

## Product Update Bulletin

Issue Date: December 2016



# Starter DSN 1365

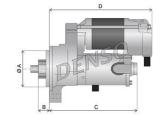
DSN1365: Tandem Solenoid (TS)

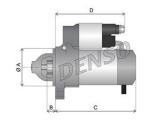
Stop-Start Starter

We are pleased to announce the first aftermarket Tandem Solenoid (TS) Stop-Start Starter (DSN1365) with innovative change-of-mind capability and patented technology enabling the engine to restart while it is still rotating and shaves up to 1.5 seconds off the restart time compared to conventional stop-start starters. The TS Stop-Start starter is a perfect solution for specific applications, particularly for vehicles with automatic transmission.

DSN1365 Vehicle Applications						
Make	Model	Litre	Fuel	Engine	Transmission	Vehicle Spec.
LAND ROVER	DISCOVERY SPORT (14-)	2,2	Diesel	224DT	Automatic 9-speed	with Stop-Start
LAND ROVER	RANGE ROVER EVOQUE (11-)	2,2	Diesel	224DT	Automatic 9-speed	with Stop-Start

DSN1365 Cross-Reference				
DENSO	438000-0820			
DENSO	438000-0821			
DENSO	438000-0822			
LAND ROVER	EJ32-11001-AB			
LAND ROVER	EJ32-11001-AC			
LAND ROVER	EJ32-11001-AD			
LAND ROVER	LR047573			
LAND ROVER	LR065819			
LAND ROVER	LR084922			





DSN1365		12V 1.9kW
<b>₩</b> 13	ØA = 54 mm	B = 1 mm
C = 208 mm	D = 168 mm	30;50 = M8; Plug
	TB = 3xM10	







#### **DENSO EUROPE B.V.**

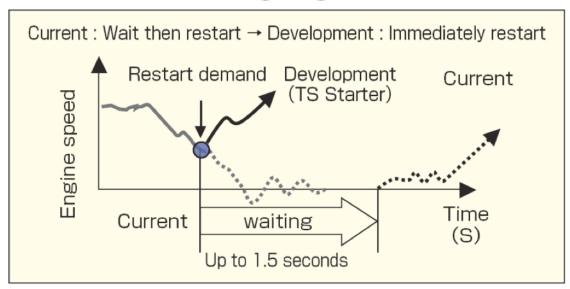
Hogeweyselaan 165 | 1382 JL Weesp | The Netherlands Tel. +31 (0)294 - 493 493 | Fax. +31 (0)294 - 417 122



#### "Change of Mind" Starter - Highlight on the technology

Engine restart times are critical for stop-start engines. A unique starting system is required to restart an engine after fuel supply is cut and before a vehicle comes to a full stop. DENSO has developed TS Starter, which have the capability of restarting before the engine reaches zero rpm. That means it doesn't need to wait for the engine to completely drop from idle speed to zero rpm, like the conventional stop-start starter. This is what we call a "Change of Mind" capable starter that allows the engine to restart with no noticeable lag time. DENSO's TS Starter, paired with a high-efficient alternator and battery, and deceleration regeneration system can improve fuel efficiency by more than 7 percent.

### Re-start during engine run down



The starter, designed specifically for stop-start systems, uses the world's first mechanism to separately control the forward shift of the pinion gear and the motor rotation. The technology enables the engine to cope with restarts in a fast (1.5 seconds quicker) and smooth way while it is still rotating.

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