

DC CURRENT SUMMATION



TECHNICAL SPECIFICATIONS

INPUT

Rated value I_n	$\pm 0-1mA...20mA$
Voltage drop	20mV
Working range	$\pm 125\%$
Overload continuous	4 x I_n
Overload continuous	1.5 x U_n

OUTPUT

Rated value mA	0-1/5/10/20 & 4-20mA
Load resistance	12/2.4/1.2/0.6 kOhm
Rated value volts	0-5 / 10 & 1-5 V

ADJUSTMENT

Zero	$\pm 2\%$
Span	$\pm 10\%$

AUXILIARY

A.C. Voltage	115 / 230 / 400 V ($\pm 25\%$ / 45-65 Hz / < 2VA)
D.C. Voltage	24 / 48 / 110 V ($\pm 20\%$ / galvanically isolated / < 3W)

WEIGHT & CASE SIZE Approx. 0.4 kg. 55mm case

SELECTION GUIDE

M100-DS1	DC current 1 input
M100-DS2	DC current 2 inputs
M100-DS3	DC current 3 inputs
M100-DS4	DC current 4 inputs

TYPICAL APPLICATIONS

The M100-DS series of summation transducer take up to four inputs and provide an output signal directly proportional to the sum of the inputs.

A typical application is the summation of total kW of four separate generating sets e.g. the four individual kW readings are provided by M100-WA4 transducers with 0-1mA output signals. The M100-DS4 summates the four 0-1mA signals and provides a single output signal that is directly proportional the sum of the total kW of all four generators.

It is important to note the following when using summation transducers, to ensure the correct reading is obtained :-

The current and voltage ratios must be identical otherwise the subsequent summation will be meaningless.

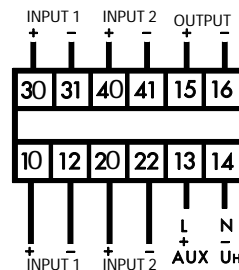
ORDERING INFORMATION

Product Code	Input	In	Output	Aux.	Freq.	Options
M100-DS1	1mA		4-20mA	230V	50Hz	

OPTIONS

1. Non standard inputs / outputs only as far as technically acceptable.
2. A.C. Auxiliary in range 57.7 to 450 volts
3. Calibration at temperature other than 23°C

CONNECTION DIAGRAMS



M100-DS2 / DS3 / DS4



Panel Components & Systems



GENERAL SPECIFICATIONS

ENVIRONMENTAL

Working temperature	0 to +60 deg C
Functional temperature	-25 to +70 deg C
Storage temperature	-55 to +85 deg C
Temperature coefficient	0.02% per deg C (100 ppm / °C)
Relative humidity	95% non condensing
Class of climate	HSE complying with DIN 40040 -3 complying with VDE/VDI 3540

INSULATION

Test voltage	4kV RMS 50Hz 1min. between Input / Case / Auxiliary / Output
Impulse test	EMC 5kV transient complying with IEC 801 / EN55020
HF interference test	EHF 2.5kV 1MHz complying with IEC 255-4
Protection class	II complying with IEC 348 BS 4753 / DIN 57411 / VDE 0411

APPLIED STANDARDS

General	IEC 688 / BS 6253 / VDE/ VDI 2192
Safety	BS EN61010 DIN 57411 / VDE 0411 ANSI C37
Surge withstand	IEC 801 / EN 55020 ANSI C37-90a
Radio screening	RFI degree N complies with VDE 0875
EMC	Emissions EN50081-2 Immunity EN50082-1

ACCURACY

Class	±0.2 % complying with IEC 688
Calibration temperature	23°C
Temperature coefficient	0.01% / °C (100 ppm / °C)
Stability	0.05 % per annum non cumulative
Warm up time	<15 min

OUTPUT

Rated value	See individual product pages
Load resistance mA (Unless otherwise stated)	1mA <15 kOhm 5mA <3 kOhm 10mA <1.5 kOhm 20mA <0.75kOhm 4-20mA <0.75kOhm
Load resistance volts (M100-VA1,VA3 only)	1, 5 & 10 volts >1 kOhm 1, 5 & 10 volts > 50kOhm
Load influence	<0.1 %
Ripple	<0.5% peak-peak at full load
Response time	<200 msec for 0-99 % at full load
Overload	<2 x rated value at full load
No load voltage	<27 V

ENCLOSURE

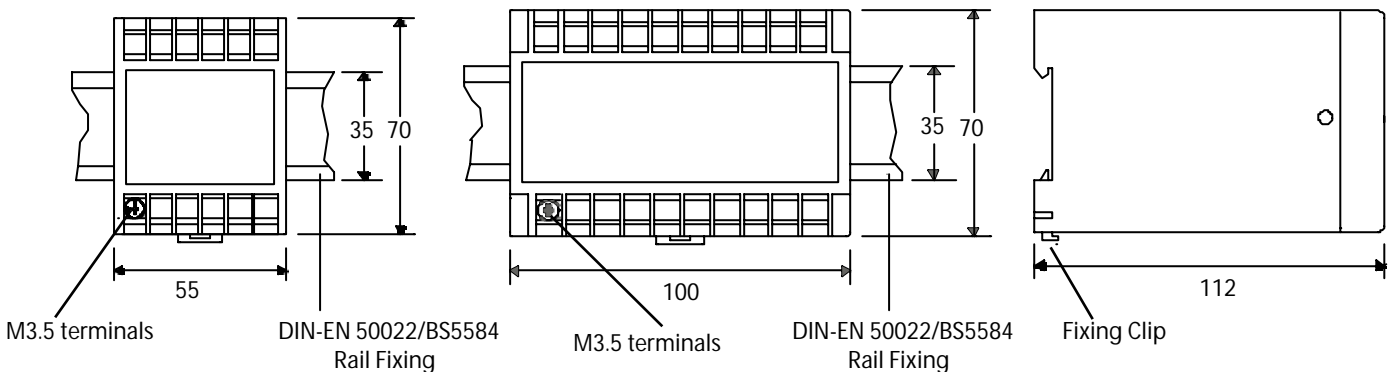
Fixing	Snap on to DIN rail 35 x 7.5 mm complies with DIN-EN 50022 BS 5584
Mounting Enclosure Code	Any position Case IP 50 / terminals IP 30 Complies with IEC 529 BS 5490 DIN 40050

APPROVALS

cU.L. Approval	File No E157034
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CASE DIMENSIONS

All Dimensions in mm



Panel Components & Systems

