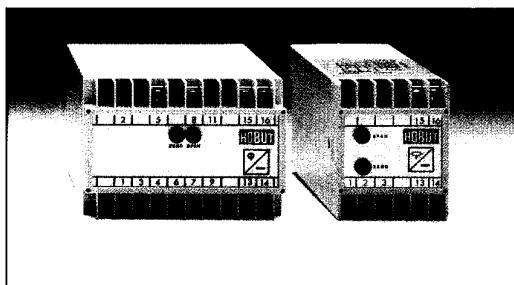
DIMENSIONS
mm



DIGITAL PANEL METERS - CASED/MODULES

Many input signals can be arranged including a.c., d.c. and temperature. Meters can be powered from a.c. or d.c. supplies. L.E.D. or L.C.D. displays of 3½ or 4½ digits or bargraph are all available.

REFER TO
DATA SHEET



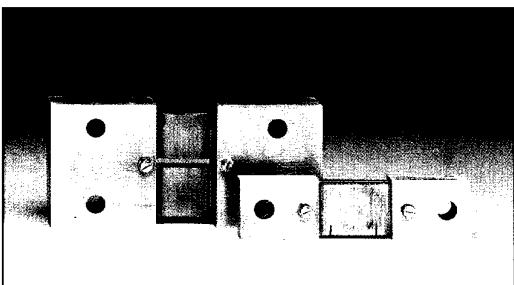
TRANSDUCERS

Space saving DIN rail mounting enclosures and high accuracy are the features of the range. Products are available to measure most electrical parameters and various current or voltage outputs can be specified to suit.

Comply with BS6253/IEC 688.
Terminal covers are supplied as standard.

Overall
Size

Single Phase 55x70x111
Three Phase 100x70x111

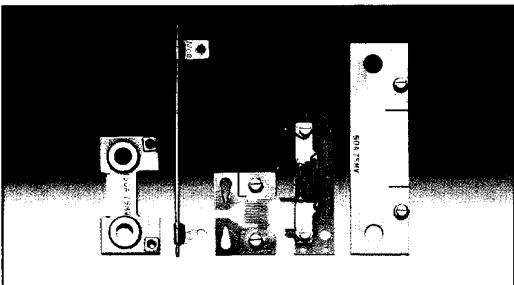


SHUNTS - BRASS ENDED

The standard 'brass-ended' shunt range is manufactured to BS89 Class 1. Outputs can be 50, 60, 75, 100, 150 or 200mV for current ranges up to 5000A. Standard leads are available as an extra.

Rating	Length
Up to 35A	118
40- 200A	121
250-1600A	146
1700-3000A	264
3100-5000A	324

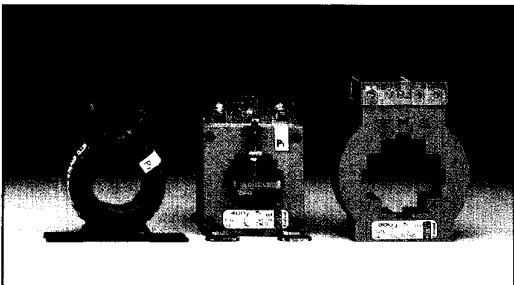
Length applies to 75mV output only



SHUNTS - ECONOMY/SPECIAL

Plate type shunts for ratings up to 300A are offered as a standard range but our engineers also design shunts for special applications and to specific dimensions. Photo-etched shunts with ratings up to 20A have found particular applications for digital panel meters.

REFER TO
DATA SHEET

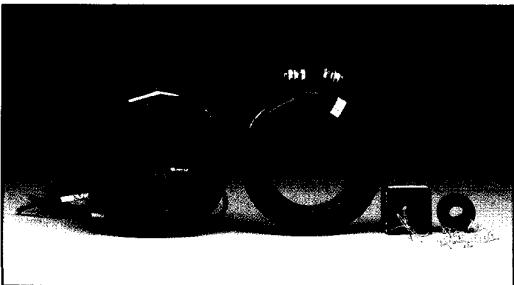


CURRENT TRANSFORMERS - STANDARD

The standard range includes epoxy resin coated, moulded case, and encapsulated types. Current transformers comply with BS3938 and IEC185. Measurement types Class 0.5, 1 or 3. Protective types Class 5P, 10P or Class X. Foot or busbar mounting can be provided.

Max.
Internal
Ø

Resin coated 157
Moulded case 35
Encapsulated 90



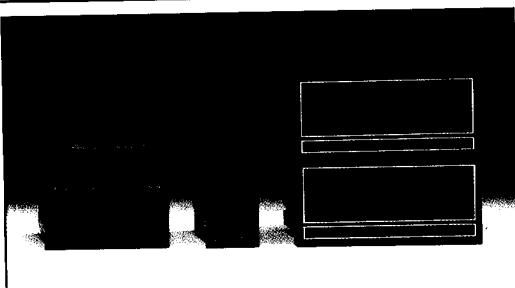
CURRENT TRANSFORMERS - SPECIAL

Considerable work has been undertaken in conjunction with customers to provide C.T.s for specific applications. Examples include special core sizes, terminal arrangements, and output leads, and also 'wedding ring', taped and potted types.

REFER TO
DATA SHEET

DIGITAL PANEL METERS, TRANSDUCERS SHUNTS & CURRENT TRANSFORMERS

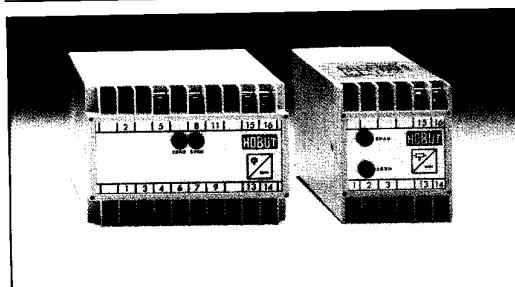
DIMENSIONS
mm



DIGITAL PANEL METERS - CASED/MODULES

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DATA SHEET



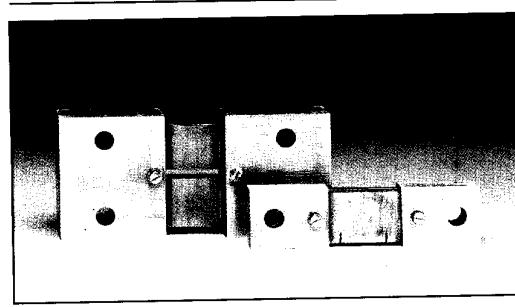
TRANSDUCERS

Space saving DIN rail mounting enclosures and high accuracy are the features of the range. Products are available to measure most electrical parameters and various current or voltage outputs can be specified to suit.

Comply with BS6253/IEC 688.
Terminal covers are supplied as standard.

Overall
Size

Single Phase	55x70x111
Three Phase	100x70x111

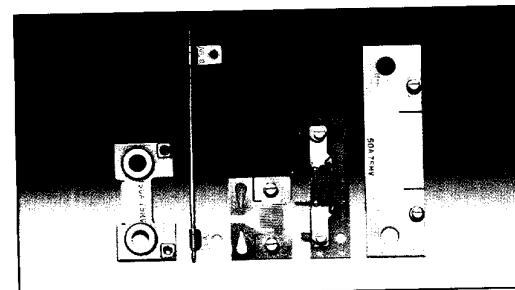


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3100-5000A	324

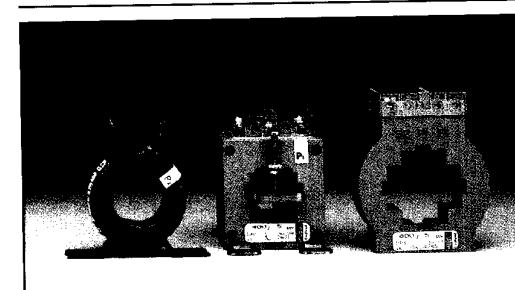
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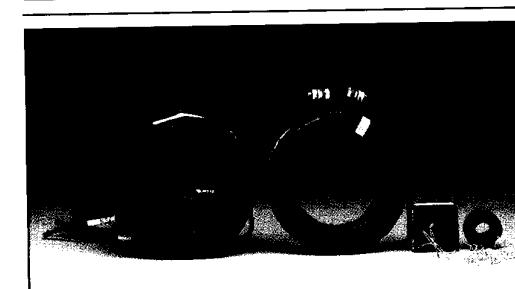


CURRENT TRANSFORMERS - STANDARD

The standard range includes epoxy resin coated, moulded case, and encapsulated types. Current transformers comply with BS3938 and IEC185. Measurement types Class 0.5, 1 or 3. Protective types Class 5P, 10P or Class X. Foot or busbar mounting can be provided.

Max.
Internal
Ø

Resin coated	157
Moulded case	35
Encapsulated	90



CURRENT TRANSFORMERS - SPECIAL

Considerable work has been undertaken in conjunction with customers to provide C.T.s for specific applications. Examples include special core sizes, terminal arrangements, and output leads, and also 'wedding ring', taped and potted types.

REFER TO
DATA SHEET