

FuelCom®

Electronic Accessories

Description

Flow Technology's exclusive FuelCom® Diesel Fuel Metering System can be supplied with the following electronic accessories: the JB-60 Junction Box, RPM sensors, AC and DC power supplies, analog and RS-485 to RS-232 communication output modules, power supply and transmitter cables. Together, this system provides ultra-high accuracy metering of net fuel burn on large diesel engines.



JB-60 Junction Box

The JB-60 Junction Box is a custom signal cable interconnect device that is included in the FuelCom® Diesel Fuel Monitoring System.



RS-9S-QD

The RS-9S-QD Engine RPM Sensor transmits square wave pulses and temperature and is an option for the FuelCom® Diesel Fuel Monitoring System.



PS1 Power Supply

The PS1 Power Supply is a small plastic enclosed AC/DC converter which supplies 12 VDC output to the FuelCom® Diesel System from 85–265 VAC input.



PS2 Power Supply

The PS2 Power Supply is a diecast aluminum enclosed DC/DC converter that has a 9–32 VDC or 45–160 VDC input voltage range which supplies 12 VDC output.



ADAM-4021 Analog Output Module

The ADAM-4021 Analog Output Module converts FuelCom's® digital RS-485 signal for net fuel burn into an analog signal such as 4–20mA. The ADAM-4520 converts RS-485 signals to RS-232 signals.



755-XX-XXX Cable

The 755-XX-XXX Cable connects the electronic accessories to the JB-60 Junction Box and is also used to connect the remote sensors to the transmitters. Length is determined by part number when ordering.

JB-60 FuelCom® Junction Box

Features

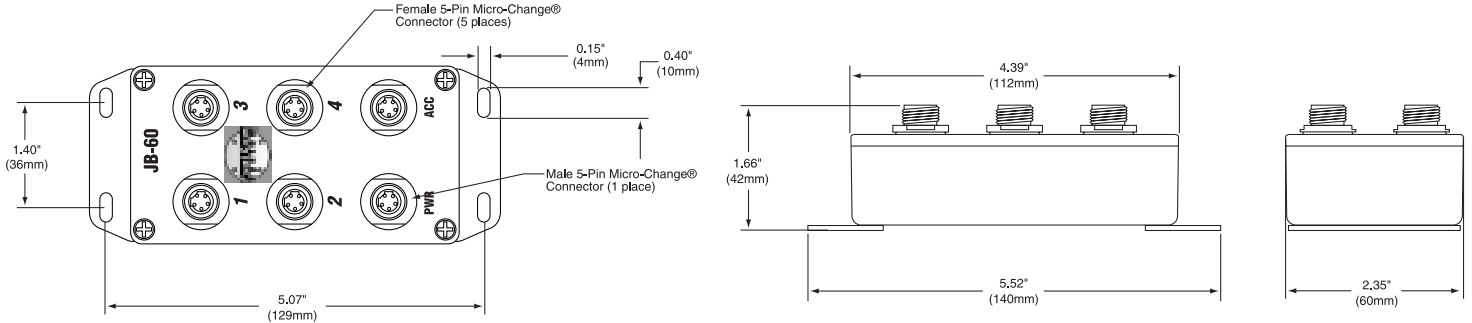
- Simultaneous multi-engine monitoring capabilities
- Simple, easy to use operation
- Factory pre-wired

Specifications

I.D. Label Material	PVC
Housing Material	Anodized aluminum
Wire	16 AWG PVC
Ambient Operating Temperature	-13° F to 194° F (-25° C to 90° C)

Specifications are for reference only and are subject to change without notice.

Dimensions



755-XX-XXX Cable

Specifications

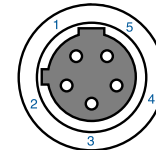
Temp. Range	-76° F to 221° F (-60° C to 105° C)
Connection	5-pin Micro-Change® connector
Material	10-720 kHz
Jacket and Insulation	PVC
Plug Shell & Coupling Nut	Brass alloy with zinc/chromate protective finish
Receptacle Body	304 stainless steel
Insert	UL recognized plastic

Features

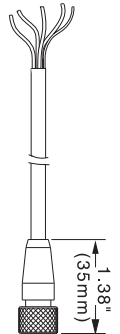
- Micro-Change® connections
- Oil-resistant, PVC jacket

Dimensions

CABLE	
RED/WHITE	(+)RS485
RED	+VDC
GREEN	DC COMMON
RED/YELLOW	PULSE
RED/BLACK	(-)RS485
BARE	SHIELD



MALE MICRO-CHANGE®
CONNECTOR
(TOP VIEW OF FC900 TRANSMITTER)



Specifications are for reference only and are subject to change without notice.

Model Numbering System



Base Model No.

Connector 1

- 7 = Female 5-pin Micro-C
- 5 = Male 5-pin Micro-C
- 3 = Male 3-pin Micro-C

Connector 2

- 0 = Bare
- 5 = Male 5-pin Micro-C
- 7 = Male 7-pin Micro-C (for use with FC800 remote transmitter)
- 8 = Female 3-pin MS

Length

- 010 = 10 feet
- 020 = 20 feet
- 050 = 50 feet
- 100 = 100 feet
- 150 = 150 feet
- 200 = 200 feet

ADAM-4520 RS-485 to RS-232 Converter

Features

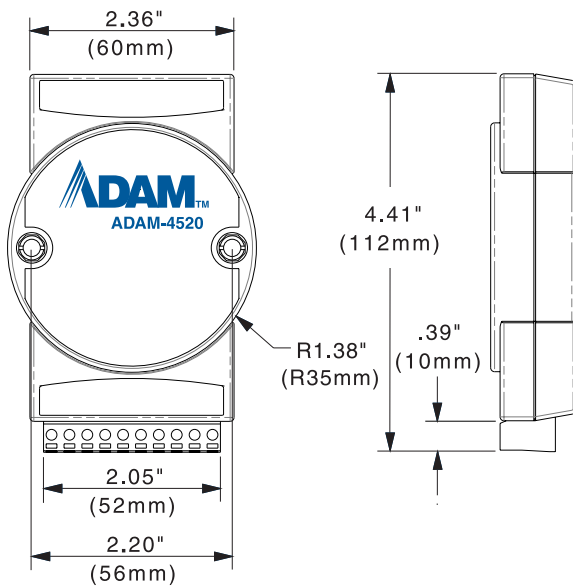
- Standard DB-9 connector for RS-232 interface
- Simple, easy to use operation
- Flexible networking
- Internal surge protection
- Fully software configurable, no jumpers

Specifications

Input	EIA RS-485 multi-drop network
RS-485 Interface Connector	Plug-in screw terminal
Output Type	RS-232
RS-232 Interface Connector	Female DB-9
Isolation Voltage	500 VDC
Power	+10 to +30 VDC (non-regulated)
Consumption	1.2 W
Temp Range	14° F to 158° F (-10° C to 70° C)

Specifications are for reference only and are subject to change without notice.

Dimensions

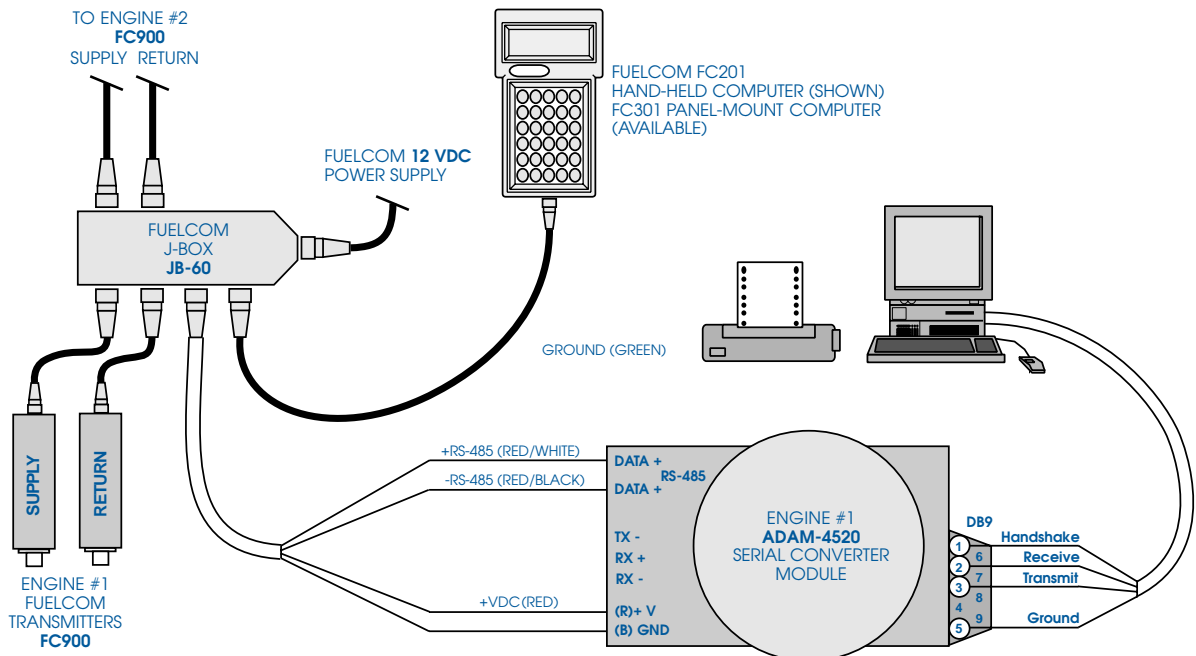


Model Numbering System

A D A M - 4 5 2 0

Serial Converter

Note: Requires Cable 755-50-XXX



ADAM-4021

RS-485 to Analog Output Module

Features

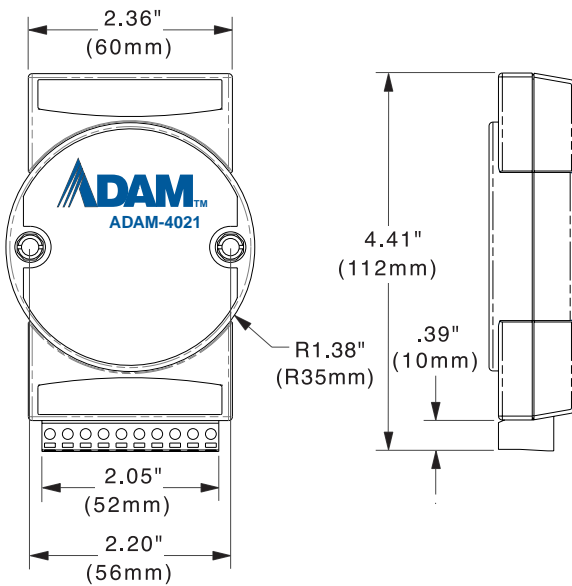
- Remotely programmable input ranges
- Simple, easy to use operation
- Flexible networking
- Internal surge protection
- Fully software configurable, no jumpers

Specifications

Input	EIA RS-485 multi-drop network
Output Type	mA, V
Output Range	0–20 mA, 4–20 mA, or 0–10 V
Isolation Voltage	500 VDC
Accuracy	±0.1% of FSR for current output ±0.2% of FSR for voltage output
Resolution	±0.025% of FSR
Load Resistor	0 to 500 Ω (source)
Power	+10 to +30 VDC (non-regulated)
Consumption	1.2 W
Temp Range	14° F to 158° F (-10° C to 70° C)

Specifications are for reference only and are subject to change without notice.

Dimensions



Model Numbering System



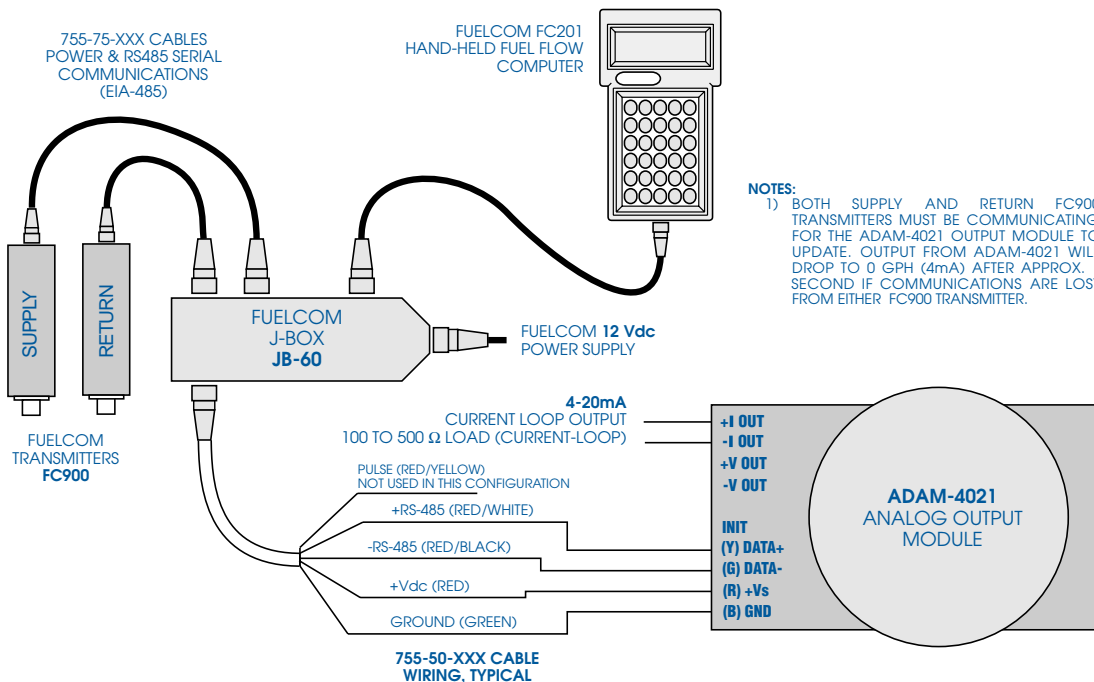
Base Model No.

Output

- 0 = 0–20 mA
- 1 = 4–20 mA*
- 2 = 0–10 V

* Standard Configuration

Note: Requires Cable 755-50-XXX



RS-9S-QD/FC801 FuelCom® RPM Sensor

Features

- Digital logic instrument compatible
- Easy installation
- Micro-Change® connections
- Stainless steel body

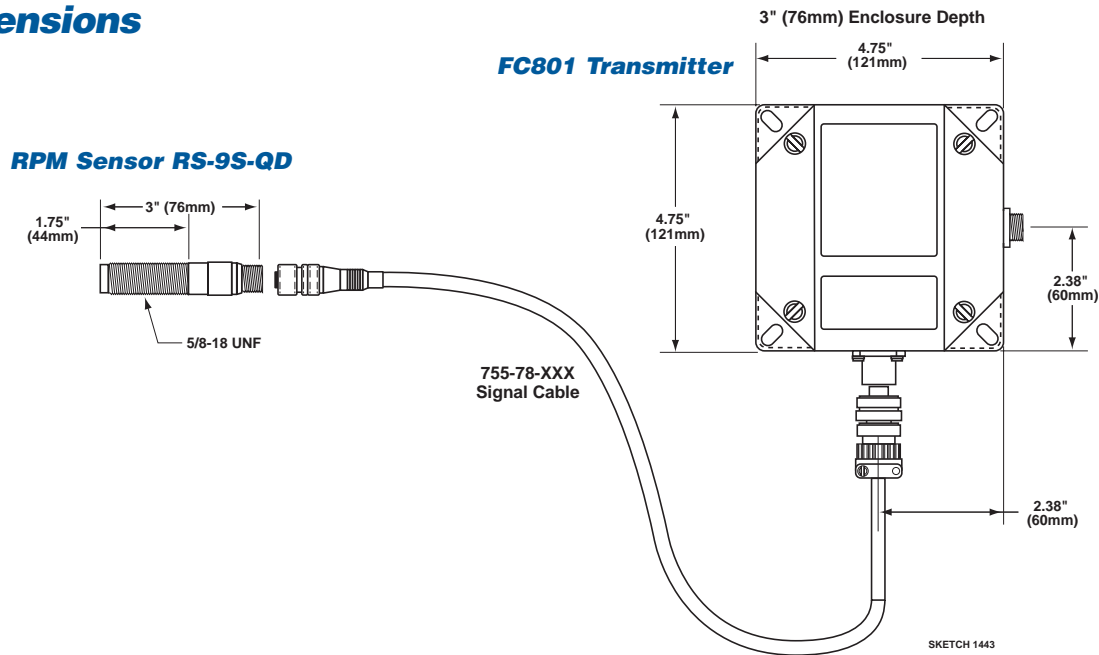
RPM Sensor/Transmitter Specifications

Supply Voltage	9–32 VDC, 0.1 amps maximum 900 mW @ 9 VDC (excluding 4–20 mA)	Output	RS 485
Operating Freq	10 kHz maximum	Temp. Range	Sensor -20° F to 176° F (-30° C to 80° C) Cable -40° F to 212° F (-40° C to 100° C) Transmitter -40° F to 185° F (-40° C to 85° C)

*Requires FC-801-1-RPM transmitter and 755-78-XXX cable

Specifications are for reference only and are subject to change without notice.

Dimensions



FuelCom® RPM Sensor/Transmitter Ordering

RPM Transmitter F C 8 0 1 - 1 - R P M

Output Type

1 = RS 485

Configuration

RPM = RPM transmitter (requires remote RPM sensor RS-9S-QD)

RPM Sensor* R S - 9 S - Q D

*Requires signal cable 755-78-XXX

PS1 FuelCom® AC/DC Power Supply

Features

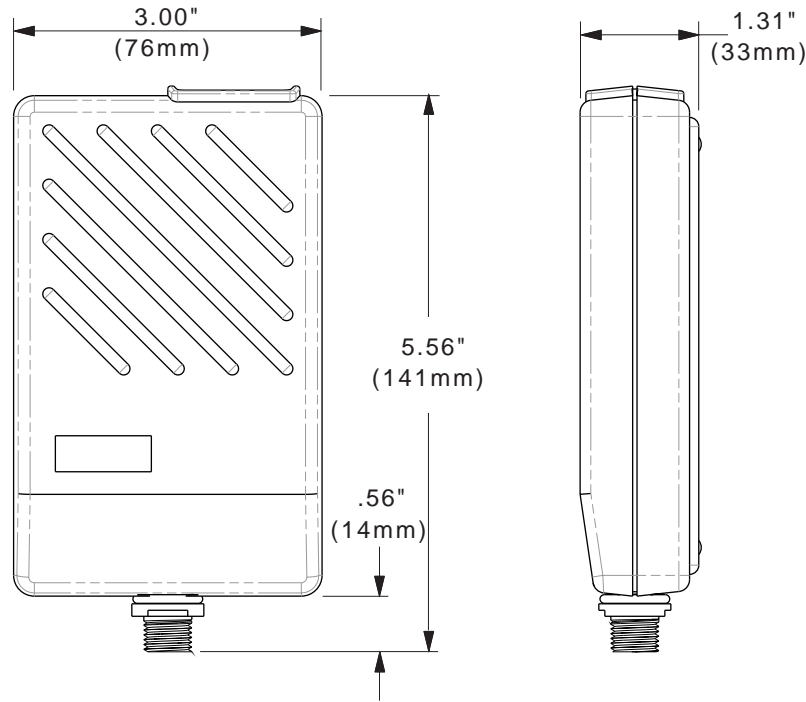
- Micro-Change® Connector for easy connection
- Small and compact
- 85–265 VAC input power

Specifications

A/C Input	85–265 VAC 47/63 Hz via IEC 320 input connector
Input Protection	Internal input line fuse
DC Output	12 VDC @ 2.17 A
Power	26 W
Output Protection	Overload auto recovery Overvoltage 115% – 140%
Enclosure	ABS polycarbonate blend
Operating Temp	32° F to 104° F (0° C to 40° C)
Storage Temp	-67° F to 185° F (-55° C to 85° C)
EMI	Meets FCC/VDE Class B
Connections	
Input	IEC 320 connector
Output	Female 5-pin Micro-Change®*

Specifications are for reference only and are subject to change without notice.

Dimensions



Model Numbering System



Base Model No. _____

Input _____

1 = 85–265 VAC / 47–63 Hz

Output _____

1 = 12 VDC, 2.17 A

Options _____

0 = Standard

* Requires 755-75-XXX cable or 755-50-XXX cable

PS2 FuelCom® DC/DC Power Supply

Features

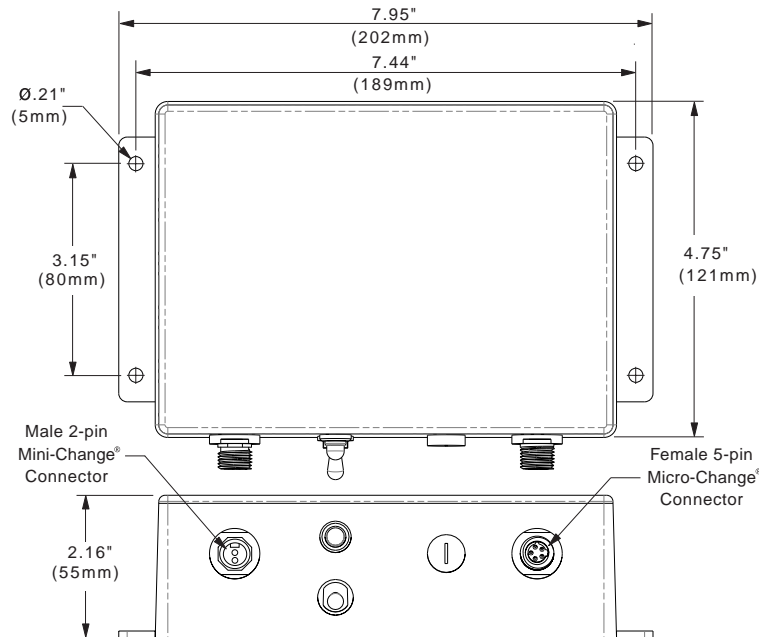
- Micro-Change® Connectors for easy connection
- Lighted power “ON” indicator
- 9–32 VDC voltage input range

Specifications

DC Input Ranges	9–32 VDC / 45–160 VDC
DC Output	12 VDC @ 2 A
Power	26 W
Protection	Reverse polarity (fused) overload (power cycling, auto recovery) overvoltage (zener clamp)
Enclosure	Diecast aluminum Alloy LM 24
Operating Temp	-13° F to 160° F (-25° C to 71° C)
Storage Temp	-40° F to 257° F (-40° C to 125° C)
EMI/RFI	Six-sided continuous shielding designed to meet FCC Class A standards
Connections	
Input	Male 2-pin Mini-Change®*
Output	Female 5-pin Micro-Change®**

Specifications are for reference only and are subject to change without notice.

Dimensions



Model Numbering System

P S 2 - - -

Base Model No. _____

Input _____

- 2 = 9–32 VDC
- 3 = 45–160 VDC

Output _____

- 1 = 12 VDC, 2 A

Options _____

- 0 = Standard

P S C - 2 0 - - -

Power Supply Cable _____

Connector 1 _____

- 2 = Female 2-pin Mini-Change®*

Connector 2 _____

- 0 = Battery Clips

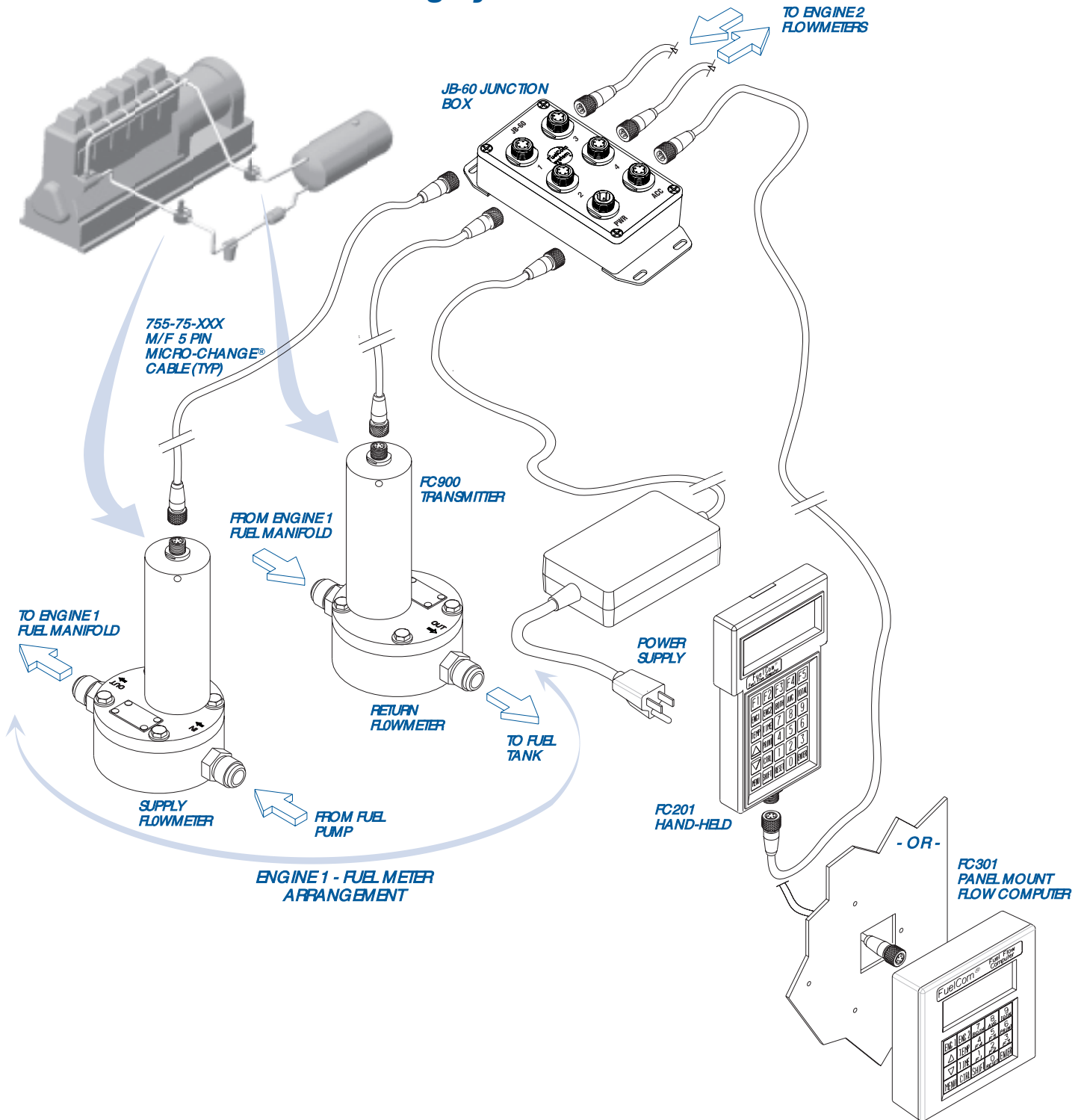
Length _____

- 010 = 10 feet

* Requires PSC-2X-XXX cable

** Requires 755-75-XXX cable

FuelCom® Diesel Fuel Metering System



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