

## SPECIFICATIONS

MITSUBISHI HIGH SPEED DIESEL ENGINE  
MODEL MITSUBISHI S4L2-T63SPH



For MEE  
(POWER UNIT STANDARD)

For reference only



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













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APPROVED		REMARKS		
DATE・SIGNATURE				
DATE Nov.28.2002				
MITSUBISHI HEAVY INDUSTRIES, LTD.				
CHG	DATE	APPROVED	CHECKED	DRAWN
△6	Apr.28.2008	A. Takai	R. Nagase	T.IGUSA
△5	Jan.24.2008			
△4	Apr.18.2007			



# 1. Principal Particulars of Diesel Engine

## General Specification

Standard	All items, unless otherwise specified, are in accordance with JIS and maker's standards	
Model	Mitsubishi S4L2 S4L2-T63SPH (MHI No. 31A00-06293 1/2-CHG1)	
    Regulations	97/68/EC Stage3A certified, Engine type " S4L2-T" 97/68/EC as last amended by 2004/26/EC	
 Type	4 cycle water-cooled, vertical overhead valve, cylinder in line, swirl chamber type	
Number of cylinders	4	
Bore × Stroke	78mm × 92mm	
Piston displacement	1.758 liters	
Compression ratio	22 : 1	
Rotation	Anti-Clockwise rotation as viewed from flywheel side	
Firing order	1-3-4-2	
Engine weight(Dry)	Approx. 174kg	
  Dimensions(Length)	Approx. 657mm	
 (Width)	Approx. 495mm	
 (Height)	Approx. 625mm	
 Inclination(Continuous)	15°	
(Temporary)	30°(Max 30 min.)	
Fuel	ASTM diesel fuel oil No.2-D(JIS K2204 gas oil specification No.2 or 3)	
 Lubricating oil	API classification service CF or CH-4 class	
Engine performance	Spec.Rating	Rating at delivery
	Breaking in around 50hr	Breaking in around 0.25 hr
Rated Power(Without fan)	36.8kW{50.0PS}/3000rpm	35.0kW{47.5PS}/3000rpm
  (With fan, for ref.)	34.2kW{46.5PS}/3000rpm	32.4kW{44.1PS}/3000rpm
Rating tolerance	±5% of nominal	
Fuel consumption(Without fan)	273g/kW-h{201g/PS-h}	300g/kW-h{221g/PS-h}
Tolerance	±5%	±5%
Low Idle	1000±25rpm	
 High Idle	3250(+20,-30)rpm	
Rating conditions(Without fan)	ISO 3046	
	Total barometric pressure:100kPa	
	Air temperature :298K	
	Relative humidity :30%	
Oil consumption	Within 2.7g/kW-h{2.0g/PS-h}	
 Fuel injection timing	14°BTDC	
Mean effective pressure	0.83MPa{8.5kgf/cm <sup>2</sup> } at Rating	
Piston speed	9.2 m/s at 3000rpm	




**Fuel system**

Fuel injection pump	BOSCH type
Fuel injection nozzle	Throttle type
Governor	Mechanical centrifugal type
Fuel filter	Filtering paper type
Min. required fuel feeding head	100mm
Max.static head of leak pipe (return)	200mmHg

**Lubricating system**

Lubricating system	Forced circulation by trochoid pump
Lubricating oil filter	Filtering paper type, full flow
Oil pressure	0.29MPa~0.39MPa{3~4kgf/cm <sup>2</sup> } at duty run 0.098MPa{1.0kgf/cm <sup>2</sup> } min. at low idling
Oil capacity	Approx. 6.0 liters (Oil pan high level 5.5 liters,Oil filter etc. Approx. 0.5 liters,High ~ Low Approx. 1.8 liters)
Oil dipstick	Standard dipstick
Oil pressure switch	Yes

**Cooling system**

Cooling system	Forced circulation of fresh water by centrifugal pump with thermostat
Engine water capacity	Approx. 2.5 liters
 Cooling fan	380mm diameter,7 blades,suction
Water pump pulley	PCD 87mm
Pulley ratio	1.33 ( Crankpulley : Water pump pulley = 116 : 87 )
  Fan spacer	30mm
Water temp. switch	Yes
Thermo. Unit	No
Thermostat	Open at 76.5deg.C - full open at 90deg.C

**Electrical system**

Alternator	12V - 50A
Voltage regulator	IC type (Built in alternator)
Regulator set voltage	14.7 ±0.3 V
Alternator pulley	PCD 65mm
Starting system	Electric starting
Starter motor	12V-2.0kW
Glow plug	10.5V,9.7A x 4
Engine shut off system	Electric solenoid (ETR)

**Intake and Exhaust system**

△ Intake manifold(cover)	Engine front side of turbo charger
△ Exhaust manifold	Engine rear side of turbo charger
Induction Resistance	Max 1.96kPa{0.2mH <sub>2</sub> O}
Exhaust Back Pressure	Max 6.57kPa{0.67mH <sub>2</sub> O}
△ Turbocharger	TD03-07G-4.8

**<Remarks>**

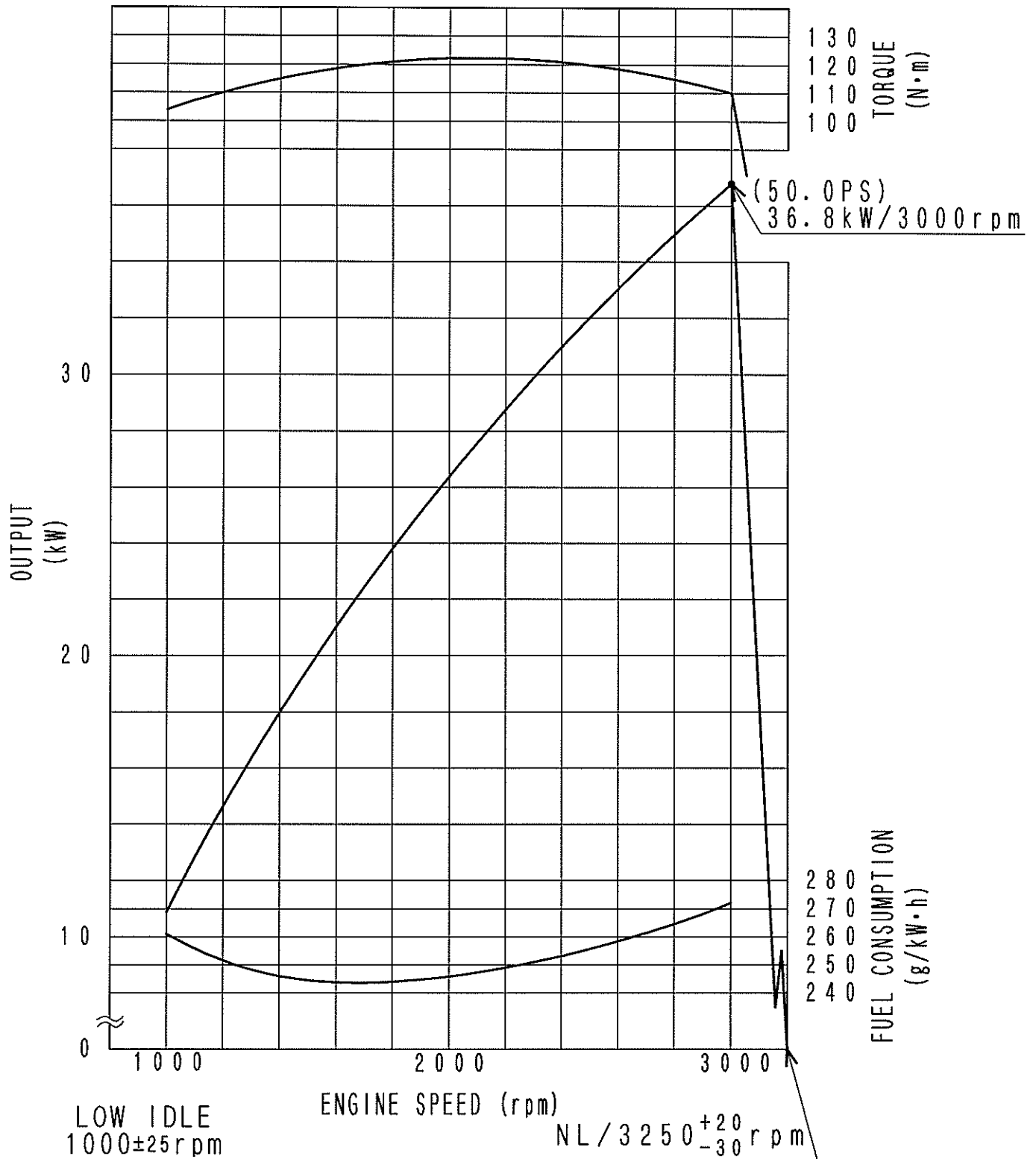
Engine color	Black(MHI standard color)
Flywheel	SAE#7-1/2
Flywheel housing	SAE#5
Side gear PTO	Allowable torque 39.2N-m{4.0kgf-m} total of front and rear, Clockwise rotation as viewed from flywheel side, Gear ratio 1:1 Gear speed(rpm)=28/28 × Engine speed(rpm)

**2. Accessories ( Loose Supply )**

	Parts Name	Parts No.	Q'ty	Remarks	
	1 SWITCH,OIL PRESSURE	31A90-00300	1	Attached To Engine	A4
	2 SWITCH, THERMO	MM432-104	1		A4
△	3 SOLENOID ASSY	30A87-10042	1		A4

# MITSUBISHI DIESEL ENGINE MODEL S4L2-T63SPH PERFORMANCE CURVE

(WITHOUT FAN)



ISO 3046

Total barometric pressure : 100kPa  
 Air temperature : 298K  
 Relative humidity : 30%



				 3RD ANGLE PROJECTION
①	30G-C236'	08. 4.28 S.MURATA	尺寸 SCALE	S4L2-T63SPH ENG ASSY  <b>三菱重工業株式会社 汎用機・特車事業本部</b> MITSUBISHI HEAVY INDUSTRIES, LTD. GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS.  図面番号 <b>31A00-06293</b> DRAWING NO.
CWG	EQ-ND	DATE	CWK	
認可 APPD	<div style="text-align: center;">             商 井           </div>	検印 CHK	R. NAGASE	
		製図 DRW	(MSHI) A. IZAKA T. SHIRAKAWA	
			2008. 1. 24	
				<input checked="" type="checkbox"/> 新 図    サイズ <input type="checkbox"/> 組立図 <input type="checkbox"/> 鉄線標準品 <input type="checkbox"/> 板金溶接品 <input type="checkbox"/> 組立品 <input type="checkbox"/> 引込図    A 1 <input type="checkbox"/> 切削品 <input type="checkbox"/> その他（購入品）





CONNECTOR EQUIVALENT TO  
7222-6234-40 (YAZAKI)  
TO MATE WITH  
30A87-00600 (MHI)  
7123-6234-40 (YAZAKI)

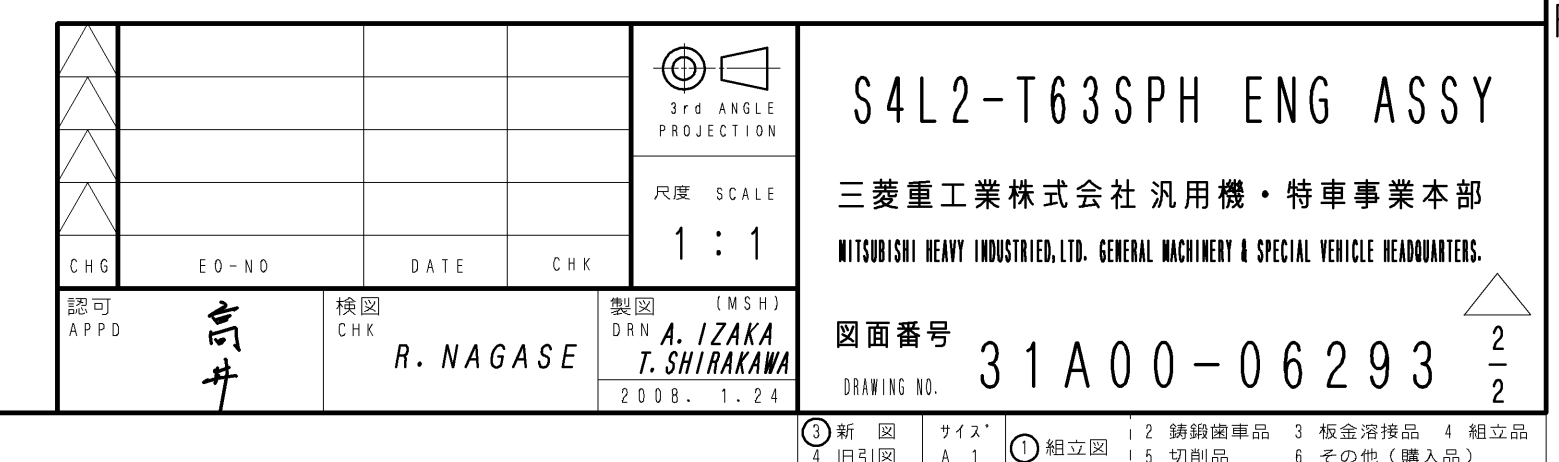


**L & R CONNECTOR**  
CONNECTOR EQUIVALENT TO  
7322-2128 (YAZAKI)  
TO MATE WITH  
MB084-014 (MHI)  
7323-2128 (YAZAKI)

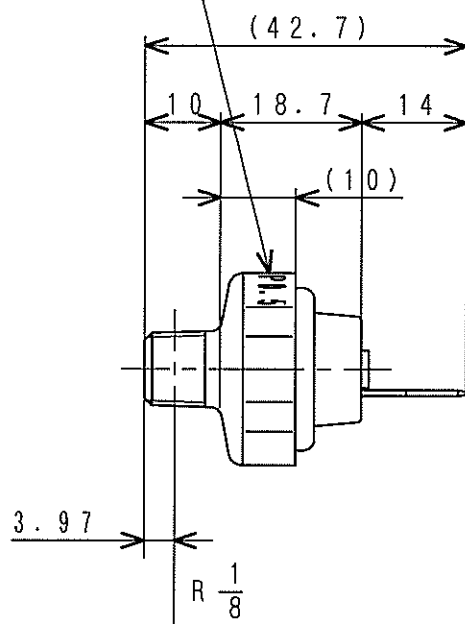
**P-CONNECTOR**  
CONNECTOR EQUIVALENT TO  
7322-2215 (YAZAKI)  
TO MATE WITH  
MM409-660 (MHI)  
7323-2215 (YAZAKI)



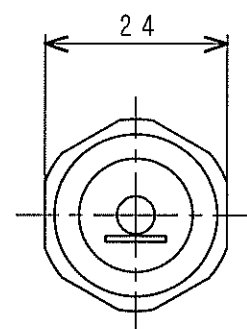
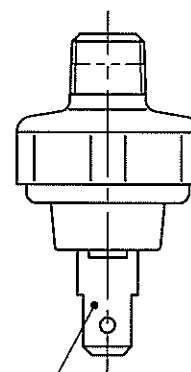
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MARK : P O . 5



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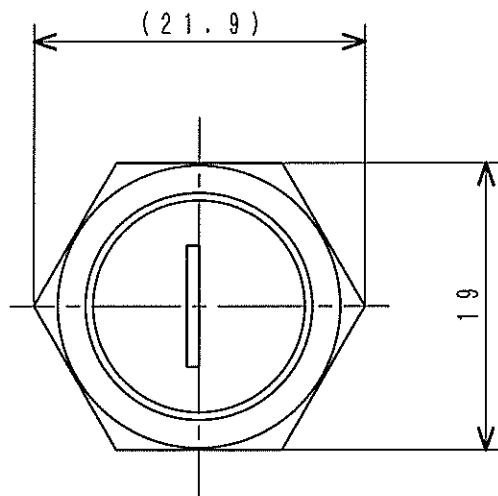
仕 様  
SPECIFICATIONS

作 動 圧 力 OPERATING PRESS.	49 kPa { 0.5 kgf / cm <sup>2</sup> }
接 点 容 量 CURRENT CAPACITY	12 V - 5 W 24 V - 10 W
結 線 様 式 CONNECTION	b ( — ○ — )

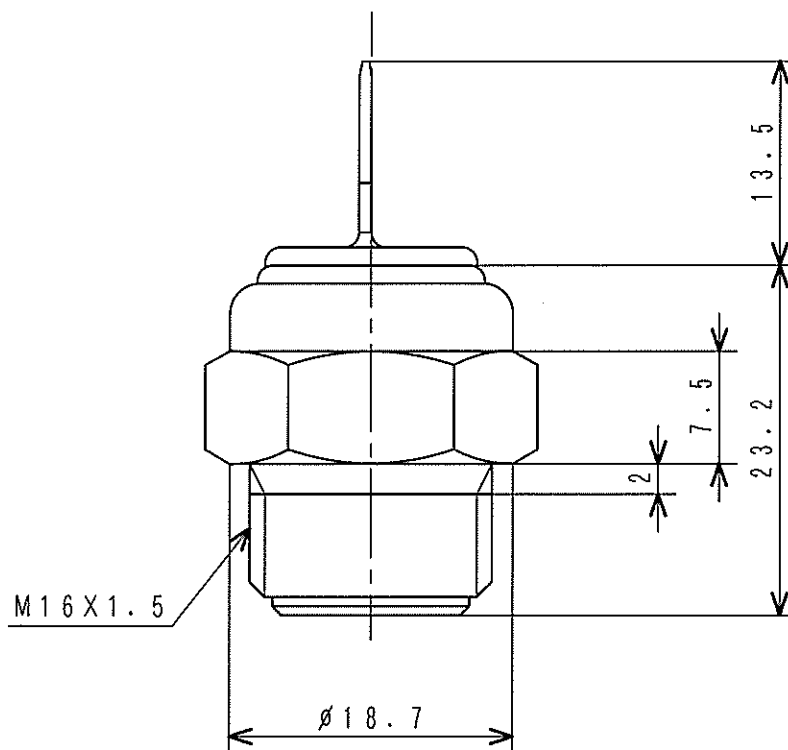
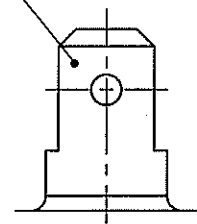
オイルプレッシャスイッチ

SWITCH, OIL PRESSURE

31A90-00300



JIS D5403 PA

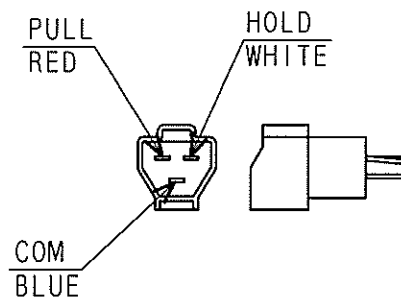
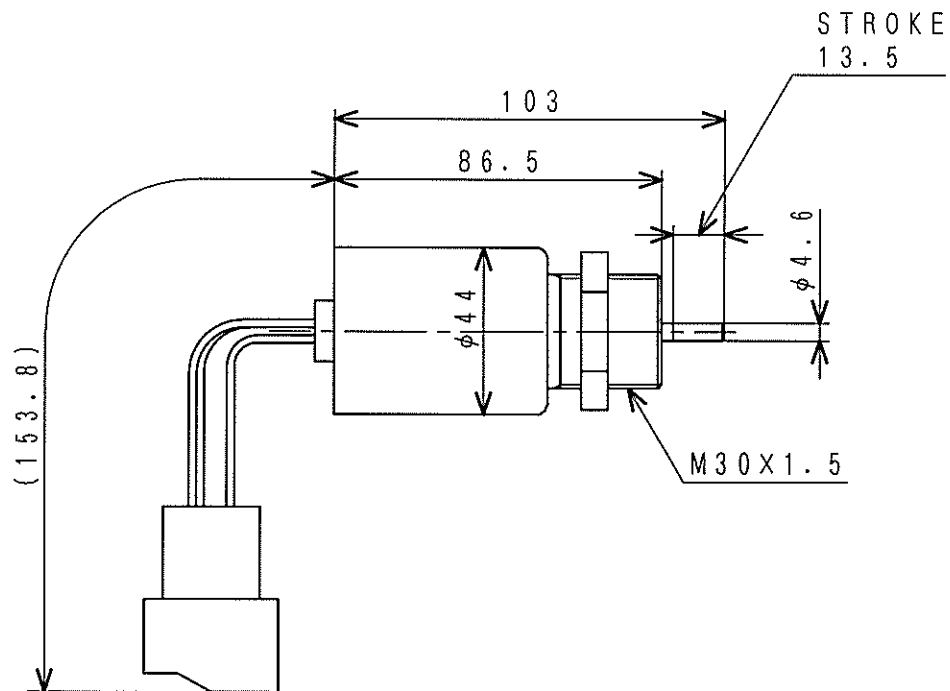


仕様  
SPECIFICATIONS

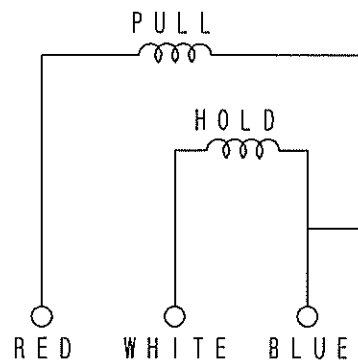
作動温度 OPERATING TEMP	111±3℃
接点容量 CURRENT CAPACITY	0.25A, MAX.
結線様式 CONNECTION	a (—○—○—)

サーモスイッチ  
SWITCH, THERMO

MM432-104



DETAIL OF CONNECTOR  
CONNECTOR EQUIVALENT TO  
7222-6234-40 (YAZAKI)  
TO MATE WITH  
30A87-00600 (MHI)  
7123-6234-40 (YAZAKI)



配線図  
WIRING DIAGRAM

仕様  
SPECIFICATIONS

定格電圧 RATED VOLTAGE	DC12V
ストローク EFFECTIVE STROKE	13.5±0.5mm
定格電流 RATED CURRENT	PULL : 50A HOLD : 1A
使用雰囲気温度 ALLOWABLE AMBIENT TEMP	-40℃~+120℃

ソレノイドアッシ

SOLENOID ASSY

30A87-10042