

TECHNICAL REFERENCE MANUAL

KRYPTON V26-1



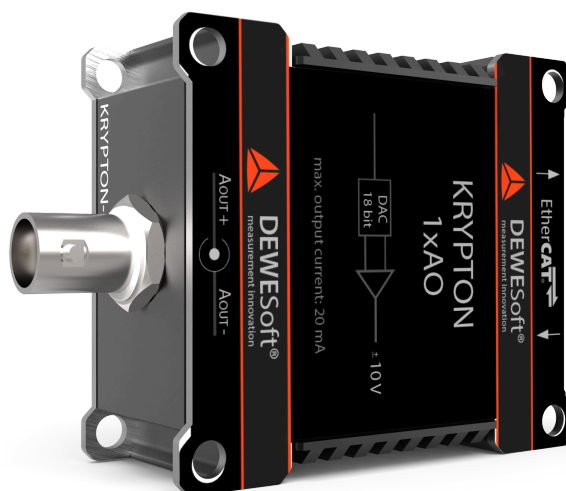
4.2. General specifications

Interface	
Data interface	EtherCAT®
Data Rate	100 Mbps Full Duplex bus speed
Max. Throughput per Chain	From 6 MB/s to 10 MB/s (see 1)
Sync Accuracy	below 1 sample to Sirius®
EtherCAT®	Max. Cable Length 100 m
Max. Number of Units	64 or more (power injectors may be required)
Data Interface Connection	LEMO 1T EtherCAT® hybrid cable Single cable for data, power and sync, daisy chainable
Additional Specifications	
Power supply ground to mechanical ground (housing) resistance	> 100 kΩ
Power	
Power Supply	9 - 48 V DC
Environmental	
Operating Temperature	-40 to 85°C
Storage Temperature	-40 to 85°C
Humidity	5 to 100 % RH
IP rating	IP65 / IP67
Shock	Shock: SIST EN 60068-2-27:2009 100 g, 6 ms, half-sine 100x pos./neg in each axis 600x total
Vibration	Random vibration: MIL-STD-202G Method 214A, test condition II-D Profile break points: 50 Hz @ 0.025 g ² /Hz 100 Hz @ 0.1 g ² /Hz 2000 Hz @ 0.1 g ² /Hz Profile RMS / Peak = 13.9 g / 41.7 g 8 hrs in each axis, 24 hrs total
1) It depends on the devices connected, numbers of channels, configuration, length of cables and other parameters.	

5.7. ANALOG OUTPUT (AO)

A single channel analog output module has a BNC connector and is the perfect module for output of voltage levels, or slow analog signals, e.g. calculated channels. Currently, the module available is KRYPTON-1xAO.

5.7.1. KRYPTON-1xAO



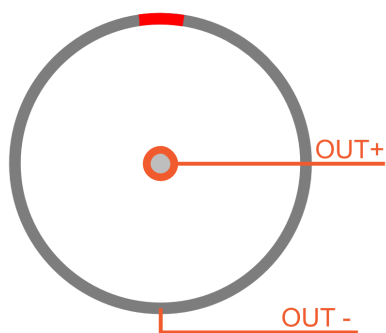
KRYPTON - 1xAO

5.7.1.1. KRYPTON-1xAO: Specifications

Analog Output	
Output types	Voltage
Number of channels	1
DAC Resolution	18 bit
Function	File replay, conditioned AI output, FGEN (software option), channel output
Update Rate	20 kS/s (5 kS/s with 3rd party master)
Analogue out bandwidth	4 kHz
Full Scale Output Range	±10 V
Accuracy (typ.)	0.1 % ±1 mV (0 to 20 mA load)
Temperature gain drift (typ.)	±10 ppm/K
Temperature offset drift (typ.)	±5 µV/K
SNR @ 1000 S/s output rate	92 dB (sine wave, 250 Hz, ±9 V)
THD	-90 dB
Output impedance	0.45 Ω DC
Maximum output current	20 mA
Settling time (0.05 % of set value)	30 µs @ 1000 Ω load, -10 V to 10 V step
Max slew rate	2.5 V/µs @ 1000 Ω load

Max capacitive load (2 % overshoot)	10 nF
Maximum load	500 Ω
Output protection	Short circuit protected
Additional specifications	
Output connector	BNC
Power	
Power supply	9 - 48 V DC
Power consumption	2 W (typ.)
Environmental	
IP rating	IP65 / IP67 (see 1)
Physical	
Dimensions	62 x 56 x 29 mm
Weight	250 g
1) Depending on the mating connector types	

5.7.1.2. KRYPTON-1xAO: BNC Connectors: Pinout



ACC connector: pinout (BNC)

Pin	Name	Description
1	Out +	Output +
2	Out -	Output -

5.9.2. KRYPTONi-1xCAN, KRYPTONi-1xCAN-FD

KRYPTONi-1xCAN is a single port CAN device that uses EtherCAT as an interface.

KRYPTONi-1xCAN-FD is a single port CAN-FD device that uses EtherCAT as a data interface. The CAN-FD supports high-speed CAN interface with data rates up to 8 Mbps. KRYPTONi-1xCAN-FD has galvanically isolated communication lines and an isolated sensor supply of +5 V and +12 V. Power limit for the sensor supply is 1.4 W.



KRYPTONi-1xCAN



KRYPTONi-1xCAN-FD



Note

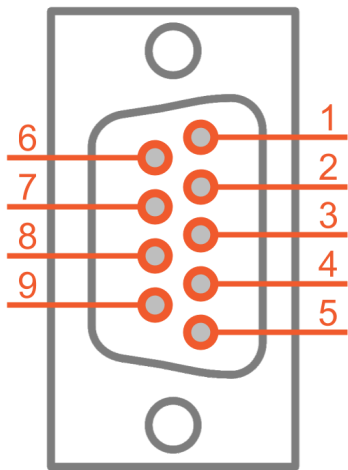
Transmit mode of both modules is not supported yet. OBDII and XCP plugins not supported yet.

5.9.2.1. KRYPTONi-1xCAN, KRYPTONi-1xCAN-FD: Specifications

	KRYPTONi-1xCAN	KRYPTONi-1xCAN-FD
CAN ports specification		
Number of ports	1	1
Interface type	CAN 2.0B	CAN-FD, CAN 2.0B
Interface data rate	up to 1 Mbit/sec	up to 5 Mbit/sec
Special protocols	J1939 (see 1)	J1939 (see 1)
Galvanic isolation	Isolated	Isolated
Bus pin fault protection		±28 V
Power specification		
Power supply	9 - 50 V DC	9 - 50 V DC
Maximum sensor power consumption	5 V / max. 250 mA (1.25 W) 12 V / max. 90 mA (1.1 W)	5 V / max. 250 mA (1.25 W) 12 V / max. 90 mA (1.1 W)
Maximum power consumption		max. 2 W (no load)

Environmental specification		
Interface	EtherCAT, 100 Mbit/s Lemo 1T (1 cable for data, power and sync, daisy chainable)	EtherCAT, 100 Mbit/s Lemo 1T (1 cable for data, power and sync, daisy chainable)
Connector type	DSUB-9	DSUB-9
Physical dimensions	62 x 56 x 29 mm	62 x 56 x 29 mm
Weight	200 g 0.44 lbs	200 g 0.44 lbs
Operating temperature	-40 °C to +85 °C	-40 °C to +85 °C
Storage temperature	-40 °C to +85 °C	-40 °C to +85 °C
Humidity	-	-
IP protection	IP65 / IP67	IP65 / IP67
1) Transmit mode not supported yet. OBDII and XCP plugins not supported yet.		

5.9.2.2. KRYPTONi-1xCAN, KRYPTONi-1xCAN-FD: DSUB Connector: Pinout



CAN connector: pinout (DSUB-9 male)

Pin	Name	Description
1	+5V	5 V supply max. current: 500 mA
2	CAN_LOW	CAN low
3	DGND	Digital Ground
4	RES	Reserved
5	RES	Reserved
6	DGND	Digital Ground
7	CAN_HIGH	CAN high
8	RES	Reserved
9	+12V	12 V supply max. current: 200 mA