

Description

The GE Mark IV Speedtronic driver allows the FieldServer to receive status data from Speedtronic devices over either RS-232 or RS-485 using GE Mark IV Speedtronic protocol. The Driver acts as a Passive Client and receives status data from Speedtronic devices.

NOTE: Only Digital values are supported.

Connection Facts

FieldServer Mode	Nodes	Comments
Client	1-10 (max)	The max number of nodes is limited by the amount of physical ports on the FieldServer.

Formal Driver Type

Serial, Passive Client

Compatibility

FieldServer Model	Compatible	FieldServer Model	Compatible
ProtoCessor	No	QuickServer FS-QS-10xx	No
ProtoCarrier	No	QuickServer FS-QS-12xx	Yes
ProtoNode	No	QuickServer FS-QS-20xx	Yes
ProtoAir	No	QuickServer FS-QS-22xx	Yes
		QuickServer FS-QS-3x10-F	Yes

Connection Information

Connection Type: EIA232 or EIA285 (Two wire, Half-Duplex)

Baud Rates: 300; 1200; 2400; 4800; 9600; 19200; 28800; 38400 (Vendor Limitation)

Data Bits: 8 (Vendor Limitation)

Stop Bits: 1 (Vendor Limitation)

Parity: Even

Multidrop Capability: No

Devices Tested

Device	Tested (Factory, Site)
GE Mark IV Speedtronic	TBC

Communication Functions

Data Types Supported

FieldServer Data Type	Description (or Device Data Type)
Digital Input	Logic Points
Digital Register	Annunciator Alarms

Read Operations Supported

FieldServer as a Passive Client
Read All Points and Alarm Statuses

Unsupported Functions and Data Types

Function	Reason
GE Mark IV Speedtronic	Only Rev. 2 12/13/84 of Speedtronic protocol is currently supported

Driver Point List

Please note that Analog points listed are currently not supported.

Byte No.	Signal	Description	Zero Pt.	Maximum	Units	Bytes
Miscellaneous Points						
1	TIME	SECONDS	0	59		1
2	TIME	MINUTES	0	59		1
3	TIME	HOUR	0	24		1
4	TIME	DAY	0	9		1
5	TIME	MONTH	0	12		1
6	TIME	YEAR	0	99		1
7	TIMR-01	TOTAL FIRED HOURS	0	9999999.9		4
11	TIMR-02	MANUALLY INIT STARTS	0	9999999.9		4
15	CNTR-01	PEAK FIRED HOURS	0	9999999.9		4
19	CNTR-02	TOTAL STARTS	0	9999999.9		4
23	CNTR-03	FAST LOAD STARTS	0	9999999.9		4
27	CNTR-04	FIRED STARTS	0	9999999.9		4
31	CNTR-05	TRIPS	0	9999999.9		4
Integer Points						
35	TTX01-1	EXHAUST TEMPERATURE TC = 1	0	2048	DEG F	2
37	TTX01-2	EXHAUST TEMPERATURE TC = 2	0	2048	DEG F	2
39	TTX01-3	EXHAUST TEMPERATURE TC = 3	0	2048	DEG F	2
41	TTX01-4	EXHAUST TEMPERATURE TC = 4	0	2048	DEG F	2
43	TTX01-5	EXHAUST TEMPERATURE TC = 5	0	2048	DEG F	2
45	TTX01-6	EXHAUST TEMPERATURE TC = 6	0	2048	DEG F	2
47	TTX01-7	EXHAUST TEMPERATURE TC = 7	0	2048	DEG F	2
49	TTX01-8	EXHAUST TEMPERATURE TC = 8	0	2048	DEG F	2
51	TTX01-9	EXHAUST TEMPERATURE TC = 9	0	2048	DEG F	2
53	TTX01-10	EXHAUST TEMPERATURE TC = 10	0	2048	DEG F	2
55	TTX01-11	EXHAUST TEMPERATURE TC = 11	0	2048	DEG F	2
57	TTX01-12	EXHAUST TEMPERATURE TC = 12	0	2048	DEG F	2
59	TTX01-13	EXHAUST TEMPERATURE TC = 13	0	2048	DEG F	2
61	TTX01-14	EXHAUST TEMPERATURE TC = 14	0	2048	DEG F	2
63	TTX01-15	EXHAUST TEMPERATURE TC = 15	0	2048	DEG F	2
65	TTX01-16	EXHAUST TEMPERATURE TC = 16	0	2048	DEG F	2

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Byte No.	Signal	Description	Zero Pt.	Maximum	Units	Bytes
Integer Points						
67	TTX01-17	EXHAUST TEMPERATURE TC = 17	0	2048	DEG F	2
69	TTX01-18	EXHAUST TEMPERATURE TC = 18	0	2048	DEG F	2
71	TTXC	EX TEMP AVG LOW'S - HIGH AND LOW REJECTED	0	2048	DEG F	2
73	CTIF-1	COMP INLET FLANGE TEMP 1	0	2048	DEG F	2
75	CTIF-2	COMP INLET FLANGE TEMP 2	0	2048	DEG F	2
77	CTDA-1	COMP DISCHARGE TEMP 1	0	2048	DEG F	2
79	CTDA-2	COMP DISCHARGE TEMP 2	0	2048	DEG F	2
81	TTWS1FI1	TURB WHEELSPACE TEMP 1ST STG FWD INNER	0	2048	DEG F	2
83	TTWS1FI2	TURB WHEELSPACE TEMP 1ST STG FWD INNER	0	2048	DEG F	2
85	TTWS1FO1	TURB WHEELSPACE TEMP 1ST STG FWD OUTER	0	2048	DEG F	2
87	TTWS1FO2	TURB WHEELSPACE TEMP 1ST STG FWD OUTER	0	2048	DEG F	2
89	TTWS1FA1	TURB WHEELSPACE TEMP 1ST STG AFT OUTER	0	2048	DEG F	2
91	TTWS1FA2	TURB WHEELSPACE TEMP 1ST STG AFT OUTER	0	2048	DEG F	2
93	TTWS2FO1	TURB WHEELSPACE TEMP 2ND STG FWD INNER	0	2048	DEG F	2
109	TTXSPL	COMBUSTION MONITOR ALLOWABLE SPREAD	0	2048	DEG F	2
111	TTXSP1	COMBUSTION MONITOR ACTUAL SPREAD 1	0	2048	DEG F	2
113	TTXSP2	COMBUSTION MONITOR ACTUAL SPREAD 2	0	2048	DEG F	2
115	LTTH1	LUBE TEMP TURBINE HEADER, GT/GG	0	2048	DEG F	2
117	LTB1D	LUBE TEMP NO. 1 TURB. BRG. DRAIN	0	2048	DEG F	2
119	LTB2D	LUBE TEMP NO. 2 TURB. BRG. DRAIN	0	2048	DEG F	2
121	LTBT1D	LUBE TEMP NO. 1 THRUST BRG. DRAIN	0	2048	DEG F	2
123	BTLG1	BEARING METAL TEMP LEAD GEAR =1	0	2048	DEG F	2
125	BTLG2	BEARING METAL TEMP LEAD GEAR =2	0	2048	DEG F	2
127	BTLG3	BEARING METAL TEMP LEAD GEAR =3	0	2048	DEG F	2
129	BTLG4	BEARING METAL TEMP LEAD GEAR =4	0	2048	DEG F	2
131	BTLG5	BEARING METAL TEMP LEAD GEAR =5	0	2048	DEG F	2
133	BTGJ11	BEARING METAL TEMP GEN. JOURNAL =1	0	2048	DEG F	2
135	BTGJ21	BEARING METAL TEMP GEN. JOURNAL =2	0	2048	DEG F	2
137	BB1	VIBRATION TRANSDUCER = 1	0	8	IN/SEC	2
139	BB2	VIBRATION TRANSDUCER = 2	0	8	IN/SEC	2
141	BB4	VIBRATION TRANSDUCER = 4	0	8	IN/SEC	2
143	BB5	VIBRATION TRANSDUCER = 5	0	8	IN/SEC	2
145	BB7	VIBRATION TRANSDUCER = 7	0	8	IN/SEC	2
147	BB8	VIBRATION TRANSDUCER = 8	0	8	IN/SEC	2
149	BB9	VIBRATION TRANSDUCER = 9	0	8	IN/SEC	2
151	BB-MAX	VIBRATION MAX SELECT	0	8	IN/SEC	2
153	PN	TURBINE STARTING DEVICE SPEED	0	125	% SPEED	2
155	TNH	TURBINE SPEED HP	0	125	% SPEED	2
157	TNR	SPEED CONTROL REFERENCE	0	125	% SPEED	2
159	FSR1	LIQUID FUEL STROKE REF. FROM FUEL SPLITTER	1	100	%	2
161	FSR2	GAS FUEL STROKE REF. FROM FUEL SPLITTER	1	100	%	2
163	CPD	COMPRESSOR DISCHARGE PRESSURE	0	2048	PSI	2
165	FPCI	INTERVALVE PRESSURE	0	2048	PSI	2
167	TTRXB	SPEED BIASED TEMPERATURE CONTROL REF.	0	2048	DEG F	2
169	CSRGV	VIGV REFERENCE ANGLE	0	100	DEGR	2
171	CSGV	INLET GUIDE VANE ANGLE (SCALED)	0	100	DEGR	2
173	FOROUT	LIQUID FUEL FLOW REFERENCE	0	10	V DC	2
175	FO	LIQUID FUEL FLOW	0	64	m/SEC	2
177	FSROUT	GAS CONTROL VALVE POSITION REFERENCE	0	10	V DC	2

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Integer Points						
179	FSG	GAS CONTROL VALVE LVDT POSITION	0	100	%	2
181	FPRG	GAS RATIO VALVE CONTROL PRESS REF.	0	10	VDC	2
183	FSGR	SPEED RATIO VALVE CALIBR. POS.	0	10	VDC	2
185	DW	GENERATOR LOAD	0.00	204.80	MW	2
187	SVL	SYSTEM LINE VOLTAGE	0	150	VRMS	2
189	SFL	SYSTEM LINE FREQUENCY	0.00	62.50	HZ	2
191	DVAR	GENERATOR LOAD VARS (SCALED)	0.00	204.80	MVAR	2
193	DDUMP1	SPARE POINT (OPT. WRITTEN TO BY SEQUENCING)	0	32768	CNT1S	2
195	DDUMP2		0	32768	CNT1S	2
197	DDUMP3		0	32768	CNT1S	2
199	DDUMP4		0	32768	CNT1S	2
201	DDUMP5		0	32768	CNT1S	2
203	DDUMP6		0	32768	CNT1S	2
205	DDUMP7		0	32768	CNT1S	2
207	DDUMP8		0	32768	CNT1S	2

Byte No.	Signal	Description	Logic Zero	Logic One	Bytes	
Logic Points						
211	0	L30D-SD	NORMAL DISPLAY MESSAGE "SHUTDOWN STATUS"	0	1	1/8
	1	L30D-SU	NORMAL DISPLAY MESSAGE "STARTUP STATUS"	0	1	1/8
	2	L30D-RUN	NORMAL DISPLAY MESSAGE "RUN STATUS"	0	1	1/8
	3	L30D-RSZ	NORMAL DISPLAY MESSAGE "NOT READY TO START"	0	1	1/8
	4	L30D-RSZ	NORMAL DISPLAY MESSAGE "READY TO START"	0	1	1/8
	5	L30D-STG	NORMAL DISPLAY MESSAGE "STARTING"	0	1	1/8
	6	L30D-CRN	NORMAL DISPLAY MESSAGE "CRANKING"	0	1	1/8
	7	L63SUF 1	STARTUP FSR FIRING FUEL COMMAND	0	1	1/8
212	0		STARTUP FSR WARMUP FUEL COMMAND	0	1	1/8
	1		NORMAL DISPLAY MESSAGE "ACCELERATING"	0	1	1/8
	2		NORMAL DISPLAY MESSAGE "FULL SPEED NO LOAD"	0	1	1/8
	3		NORMAL DISPLAY MESSAGE "SYNCHRONIZING"	0	1	1/8
	4		NORMAL DISPLAY MESSAGE "SPINNING RESERVE"	0	1	1/8
	5		NORMAL DISPLAY MESSAGE "LOADING"	0	1	1/8
	6		NORMAL DISPLAY MESSAGE "FAST LOADING"	0	1	1/8
	7		NORMAL DISPLAY MESSAGE "PRESELECTED LOAD"	0	1	1/8
213	0		NORMAL DISPLAY MESSAGE "BASE LOAD"	0	1	1/8
	1		NORMAL DISPLAY MESSAGE "PEAK LOAD"	0	1	1/8
	2		NORMAL DISPLAY MESSAGE "PART LOAD"	0	1	1/8
	3		NORMAL DISPLAY MESSAGE "UNLOADING"	0	1	1/8
	4		NORMAL DISPLAY MESSAGE "FIRED SHUTDOWN"	0	1	1/8
	5		NORMAL DISPLAY MESSAGE "COASTING DOWN"	0	1	1/8
	6		NORMAL DISPLAY MESSAGE "ON COOLDOWN"	0	1	1/8
	7		NORMAL DISPLAY MESSAGE "OFF COOLDOWN"	0	1	1/8

Byte No.	Signal	Description	Logic Zero	Logic One	Bytes
Logic Points					
214	0	OFF MODE SELECTED	0	1	1/8
	1	CRANK MODE SELECTED	0	1	1/8
	2	FIRE MODE SELECTED	0	1	1/8
	3	AUTO MODE SELECTED	0	1	1/8
	4	REMOTE MODE SELECTED	0	1	1/8
	5	NORMAL DISPLAY MESSAGE "START SELECT"	0	1	1/8
	6	NORMAL DISPLAY MESSAGE "STOP SELECT"	0	1	1/8
	7	PRE-SELECTED LOAD COMMAND	0	1	1/8
215	0	BASE LOAD COMMAND	0	1	1/8
	1	PEAK LOAD COMMAND	0	1	1/8
	2	FSR SHUTDOWN CONTROL	0	1	1/8
	3	FSR STARTUP CONTROL	0	1	1/8
	4	FSR ACCELERATION CONTROL HP SPEED	0	1	1/8
	5	FSR TEMPERATURE CONTROL	0	1	1/8
	6	FSR SPEED DROOP CONTROL	0	1	1/8
	7	FSR SPEED ISOCH CONTROL	0	1	1/8
216	0	MIN FSR LOGIC	0	1	1/8
	1	FSR MANUAL CONTROL	0	1	1/8
	2	SEQUENCE IN PROGRESS	0	1	1/8
	3	10V CONTROL MESSAGE - MAXIMUM ANGLE	0	1	1/8
	4	10V CONTROL MESSAGE - TEMPERATURE CONTROL	0	1	1/8
	5	10V CONTROL MESSAGE - MANUAL CONTROL	0	1	1/8
	6	NORMAL DISPLAY MESSAGE "VOLTAGE MATCHING"	0	1	1/8
	7	AUXILIARY TO FAST LOAD START SIGNAL	0	1	1/8
217	0	WATER WASH SELECTED	0	1	1/8
	1	FUEL LINE PURGE IN PROGRESS	0	1	1/8
	2	MASTER PROTECTIVE SIGNAL	0	1	1/8
	3	NORMAL SHUTDOWN	0	1	1/8
	4	TURBINE COMPLETE SEQUENCE	0	1	1/8
	5	HP ZERO SPEED SIGNAL	0	1	1/8
	6	MINIMUM SPEED SIGNAL (APPR 20%)	0	1	1/8
	7	ACCELERATING FUEL SPEED SIGNAL (APPR 40%)	0	1	1/8
218	0	HP OPERATING SPEED SIGNAL	0	1	1/8
	1	FLAME DETECTED CHANNEL =1	0	1	1/8
	2	FLAME DETECTED CHANNEL =2	0	1	1/8
	3	FLAME DETECTED CHANNEL =3	0	1	1/8
	4	FLAME DETECTED CHANNEL =4	0	1	1/8
	5	GENERATOR BREAKER CLOSURE	0	1	1/8
	6	SPARE POINT (OPT. WRITTEN TO BY SEQUENCING)	0	1	1/8
	7		0	1	1/8
219	0	SPARE POINT (OPT. WRITTEN TO BY SEQUENCING)	0	1	1/8
	1		0	1	1/8
	2		0	1	1/8
	3		0	1	1/8
	4		0	1	1/8
	5		0	1	1/8
	6		0	1	1/8
	7		0	1	1/8

Byte No.	Signal	Description	Logic Zero	Logic One	Bytes
Logic Points					
220	0	SPARE POINT (OPT. WRITTEN TO BY SEQUENCING)	0	1	1/8
	1		0	1	1/8
	2		0	1	1/8
	3		0	1	1/8
	4		0	1	1/8
	5		0	1	1/8
	6		0	1	1/8
	7		0	1	1/8
221	0	SPARE POINT (OPT. WRITTEN TO BY SEQUENCING)	0	1	1/8
	1		0	1	1/8
	2		0	1	1/8
	3		0	1	1/8
	4		0	1	1/8
	5		0	1	1/8
	6		0	1	1/8
	7		0	1	1/8

Byte No.	Description	LogicZero	LogicOne	Bytes
Annunciator Alarms				
222	ALARM 0-7	0	FF	1
223	ALARM 8-15	0	FF	1
224	ALARM 16-23	0	FF	1
225	ALARM 24-31	0	FF	1
226	ALARM 32-39	0	FF	1
227	ALARM 40-47	0	FF	1
228	ALARM 48-55	0	FF	1
229	ALARM 56-63	0	FF	1
230	ALARM 64-71	0	FF	1
231	ALARM 72-79	0	FF	1
232	ALARM 80-87	0	FF	1
233	ALARM 88-95	0	FF	1
234	ALARM 96-103	0	FF	1
235	ALARM 104-111	0	FF	1
236	ALARM 112-119	0	FF	1
237	ALARM 120-127	0	FF	1
238	ALARM 128-135	0	FF	1
239	ALARM 136-143	0	FF	1
240	ALARM 144-151	0	FF	1
241	ALARM 152-159	0	FF	1
242	ALARM 160-167	0	FF	1
243	ALARM 168-175	0	FF	1
244	ALARM 176-183	0	FF	1
245	ALARM 184-191	0	FF	1
246	ALARM 192-199	0	FF	1

Byte No.	Description	LogicZero	LogicOne	Bytes
Annunciator Alarms				
247	ALARM 200-207	0	FF	1
248	ALARM 208-215	0	FF	1
249	ALARM 216-223	0	FF	1
250	ALARM 224-231	0	FF	1
251	ALARM 232-239	0	FF	1
252	ALARM 240-247	0	FF	1
253	ALARM 248-255	0	FF	1

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