# OPTICAL DATA TRANSMISSION DEVICE For Ethernet EWF-□EA/B-01 (Master/Slave mode) SPECIFICATIONS

$\cdot \times 2$	Correction of errors				2	Apr. 11 <sup>th</sup> '14	Oka	FA-7497
Symbol	Amended reason				Pages	Date	Corrector	Amended No.
Approved by	Checked by	Drawn by	Designed by	Title	Optic	Optical Data Transmission Device for Ether		
				The		EWF-DEA/I	3-01 Spec	ifications
			OKA	Drawing No.	3	C-42-406	51	1/6

## 1. General

This device is a repeater that can connect to the Ethernet line directly. Setting of MAC address or IP is not required and this can be used as well as a LAN cable. This is suitable for the communication through the network camera or between host and slave. Communication distance will be up to 100m and it is possible to communicate between moving devices. Be sure to use A and B type as a pair. Also, each unit should be set to either Master or Slave mode depending on which side to connect with.



#### 3. Specifications

e. speem	cutions						
Model No.		<b>EWF-0EA-01</b>	<b>EWF-0EB-01</b>	<b>EWF-1EA-01</b>	EWF-1E	B-01	
Transmission distance		50m		10	100m		
Directional angle		Full ang	gle $1.4^{\circ}$	Full ang	Full angle $0.7^{\circ}$		
Power s	ource	24VDC(±10%)					
Current	consumption	150mA(24VDC)					
Transm	ission system	Full-duplex two-way transmission					
Transm	ission speed	• <del>10M</del> /100Mbps					
Laser sa	fety standard	Class 2M					
Interfac	e	Ethernet					
Commu	nication standard	IEEE802.3u 100BASE-TX/ • <del>10BASE-T</del> , Auto-negotiation compliant					
Modula	tion system	Direct modulation					
Connect	tion	Mini clamp connector(Power/CD signal), Modular jack RJ-45(Ethernet)					
Ambient temperature/ humidity		$-10^{\circ}C \sim +50^{\circ}C$ , 85% RH or less(non icing)					
Ambient illuminance		10000lux or less(Halogen/mercury lamp)					
Impact resistance		490m/s <sup>2</sup> , Each 10 times in X, Y and Z directions					
Vibration resistance		Double amplitude 1.5mm, $10 \sim 55$ Hz, each 2 hours in X, Y and Z direction					
		<b>· ▲</b>	. ,	,			
Title	tle Optical Data Transmission Device for Ethernet EWF-DEA/B-01 Specifications			C-42-406	1	2/6	

Protect	ive st	ructure	IP40			
Reception output(CD)		ıtput(CD)	Photo-coupler open-collector(Withstand pressure 35V), ON when receiving light (Max.50mA, residual voltage 1.5V)			
Level v	Level voltage output		Approx.0~3V, connector S2B-PH-K-S(JST)			
(Analog	onung. onitr	nut)	This is available only when adjusting the optical axis.			
(1 1110)	Jour	, ut)	External wiring is forbidden.			
3. Conne	ection	l				
(Defer	witch		RJ-45 connector for communication			
(Relei	io ne	$\frac{111}{100}$ , $\sim$	IMITR-5M2-88-LP(Hirose made)			
operatic	11110	ue) ~				
Conne	ctor f	or nower	Connector for level voltage			
3720	4-1BF	E0-004(3M)	S2B-PH-K-S(JST made)			
Conne	ctor (	attached)	(Put the cap on during)			
3710	4-220	6-000FL	ordinary operation)			
2,10	0					
* Adapte cable.	d cabl	le of attached	connector is as follows. If using the other cable, use adapted connector for the used			
	Мо	del No.	AWG No. Nominal cross-section Finished dimension			
371	04-22	206-000FL	AWG20~22 0.3~0.5mm <sup>2</sup> 1.6~2.0mm			
Din aggio		4				
PIII assig	ninen No	Signala	I/O circuit			
	INO.		1/O clicult			
4	r		24VDC			
	,	-•				
2	2	CD				
			$\bigvee$ K $\int$ $\bigwedge$ $_{36V}$ Photo-coupler output			
1		COM				
Title	O	ptical Data Tra	nsmission Device for Ethernet Drawing C-42-4061 3/6			
	1	EWF-∐E	A/B-01 Specifications No.			



\*This device contains a circuit which corrects delay time to facilitate stable high speed communication. The Status lamp (S) lights up when the circuit operation is normal. Also, communication becomes possible when both the Status lamp and the CD lamp light up.

Red: LAN Active Lamp



Green: LAN Link Lamp

Active: Lights up when transmitting and receiving data.

Link: Lights up when link is established.

Title	Optical Data Transmission Device for Ethernet	Drawing	C-42-4061	4/6	
	EWF-DEAD-01 Specifications	INO.			

# 5. Operation mode

It can be switched between Master mode and Slave mode by using the slide switch next to RJ connector. The mode depends on the position of the mode switch.

Master mode



Slave mode

When using on Ether CAT network, be sure to set each EWF to either Master or Slave mode depending on which side to connect with.



However during adjusting optical axis, EWF at both sides should be set in Master mode because in Slave mode it does not project light unless linked to LAN. Please refer to the below chart for each mode operations.

Title	Optical Data Transmission Device for Ethernet	Drawing	C 42 4061	5/6
	EWF-DEA/B-01 Specifications	No. C-42-4001		5/0

