

Manipulator IMD Input Power Cable

Model Number: THRSLTCA1111

Overview

The Manipulator IMD Input Power Cable supplies power and communication between the manipulator drive module (IMD) and its subsystems. It supports motor phases, encoder feedback, hall sensors, limit switches, potentiometer signals, and CAN bus communication.

Proven in the **UXOR project supplied to the Indian Air Force (IAF)**, the cable has demonstrated rugged reliability in mission-critical robotic deployments.

Technical Specifications

Parameter	Specification
Function	Power and signal interface for manipulator IMD
Connectors	C1: 62IN-12E-12-10P C2: 62IN-12E-14-19S
Supported Signals	Power, CAN bus, Motor, Encoder, Hall sensor, Limit switches, POT
Cable Construction	Shielded PTFE wiring, rugged protective boots
Protection Standard	IP65
Operating Temperature	−20°C to +55°C

Pin Configuration (Combined Table)

Connector	Pin	Signal	Connector	Pin	Signal
C1	A	+24V	C2	A	U (Motor)
	B	+24V		B	V (Motor)
	C	GND		C	W (Motor)
	D	GND		D	+5V (Hall)
	E	Tx		E	GND (Hall)
	F	Rx		F	C (Hall)
	G	GND		G	B (Hall)
	H	CAN-H		H	A (Hall)
	J	CAN-L		J	ENC A
				K	ENC B
				L	BRAKE +
				M	BRAKE –
				N	+5V (Limit SW)
				P	GND (Limit SW)
				R	L/S-F
				S	L/S-R
				T	+5V (POT)
				U	GND (POT)
				V	POT-REF

Tag No	Connector Type		SIGNAL
C1	62IN-12E-12-10P	A	+24V
		B	+24V
		C	GND
		D	GND
		E	Tx
		F	Rx
		G	GND
		H	CAN-H
		J	CAN-L

Tag No	Connector Type		SIGNAL
C2	62IN-12E-14-19S	A	U
		B	V
		C	W
		D	+5V
		E	GND
		F	C
		G	B
		H	A
		J	ENC A
		K	ENC B
		L	BRAKE +
		M	BRAKE -
		N	+5V
		P	GND
		R	L/S-F
		S	L/S-R
		T	+5V
		U	GND
		V	POT-REF

Key Features

- Consolidates **power, feedback, and communication signals** in one harness.
- Supports motor drive (U, V, W), encoder feedback, hall sensors, and brakes.
- Integrated CAN-H and CAN-L lines for communication.
- Rugged Amphenol MIL-grade connectors.
- Shielded PTFE wiring with EMI/EMC protection.
- Proven durability in defense robotic environments.

Applications

- Power and communication link for manipulator IMD systems.
- Subsystem testing and validation of manipulator drives.
- Defense-grade robotic platforms requiring reliable cabling.
- **UXOR manipulator integration (field-proven in IAF deployment).**

Note

The Manipulator IMD Input Power Cable is part of THRSL's standard harness suite, optimized for robotic subsystems. Custom variants can be built for alternate connector types, cable lengths, or additional signal integration.