



Powell Agricultural Solutions

Single Pair Ethernet, 1000Base-T1 Type A
and B Connectors and Cables

Powell[®]
Agricultural Solutions

For more information on how Powell Electronics is meeting
the needs of the agricultural community, please contact:

Powell Electronics
200 Commodore Drive
Swedesboro, NJ 08085
United States
aginfo@powell.com

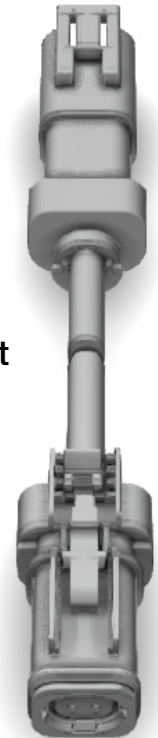
Powell Ireland Limited
Clane Business Park
Clane
Kildare, Ireland
W91 XN65
PAS@powell.com

Rugged & Sealed, Single-Pair Ethernet Connector System

Compliant with IEEE802.3bp for 1000BASE-T1 Type A & Type B

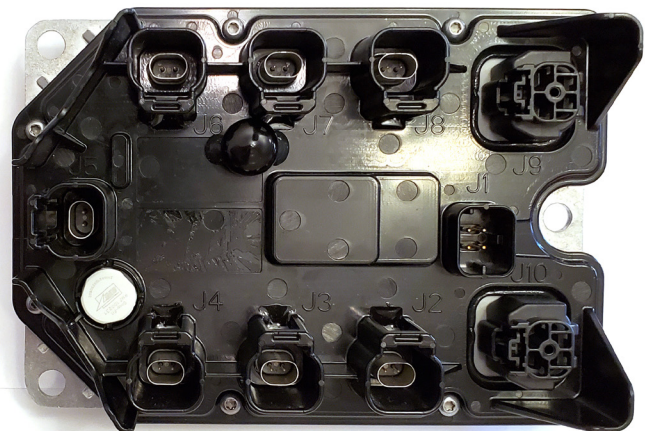
FEATURES AND BENEFITS

- 1000BASE-T1 (1Gb) Type A 15m & Type B 40m channel (4 in-lines)
- OPEN Alliance - TC9 Class 2 shielded interface
- Jacketed shielded twisted pair (STP) cable for 0.50mm² (20AWG)
- IP67 / IP69K / USCAR2 sealing performance (planned)
- Connections: Cable-to-Cable, Cable-to-Board/Device
- Terminal system using standard J1939, solid machined size 20 round contact
- Rugged housing design for high vibration environments
- -40°C to +125°C temperature range
- Simple tooling offers ease of termination, serviceability in the field



FOCUS APPLICATIONS

- High-Speed Interconnect Network Backbone
- Touchscreen Displays
- 360 Degree Camera Systems
- Gateway/Switches



PAS HSI Gb Ethernet Switch

PART NUMBER: PAS88160007

Three Machine Interfaces

Primary Connector

- TE-Ampseal-16, 4 POS: 776487-1

(6) 100/1000BASE-T1 Ports with Link Partnership Negotiation

- Header 2-Pin PCB Connector: 9-2370706-1
- Mating Shell (Rev A Key): 9-2367337-1

(1) 1000BASE-T1 Port with Active Link Partnership

- Header 2-Pin PCB Connector: 9-2370706-1
- Mating Shell (Rev C Key): 9-2367337-3

(2) 10/100BASE-TX Ports:

- Molex-HS AutolinkII: 34858-0106

Electrical / Software

Supports 12V/24V

Auto-negotiation for Ethernet at 100Mbps or 1Gbps

- Auto-negotiation is still being defined

Diagnostics - requirements are still being defined

Meets AEF HS-ISOBUS requirements

Mechanical

IP67 Enclosure (with mated connectors)

Environmental

Operating Temperature: -40°C to +85°C

Meets AEF HS-ISOBUS requirements



Single Pair Ethernet Cable

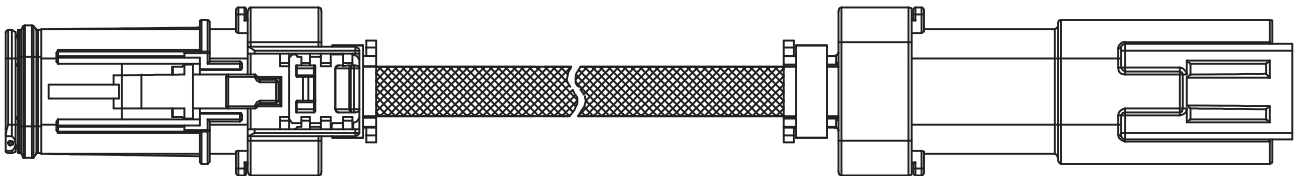
- PART NUMBER:** PAS20176-1 – Female to Male 1 M Cable
PAS20176-2 – Female to Male 4 M Cable
PAS20176-3 – Female to Male 12 M Cable

Electrical

- Voltage Rating: 60 VDC
- Impedance: 100 ohm

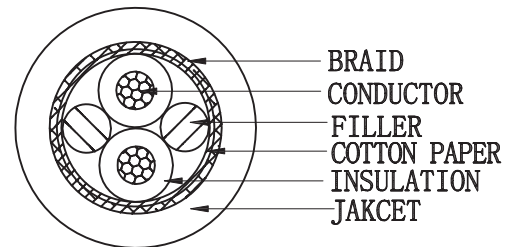
Environmental

- Operating Temperature: -55°C to +125°C
- Lead Free, RoHS Compliant



Materials

- Jacket: PVC, color Black
- Wire Insulation: PVC, colors Black and White
- Filler: cotton & paper
- Conductors: Tinned Stranded Copper
- Drag Chain Shielding: Tinned copper, 483-2464 20, 15 Million Times



Electrical

- Voltage rating: 300V
- Conductor Resistance: 40.1 ohm
- Insulation Resistance: 10M ohm min
- Dielectric Test: 200V AC / 1Minute

Temperature Rating

- Temperature: 80°C

Environmental

- Lead Free, RoHS Compliant