

Technical Specification SA10A

TECHNICAL SPECIFICATION.

MAINS SUPPLY

Marked:	MAINS
Input voltage:	100 – 240 V DC / AC 50/60 Hz
Max power:	50W
Connector type:	IEC Inlet Filter
Fuses:	2
Fuse type:	5x20mm
Fuse rating:	T3.15A

INTERNAL BATTERY

Quantity:	1
Used for:	Static and Dynamic Resistance measurement
Battery type:	Hawker Lead Accumulator 6 V 5 A, 0809-0012 (XMB)
Battery rating:	12Volt (2x6V 5A Lead accumulator)
Battery charging:	13.5-14.0V @ 0.5A
Battery float voltage:	13.6V @ 25°C
Life Time:	<= 8 year
Fuses:	1
Fuse Panel mounted:	BUSSMANN BY EATON 25A aM

MAIN CONTACTS

Marked:	A1, A2, A3, A4, B1, B2, B3, B4, C1, C2, C3, C4.
Inputs:	12 independent.
Function:	Measure contact timing of main and pre-insert resistor contacts
Voltage:	48Vdc
Current:	Max 11 mA when load is between 24-48V Max 30 mA when load is between 0-24V
Timing accuracy:	±20µs at 50 KHz sampling.
Max Voltage between red and black output:	250VAC / ±300VDC

AUXILIARY CONTACTS

Marked:	1a, 1b, 2a, 2b, 3a, 3b.
Inputs:	6 independent
Function:	Measure contact timing of aux contacts
Voltage:	24Vdc
Current:	Max 11 mA
Timing accuracy:	±20µs at 50 KHz sampling.
Max Voltage between red and black output:	250VAC / ±300VDC

TRAVEL INPUTS

Marked:	T1, T2, T3.
Inputs:	3 digital or analog.
Digital input receiver:	2 RS422 quadrature inputs
Digital resolution:	16bit @ 100Mhz
Digital transducer speed:	Max 10 Mbps
Digital accuracy:	Depending on transducer resolution
Voltage measure:	W1, W2, W3 ± 5 V DC, accuracy ±0,005V DC
Analog min resistance:	100 Ohm.
Analog resolution:	14 bits. Resolution ≈ 0.6mV / Bit
Power output:	+5 VDC 100 mA.

RESISTANCE MEASUREMENT

Marked:	Ur, Ir.	
Inputs:	1 analog.	
Outputs:	1 Current generator	200-210 A \geq 4 V DC @ 200ms.
Voltage measure:	Ur	0 - \pm 225 mV DC, Accuracy $< \pm$ 0.2mV DC
Analog resolution:		14 bits. Resolution \approx 0.0275mV / Bit
Current Out	Ir	0 - 240 A DC. Accuracy $< \pm$ 2A DC
Analog resolution:		14 bits. Resolution \approx 15mA / Bit.
Resistance meas.:	Res	0 - 1000 μ Ohm. Accuracy $< \pm$ 2 μ ohm.

COIL INPUTS

Marked:	Uc, COM.	Not fused, max 300V AC/DC, 32A
Inputs:		1 analog.
Voltage measure:	Uc	Range 0- \pm 300 V DC. Accuracy $< \pm$ 1% or \pm 1V DC Range 0 - 300 V AC. Accuracy $< \pm$ 1% or \pm 1V AC
Analog resolution:		14 bits. Resolution \approx 56mV / Bit.

COIL OUTPUTS

Marked:	CLOSE,OPEN,COM.	Supplied from Uc
Outputs:		2 Semiconductor controlled.
Protection:		Short circuit current limit \geq 35A.
Current measure:	Ic	0 - \pm 45A DC. Accuracy $< \pm$ 1% or \pm 0.1A DC 0 - 32A AC. Accuracy $< \pm$ 1% or \pm 0.1A AC
Analog resolution:		14 bits. Resolution \approx 5.7mA / Bit.

AUXILIARY VOLTAGE INPUTS

Marked:	Uk, UI, COM.	
Inputs:		2 analog.
Voltage measure:	Uk, UI	Range 0- \pm 300 V DC. Accuracy $< \pm$ 1% or \pm 1V DC Range 0 - 300 V AC. Accuracy $< \pm$ 1% or \pm 1V AC
Analog resolution:		14 bits. Resolution \approx 56mV / Bit.

MOTOR INPUT

Marked:	Um, COM.	Not fused, max 300V AC/DC, 32A
Inputs:		1 analog.
Protection:		Internal isolated
Voltage measure:	Um	Range 0- \pm 300 V DC. Accuracy $< \pm$ 1% or \pm 1V DC Range 0 - 300 V AC. Accuracy $< \pm$ 1% or \pm 1V AC
Analog resolution:		14 bits. Resolution \approx 56mV / Bit.

MOTOR OUTPUT

Marked:	MOTOR, COM.	Supplied from input Um .
Outputs:		1 constant output
Protection:		Internal isolated. Not fused, max 300V AC/DC, 32A
Current measure:	Im	Range 0- \pm 90A DC. Accuracy $< \pm$ 1% or \pm 0.1 A DC Range 0 - 60A AC. Accuracy $< \pm$ 1% or \pm 0.1 A AC
Analog resolution:		14 bits. Resolution \approx 11.5mA / Bit.

COMMUNICATION INTERFACE 1

Marked: **RS-232.**
Protection: Internal isolated
Baud rate 115.2 K baud
Data size 8-bit
Parity None
Stop bits 1
Flow control none

COMMUNICATION INTERFACE 2

Marked: **USB 1.1 / USB 2.0 full-speed.**
Protection: Internal isolated
Baud rate 115.2 K baud
Data size 8-bit
Parity None
Stop bits 1
Flow control none

DISPLAY

Type: LCD Backlit
Characters: 4 rows, 20 characters per row. 5x8 Dots Per Character

PUSHBUTTONS

Marked: **CLOSE, OPEN**
Close button: Make a Close operation if breaker is in Open position
Open button: Make an Open operation if breaker is in Close position
Close + Open button: Make a Close-Open operation if breaker is in Open position

INTERNAL SAMPLING

Max time @ 10 Hz	52428.799	seconds
Max time @ 100 Hz	5242.879	seconds
Max time @ 250 Hz	2097.151	seconds
Max time @ 500 Hz	1048.575	seconds
Max time @ 1000 Hz	524.287	seconds
Max time @ 2500 Hz	209.714	seconds
Max time @ 5000 Hz	104.857	seconds
Max time @ 10000 Hz	52,428	seconds
Max time @ 25000 Hz	20.971	seconds
Max time @ 50000 Hz	10.485	seconds

DIMENSION AND WEIGHT:

Dimensions 458*331*153 (With*Height*Depth)
Weight about 12 kg

ENVIRONMENT:

Operating temperature -20 - 40 °C
Storing temperature -40 - 40 °C
Transport temperature: -40 - 40 °C
Relative humidity 20 - 85% non-condensing
Altitude operating 2 000 m
Altitude non-operating 12 000 m

OVERVOLTAGE CATEGORY:

II

MANUFACTURER:

Elcon AB
Hyttrisvägen 27
770 14 Nyhammar SWEDEN

