Metso IOP301

Complete Product Information

01 Product dashboard

Metso IOP301 is a 16-channel isolated analog-input module for the maxPAC Model IOP system. Each channel can be configured for current or voltage input, with field or system loop supply as applicable.

Identity	Position	Evidence
Metso IOP301	maxPAC Model IOP / DPU4	Metso Automation MAX Controls maxPAC Hardware Reference Guide, 277596

System context

This maxPAC analog-input module receives isolated transmitter measurements and presents converted values to the configured DPU.

IOP301 has 16 isolated input circuits and supports any mix of current and voltage inputs. A 4-20 mA loop may use field supply or 24 V system loop power from the backplane; voltage channels use the 0-2.4 V input span. Each channel has input-type jumpers, so its wiring and scaling must match the transmitter and saved DPU configuration.

02 Technical capability map

Product role	Isolated analog-input module
Input channels	16, with DPU4E mode
DPU4A/B mode	15 channels, 16 addresses
DPU4E mode	16 channels, two addresses
Input forms	4-20 mA or 0-2.4 V
Current-loop supply	Field or 24 V backplane supply
Resolution	15 bits plus sign
Scan rate	100 ms
Accuracy	+/-0.1% of reading at 25 deg C
Conversion	Sigma-delta oversampling
Field-to-logic isolation	1500 V AC
Channel-to-channel isolation	500 V AC
Active indicator	Steady on in normal scan; diagnostic blink codes
Self-calibration	At power-up and periodically online

03 Applications and compatibility

Application	Engineering relationship
Mixed analog inputs	Use individual channel jumpers to combine documented current and voltage measurements on one module.
System-powered loops	Supply selected 4-20 mA transmitter circuits from the 24 V backplane loop feed when the wiring mode supports it.
Field-powered loops	Bring externally supplied current-loop signals to their configured channels with the documented shunt path.
Redundant transmitters	Use the manufacturer's external 100-ohm shunt arrangement when two IOP301 modules share a transmitter.

Compatibility boundary

Choose the DPU4E or DPU4A/B address mode and configure each current or voltage channel before connecting field transmitters.

The module has two operating modes. With DPU4E it uses two bus addresses and provides all 16 channels; with DPU4A/B it requires 16 addresses and provides 15 channels. It uses sigma-delta conversion, 15-bit-plus-sign resolution, a 100 ms scan rate and self-calibration at start-up and online. The manual gives +/-0.1% of reading accuracy at 25 deg C, with 1500 V AC field-to-logic and 500 V AC channel-to-channel isolation.

04 Engineering decisions and precautions

Decision	Required check
Check DPU mode	Set W6 for DPU4E or DPU4A/B and confirm the corresponding address use.
Check mains filter	Set W1 for the applicable 50 or 60 Hz environment.
Set channel jumpers	Apply A-E input-type jumper positions for each selected signal form.
Protect loop supply	Check the system or field supply and independently fuse redundant transmitter feeds.
Inspect shunts	Use the documented external 100-ohm shunts for redundant common-transmitter wiring.
Review diagnostics	After power-up, confirm Active indication and resolve any coded A/D or calibration fault.

Question	Answer
How many analog inputs does Metso IOP301 provide with DPU4E?	The DPU4E mode provides 16 channels while using two bus addresses.
How does Metso IOP301 operate with DPU4A/B?	In DPU4A/B mode it uses 16 addresses and provides 15 channels.
Which signal forms can Metso IOP301 accept?	Channels may be configured for 4-20 mA current or 0-2.4 V voltage input.

05 Lifecycle and offered unit

IOP301	A current manufacturing and support phase for this exact maxPAC module reference is unconfirmed.
Support and replacement	Match the DPU mode, bus addressing, channel jumpers, input shunts and field wiring before installing a replacement.
Availability	Apter Power quoted availability is separate from the manufacturer lifecycle phase.

Condition	New, original product
Exact identity	Confirm IOP301 on the module and retain its DPU mode, jumper map and channel wiring; IOP302 is a different common-input module.
Included items	Confirm the IOP301 module, connector condition and any fitted program resistors; field shunts and IOP306 kit are separate unless quoted.

Technical source

Metso Automation MAX Controls maxPAC Hardware Reference Guide, 277596

Discuss the complete reference

Metso IOP301

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