

Data Logger C 70



The data logger C 70 integrates a programmable data logging system for motorsport applications for a very competitive price. Additional input devices can be connected via Ethernet and CAN buses. Data Analysis Software WinDarab is available free of charge as “WinDarab V7 free” on our website. The logger can be upgraded to a 2nd logging partition of 4 GB (e.g. for long term recording). For quick data transfer from the car e.g. during pit stop, data copy to a USB stick is available as an option. The stick is connected to the wiring harness for the C 70. The device comes with 4 analog and 4 speed inputs as standard; further 12 analog inputs are available as optional upgrade.

Application

Processor	667 MHz Dual Core
Converters	10 kHz 12 bit AD converters with digital low pass filter
Internal power source	Li/Ion capacitor
Configurable math channels	
User configurable CAN in/out messages	
Online data compression	
Internal logger	
• 4 GB memory (standard)	
• Plus 4 GB memory (optional)	
• 1,500 channels	
• 1 ms Sampling rate	
Logging rates	
• Usage of all features: 600 kB/s	
• Primary logging use case: >1,200 kB/s	
• Logging data download rate: up to 6.2 MB/s	

- ▶ Cutting-edge 667 MHz Dual Core Processor
- ▶ Recording on USB flash drive (opt.)
- ▶ Supports GPS lap trigger, pre-dated lap time etc.
- ▶ High programming flexibility using mathematical functions and conditional channels

LTE Ethernet telemetry support, GSM telemetry support

Technical Specifications

Mechanical Data

Size	151 x 126 x 25.5 mm
Weight	450 g
Protection Classification	IP54 to DIN 40050, Section 9, Issue 2008
Operating temperature internal	-20 to 85°C
Max. vibration	Vibration profile 1 (see Appendix or www.bosch-motorsport.com)

Electrical Data

Supply voltage	5 to 18 V
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Inputs

4 x analog channels, additional 12 optional
0 to 5 V input range
12 bit resolution
switchable pull up resistor for all ANA_IN
4 x Hall-effect or DF11 wheel speed inputs, switchable

Sensor Supplies and Screens

2 x Sensor supply 5 V ± 1 % (250 mA)
1 x Sensor supply 10 V ± 1 % (250 mA)
1 x Sensor supply U_Bat (250 mA)
4 x Sensor ground

Connectors and Wires

Motorsport connector on logger	AS216-35PN
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Mating connector	F02U.000.466-01
AS616-35SN	

Pin Configuration

Pin	Name	Comment	Status
1	KL_31		Incl.
2	KL_15		Incl.
3	KL_30		Incl.
4	Rev_In_3	Hall or DF11 switchable	Incl.
5	Rev_In_1	Hall or DF11 switchable	Incl.
6	KL_31		Incl.
7	CAN_2_L	CAN speed selectable	Incl.
8	Ethernet_2_TXP		Incl.
9	Ethernet_2_TXN		Incl.
10	Sens_Power_12V	over current protected	Incl.
11	Rev_In_4	Hall or DF11 switchable	Incl.
12	Rev_In_2	Hall or DF11 switchable	Incl.
13	Laptrigger_In		Incl.
14	CAN_2_H	CAN speed selectable	Incl.
15	CAN_1_H	CAN speed selectable	Incl.
16	Ethernet_2_RXP		Incl.
17	Sens_Gnd_4	fused	Incl.
18	Sens_Power 5V	over current protected	Incl.
19	ANA_IN_3	3.01 kOhm switchable	Incl.
20	ANA_IN_4	3.01 kOhm switchable	Incl.
21	Time_Sync	connection to Bosch ECU	Incl.
22	CAN_1_L	CAN speed selectable	Incl.
23	Com_screen	Ethernet and USB screen	Incl.
24	Ethernet_2_RXN		Incl.
25	Sens_Gnd_3	fused	Incl.
26	Sens_Power 5V	over current protected	Incl.
27	ANA_IN_7	3.01 kOhm switchable	Opt.
28	ANA_IN_1	3.01 kOhm switchable	Incl.
29	USB_Device_DP	to Bosch USB stick	Opt.
30	RS232_TX_Telemetry		Incl.
31	Ethernet_1_TXP		Incl.
32	Sens_Gnd_2	fused	Incl.
33	Sens_Power_10V	over current protected	Incl.
34	ANA_IN_8	3.01 kOhm switchable	Opt.
35	ANA_IN_10	3.01 kOhm switchable	Opt.
36	USB_Device_Gnd	to Bosch USB stick	Opt.
37	USB_Device_DN	to Bosch USB stick	Opt.

Pin	Name	Comment	Status
38	RS232_RX_Telemetry	e.g. GSM telemetry	Incl.
39	Ethernet_1_TXN		Incl.
40	Sens_Gnd_1	fused	Incl.
41	ANA_IN_11	3.01 kOhm switchable	Opt.
42	ANA_IN_9	3.01 kOhm switchable	Opt.
43	RS232_TX_GPS		Incl.
44	ANA_IN_16	3.01 kOhm switchable	Opt.
45	USB_Device_Power	to Bosch USB stick	Opt.
46	Ethernet_1_RXP		Incl.
47	ANA_IN_12	3.01 kOhm switchable	Opt.
48	ANA_IN_6	3.01 kOhm switchable	Opt.
49	ANA_IN_2	3.01 kOhm switchable	Incl.
50	ANA_IN_13	3.01 kOhm switchable	Opt.
51	ANA_IN_15	3.01 kOhm switchable	Opt.
52	Ethernet_1_RXN		Incl.
53	ANA_IN_5	3.01 kOhm switchable	Opt.
54	RS232_RX_GPS	for GPS sensor input	Incl.
55	ANA_IN_14	3.01 kOhm switchable	Opt.

Communication

CAN interfaces	2
Ethernet 100BaseT	2
Laptrigger input	1
RS232	Telemetry, GPS
Configuration via RaceCon	Over Ethernet or MSA-Box II

Installation Notes

Maintenance Interval: 220 h or a maximum of two years

Legal Restrictions

The sale of this product in Mexico is prohibited. Due to embargo restrictions, sale of this product in Russia, Belarus, Iran, Syria, and North Korea is prohibited.

Upgrades

CCP/XCP_MASTER

Enables CCP/XCP master functionality to request data from foreign devices via CAN/CCP protocol or XCP over Ethernet (UDP). (ASAP2 file from ECU manufacturer required)

FULL_LOG_2

Enable logging partition 2 with 4 GB memory

IO_EXTENS

Enable additional 12 analog input channels

USB_DATA

Rugged USB flash drive Bosch File System (BFS) format included, works with BFS preformatted USB flash drive only
 Adapter cable to USB-Port
 Adapter for wiring harness
 SW license USB-Port unlocked

Ordering Information

Data Logger C 70
 Order number **F02U.V02.302-02**

Software Options

CCP/XCP_MASTER

Order number **F02U.V02.213-01**

FULL_LOG_2
 Order number **F02U.V02.305-01**

IO_EXTENS
 Order number **F02U.V02.205-01**

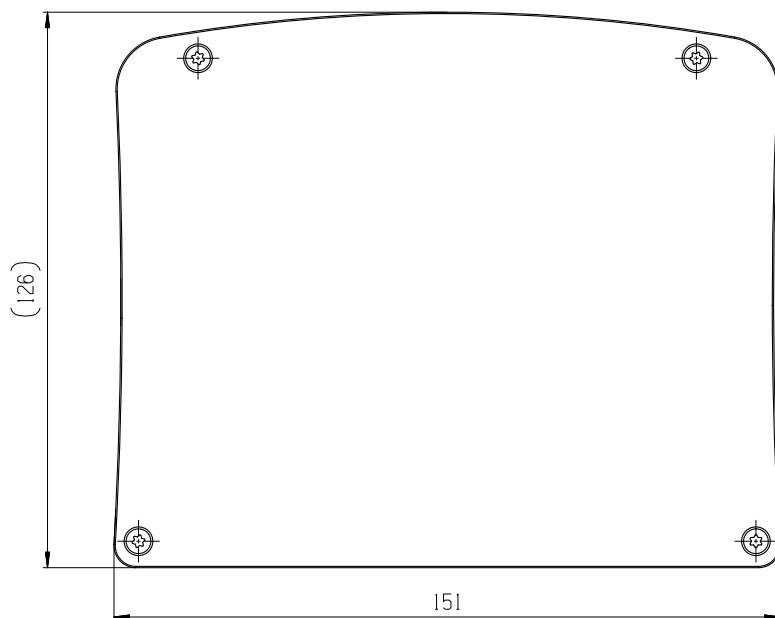
Accessories

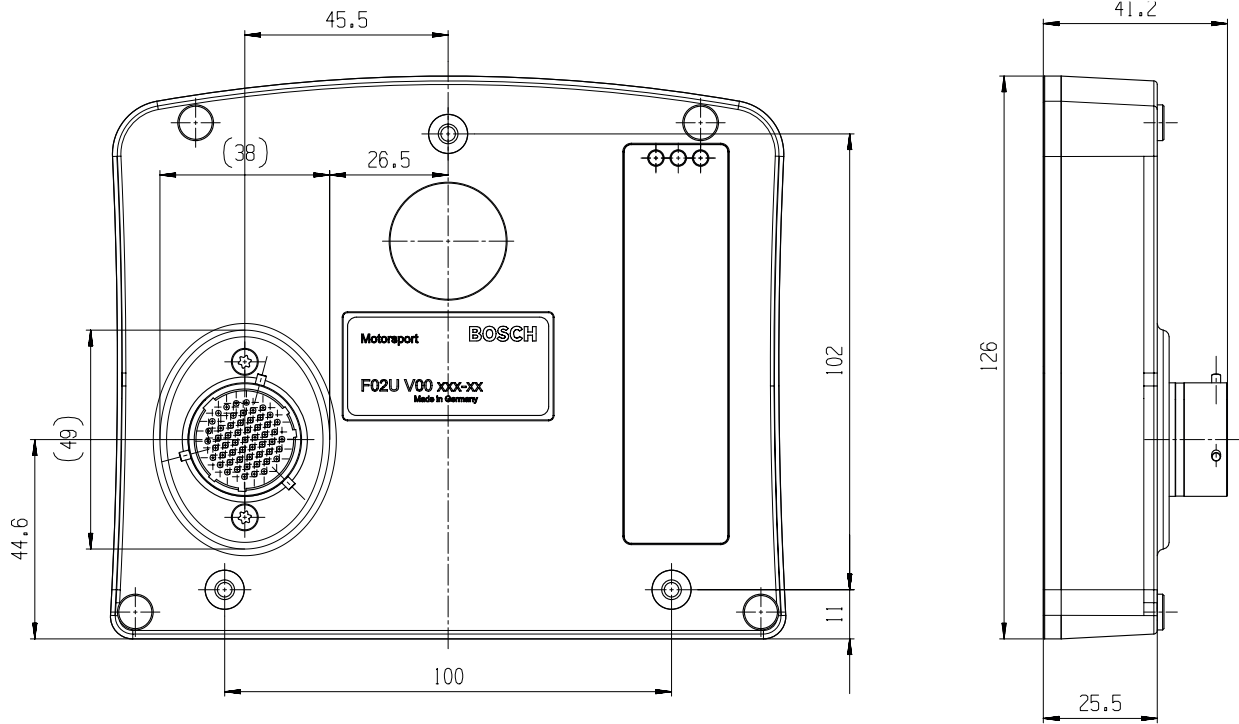
Vehicle Loom Basic
 Order number **F02U.V02.735-01**

Bench Loom
 Order number **F02U.V02.349-01**

USB_DATA
 Order number **F02U.V02.214-01**

Dimensions





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