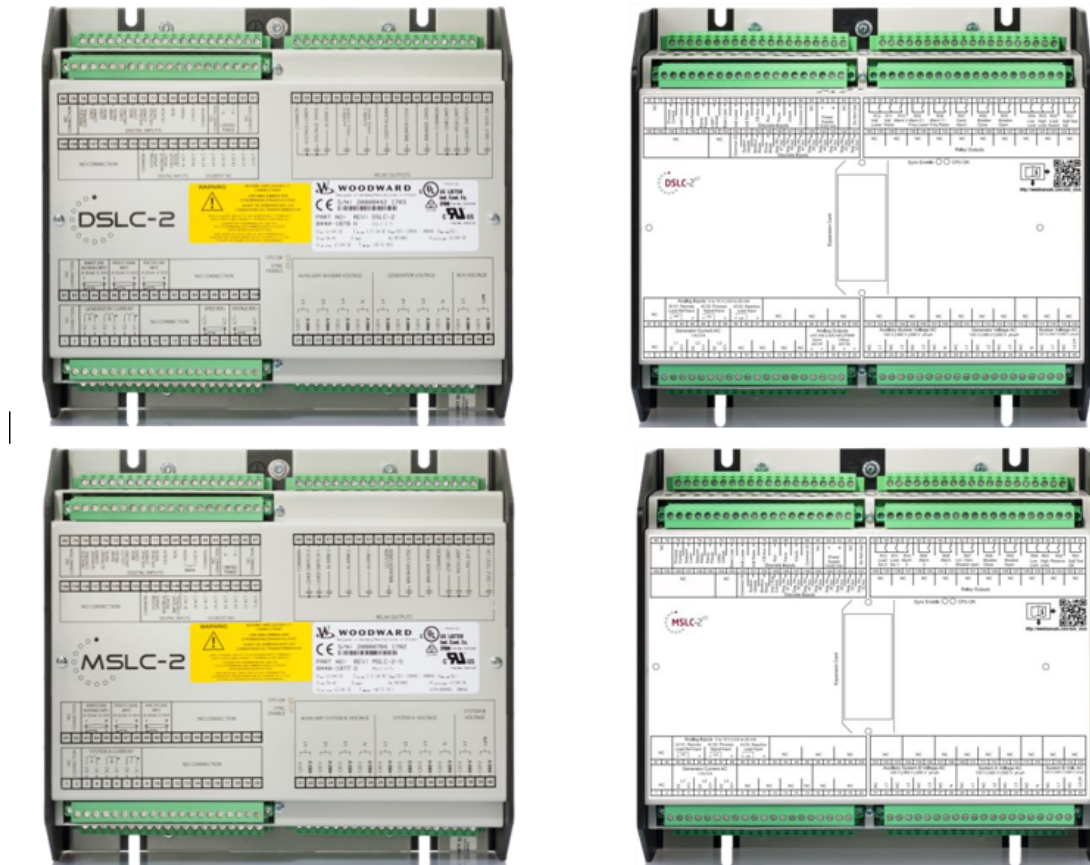




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What are the differences between DSLC-2 MSLC-2 and DSLC-2XT MSLC-2XT ?

Justin Schneider - 2026-07-27 - [MSLC-2](#)



*Not actual product picture, only a representation

Woodward understands the time-intensive nature of Power Generation projects. Ensuring the longevity of our products is one way we make our customers successful. Woodward has supplied and supported the field proven MSLC-2/DSLC-2 line of synchronizers and load controllers for over a decade. An upcoming state of the art Drop-In replacement successor extends the life cycle of this product line for another decade and

possibly beyond. This document provides an overview of what to expect from the successor products, namely MSLC-2XT/DSLC-2XT respectively.

Important Features:

- Drop-In Replacement (Mounting dimensions and overall dimensions are same)
- Similar Look and Feel as MSLC-2/DSLC-2 (available in back panel mounting style)
- USB Connectivity to PC (RS-232 port is removed; new: USB Type B)
- Direct connect up to 690VAC (increased range handled by device configuration)
- Software selectable 1A/5A CT input (supported by one P/N)

Important Considerations:

1. Communicating with legacy DSLC-2 (and MSLC-2)

Woodward will provide update files for legacy DSLC-2 and MSLC-2 devices in the field if there is to run a mix of both DSLC-2/MSLC-2 generations. The legacy device will then send their UDP messages in a way that DSLC-2XT/MSLC-2XT can evaluate. It is mandatory to load this update file into the legacy devices for the system to run smoothly.

2. Using your existing settings file (*. WSET) from legacy DSLC-2 (and MSLC-2)

Woodward will provide a conversion rule for ToolKit to make the configuration transfer as smooth as possible. Some minor parameters will be shown in a log file, to be evaluated manually.

<https://support.easygen.org/en/kb/articles/load-old-dslc-2-wset-file-into-dslc-2xt>

3. The AC measurement of the DSLC-2XT (and MSLC-2XT)

The measurement hardware and software are different in comparison to the legacy devices. This is mainly due to higher accuracy, more flexible measurement range and fast response characteristics. The earthing of the DSLC-2XT/MSLC-2XT devices has become more important due to higher impedance of the measurement circuits.

4.ToolKit

To give you a seamless transition experience, the ToolKit layout (*. WTOOL file) is designed like the original devices. There are few less parameters due to new AC measurement and communication interfaces.

5.Documentation server

Product literature (manuals, config. files, software etc.) is hosted on a documentation server that is easily accessible by a QR code printed on the housing. Two additional QR stickers are delivered with the controllers to help you paste them at a location convenient to you. Subsequently, product CD is removed from scope of delivery. https://wss.woodward.com/manuals/PGC/DSLC_MSLC_series



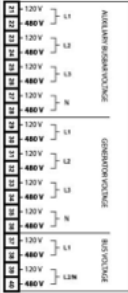
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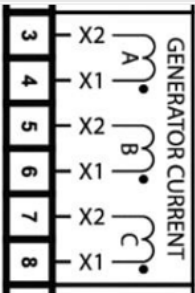
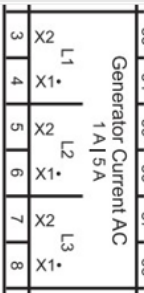
The DSLC-2XT/MSLC-2XT is an upward compatible successor device for the DSLC-2/MSLC-2. They are based on the easYgen-3400XT-P2 hardware. It is designed to function as good as the original DSLC2/MSLC-2 (version 1.1511). The new generation is equipped with a more powerful CPU, memory, and communication. It is more responsive in HMI and SCADA communications. The important control functions run on the same task rates that ensures the same control dynamic.

Most important, it is being designed to be able to run with the legacy DSLC-2/MSLC-2 system. This becomes more important than ever due to lack of obtainable components that may force us to make a hard stop to the DSLC-2/MSLC-2 product line later this year. If some minor rules are observed the DSLC-2XT can be mixed with already existing DSLC-2 / MSLC-2 in an application.

MSLC-2XT (in line with DSLC-2XT) is also in preparation and comes few months after DSLC-2XT.

AC Measurement:

	DSL2C-2/MSLC-2	DSL2C-2XT/MSLC-2XT	Comments
Voltage measurement	Rated: 120V 480V		Rated: 120V 480V 690V AC voltage measurement capability is expanded to 690Vrated
Linear measuring range	Maximum: 150V 600V	Maximum: 897V	Max. = 1.3x Vrated
Terminal diagram			Wiring difference, no separate terminals for 120 Vac input. 120V 480V 690V is handled by parametrization
Frequency	50/60Hz (40.0 to 85.0 Hz)	50/60Hz (30.0 to 85.0 Hz)	
Current measurement	1A or 5A, two separate hardware numbers	1A or 5A, same hardware	Simplifies inventory management

Linear measuring range	1.5 x Irated	3 x Irated	Realize enhanced protection schemes
Burden	< 0.15VA	< 0.10 VA	Grid code requirement
Terminal diagram			no separate part number for 1A and 5A CT inputs, handled by parametrization

I/Os:

	DSLC-2/MSLC-2		DSLC-2XT/MSLC-2XT	Comments
Discrete inputs				
Min. delay time	80ms		20ms	Helps to achieve < 100ms switchover
Analog inputs				
Resolution	11 Bit		14 Bit	Better accuracy
Accuracy	1%		0.5%	
Analog outputs				No AO in MSLC-2 or MSLC-2XT
AO#1	Freely scalable ±10 Vdc, ±20 mA, PWM		Freely scalable ±10 Vdc, ±20 mA, PWM Pre-configured to „11.03 Speed bias [%]“	Preferred for speed biasing
Resolution	Max. 12 Bit		Min. 12 Bit	
AO#2	Freely scalable ±10 Vdc, ±20 mA, PWM		Freely scalable ±10 Vdc, ±20 mA, PWM Pre-configured to „11.02 Voltage bias [%]“	Preferred for AVR biasing
Resolution	Max. 12 Bit		Min. 12 Bit	
Isolation	100 VAC		Basic isolation to PE: 500 VAC Reinforced isolation to PE: 300VAC	Enhanced isolation

Interfaces:

	DSLC-2/MSLC-2		DSLC-2XT/MSLC-2XT	Comments
Service Port	RS-232		USB	No extra/special cable required for programming
Ethernet	2	3		1 additional Ethernet connection (named Ethernet C) is provided

terminal deltas DSLC-2 / DSLC-2XT

<https://wss.woodward.com/manuals/Legacy/DSLC%20%2B%20MSLC/DSLC-2%20MSLC-2/DSLC-2%20DSLC-2XT%20wiring%20differences.pdf>

Others:

- The communication 9-pin D-sub connectors are replaced by phoenix plugs with screw terminals
- The analog outputs 1 & 2 are supported with two terminals now (the shunt for voltage output is internally populated)

Schedule:

- DSLC-2XT: Design release to production scheduled for Sept'22. Shipment expected Oct'22 however depends on availability of components. Limited early sample and draft manual available. Please contact your account manager.
- MSLC-2XT: Design release to production scheduled for Nov'22. Shipment expected Dec'22 however depends on availability of components. Limited early sample and draft manual available. Please contact your account manager.

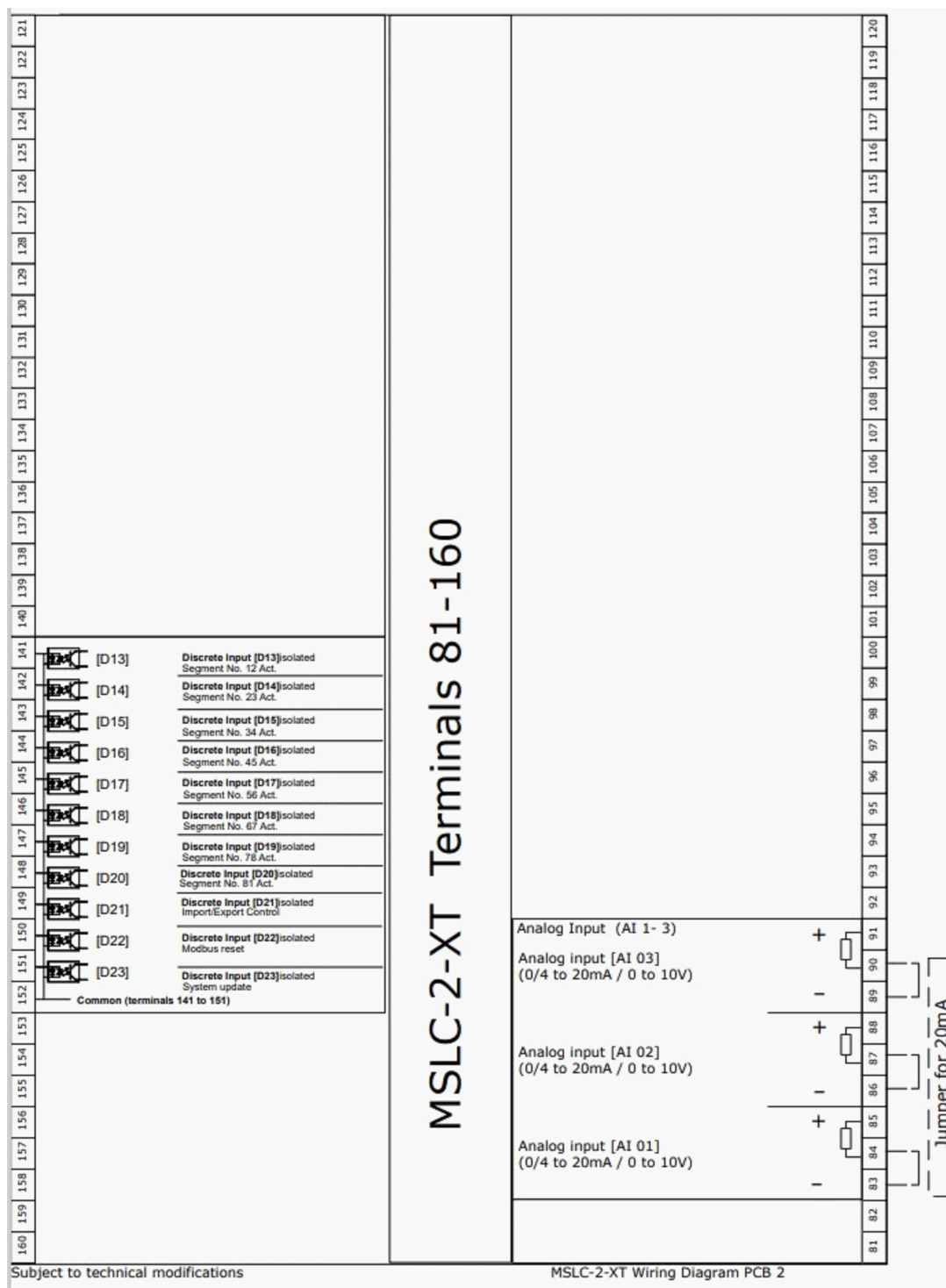
Part Numbers:

- 8440-2298: MSLC-2XT
- 8440-2299: DSLC-2XT

Wiring diagram (DSLC-2XT)

		USB Host In preparation	USB Device			(Ethernet C)	Ethernet B	Ethernet A		Screw terminals
41		[R01] Relay [R01] isolated Self Test OK	Terminals 1-80	DSL C-2-XT	Busbar voltage		L2 N	690 Vac ph-ph	40	
42		[R02] Relay [R02] Load Switch			Busbar voltage		L1	690 Vac ph-ph	38	
43		[R03] Relay [R03] High Limit			Generator voltage N			690 Vac ph-ph	36	
44		[R04] Relay [R04] Low Limit			Generator voltage L3			690 Vac ph-ph	34	
45		[R05] Relay [R05] isolated Breaker open			Generator voltage L2			690 Vac ph-ph	32	
46		[R06] Relay [R06] isolated Breaker close			Generator voltage L1			690 Vac ph-ph	30	
47		[R07] Relay [R07] isolated Centr. Alarm			Auxiliary busbar voltage N			690 Vac ph-ph	28	
48		[R08] Relay [R08] isolated Alarm 1 / Freq. Raise			Auxiliary busbar voltage L3			690 Vac ph-ph	26	
49		[R09] Relay [R09] isolated Alarm 2 / Freq. Lower			Auxiliary busbar voltage L2			690 Vac ph-ph	24	
50		[R10] Relay [R10] Alarm 3			Auxiliary busbar voltage L1			690 Vac ph-ph	22	
51		[R11] Relay [R11] Voltage Raise			Analog output [AO 02] (+/-10Vdc / +/-20mA / PWM) Voltage Biasing		[AO 02]	-	20	
52		[R12] Relay [R12] Voltage Lower			Analog output [AO 01] (+/-10Vdc / +/-20mA / PWM) Speed Biasing		[AO 01]	-	19	
53		Earth				+	18			
54		NC				Do not connect !	17			
55		Power supply Isolated, 8 to 40 Vdc*2				-	16			
56		NC				+	15			
57		Common (terminals 67 to 78)					14			
58		[D01] Discrete input [D01] isolated Check					13			
59		[D02] Discrete input [D02] isolated Permissive					12			
60		[D03] Discrete input [D03] isolated Run					11			
61		[D04] Discrete input [D04] isolated CB Aux					10			
62		[D05] Discrete input [D05] isolated Voltage Raise					9			
63		[D06] Discrete input [D06] isolated Voltage Lower					8			
64		[D07] Discrete input [D07] isolated Base Load					7			
65		[D08] Discrete input [D08] isolated Load / Unload					6			
66		[D09] Discrete input [D09] isolated Ramp Pause					5			
67		[D10] Discrete input [D10] isolated Load Raise					4			
68		[D11] Discrete input [D11] isolated Load Lower					3			
69		[D12] Discrete input [D12] isolated Process Control					2			
70		NC					1			
71										
72										
73										
74										
75										
76										
77										
78										
79										
80										

		USB Host In preparation	USB Device			(Ethernet C)	Ethernet B	Ethernet A		Screw terminals			
41		[R01]	Relay [R01] isolated Self Test OK	Terminals1-80		System B voltage				L2 N	690 Vac ph-ph	40	
42		[R02]	Relay [R02] Reserve			System Bvoltage				L1	690 Vac ph-ph	38	
43		[R03]	Relay [R03] High Limit			System A voltage N					690 Vac ph-ph	36	
44		[R04]	Relay [R04] Low Limit			System A voltage L3					690 Vac ph-ph	34	
45						System A voltage L2					690 Vac ph-ph	32	
46						System A voltage L1					690 Vac ph-ph	30	
47		[R05]	Relay [R05] isolated Breaker open			Auxiliary System B voltage N					690 Vac ph-ph	28	
48		[R06]	Relay [R06] isolated. Breaker close			Auxiliary System B voltage L3					690 Vac ph-ph	26	
49		[R07]	Relay [R07] isolated Lcl./Gen.Breaker Open			Auxiliary System B voltage L2					690 Vac ph-ph	24	
50						Auxiliary System B voltage L1					690 Vac ph-ph	22	
51													
52													
53	[R08]	Relay [R08] isolated Alarm 1											
54													
55	[R09]	Relay [R09] isolated Alarm 2											
56													
57	[R10]	Relay [R10] Alarm 3											
58													
59	[R11]	Relay [R11] Load Switch 1											
60	[R12]	Relay [R12] Load Switch 2											
61	D0 Not Use											20	
62	NC											19	
63	+	Power supply											18
64	-	Isolated, 8 to 40 Vdc*2											17
65	NC											16	
66	Common (terminals 67 to 78)											15	
67		[D01]	Discrete Input [D01]isolated Check									14	
68		[D02]	Discrete Input [D02]isolated Permissive									13	
69		[D03]	Discrete Input [D03]isolated Run									12	
70		[D04]	Discrete Input [D04]isolated CB Aux									11	
71		[D05]	Discrete Input [D05]isolated Voltage Raise									10	
72		[D06]	Discrete Input [D06]isolated Voltage Lower									9	
73		[D07]	Discrete Input [D07]isolated Base Load									8	
74		[D08]	Discrete Input [D08]isolated Utility Unload									7	
75		[D09]	Discrete Input [D09]isolated Ramp Pause									6	
76		[D10]	Discrete Input [D10]isolated Setpoint Raise									5	
77		[D11]	Discrete Input [D11]isolated Setpoint Lower									4	
78		[D12]	Discrete Input [D12]isolated Process Control									3	
79												2	
80												1	
Subject to technical modifications						RS485 #1		1: RS485_A 2: RS485_B 3: RS485_GND 4: RS485_SHIELD 5: RS485_Y 6: RS485_Z		Screw terminals			
						System A current (isolated) 1A / 5A compatible		X1* C(L3) X2 X1* B(L2) X2 X1* A(L1) X2					



Subject to technical modifications

MSLC-2-XT Wiring Diagram PCB 2