

TECHNICAL REFERENCE MANUAL

IOLITE® V26-1



4.3.5. IOLITE: Multi channel device

IOLITE multi-channel modules are fully compatible with the DIN rail mount. The chassis offers an easy clip-in mechanism for mounting to all standard industrial DIN rail mounts.

IOLITE DAQ devices use RJ45 connectors which allow easy connection of modules with standard low-cost Ethernet/EtherCAT cables.



Important

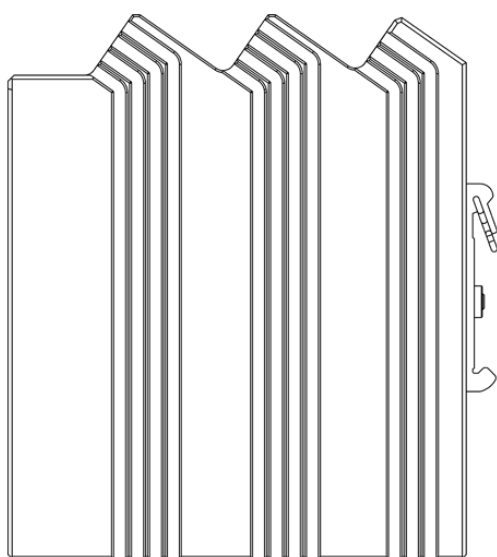
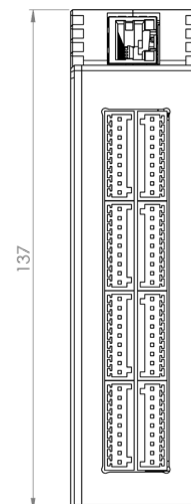
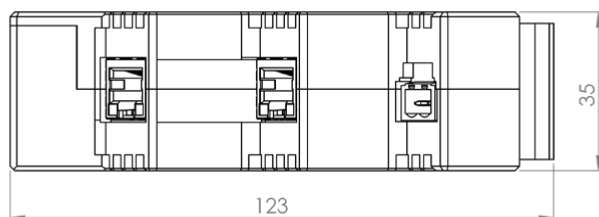
For the power supply we have two terminal block connectors so the devices can be daisy chained with each other.

4.3.5.1. IOLITE - Multi channel: Renders



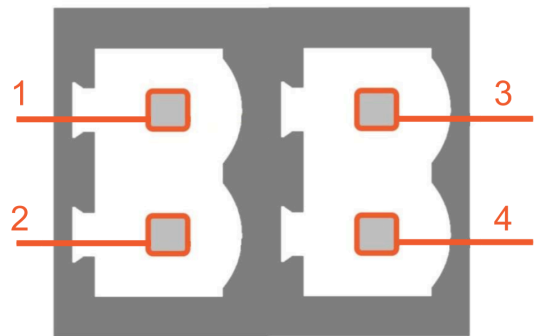
IOLITE multi channel device

4.3.5.2. IOLITE - Multi channel: Dimension



4.3.5.3. IOLITE - Multi channel: Connectors

4.3.5.3.1. IOLITE - Multi channel: PWR IN

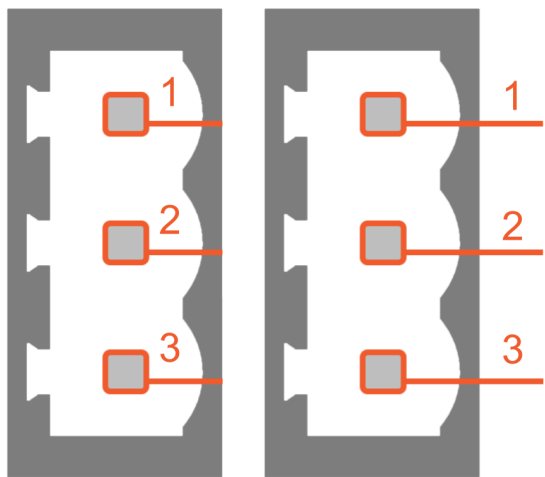


Power in connector: pin-out (4-pin male)

Pin	Name	Description
1	+	PWR +
2	-	PWR -
3	+	PWR +
4	-	PWR -

Connector (on the device):
SCDN-THR 3.81/04/90G 3.2SN BK BX

Mating Connectors (for the cable):
BCF 3.81/02/180 SN BK BX



Power in connector: pin-out (two 3-pin connectors)

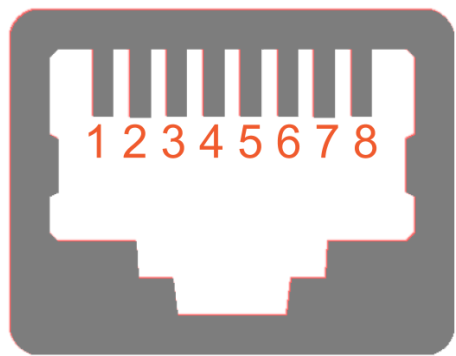
Pin	Name	Description
1	Chassis	Connected to chassis
2	-	PWR-
3	+	PWR +

Connector (on the device):
2x3 OMNIMATE SC 3.81/03/180

Mating Connectors (for the cable):
2x3 OMNIMATE BCF 3.81/03/180;

4.3.5.3.2. EtherNET - IN (Data, Sync)

The connector used on the device is a standard Ethernet connector (RJ45).
Standard ethernet cable with standard connector can be used to connect IOLITE - Multi channel to PC.

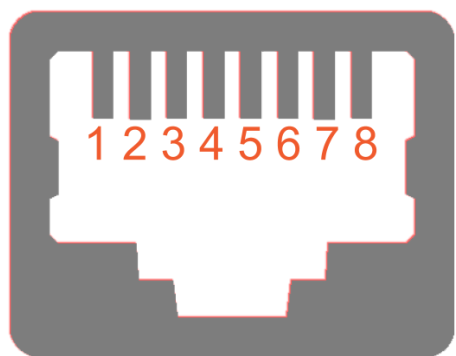


EtherCAT connector: pin-out (RJ-45 female)

Pin	Name	Description
1	TX_P	Transmission +
2	TX_N	Transmission -
3	RX_P	Reception +
4	-	-
5	-	-
6	RX_N	Reception -
7	-	-
8	-	-

4.3.5.3.3. EtherNET - OUT (Data, Sync)

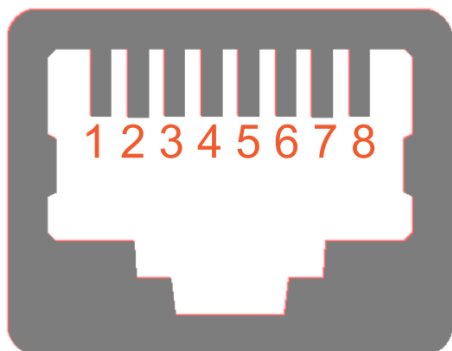
The connector used on the device is a standard Ethernet connector (RJ45).
Standard ethernet cable with standard connector can be used to connect IOLITE Multi channel device with an additional IOLITE Multi channel device



EtherCAT connector: pin-out (RJ-45 female)

Pin	Name	Description
1	TX_P	Transmission +
2	TX_N	Transmission -
3	RX_P	Reception +
4	-	-
5	-	-
6	RX_N	Reception -
7	-	-
8	-	-

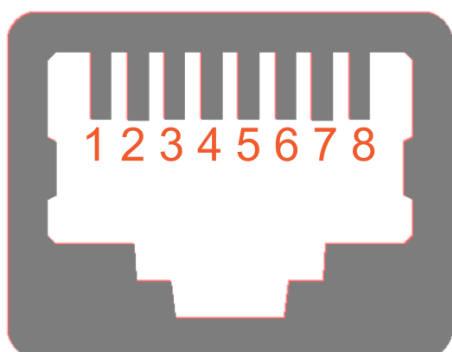
4.3.5.3.4. PoE - ECAT - IN (Data, Sync, PWR)



EtherCAT connector: pin-out (RJ-45 female)

Pin	Name	Description
1	TX_P	Transmission +
2	TX_N	Transmission -
3	RX_P	Reception +
4	DC +	PoE +
5	DC +	PoE +
6	RX_N	Reception -
7	DC -	PoE -
8	DC -	PoE -

4.3.5.3.5. PoE - ECAT - OUT (Data, Sync, PWR)



EtherCAT connector: pin-out (RJ-45 female)

Pin	Name	Description
1	TX_P	Transmission +
2	TX_N	Transmission -
3	RX_P	Reception +
4	DC +	PoE +
5	DC +	PoE +
6	RX_N	Reception -
7	DC -	PoE -
8	DC -	PoE -

Caution



If the device is supplied on PWR IN, PoE voltage (DC+ / DC- on ECAT OUT) is equal to Vin (PWR+ / PWR-) on PWR IN (max. current 3 A). If you chain the devices, the voltage on ECAT OUT is the same as connected to the ECAT IN. There is no protection.

If PoE with power and PWR IN are connected at the same time, PWR IN power will be chosen, but only if it is within the specifications (9-48 V).

Be sure to check the connection possibilities in chapter [3.2. Connecting IOLITE®](#).

6.9. CAN BUS

A Controller Area Network (CAN bus) is a vehicle bus standard often used in automotive applications. The IOLITE family supports this with a 4-port module supporting CAN 2.0 and CAN-FD.

The module comes in IOLITE rack and IOLITE modular version.



IOLITEir-4xCAN-FD



IOLITEi-4xCAN-FD

6.9.1. IOLITEi 4xCAN-FD: Specifications

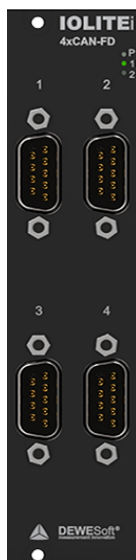
CAN ports specification	
Number of ports	4
Interface type	CAN-FD, CAN 2.0B
CAN 2.0B data rate	Up to 1 Mbit/s (see 1)
CAN-FD data rate	Up to 5 Mbit/s (see 1)
Special protocols	J1939, XCP, OBDII
Galvanic isolation	Isolated
Bus pin fault protection	±36 V
Oscillator frequency	40 MHz
Power specification	

Power supply	9 - 48 V DC
Maximum sensor power consumption	5 V / max. 250 mA (1.25 W) 12 V / max. 90 mA (1.1 W)
Maximum power consumption	max. 2 W (no load)
Sensor supply isolation	Channel to ground
Additional Specifications	
Rack	IOLITEir-4xCAN-FD
Input connector	DSUB9
Power supply	9 - 48 V DC
Weight	310 g
Slice Dimensions	128.4 x 118.4 x 30.14 mm
Additional Specifications	
Modular	IOLITEi-4xCAN-FD
Input connector	DSUB9
Power supply	9 - 48 V DC
Weight	550 g
Slice Dimensions	136.75 x 115.0 x 35.0 mm
1) For more information please see the manual.	

Transfer rates	IOLITE 4xCAN-FD (IOLITE)	IOLITE 4xCAN-FD (OBSIDIAN)
CAN		
Max. receive rate	Per 4 channels: 1 Mbit/s Single channel: 1 Mbit/s	Per 4 channels: 1 Mbit/s Single channel: 1 Mbit/s
Max. transmit rate	Per 4 channels: 1 Mbit/s Single channel: 1 Mbit/s	Per 4 channels: 1 Mbit/s Single channel: 1 Mbit/s
CAN-FD		
Max. receive rate	Per 4 channels: 2.9 Mbit/s Single channel: 5.9 Mbit/s	Per 4 channels: 2,9 Mbit/s Single channel: 5,9 Mbit/s
Max. transmit rate	Per 4 channels: 290 kbit/s Single channel: 1.4 Mbit/s	Per 4 channels: 290 kbit/s Single channel: 1.4 Mbit/s

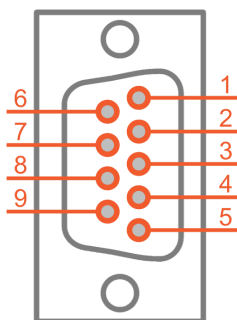
6.9.2. IOLITEi 4xCAN-FD: DSUB Connector

IOLITEi-4xCAN-FD and IOLITEir-4xCAN-FD modules have four 9-pin DSUB connectors with standard pinout.



IOLITEir-CAN-FD Front

6.9.2.1. CAN port: DSUB Connector: Pinout



CAN connector: pinout (DSUB-9 male)

Pin	Name	Description
1	+5V	5 V supply max. current: 250 mA
2	CAN_LOW	CAN low
3	DGND	Digital Ground
4	NC	Do not connect
5	RES	Reserved
6	DGND	Digital Ground
7	CAN_HIGH	CAN high
8	RES	Reserved
9	+12V	12 V supply max. Current: 90mA

6.9.2.2. Waterproof version: IOLITEirw-4xCAN-FD

Connector on the module: DSUB9 IP67 connector (772-E09-113R011)

Mating connector: compatible with DSUB9f IP67 and standard non-waterproof connectors