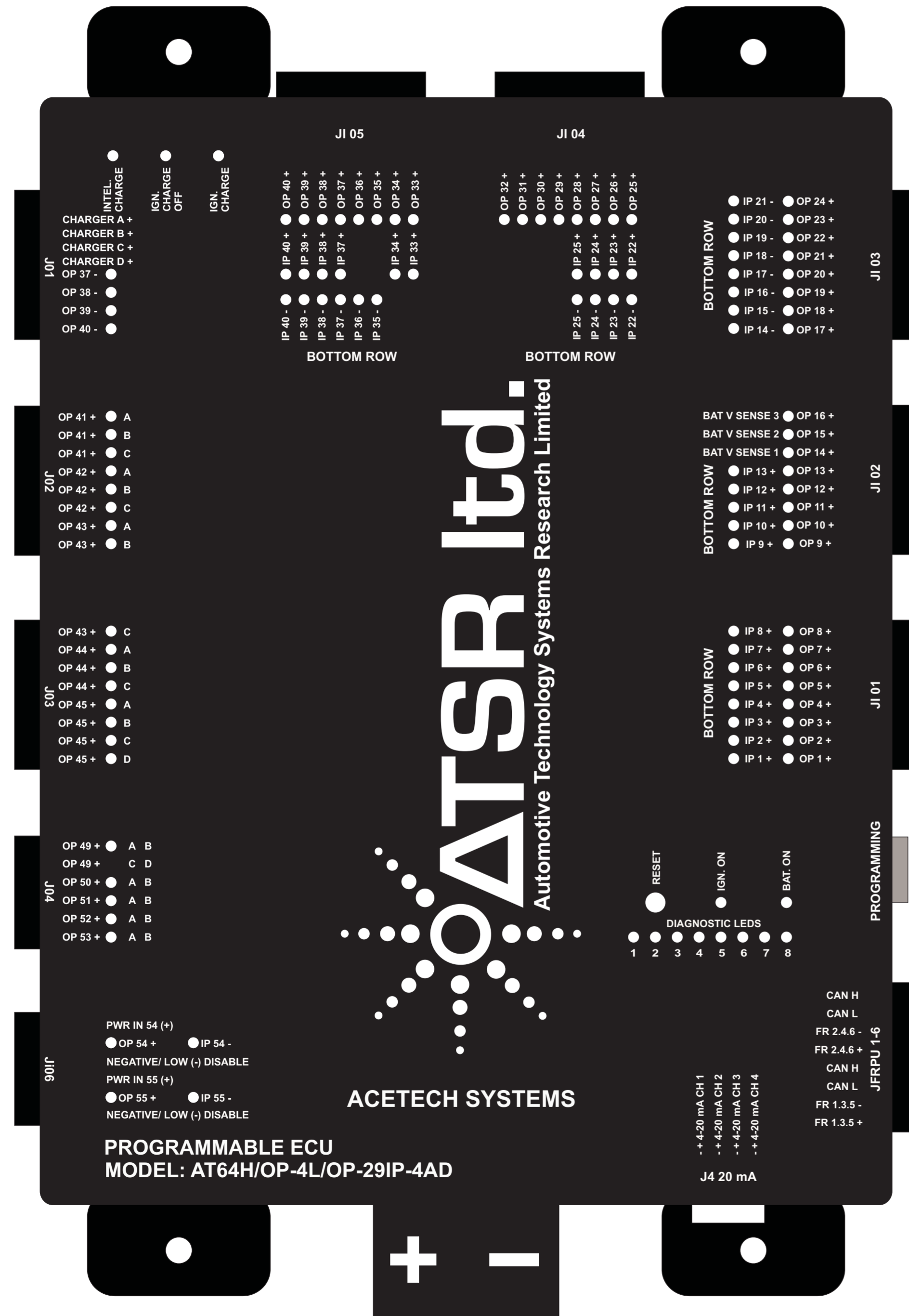


ACETECH SYSTEMS PROGRAMMABLE ECU MODEL AT 64H/OP-4L/OP-29IP-4AD

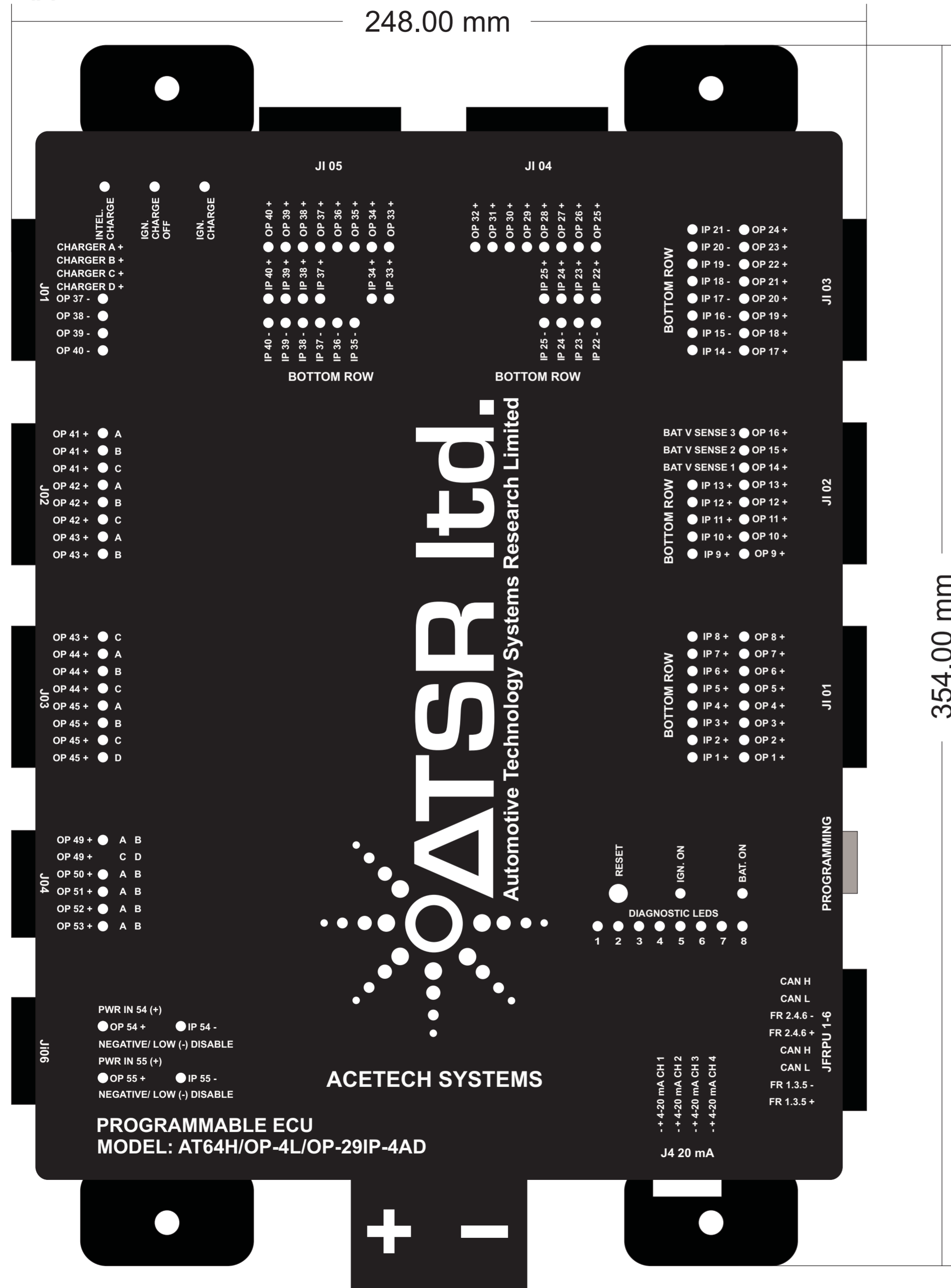


SPECIFICATION:

- COMMUNICATION PROTOCOL: CAN J1939 (ISO 11898)
- OPERATING VOLTAGE: 10 - 30 VDC (NEGATIVE GROUND / EARTH)
- SWITCHED HIGH OUTPUTS: 40 X 15 AMP
- SWITCHED LOW OUTPUTS: 4 X 15 AMP
- SWITCHED GROUPED HIGH OUTPUTS: 16 X 15 AMP (7 GROUPS)
- 6 No. SPECIAL OUTPUTS FOR CONTROL OF HIGH LEVEL LIGHTS / TRAILER SOCKET
- 1. SIDE / TAIL LIGHTS / MARKER LIGHTS
- 2. BRAKE / STOP LIGHTS
- 3. INDICATOR (LEFT)
- 4. INDICATOR (RIGHT)
- 5. FOG LIGHT
- 6. REVERSE
- 2 No SPECIAL FUNCTION CHANNELS FOR PSV (PASSENGER SERVICE VEHICLE) REQUIREMENTS
- EMERGENCY ENGINE STOP (EXTERNAL ENGINE EMERGENCY STOP)
- 4 CHANNEL BATTERY V SENSE (BATTERY MONITORING)
- 4 CHANNEL SPLIT CHARGE
- 4 CHANNEL BATTERY MANAGEMENT
- LOAD PRIORITIZATION / LOAD SHEDDING

COMPANY:			
TITLE: ECU MODEL AT 64			
CODE:	SIZE: A 2	DRAWING No.:	REV: 1.0
SCALE:	SHEET 1 OF 3		

DRAWN: D O D	DATED: 27/11/08
CHECKED:	DATED:
QUALITY CONTROL	DATED:
RELEASED	DATED:



ACETECH SYSTEMS PROGRAMMABLE ECU MODEL AT 64H/OP-4L/OP-29IP-4AD

SPECIFICATION:

- COMMUNICATION PROTOCOL:** CAN J1939 (ISO 11898)
OPERATING VOLTAGE: 10 - 30 VDC (NEGATIVE GROUND / EARTH)
SWITCHED HIGH OUTPUTS: 40 X 15 AMP
SWITCHED LOW OUTPUTS: 4 X 15 AMP
SWITCHED GROUPED HIGH OUTPUTS: 16 X 15 AMP (7 GROUPS)
6 No. SPECIAL OUTPUTS FOR CONTROL OF HIGH LEVEL LIGHTS / TRAILER SOCKET
 1. SIDE / TAIL LIGHTS / MARKER LIGHTS
 2. BRAKE / STOP LIGHTS
 3. INDICATOR (LEFT)
 4. INDICATOR (RIGHT)
 5. FOG LIGHT
 6. REVERSE
2 No SPECIAL FUNCTION CHANNELS FOR PSV (PASSENGER SERVICE VEHICLE) REQUIREMENTS
EMERGENCY ENGINE STOP (EXTERNAL ENGINE EMERGENCY STOP)
4 CHANNEL BATTERY V SENSE (BATTERY MONITORING)
4 CHANNEL SPLIT CHARGE
4 CHANNEL BATTERY MANAGEMENT
LOAD PRIORITIZATION / LOAD SHEDDING

COMPANY:			
TITLE: ECU MODEL AT 64			
CODE:	SIZE: A 2	DRAWING No.:	REV: 1.0
SCALE:		SHEET 2 OF 3	

DRAWN: D O D	DATED: 27/11/08
CHECKED:	DATED:
QUALITY CONTROL	DATED:
RELEASED	DATED:

ACETECH SYSTEMS PROGRAMMABLE ECU MODEL AT 64H/OP-4L/OP-29IP-4AD PLUG / TERMINAL IDENTIFICATION

HIGH SIDE SWITCHED OUTPUTS

OUTPUT#	FUNCTION
---------	----------

PLUG JI01
 OUTPUT / OP 1+
 OUTPUT / OP 2+
 OUTPUT / OP 3+
 OUTPUT / OP 4+
 OUTPUT / OP 5+
 OUTPUT / OP 6+
 OUTPUT / OP 7+
 OUTPUT / OP 8+

PLUG JI02
 OUTPUT / OP 9+
 OUTPUT / OP 10+
 OUTPUT / OP 11+
 OUTPUT / OP 12+
 OUTPUT / OP 13+
 OUTPUT / OP 14+
 OUTPUT / OP 15+
 OUTPUT / OP 16+

PLUG JI03
 OUTPUT / OP 17+
 OUTPUT / OP 18+
 OUTPUT / OP 19+
 OUTPUT / OP 20+
 OUTPUT / OP 21+
 OUTPUT / OP 22+
 OUTPUT / OP 23+
 OUTPUT / OP 24+

PLUG JI04
 OUTPUT / OP 25+
 OUTPUT / OP 26+
 OUTPUT / OP 27+
 OUTPUT / OP 28+
 OUTPUT / OP 29+
 OUTPUT / OP 30+
 OUTPUT / OP 31+
 OUTPUT / OP 32+

PLUG JI05
 OUTPUT / OP 33+
 OUTPUT / OP 34+
 OUTPUT / OP 35+
 OUTPUT / OP 36+
 OUTPUT / OP 37+
 OUTPUT / OP 38+
 OUTPUT / OP 39+
 OUTPUT / OP 40+

LOW SIDE SWITCHED OUTPUTS

OUTPUT #	FUNCTION
----------	----------

PLUG J01
 OUTPUT / OP 37-
 OUTPUT / OP 38-
 OUTPUT / OP 39-
 OUTPUT / OP 40-

GROUPED HIGH SIDE OUTPUTS (SWITCHED - BATTERY - IGNITION - ISOLATED ENABLED)

OUTPUT #	FUNCTION
----------	----------

PLUG J02
 OUTPUT / OP 41+ (A)
 OUTPUT / OP 41+ (B)
 OUTPUT / OP 41+ (C)
 OUTPUT / OP 42+ (A)
 OUTPUT / OP 42+ (B)
 OUTPUT / OP 42+ (C)
 OUTPUT / OP 43+ (A)
 OUTPUT / OP 43+ (B)

PLUG J03
 OUTPUT / OP 43+ (C)
 OUTPUT / OP 44+ (A)
 OUTPUT / OP 44+ (B)
 OUTPUT / OP 44+ (C)
 OUTPUT / OP 45+ (A)
 OUTPUT / OP 45+ (B)
 OUTPUT / OP 45+ (C)
 OUTPUT / OP 45+ (D)

SPECIAL OUTPUT DRIVES FOR MARKER LIGHTS / STOP / TAIL / INDICATORS / FOG / REVERSING

DRIVEN BY INPUTS (IP 2-4-5-6-7)

OUTPUT#	FUNCTION
---------	----------

PLUG J04
 OUTPUT / OP 49+ (A) 1 + 2 DRIVEN BY INPUT / IP2+ (SIDE / TAIL LIGHTS / MARKER LIGHTS)
 OUTPUT / OP 49+ (B) 1 + 2 DRIVEN BY INPUT / IP2+ (SIDE / TAIL LIGHTS / MARKER LIGHTS)
 OUTPUT / OP 50+ (1 + 2) DRIVEN BY INPUT 4+ / IP4+
 OUTPUT / OP 51+ (1 + 2) DRIVEN BY INPUT 5+ / IP5+
 OUTPUT / OP 52+ (1 + 2) DRIVEN BY INPUT 6+ / IP6+
 OUTPUT / OP 53+ (1 + 2) DRIVEN BY INPUT 7+ / IP7+

SPECIAL FEATURE INPUT / OUTPUTS FOR EMERGENCY EXTERNAL VEHICLE ENGINE STOP (PSV REQUIREMENT)

TERMINAL #	FUNCTION
PLUG JI06	
PWR IN 54+	+12 / 24 SUPPLY
OP 54+ / OUTPUT 54+	+12 / 24 OUTPUT
NEGATIVE LOW DISABLE	DISABLES OUTPUT 54 WHEN SWITCHED TO GROUND
PWR IN 55+	+12 / 24 SUPPLY
OP 55+ / OUTPUT 55+	+12 / 24 OUTPUT
NEGATIVE LOW DISABLE	DISABLES OUTPUT 55 WHEN SWITCHED TO GROUND

BATTERY V SENSE - SPLIT CHARGE CONTROL (BATTERY MANAGEMENT)

INPUT#	FUNCTION
PLUG JI02	
V SENSE BATTERY 1	MAIN VEHICLE BATTERY V SENSE
V SENSE BATTERY 2	COMMS BATTERY V SENSE / BATTERY BANK 2
V SENSE BATTERY 3	BATTERY BANK 4 V SENSE

NOTE:
 BATTERIES / BATTERY CONNECTED TO ACETECH ECU
 ARE AUTOMATICALLY VOLTAGE SENSED VIA INTERNAL CIRCUITRY

BATTERY MANAGEMENT / SPLIT CHARGE CONTROL / EMERGENCY VEHICLE CRANK

OUTPUT#	FUNCTION
PLUG J01	
CHARGER A+	AUXILIARY BATTERY / BATTERIES HCM
CHARGER B+	COMMS BATTERY / BATTERIES / BATTERY BANK 2
CHARGER C+	BATTERY BANK 3
CHARGER D+	BATTERY BANK 4

SWITCH PANEL / CONTROL PANEL CONNECTION POINT

OUTPUT#	FUNCTION
PLUG JFRPU 1-6	
F R 1 3 5 +	+12 VOLT SUPPLY SWITCH PANEL NUMBER 1 3 5
F R 1 3 5 -	-12 VOLT (GROUND) SUPPLY SWITCH PANEL NUMBER 1 3 5
CAN L	CAN LOW
CAN H	CAN HIGH
F R 2 4 6 +	+12 VOLT SUPPLY SWITCH PANEL NUMBER 2 4 6
F R 2 4 6 -	-12 VOLT (GROUND) SUPPLY SWITCH PANEL NUMBER 2 4 6
CAN L	CAN LOW
CAN H	CAN HIGH

HIGH SIDE INPUTS

INPUT#	FUNCTION
--------	----------

PLUG JI01
 INPUT / IP 1+ HORN
 INPUT / IP 2+ SIDELIGHTS / MARKER LIGHTS (OP 49)
 INPUT / IP 3+ IGNITION
 INPUT / IP 4+ STOP / BRAKE PEDAL (OP 50)
 INPUT / IP 5+ (OP 51)
 INPUT / IP 6+ (OP 52)
 INPUT / IP 7+ (OP 53)
 INPUT / IP 8+

HIGH SIDE INPUTS

INPUT#	FUNCTION
--------	----------

PLUG JI02
 INPUT / IP 9+
 INPUT / IP 10+
 INPUT / IP 11+
 INPUT / IP 12+
 INPUT / IP 13+

LOW SIDE INPUTS

INPUT#	FUNCTION
--------	----------

PLUG JI03
 INPUT / IP 14-
 INPUT / IP 15-
 INPUT / IP 16-
 INPUT / IP 17-
 INPUT / IP 18-
 INPUT / IP 19-
 INPUT / IP 20-
 INPUT / IP 21-

LOW SIDE / HIGH SIDE INPUTS

INPUT#	FUNCTION
--------	----------

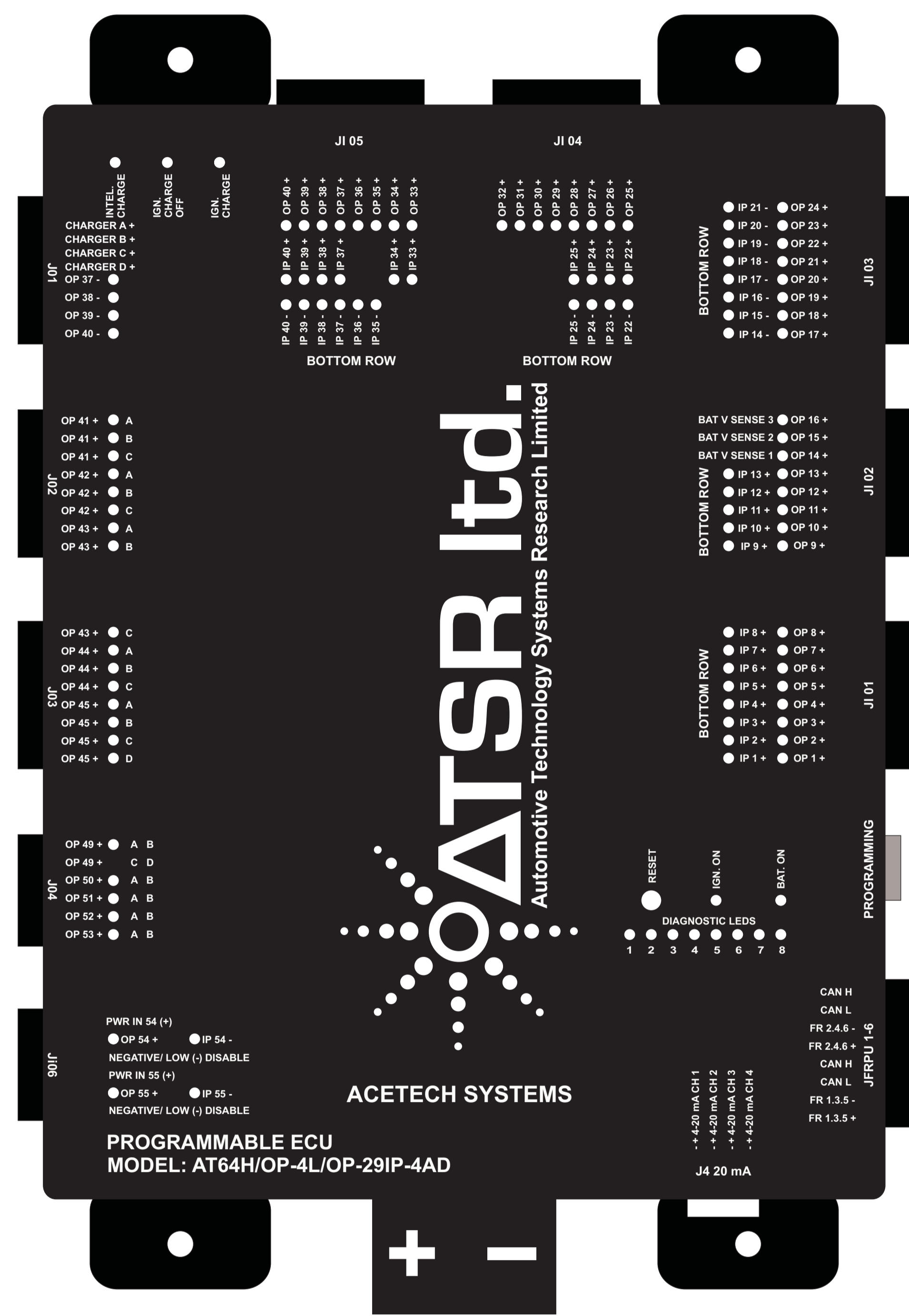
PLUG JI04
 INPUT / IP 22 - / +
 INPUT / IP 23 - / +
 INPUT / IP 24 - / +
 INPUT / IP 25 - / +

PLUG JI05
 INPUT / IP 33 +
 INPUT / IP 34 +
 INPUT / IP 35 -
 INPUT / IP 36 -
 INPUT / IP 37 - / +
 INPUT / IP 38 - / +
 INPUT / IP 39 - / +
 INPUT / IP 40 - / +

4 TO 20mA A TO D INPUTS (ANALOG TO DIGITAL INPUTS)

INPUT#	FUNCTION
--------	----------

PLUG J4 20mA
 - + 4 - 20mA CH 1
 - + 4 - 20mA CH 2
 - + 4 - 20mA CH 3
 - + 4 - 20mA CH 4



DRAWN: D O D		DATED: 27/11/08		COMPANY:	
CHECKED:		DATED:		TITLE: ECU MODEL AT 64	
QUALITY CONTROL		DATED:		CODE: A 1	REV: 1.0
RELEASED		DATED:		SCALE: SHEET 3 OF 3	