

Power Supplies

- Potentiometer allows for the regulation of the output from 100 to 120% to compensate for fluctuation in the voltage lines.
- LED indicator for output status, automatic restart after fault is cleared
- Regulated and protected against short circuits and voltage spikes
- Fits easily into established panels and conforms with the MII line
- CE UL/cUL CSA TUV and C-Tick Certified

12VDC



24VDC

Specifications

Type	Input	Output	Consumed Power	Part Number
PS12	100 – 240 VAC	12 VDC adjustable from 100 – 120%	22W	88 950 300
PS24	100 – 240 VAC	24 VDC adjustable from 100 – 120%	30W	88 950 301
		Conforms to the standards	EN 50081-1, EN 50082-1, IEC 61000-8-2 & IEC 950	



Cabling

Cables

		Part Number
PC – Millenium cabling	PC – Millenium II cable DB9	88 950 102
	PC – Millenium II cable USB	88 950 105



Programming

Software

		Part Number
Software	MII Software on CD	88 950 100
	MII modem installation CD	88 950 113
Memory Module	EEPROM memory module	88 950 101



Converters

Converters

		Part Number
0-20mA → 0 – 10VDC converter	Input module converts 0 – 20mA to 0 – 10 VDC	88 950 108
PWM → 0 – 10VDC converter	Output module converts PWM to 0 – 10 VDC	88 950 112



Covers / Faceplates

Covers / Faceplates

		Part Number
Faceplates	Mounting faceplate for EC-12 / SA-12	89 750 103
	Mounting faceplate for EC-20 / SA-20 / XT-20 / EX-20	89 750 109
Water tight Covers	Water tight covers for SA12 / EC12	89 750 160
	Water tight covers for SA20 / XT20 / EC20 / EX20	89 750 161
	Water tight covers for SA20 / XT20 / EX20 / EC20 + 1 adjacent extension	89 750 162

Products and specifications subject to change without notice.

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Technical characteristics

Insulation	7 M Ω
Safety class	0 industrial / II domestic casing
Earthing	None
Protection	IP20/Terminal block IP40 IP00 for CN12 and CN20
Certification	CE, UL, cUL
Compliance	EN 60947-1 EN 60730-1 EN 60601-1
Programming method	Function blocks/SFC
Program size	128 blocks
Program memory	Flash EEPROM

Removable memory	EEPROM
Data memory	256 bits/words backed up for 10 years
LCD display	Display with 4 lines of 12 characters
Real-time clock	Drift < 1 min/month at 25°C with user-definable correction of drift Data retention: 10 years (lithium battery)
Storage temperature	-40 → +70°C
Operating temperature	-5 → +55°C
Relative humidity (without condensation)	90 → 95%
Dimensions (w x h x d)	SA12-EC12: 72 x 90 x 60 mm SA20-XT-EC20: 125 x 90 x 60 mm CN12: 72 x 90 x 42 mm CN20: 125 x 90 x 42 mm

Electrical characteristics

100 - 240 VAC power supply

Operating voltage	100 VAC → 240 VAC (+10% – 15%) 50/60 Hz
Operating limits	85 VAC → 264 VAC
Immunity from micro power cuts	10 ms
Maximum inrush current	7 A
Maximum power consumption	SA12-EC12-CN12: 6 VA SA20-EC20-CN20: 6.5 VA XT20-EX20: 8 VA

24 VAC power supply

Operating voltage	24 VAC +20% – 15% 50/60 Hz
Operating limits	20.4 VAC → 28.8 VAC
Immunity from micro power cuts	10 ms
Maximum inrush current	7 A
Maximum power consumption	SA12-EC12-CN12: 6 VA SA20-EC20-CN20: 6.5 VA XT20-EX20: 8 VA

24 VDC power supply

Operating voltage	24 VDC +20% – 15%
Operating limits	20.4 VDC → 28.8 VDC
Immunity from micro power cuts	1 ms
Maximum inrush current	7 A
Maximum power consumption	SA12-EC12-CN12: 3.5 W SA20-EC20-CN20: 4 W XT20-EX20: 5 W

Analogue inputs (24 VDC model only)

CN12-SA12-EC12	4 inputs from I5 to I8
CN20-SA20-EC20-XT20	8 inputs from I5 to I12
Measuring range	(0 → 10 V) or (0 → Power supply V)
Resolution	8 bits
Conversion time	10 ms
Max. input voltage	28.8 VDC
Input impedance (k Ω)	> 10
Precision	+/- 5%
Temperature drift	+/- 3 LSB
Potentiometer control	2.2 K Ω /0.5 W

100 - 240 VAC input

Input voltage	100 - 240 (+10% / -15%) VAC
Operating frequency	50/60 Hz
Input impedance	700 k Ω
Pull-in voltage at logic state 1	≥ 80 VAC
Drop-out voltage at logic state 0	≤ 40 VAC
Status indicator	On LCD screen for SA12, SA20, XT20

24 VAC input

Input voltage	24 (+10% / -15%) VAC
Operating frequency	50/60 Hz
Input impedance	4 k Ω
Pull-in voltage at logic state 1	≥ 15 VAC
Drop-out voltage at logic state 0	≤ 5 VAC
Status indicator	On LCD screen for SA12, SA20, XT20

24 VDC input

Input voltage	24 (+20% – 15%) VDC
Input current	3.2 mA/5.5 mA max
Pull-in voltage at logic state 1	≥ 15 VDC
Drop-out voltage at logic state 0	≤ 5 VDC
Response time	10 ms
Sensor type	Contact – 3-wire PNP
Status indicator	On LCD screen for SA12, SA20, XT20

Relay outputs

Max. voltage breaking capacity	250 VAC
Max. current breaking capacity	8 A
Service life	8 A / 250 VAC resistive (100,000 operations)
Min. load	10 mA / 5 VDC
Response time	10 ms
Status indicator	On LCD screen for SA12, SA20, XT20

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12 VDC power supply

Operating voltages	12 VDC +30% – 15% (+30% – 11% for XT20 relais 88 950 065)
Operating Limits	10.2 VDC >15.6 VDC (10.68 VDC >15.6 VDC pour XT20 relais 88 950 065)
Immunity to micro cuts	1 ms
Maximum inrush current	6 A
Maximum power consumption	SA12-EC12-CN12:2.2 W SA20-EC20-CN20:4.5 W XT20-EX20:5.5 W

Discrete/PWM solid state outputs

PWM solid state outputs	SA12-EC12-CN12: 01 to 04 SA20-XT20-EC20-CN20: 01 to 06
Voltage breaking capacity	5-28.8 VDC
Current breaking capacity	0.7 A / 5-28.8 VDC
Min. load	1 mA
Max. inductive load	0.7 A
Max. incandescent load	0.1 A
Off-state leakage	0.1 mA / 24 VDC

12 VDC input

Input voltage	12(+30%–15%) VDC Except XT20R +30%–11%)
Input current	1.9 mA/2.3 mA max.
Pull in voltage at logic state 1	> 8 VDC
Drop out voltage at logic state 0	≤ 3 VDC
response	10 ms
Sensor type	Contact or PNP / NPN 3 wire
Status Indicator	On LCD display for SA12, SA20, & XT20

Response time	1ms
Isolated	no
PWM frequency	120 Hz to 1,920 Hz (user-definable)
PWM Cyclic ratio	0 to 100% (256 steps)
PWM precision at 120 Hz	< 5% (15% to 85%) load at 10 mA
PWM precision at 500 Hz	< 10% (20% to 80%) load at 10 mA
Status indicator	On LCD screen for SA12, SA20, XT20