APTER POWER ENGINEERING REFERENCE

MC-TPIX12

Pulse Input Field Termination Assembly

The MC-TPIX12 accepts field pulse trains and routes their frequency and count information into a TPS Process Manager pulse-input channel for speed, rate and totalization processing.

Parameter	Technical value
Manufacturer	Honeywell
Product model	MC-TPIX12
Part number	51304084-175
System family	TPS Process Manager I/O
Document	Installation & Application Guide
Country	USA
HS code	8537101190

2. Installation Planning

The MC-TPIX12 accepts field pulse trains and routes their frequency and count information into a TPS Process Manager pulse-input channel for speed, rate and totalization processing.

Pre-installation sequence

- Select the input filter for the expected pulse rate.
- Keep pulse wiring separated from high-energy conductors.
- Confirm the sensor waveform crosses both stated logic thresholds.
- Verify rate and accumulated count independently during commissioning.

Matched components

- TPS pulse input processor
- Pulse input power adapter
- Two-wire or three-wire pulse sensor
- FTA-to-IOP cable assembly

3. Wiring and Interface Checks

Installation item	Required technical value
FTA model	MC-TPIX12
Part number	51304084-175
Input channels	8
Input frequency	1 Hz to 20 kHz
Input impedance	10 kOhm minimum
Pulse low level	-0.5 to +1.9 V
Pulse high level	+3.5 to +24 V
No-damage input	+/-30 V maximum
Field input scan	20 ms
PV update	500 ms for 8 channels

Interface controls

- Use only the MC-TPIX12 hardware identity and the matched components listed for this product.
- Record wiring, polarity, addressing or channel allocation before disturbing installed conductors.
- Keep field circuits de-energized until continuity and insulation checks are complete.
- Apply the product-specific limits in the table during loop or channel testing.

4. Commissioning and Functional Test

1. Confirm that MC-TPIX12 and part number 51304084-175 match the cabinet record.
2. Verify the connection to TPS pulse input processor before applying operating power.
3. Check the product function: terminates pulse-producing field devices.
4. Simulate or apply a controlled signal for turbine and compressor speed pickup channels.
5. Compare the channel indication or output state with the control database.
6. Record baseline values and restore the field circuit to its operating configuration.

5. Diagnostics and Return to Service

Product-specific diagnostic questions

How should an engineer verify 20 kHz upper frequency on MC-TPIX12?

Use the MC-TPIX12 technical limit or configuration stated for 20 kHz upper frequency, then verify it at the installed channel before service.

What must be checked for logic thresholds on MC-TPIX12?

Treat logic thresholds as a product-specific commissioning point and compare the field condition with the Honeywell hardware configuration.

Which system detail controls three-wire transmitter power on MC-TPIX12?

The required check concerns three-wire transmitter power; confirm the connected hardware is the matched component listed for MC-TPIX12.

Why is it important to confirm filter-dependent pulse width on MC-TPIX12?

For filter-dependent pulse width, isolate the circuit, record its present configuration and apply the stated Honeywell limit before re-energization.

RETURN-TO-SERVICE CHECK

Confirm model MC-TPIX12, cabinet wiring, control-system channel assignment and the intended field response before releasing the equipment for production.