

OPEN FIELD NETWORK UNIT



EtherCAT
DL-EC1A



PROFINET
DL-PN1



PROFIBUS DP
DL-PD1



EtherNet/IP®
DL-EP1



DeviceNet®
DL-DN1



CC-Link
DL-CL1

TCP/IP
DL-EN1

RS-232C
DL-RS1A



OPEN FIELD NETWORK UNIT

TECHNOLOGY TO CHANGE THE FACE OF FACTORY AUTOMATION

DL supports communication with open field networks.

IG Series

Multi-Purpose CCD Laser Micrometer

IB Series

Thrubeam Type
Laser Detection
Sensor

GT2/GT Series

Contact Sensor

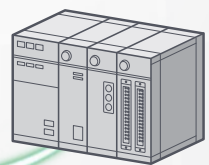
IL Series

CMOS Multi-function
Analogue Laser Sensor

DL-EC1A

EtherCAT

PLC



EtherCAT®

EtherCAT

DL-EC1A



EtherCAT®

PROFINET

DL-PN1



PROFI
NET

PROFIBUS DP

DL-PD1



PROFI
BUS

EtherNet/IP®

DL-EP1



EtherNet/IP®

MERIT 1 SAVE WIRING TIME WITH OPEN FIELD NETWORK

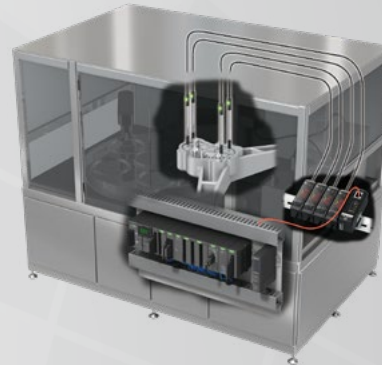
When more units are used in combination with each other, more wiring is required.
If communicating with the DL Series, only two wires are required to supply power to the sensor.

»» CONVENTIONAL



Multiple preparation and wiring steps increased the installation time.

»» WITH THE DL SERIES



No need to trim the cables Terminal block unnecessary
No additional wiring when replacing/adding sensors
Only a single communication cable is required between the PC/PLC and the DL Series for wiring.

MERIT 2 IMPROVING FUNCTIONALITY THROUGH REMOTE ACCESS WITH FIELD NETWORK

Judgment result monitoring, measurement value readout, input & output control and setting changes can be done via HMI, PLC or PC.

»» CONVENTIONAL

MONITORING

To check the sensor status, the operator must directly check the sensor amplifier.

CHANGE SETTINGS

Settings must be changed on every single sensor amplifier.

»» WITH THE DL SERIES

MONITORING

The sensor status can be monitored on an HMI, PLC or PC. Makes it easier to detect problems before an error occurs.

CHANGE SETTINGS

The settings can be changed externally from an HMI, PLC or PC. Changeover times can be reduced.

DeviceNet®

DL-DN1



DeviceNet

CC-Link

DL-CL1



CC-Link V2

TCP/IP

DL-EN1



RS-232C

DL-RS1A



SPECIFICATIONS

EtherCAT Network communication unit DL-EC1A

Model	DL-EC1A	
EtherCAT Specifications	Compatible functions	Process data object communication (cyclic communication) Mailbox communication (message communication) CoE compatible
	Conformance test	Complies with V2.0.42

PROFINET Network communication unit DL-PN1

Model	DL-PN1	
PROFINET specifications	Device type	Data I/O Communication Record data Communication
	Number of connections	1
	Update time	2 to 512 ms
	GSDML Version	Ver. 2.3
	Conformance class	Conformance Class A
	Conformance test	V2.2.4
	Compliant protocol	LLDP, DCP

PROFIBUS DP Network communication unit DL-PD1

Model	DL-PD1	
PROFIBUS DP specifications	Device type	DP-V1 Slave (D-sub 9 pin, Number of the ports: 1)
	Communication speed	9.6 kbps to 12 Mbps
	Cable length	9.6 / 19.2 / 45.45 / 93.75 kbps : 1200 m 187.5 kbps : 1000 m, 500 kbps : 400 m 1.5 Mbps : 200 m, 3 / 6 / 12 Mbps : 100 m

EtherNet/IP® Network communication unit DL-EP1

Model	DL-EP1	
EtherNet/IP® Specifications	Compatible Functions	Cyclic Communication Message communication (Explicit messaging) Compatible with UCM and Class 3
	Number of connections	64
	RPI (Transmission cycle)	0.5 to 10000 ms (0.5 ms unit)
	Tolerable communication bandwidth for cyclic communication	6000 pps
	Conformance Test	Compatible with Version A7

DeviceNet® communication unit DL-DN1

Model		DL-DN1		
DeviceNet® Specifications	Compatible functions	Input/Output communication (poll)/ Explicit Message Communication		
	Address Settings	0 to 63 (PGM compatible)		
	Communication speed (Automatic switching method)	500 kbps	250 kbps	125 kbps
	Maximum cable length	100 m (thick cable)	250 m (thick cable)	500 m (thick cable)
		100 m (thin cable)	100 m (thin cable)	100 m (thin cable)
	Network power source	11 to 25 VDC (DeviceNet® provided from the communication power source)		

CC-Link Network communication unit DL-CL1

Model	DL-CL1	
CC-Link specifications	Compatible versions	Ver. 2.00 / Ver. 1.10 (selectable)
	Number of occupied stations	Ver. 2.00: 1 station, 8× / 2 stations, 8× / 4 stations, 2×; (selectable) Ver. 1.10: 1 / 2 / 4 stations (selectable)
	Type of station	Remote device station
	Transmission rate	156 kbps / 625 kbps / 2.5 Mbps / 5 Mbps / 10 Mbps
	Setting of station numbers	1 to 64

TCP/IP Network communication unit DL-EN1

Model	DL-EN1	
Ethernet Specifications	Transmission rate	100Mbps (100BASE-TX)
	Transmission medium	STP cable or Category 5 or higher UTP cable (100BASE-TX)
	Maximum cable length	100 m (Distance between DL-EN1 and Ethernet switch)
Performance specifications	Socket communication, no-protocol commands, ASCII	TCP socket 1

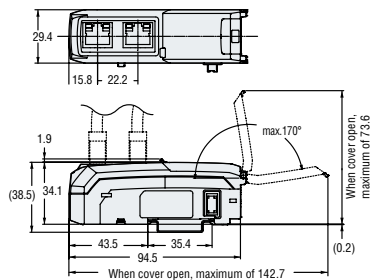
RS-232C Network communication unit DL-RS1A

Model	DL-RS1A	
RS-232C Specifications	Communication Method	Full duplex
	Synchronization Method	Start-stop
	Transmission Code	ASCII
	Baud rate	2400/4800/9600/19200/38400 bps

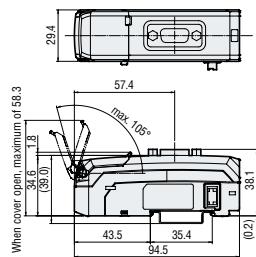
DIMENSIONS

Unit : mm

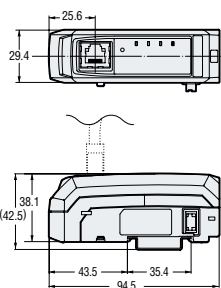
DL-EC1A



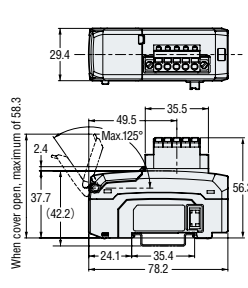
DL-PD1



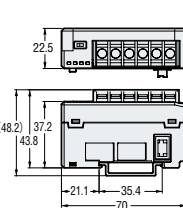
DL-PN1/EP1/EN1



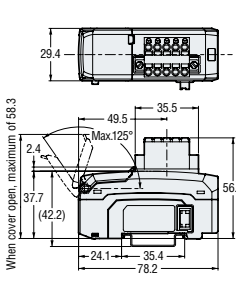
DL-DN1



DL-RS1A



DL-CL1



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