

Table 8-102. IC_CTRL1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7	EN_DRV	R/W	0b	Enable gate drivers. 0b = Gate driver output disabled and passive pulldowns enabled. 1b = Gate driver outputs enabled.
6	EN_OLSC	R/W	0b	Enable offline open load and short circuit diagnostic. 0b = Disabled. 1b = VDS monitors set into real-time voltage monitor mode and offline diagnostics current sources enabled.
5-4	BRG_MODE	R/W	00b	Bridge PWM control mode. 00b = Independent Half-Bridge 01b = H-Bridge PH/EN 10b = H-Bridge PWM 11b = Solenoid Control
3-1	LOCK	R/W	011b	Lock and unlock the control registers. Bit settings not listed have no effect. 011b = Unlock all control registers. 110b = Lock the control registers by ignoring further writes except to the LOCK register.
0	CLR_FLT	R/W	0b	Clear latched fault status information. 0b = Default state. 1b = Clear latched fault bits, resets to 0b after completion. Will also clear SPI fault and watchdog fault status.

Q1.

When EN_OLSC function is activated (1b), is the overcurrent protection function via VDS below unusable?

Even if VDS_LVL below is adjusted, the protection function is not activated.

Is there no way to use VDS Overcurrent protection function while EN_OLSC function is activated?

Table 8-52. DRV_CTRL1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-6	VGS_MODE	R/W	00b	VGS gate fault monitor mode for half-bridges 1-8. 00b = Latched fault. 01b = Cycle by cycle. 10b = Warning report only. 11b = Disabled.
5	VGS_IND	R/W	0b	VGS fault independent shutdown mode configuration. 0b = Disabled. VGS fault will shut down all half-bridge drivers. 1b = Enabled. VGS gate fault will only shutdown the associated half-bridge driver.
4	VGS_LVL	R/W	0b	VGS threshold comparator level for dead-time handshake and VGS fault monitor for half-bridge drivers. 0b = 1.4 V 1b = 1 V
3	VGS_HS_DIS	R/W	0b	VGS dead-time handshake monitor disable. 0b = 0x0 1b = Disabled. Half-bridge transition is based only on TDRIVE and programmable digital dead-time delays.
2-1	VDS_MODE	R/W	00b	VDS overcurrent monitor mode for half-bridges 1-8. 00b = Latched fault. 01b = Cycle by cycle. 10b = Warning report only. 11b = Disabled.
0	VDS_IND	R/W	0b	VDS fault independent shutdown mode configuration. 0b = Disabled. VDS fault will shut down all half-bridge drivers. 1b = Enabled. VDS gate fault will only shutdown the associated half-bridge driver.

Table 8-58. VDS_CTRL1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	VDS_LVL_1	R/W	1101b	Half-bridge 1 VDS overcurrent monitor threshold. 0000b = 0.06 V 0001b = 0.08 V 0010b = 0.10 V 0011b = 0.12 V 0100b = 0.14 V 0101b = 0.16 V 0110b = 0.18 V 0111b = 0.2 V 1000b = 0.3 V 1001b = 0.4 V 1010b = 0.5 V 1011b = 0.6 V 1100b = 0.7 V 1101b = 1 V 1110b = 1.4 V 1111b = 2 V

Q2.

When DRV8718 enters ACTIVE MODE, the VGS of the external HIGH SIDE FET automatically becomes HIGH.

Is there any way to turn that function OFF?

