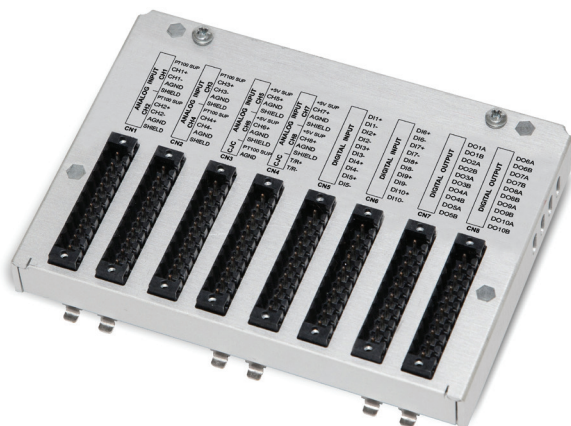




PLI004 Multifunction I/O Module Tech-Note

The PLI004 is compact multifunction I/O module. The plug-in is compatible with Series 500, 500G, 600, eX and eXware. The PLI004 is a programmable module offering a highly flexible configuration.



- 10 Digital Inputs
- 10 Digital Outputs SSR
- 4 Analog Inputs configurable for voltage or temperature measurement
- 4 Analog Inputs configurable for voltage
- 1 PT100 input for cold junction compensation of thermocouples

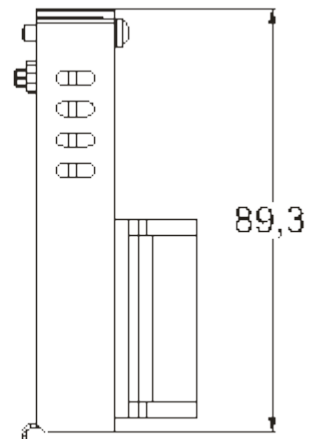
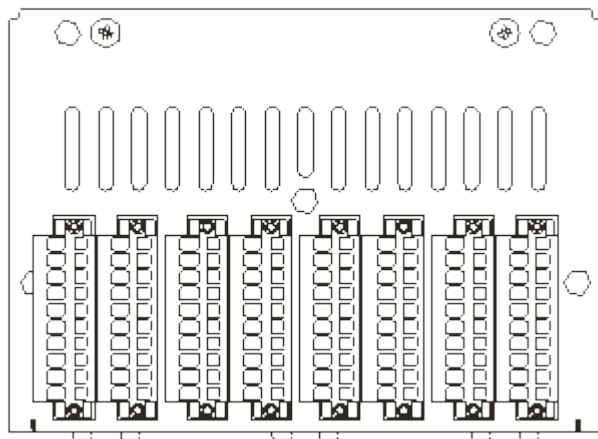
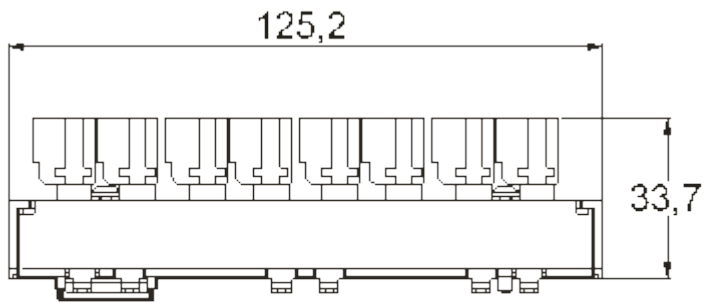
Highlights

The plug-in is compatible with Series 500, 500G, 600, eX and eXware.

- Plug&Play operation. The I/O module is automatically detected when plugged-in.
- I/O configuration supported by a CODESYS I/O library.
- Compact and low power consumption.
- No additional power supply required in addition to the 24Vdc I/O power supply
- Optically isolated Digital I/O.
- Easy wiring with removable 3,5mm spring connectors.
- Analog Inputs are software programmable as voltage inputs or temperature inputs. They can be configured to support industrial temperature sensors like thermocouple and PT100 (RTD).
- Analog Inputs with Programmable Gain Amplifier (PGA) and Offset
- On-board FPGA-based measurement controller reduces main CPU overhead.
- Additional PT100 channel for cold junction compensation. To be used for thermocouples.
- Protective coating
- Advanced board-level diagnostic

Technical Data

Digital Inputs	
Number of channels	10
Type of channel	Source active high (+24Vdc) inputs.
Input Voltage range	12 - 30 Vdc
Input impedance	3,3 K Ω
Optical isolation	Yes
Isolation	1500 Vrms
Input filter	Programmable 0.1ms to 20ms
Digital Outputs	
Number of Channels	10
Type of channel	SSR, 2 contacts
Max load voltage	30 Vdc
Max load current	1.4 A
Output delay time	5ms max
Optical isolation	Yes
Isolation	1500 Vrms
Analog Inputs	
Channels	4 differential or 8 single ended Individually programmable.
Optical isolation	No
Measurement type	"Voltage Temperature (various types of thermocouples or PT100 RTD) with external cold junction compensation "
A/D resolution	12 bits
Accuracy @ 25°C	0.2% typ.
Voltage input range and accuracy	Bipolar: $\pm 100\text{mV}$ 0.1% FS $\pm 500\text{mV}$ 0.1% FS $\pm 1\text{V}$ 0.1% FS $\pm 5\text{V}$ 0.1% FS $\pm 10\text{V}$ 0.1% FS Unipolar: 0-100mV 0.1% FS 0-500mV 0.1% FS 0-1V 0.1% FS 0-5V 0.1% FS 0-10V 0.1% FS"
Voltage Input absolute max. ratings	$\pm 15\text{Vdc}$ (referenced to analog ground)
Voltage input linearity error	0.1%
Voltage mode input impedance	$>2\text{M}\Omega$
Thermocouple input	E (-270/1000°C) J (-210/760°C) K (-270/1370°C) R (0/1768°C) S (0/1768°C) T (-270/400°C)
Cold Junction compensation	External with dedicated PT100 input
PT100 RTD input	2, 3 or 4 wires transducer interface with break and short circuit detection
Temperature range	-100°C÷850°C
PT100 accuracy @ 25 °C	Range 1 0÷157 Ω 0.2% Range 2 0÷530 Ω 0.3% Range 3 0÷1020 Ω 0.4% Range 4 0÷8800 Ω 0.5%"
Analog Inputs	
Channels	4 single ended
Optical isolation	No
Measurement type	Voltage
A/D resolution	12 bits
Accuracy @ 25°C	0.2% typ.
Voltage input range and accuracy	Unipolar: 0-100mV 0.1% FS 0-500mV 0.1% FS 0-1V 0.1% FS 0-5V 0.1% FS 0-10V 0.1% FS"
Voltage Input absolute max. ratings	$\pm 15\text{Vdc}$ (referenced to analog ground)
Voltage input linearity error	0.1%
Voltage mode input impedance	$>2\text{M}\Omega$
Connectors	
Connector Type	Ommimate range header/plugs 3.5mm-10 contacts (two piece terminal blocks) SL-SMT 3.5/180F Box + BLZF 3.5/180F
Environmental Conditions	
Operating temperature	0 to 50 °C (vertical installation)
Storage temperature	-20 to +70 °C
Operating and storage humidity	5 – 85 % relative humidity, non-condensing
Protection class	IP20
Approvals	
CE	Emission EN 61000-6-4, Immunity EN 61000-6-2 for installation in industrial environments Emission EN 61000-6-3, Immunity EN 61000-6-1 for installation in residential environments
RCM	Yes



Ordering Information

Model	Part Number	Description
PLIO04	+PLIO04U0P1	Multifunction I/O Module. 10 DI, 10 DO, 8 AI



SCATTERGOOD & JOHNSON LTD

ELECTRICAL ENGINEERING & FLUID CONTROL DISTRIBUTORS

Est.1899

At Scattergood & Johnson Ltd, we pride ourselves on being a technical distributor to specialist industries.

Working with a range of quality product suppliers across a number of specialist markets, we are not your average 'box shifter' - we are your technical and supply chain partner.

We fully support every product we sell - for free! Our internal team and external sales engineers can answer any product or application question, no matter the complexity.

Backing up this technical ability is a range of 50,000+ products available from stock for nationwide next day delivery (same day if required!), or you can collect what you need from any of our trade counters around the UK.

Select your specialist interest below to learn more about how we can help.



Online, In Branch and On the Road - Scattergood & Johnson Ltd, there when you need us.

www.scatts.co.uk