

Millenium 3 Smart and Essential

→ Analog extension

- Direct connection of analog 0-10 V or 0-20 mA or Pt100 inputs (10 bit) can be configured using the M3 Soft software
- 2 analog 0-10 V or PWM outputs (10 bit) can be configured using the M3 Soft software
- Ramp can be parameterised for outputs used as 0-10 V outputs
- Power supply via the controller



XA04

Part numbers

Type	Input	Output	Supply	Code
XA04	1 analog (0-10 V/0-20 mA) 1 analog (0-10 V/0-20 mA/Pt100)	2 analog (0-10 V/PWM)	Via the 24 V $\overline{\text{V}}$ controller	88970241

Specific characteristics*

Certifications	IEC/EN 60751
Earthing	Yes, refer to the quick reference guide supplied with the product

Analog inputs

Inputs used as analog inputs	0-10 V	0-20 mA	Pt100
Inputs	IP and IQ	IP and IQ	IQ
Input range	0 \rightarrow 10 V $\overline{\text{V}}$	0 \rightarrow 20 mA	-25 \rightarrow 125 °C
Input impedance	$\geq 18 \text{ k}\Omega$	246 Ω	-
Maximum non destructive current/voltage	30 V	30 mA	-
Value of LSB	9.8 mV	20 μA	0.15 °C
Input type	Common mode	Common mode	Pt100 probe - IEC 751 - 3-wire
Resolution	10 bit	10 bit	10 bit
Conversion time	Module cycle time	Module cycle time	Module cycle time
Accuracy at 25 °C	$\pm 2 \%$	$\pm 2 \%$	$\pm 1.5 \%$
Accuracy at 55 °C	$\pm 2 \%$	$\pm 2 \%$	$\pm 1.5 \%$
Isolation between analog channel and power supply	None	None	None
Cable length	10 m maximum, with shielded cable (sensor not isolated)	10 m maximum, with shielded cable (sensor not isolated)	10 m maximum, with shielded cable (sensor not isolated)
Protection against polarity inversions	Command ignored	Command ignored	Command ignored

Analog outputs

Range output	0 \rightarrow 10 V
Input type	Resistive
Max. load	10 mA
Value of LSB	10 mV
Resolution	10 bit
Conversion time	Controller cycle time
Accuracy at 25 °C	$\pm 1 \%$ of full scale
Accuracy at 55 °C	$\pm 1 \%$ of full scale
Repeat accuracy at 55 °C	$\pm 1 \%$
Isolation between analog channel and power supply	None
Cable length	10 metres maximum, with shielded cable (sensor not isolated)
Protection against polarity inversions	Yes

PWM

Range output	V power supply
Max. load	$\geq 1.2 \text{ k}\Omega$ ($I \leq 20 \text{ mA}$)
PWM cyclic ratio	1024 steps (0 - 100 %)
Frequency	78 Hz, 312.5 Hz, 666.6 Hz, 1000 Hz, 1250 Hz, 1428 Hz, 1666 Hz, 2000 Hz
Accuracy	1 % across the entire temperature range for PWM ratios from 5 % to 95 %
Built-in protections	Against overvoltages: Yes

*Also see Millenium 3 Smart and Essential General characteristics

Dimensions (mm)

XA04

