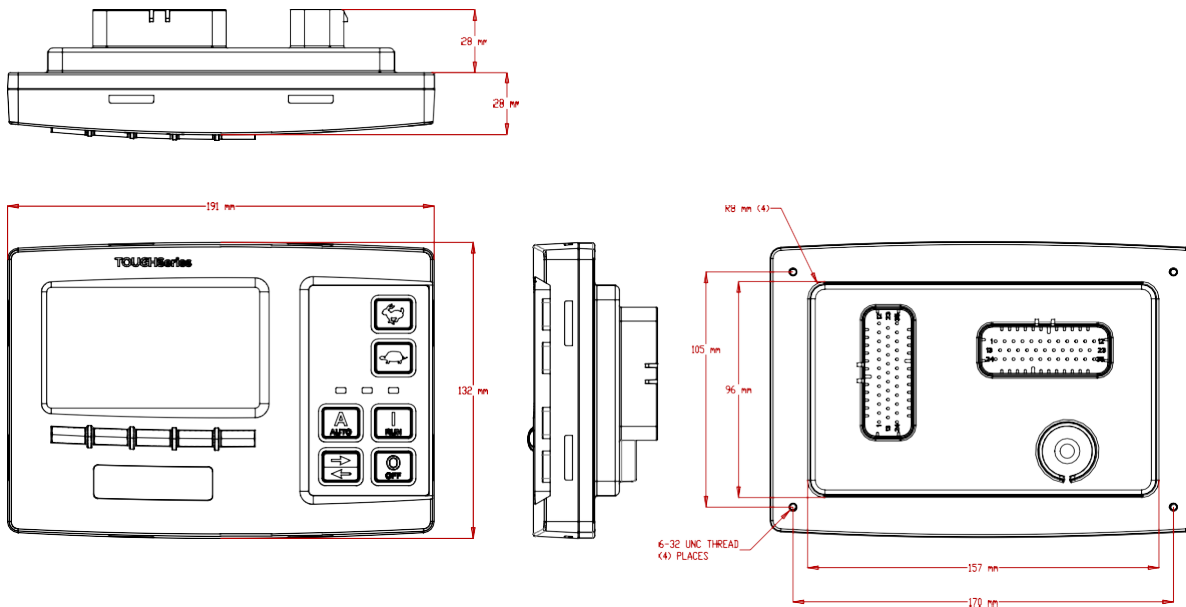


DynaGen™



TOUGH Series™ PRO TE/TG600

SCHEMATIC AND TEST SPECIFICATIONS

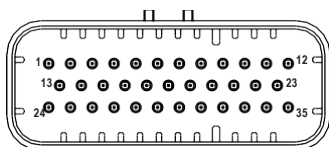


TEST SPECIFICATIONS

DC Transients	Meets SAE J1113 Pulse 1 (b/c) Meets SAE J1113 Pulse 2A Meets SAE J1113 Pulse 2b	Meets SAE J1113 Pulse3a and 3b Meets SAE J1113 Pulse4 Meets SAE J1113 Pulse 5a
AC Transients	DynaGen setup and tailored 2KV pulse, 0, 90, 270 degrees	
ESD SAE J1113	Direct Discharge (powered). Meets SAE J1113-13. Figure 1b. Severity level 4 Direct Discharge (un-powered). Meets SAE J1113-13. Figure 1b. Severity level 4 Air Gap Discharge (powered). Meets SAE J1113-13. Figure B1. Severity level 4 Air Gap Discharge (un-powered). Meets SAE J1113-13. Figure B1. Severity level 4	
EMC MIL STD 461E	MIL STD 461E section 5.5 (CE102)	
Environmental	Thermal Cycling (SAE J1455)	
Mechanical (SAE J1455)	Impact UL Harness Swing SAE J1455 Unpackaged Drop SAE J1455, UL	
Vibration SAE J1455	SAE J1455: Random profile for engine mounted panels on all 3 axis SAE J1455: Swept sine on all 3 axis	
Mechanical (SAE J1455)	UL 746C NEMA IC65 pilot duty rating UL508, 17th edition (Table 36.1) CSA 22.2, No. 14-10, 11th edition	UL2200, 1st edition UL840 (tables 8.1, 9.2) UL50



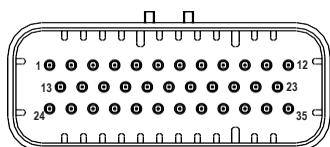
MAIN AND AUXILIARY CONNECTORS



Main Connector (AMPSEAL 35-pin)



Pin	Name	Description	Pin	Name	Description
1	V_BAT	Battery Positive	19	Analog Input 3	Configurable Analog Input (Hi Z, Lo Z, 0-5VDC, 4-20mA, B-)
2	V_BAT	Battery Positive	20	Analog Input 4	Configurable Analog Input (Hi Z, Lo Z, 0-5VDC, 4-20mA, B-)
3	Switched Output 1	High Side Switch	21	Analog Input 5	Configurable Analog Input (Hi Z, Lo Z, 0-5VDC, 4-20mA, B-)
4	Switched Output 3	High Side Switch	22	Analog Input 6	Configurable Analog Input (Hi Z, Lo Z, 0-5VDC, 4-20mA, B-)
5	Switched Output 2	High Side Switch	23	Analog Input 7	Configurable Analog Input (Hi Z, Lo Z, 0-5VDC, 4-20mA, B-)
6	Switched Input 1	Configurable Digital Input (B+, B-, B+ or B-, OPEN)	24	Ground	Battery Negative
7	Switched Input 2	Configurable Digital Input (B+, B-, B+ or B-, OPEN)	25	Ground	Battery Negative
8	Switched Input 6	Configurable Digital Input (B+, B-, B+ or B-, OPEN)	26	Switched Output 8	High Side Switch
9	Analog Input 1	Configurable Analog Input (Hi Z, Lo Z, 0-5VDC, 4-20mA, B-)	27	Switched Output 6	High Side Switch
10	Analog Input 2	Configurable Analog Input (Hi Z, Lo Z, 0-5VDC, 4-20mA, B-)	28	Switched Input 4	Configurable Digital Input (B+, B-, B+ or B-, OPEN)
11	CANL	CANbus with internal software selectable 120Ω resistor	29	Switched Input 9	Configurable Digital Input (B+, B-, B+ or B-, OPEN)
12	CANH	CANbus with internal software selectable 120Ω resistor	30	Switched Input 8	Configurable Digital Input (B+, B-, B+ or B-, OPEN)
13	NC	No Connect	31	Switched Input 7	Configurable Digital Input (B+, B-, B+ or B-, OPEN)
14	Switched Output 4	High Side Switch	32	Analog Input 8	Configurable Analog Input (Hi Z, Lo Z, 0-5VDC, 4-20mA, B-)
15	Switched Output 5	High Side Switch	33	Analog Input 9	Configurable Analog Input (Hi Z, Lo Z, 0-5VDC, 4-20mA, B-)
16	Switched Output 7	High Side Switch	34	Speed Input 1	Mag Pickup, Alternator Input
17	Switched Input 5	Configurable Digital Input (B+, B-, B+ or B-, OPEN)	35	Speed Input 2	Mag Pickup, Alternator Input
18	Switched Input 3	Configurable Digital Input (B+, B-, B+ or B-, OPEN)			



Auxiliary Connector (AMPSEAL 35-pin)

Pin	Name	Description	Pin	Name	Description
1	RS485A	RS485	18	NC	No Connect
2	RS485B	RS485	19	NC	No Connect
3	RS485COM	RS485 Ground	20	NC	No Connect
4	NC	No Connect	21	NC	No Connect
5	NC	No Connect	22	NC	No Connect
6	NC	No Connect	23	NC	No Connect
7	Analog Input 10	Configurable Analog Input (Hi Z, Lo Z, 0-5VDC, 4-20mA, B-)	24	NC	No Connect
8	NC	No Connect	25	USB D+	USB D+ Input
9	AC Neutral	AC Neutral Input	26	USB D-	USB D- Input
10	AC Voltage Phase A	AC Voltage Phase A Input	27	USB Ground	USB Ground (internally connected to battery negative)
11	AC Voltage Phase B	AC Voltage Phase B Input	28	5V Protected Output	5V Protected Output
12	AC Voltage Phase C	AC Voltage Phase C Input	29	Ground	Battery Negative
13	Switched Output 9	High Side Switch	30	NC	No Connect
14	Switched Output 10	High Side Switch	31	CT Common	CT Common Input
15	Switched Input 10	Configurable Digital Input (B+, B-, B+ or B-, OPEN)	32	CT Common	CT Common Input
16	Switched Input 11	Configurable Digital Input (B+, B-, B+ or B-, OPEN)	33	AC Current Line A	AC Current Line A Input
17	Switched Input 12	Configurable Digital Input (B+, B-, B+ or B-, OPEN)	34	AC Current Line B	AC Current Line B Input
			35	AC Current Line C	AC Current Line C Input

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