



Sprinter MY19+ Parameterizable Special Module (ED5) Technical Bulletin UM907/02

R&D Liaison Charleston, 7/14/2020
Mercedes-Benz Vans, LLC

Mercedes-Benz
Vans. Born to run.



Notice

Mercedes-Benz Vans, LLC does not warrant the accuracy of the information contained in this bulletin and reserves the right to modify or append this bulletin without prior notification. Mercedes-Benz disclaims all liability associated with the provision of this bulletin.

This bulletin is not intended to serve as a work instruction, but merely to provide some helpful information for Upfitters to take into consideration before retrofitting or modifying a Mercedes-Benz Sprinter Van.

Prior to making any modification to or installing any equipment in or on a Mercedes-Benz or Freightliner Sprinter, you should review and ensure compliance with all applicable laws and regulations, consult with Vans Engineering Support for Upfitter Management for additional and updated information, and read the Body and Equipment Guideline for Sprinter Model Series 907.

The PSM software is a customized and tailored software solution designed for a specific customer application matched to a specific Sprinter model configuration.

Exception: Factory Options T57 and E5M have factory PSM software installed

Vans PSM Support Contacts

For more information or upfitter inquiries, please submit a request via our website:

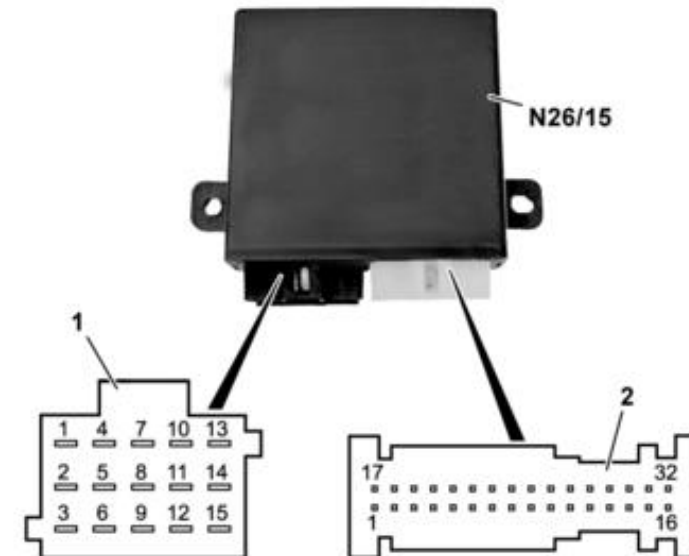
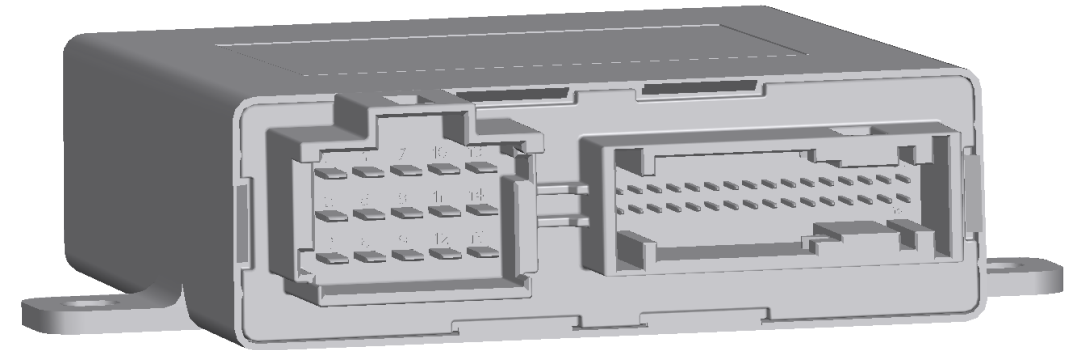
www.UpfitterPortal.com

Sprinter MY19: Parameterizable Special Module

Code	
ED5	Parameterizable Special Module (PSM)
ED8	Pre-installation Electrics, Parameterizable Special Module
E5M	Extension of PSM Standard Contact

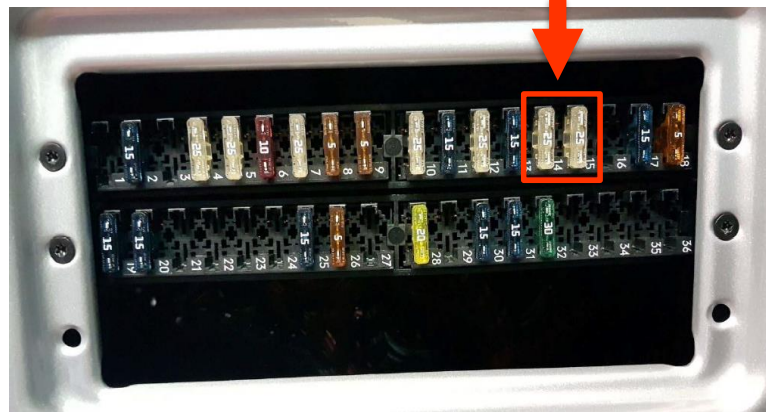
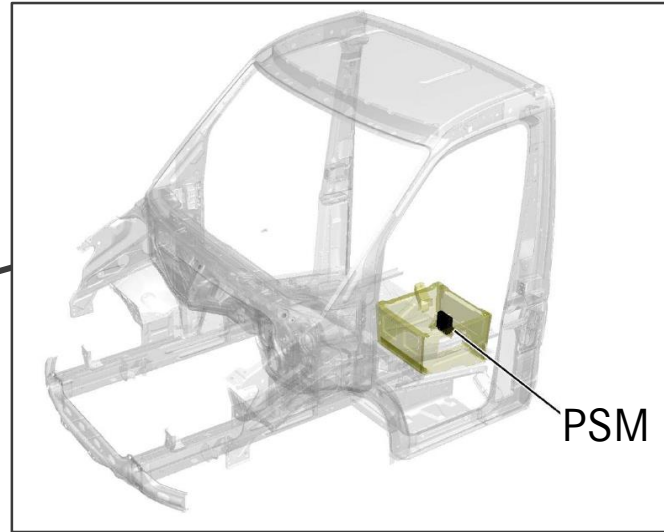
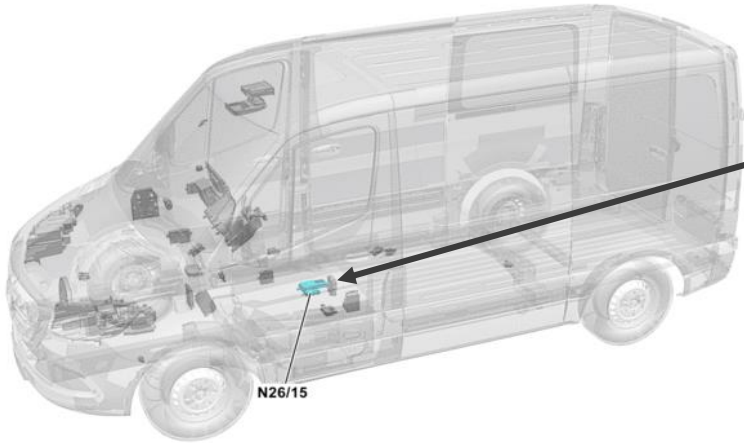
Part	Part Number
Parameterizable Special Module (PSM)	A 907 900 53 03 (MY19) A 907 900 14 03 (MY19+)

Plug	Part Name	Part Number
1	Plug 1 housing	A 013 545 63 26
	2.8 mm MCP pins	A 013 545 76 26
2	Plug 2 housing	A 005 545 28 30
	Cover	A 000 545 91 03
	Contact support	A 002 545 05 40
	0.64 mm MQS pins	A 013 545 44 26



Sprinter MY19: Location of PSM

PSM is installed in the driver's seat box

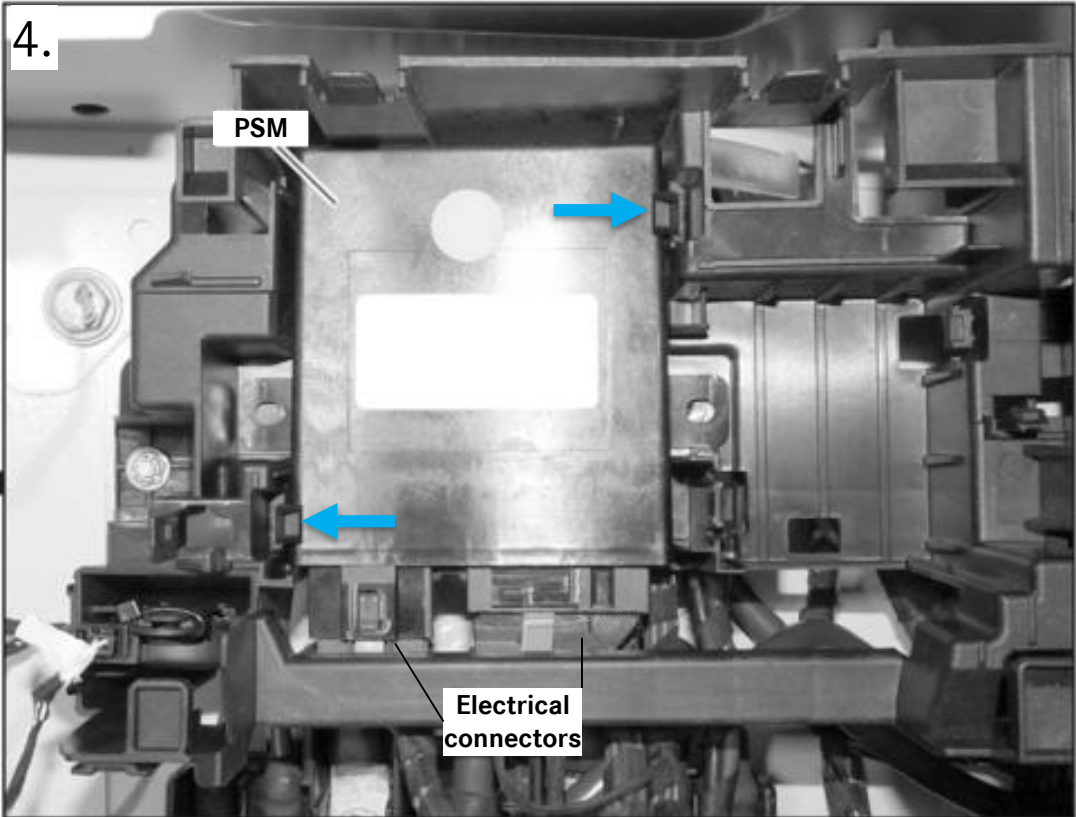
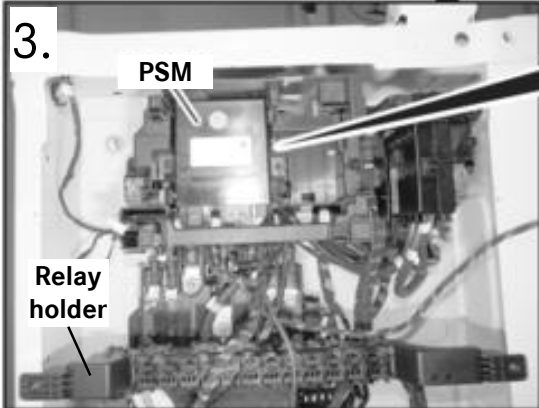
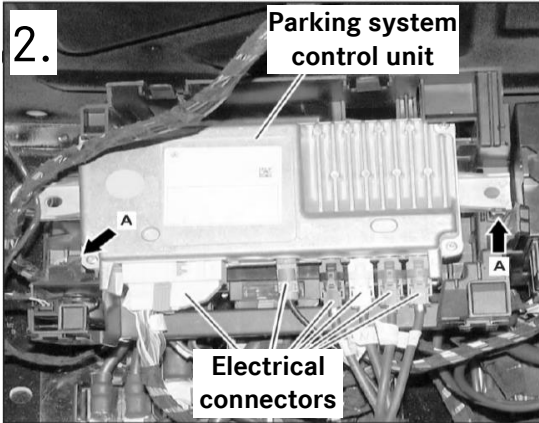


Fuses for PSM are located in the fuse box on the driver's seat frame

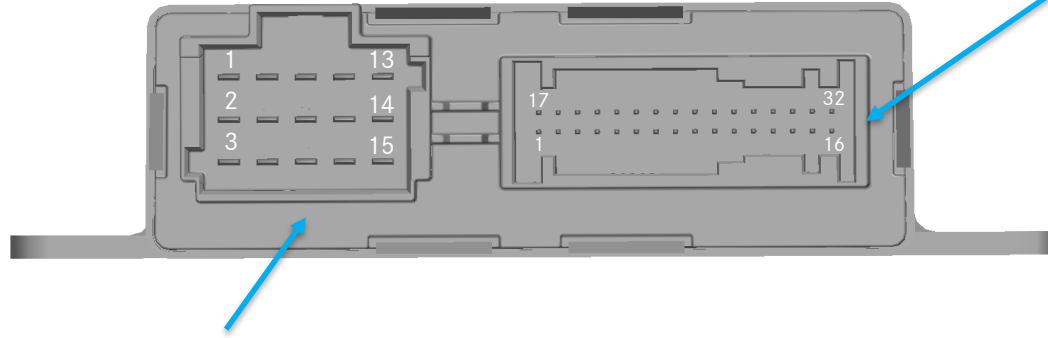
Fuses 14 and 15, shown by the red arrow, are fuses for PSM

Sprinter MY19: Installation/ Removal of PSM

- 1. Remove driver seat and seat base cover
- 2. Remove parking system control unit and set the unit aside with all the electric lines connected
- 3. Bracket for the PSM control unit is located directly under the parking system control unit
- 4. Clip or unclip the catch hooks, shown by blue arrows, to install or remove, respectively, the PSM control unit



Sprinter MY19: Pin Assignment



Plug 1

Pin	Circuit	Rating (A)	Type
1	Vehicle Power	-	-
2	Output 2	10	High Side
3	Output 5	5	High Side
4	Vehicle Power	-	-
5	Output 1	5	High Side
6	Output 18	5	High Side
7	Output 4	10	High Side
8	-	-	-
9	GND*	7.5	-
10	Vehicle Power	-	-
11	Output 3	5	High Side
12	Output 19	5	High Side
13	Vehicle Power	-	-
14	Output 20	5	High Side
15	Vehicle GND	-	-

* Can be utilized as a GND source

Plug 2

** Not programmable

Pin	Circuit	Rating (A)	Type
1	Output 11	0.5	Low Side
2	Output 14	0.5	Low Side
3	Output 15 (PWM fix)**	0.5	Low Side
4	Output 8	0.5	High Side
5	Output 9	0.5	High Side
6	Output 10	0.5	High Side
7	Input 5	-	Low Side
8	Input 6	-	Low Side/ Analog
9	Input 1	-	Low Side/ Analog
10	Input 10	-	Low Side/ Analog
11	Input 7	-	Low Side/ Analog
12	-	-	-
13	GND*	1	-
14	CAN GND	-	-
15	GND*	1	-
16	ABH CAN-H	-	-
17	Output 13	1	Low Side
18	Output 17	1	Low Side
19	Output 12	0.5	Low Side
20	Output 7	1	High Side
21	Output 6	1	High Side
22	Output 16	0.5	High Side
23	Input 4	-	High Side
24	Input 8	-	Low Side/ Analog
25	Input 9	-	Low Side/ Analog
26	Input 2	-	High Side
27	Input 3	-	High Side
28	Body CAN-L	-	-
29	Body CAN-H	-	-
30	CiA CAN-L	-	-
31	CiA CAN-H	-	-
32	ABH CAN-L	-	-

Sprinter MY19: PSM General Information

- PSM is connected to the Body CAN and can read vehicle status information and control vehicle functions
- 10 inputs (analogue and digital) and 19 outputs available for user-specific components
- Parameterization occurs using Mercedes-Benz Xentry diagnostic tool
- PSM software is supported by Mercedes Benz authorized personnel
- PSM is used for improving various vehicle functions e.g. fuel economy, safety, vehicle tracking, and fleet management
- PSM can be retrofitted on vehicles equipped with PSM prep code ED8
- PSM is automatically included with right/ left sliding door step code T57 / T58

Sprinter MY19: PSM Capabilities

Controls in-vehicle functions via Body CAN

- Interior and exterior lighting activation
- Internal buzzer alarm
- Horn activation
- Central locking
- Windscreen wipers
- Audio mute
- Engine start prevention
- And more

Sprinter MY2019: New PSM Functions

- Activation of electrical load compartment sliding door
- Manual and automatic opening and closing of windows
- Text displays on the instrument cluster
- Extension of signal pool, e.g. driver's belt buckle, AdBlue, trailer operation
- 4 additional PLC (Programmable Logic Controller) groups
- Arithmetic logic units e.g. calculation and comparator units

Sprinter MY19: PSM Logic & Other Functions

PSM signals can be combined together to create logic combinations

- Signals combined using following operators: AND, NAND, OR, NOR, XOR, XNOR
- 12 Programmable logic controller (PLC) groups available
- Each PLC group have 8 logic blocks

Signals can be processed to trigger specified output signals or input functions internally using following functions:

- Timer & Counter
- Flip flop
- Threshold switches & Threshold switches with hysteresis
- Arithmetic, Calculation, Differentiator/ integrator, Comparator results

Sprinter MY19: Operational Procedure

Master Upfitter

1. Please submit a PSM request with your desired functions at: www.upfitterportal.com
2. After a feasibility study of the requested functions, Mercedes Benz will support the upfitter with the PSM program on feasible functions
3. Completed PSM program and PSM program specification sheet with pin information will be provided to the upfitter on the same inquiry page opened by the upfitter
4. Upfitter will download PSM program onto a USB storage device
5. Using the USB and Xentry diagnostic tool, an authorized Sprinter dealer can upload the PSM program onto the van
6. Upfitter should review PSM pin assignment diagram (page 6) to ensure correct upfit connection to the PSM

***NOTE:** MY2018 and earlier PSM files do **NOT** work on the MY2019 and later Sprinter

- All parameterizations must be created new. File format is now .cds (previously .psm)

Sprinter MY19: Operational Procedure

Non Master Upfitter

1. For general information on PSM, please visit the Upfitter Portal: www.upfitterportal.com
2. On the Upfitter Portal, visit the 'PSM Information' page for general information on the PSM
3. Visit 'PSM Standard Programs' to learn more about available PSM programs. Software specification sheet with program and pinout information is provided for each available standard PSM program.
4. Visit local dealership to download and install desired standard PSM program or for any questions on PSM
5. An authorized Sprinter dealer will upload the PSM program onto the van using Xentry diagnostic tool
6. Upfitter should review PSM pin assignment diagram (page 6) to ensure correct upfit connection to the PSM

***NOTE:** MY2018 and earlier PSM files do **NOT** work on the MY2019 and later Sprinter

- File format is now .cds (previously .psm)

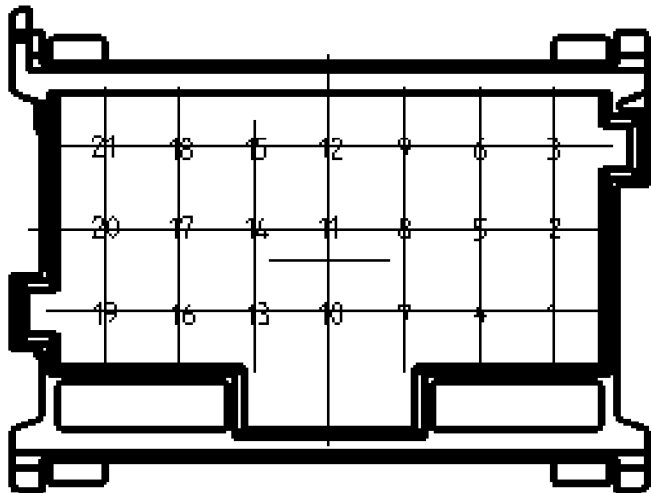
Sprinter MY19: Electrical pre-installations options

E5M: Extension PSM Standard Contact

- E5M plugs part numbers:
 - PSM-outlet: A0285453628
 - PSM-inlet: A0265459428
- Pre-installed y-harness designed to connect directly to PSM
- Standardized interface for simple connection with PSM for upfitters
- Allows the connection of upfit components and systems without intervention in the MB wiring harness
- Upfit wiring harness can be prefabricated completely
- PSM automatically added when E5M is ordered

Note: Certain individual pins on the PSM are already assigned ex-factory and cannot be modified

Sprinter MY19: E5M Pin Assignment



Plug Outputs

Pin	Circuit
1	Output 1
2	Output 2
3	Output 3
4	Output 4
5	Output 5
6	Output 6
7	Output 7
8	Output 8
9	Output 9
10	Output 10
11	Output 11
12	Output 12
13	Output 13
14	Output 14
15	Output 15*
16	Output 16
17	Output 17
18	Output 18
19	Output 19
20	Output 20
21	-

* Not programmable

Plug Inputs

Pin	Circuit
1	Input 1
2	Input 2
3	Input 3
4	Input 4
5	Input 5
6	Input 6
7	Input 7
8	Input 8
9	Input 9
10	Input 10
11	-
12	Ground (Plug 2)
13	Ground (Plug 2)
14	ABH CAN-H
15	ABH CAN-L
16	Ground (Plug 1)
17	-
18	-