

The status of the drive is reported back in registers 2100h~2110h (48449~48465 decimal). The six most recent faults are found in P11.04~P11.09 (0B04h~0B09h, 42821~42826 decimal). See Chapter 5 for more detailed explanations of these registers.

GS4 Status Addresses (Read Only)						
Description		Range	Modbus Address			
			Hex	Dec	Octal	
Status Monitor 1	Fault Codes	0: No Error	2100	48449	20400	
		1: Overcurrent during Accel (ocA)				
		2: Overcurrent during Decel (ocd)				
		3: Overcurrent during normal speed (ocn)				
		4: Ground Fault (GFF)				
		5: IGBT short circuit (occ)				
		6: Overcurrent during Stop (ocS)				
		7: Overvoltage during Accel (ovA)				
		8: Overvoltage during Decel (ovd)				
		9: Overvoltage during normal speed (ovn)				
		10: Overvoltage during Stop (ovS)				
		11: Low voltage during Accel (LvA)				
		12: Low voltage during Decel (Lvd)				
		13: Low voltage during normal speed (Lvn)				
		14: Low voltage during Stop (LvS)				
		15: Input phase loss (OrP)				
		16: IGBT Overheat 1 (oH1)				
		17: Cap Overheat 2 (oH2)				
		18: Thermister 1 open (tH1o)				
		19: Thermister 2 open (tH2o)				
		20: Power Reset Off (PWR)				
		21: Overload (oL) (150% 1Min, Inverter)				
		22: Motor1 Thermal Overload (EoL1)				
		23: Motor2 Thermal Overload (EoL2)				
		24: Motor Overheat-PTC (oH3)				
		25: reserved				
		26: Over Torque 1 (ot1)				
		27: Over Torque 2 (ot2)				
		28: Under current (uc)				
		29: reserved				
		30: EEPROM write error (cF1)				
		31: EEPROM read error (cF2)				
		32: reserved				
		33: U phase current sensor detection error (cd1)				
		34: V phase current sensor detection error (cd2)				
		35: W phase current sensor detection error (cd3)				
		36: CC Hardware Logic error 0 (Hd0)				
		37: OC Hardware Logic error 1 (Hd1)				
		38: OV Hardware Logic error 2 (Hd2)				
39: OCC Hardware Logic error 3 (Hd3)						
		40: Motor auto tune error (AuE)				
		41: PID Feedback loss (AFE)				
		42~47: reserved				
		48: Analog input signal loss (ACE)				
		49: External Fault (EF)				
		50: Emergency Stop (EF1)				
		51: Base Block (bb)				
		52: Password Error (Pcod)				
		53: Software Code lock (ccod)				
		54: PC Command error (CE1)				
		55: PC Address error (CE2)				
		56: PC Data error (CE3)				
		57: PC Slave error (CE4)				
		58: PC Communication Time Out (CE10)				
		59: PC Keypad Time out (CP10)				
		60: Braking Transistor Fault (bf)				
		61: Y-Delta connection Error (ydc)				
		62: Decel Energy Backup Error (dEb)				
		63: Over Slip Error (oS�)				
		64: Electromagnet switch error (ryF)				
		65~71: reserved				
		72: STO Loss1 (STL1)				
		STO1~SCM1 internal hardware detect error				
		73: ES1 Emergency Stop (S1)				
		74: In Fire Mode (Fire)				
		75: reserved				
		76: Safety Torque Off function active (STO)				
		77: STO Loss2 (STL2)				
		STO2~SCM2 internal hardware detect error				
		78: STO Loss3 (STL3) –				
		STO1~SCM1 and STO2~SCM2 internal hardware detect errors				
		79: U Phase Short (Uoc)				
		80: V Phase Short (Voc)				
		81: W Phase Short (Woc)				
		82: U Phase Loss (UPHL)				
		83: V Phase Loss (VPHL)				
		84: W Phase Loss (WPHL)				
		85~89: reserved				
		90: PLC Force Stop (FStp)				
		91~98: reserved				
		99: CPU Command error (TRAP)				
		100~110: reserved				
		111: reserved				

(table continued next page)

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3 Function Principle of the Application Example

Name	Type	Start value	Function
ConfigAxis	WORD	16#003F	Assignment of the drive control word (drive parameter r2090). The start value 16#003F sets bits 1 to 6 to TRUE: Bit 1: OFF2 Bit 2: OFF3 Bit 3: Enable operation Bit 4: Enable ramp-function generator Bit 5: Continue ramp-function generator Bit 6: Enable speed setpoint
HWIDSTW	HW_IO	0	Hardware ID setpoint value (see section Telegram slot)
HWIDZSW	HW_IO	0	Hardware ID actual value (see section Telegram slot)

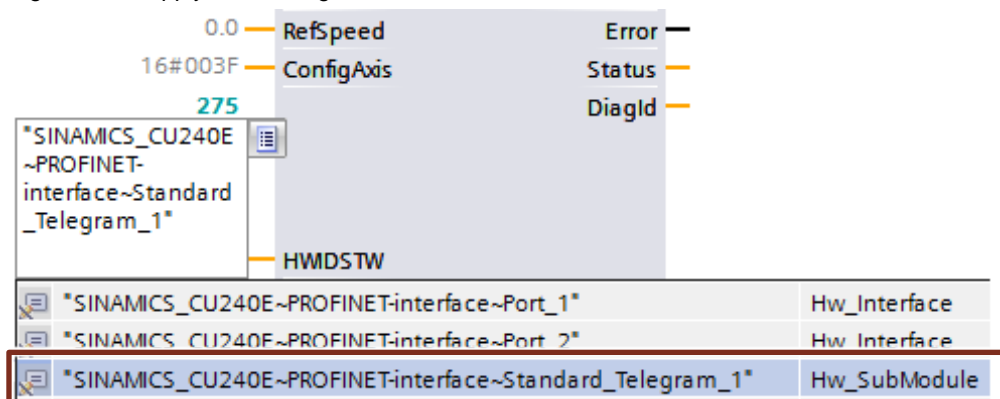
Table 3-6: "SINA_SPEED" output parameter

Name	Type	Start value	Function
AxisEnabled	BOOL	FALSE	Drive operation is enabled
Lockout	BOOL	FALSE	On-inhibit of the drive is active
ActVelocity	REAL	0.0	Actual speed of the drive
Error	BOOL	FALSE	Drive fault active
Status	WORD	0	Display of status values: 16#7002: No fault 16#8401: Drive fault active 16#8402: On-inhibit active 16#8600: DPRD_DAT error 16#8601: DPWR_DAT error
DiagId	WORD	0	Expanded communication fault (error when calling up a command)

Telegram slot

The block inputs HWIDSTW and HWIDZSW must reference to the hardware ID of the standard telegram.

Figure 3-3: Supply of the telegram slot



When using a PROFINET connection between the SIMATIC controller and the SINAMICS G120 drive, the same hardware ID must be configured for block inputs HWIDSTW and HWIDZSW.