NOTES
FS40
Sinking Inputs (NPN) COMMON_IN=GND
Sourcing Outputs (PNP) COMMON_OUT=+24VDC

Inspect Trigger
Reject Trigger/Confirm
SOURCING Outputs (PNP)

NOTE
FS40 Outputs MAY be paralleled!
(if you don't want to differentiate counts or if you have more than 2)

1

IO0 Pin 10
IO1 Pin11
IO2 Pin 1
IO3 Pin 12
IO4 Pin 4
IO5 Pin 5

(Microscan Gray/Pink) → I/4 Pass1
(Microscan Brown) → I/5 Fail1A
(Microscan Red/Blue) → I/6 Fail1B

I/0 Encoder

I/1 Inspect Trigger

I/2 Reject Trigger
I/3 Reject Confirm
I/4 Pass1
I/5 Fail1A
I/6 Fail1B
I/7 Pass2
I/8 Fail2A
I/9 Fail2B

OMRON E2E-X14B1DL18
14mm, PNP, NO,COM2,Long Body,M18
Brown: +24VDC
Blue: 0VDC
Black: Trigger

(Microscan Violet)

2

IO0 Pin 10
IO1 Pin11
IO2 Pin 1
IO3 Pin 12
IO4 Pin 4
IO5 Pin 5

(Microscan Gray/Pink) → I/7 Pass2
(Microscan Brown) → I/8 Fail2A
(Microscan Red/Blue) → I/9 Fail2B

(Microscan Violet)

Zebra FS40
Zebra and Microscan cables have DIFFERENT colors

Pin	Usage	Zebra	Microscan
1	GPIO2	Yellow	White
2	TXD	White/Yellow	Brown
3	RXD	Brown	Green
4	GPIO4	White/Brown	Yellow
5	GPIO5	Violet	Gray
6	COM_IN	White/Violet	Pink
7	DC_IN	Red	Blue
8	GND	Black	Red
9	COM_OUT	Green	Black
10	GPIO0	Orange	Violet
11	GPIO1	Blue	Gray/Pink
12	GPIO3	Grey	Red/Blue

0 1 2 3 4 5 6 7 8 9

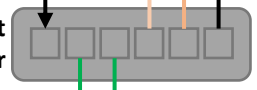
Allen-Bradley
MicroLogix 1100
1763-L16BBB B/16.00

NOTES
All Inputs Sinking
Both DCCOM inputs = GND

0 1 2 3 4 5 6 7

O/4 Cycle Power (How?)
O/3 Green Light
O/2 Red Light
O/1 Linestop
O/0 Reject

Inspect Trigger



(White Wire)

Strobes

Smart Vision Lights Strobe
Brown: +24VDC
Black: +24VDC
Blue: 0VDC
White: Trigger Input

Master Strobe comes from Sentech 1

1

Line0 Pin 2
Line1 Pin 4
Line2 Pin 3

I/5 Fail1A ???

HOW USE THIS 5V OUTPUT?

OMRON Sentech STC-MBS52POE
Pin 1: PWR +24V Power Black
Pin 2: IN Line0 Trigger Green
Pin 3: GPIO Line2 Red
Pin 4: OUT Line1 Orange
Pin 5: COM Yellow
Pin 6: GND 0VDC White

2

Line0 Pin 2
Line1 Pin 4
Line2 Pin 3

HOW USE THIS 5V OUTPUT?

I/8 Fail2A ???

(White Wire)

Microscan DOAL
Brown: +24VDC
Black: +24VDC
Blue: 0VDC
White: Trigger Input

PWR +24 VDC
Sentech Pin 1: PWR Black
FS40 Pin 7: DC_IN Red (Microscan Blue)
FS40 Pin 9: COM_OUT Green (Microscan Black)
Strobe: Brown and Black
DOAL: Brown and Black
Photoeye: Brown

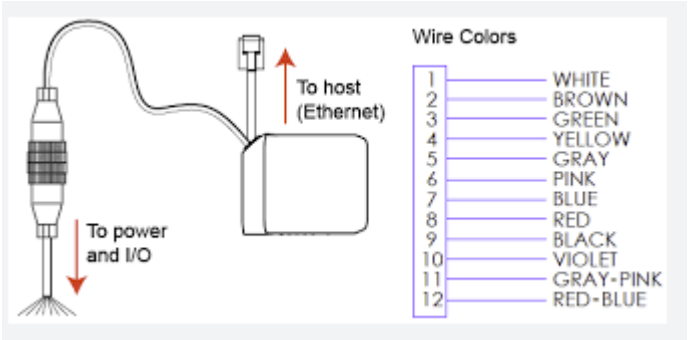
GND 0 VDC
Sentech Pin 5: COM YELLOW
Sentech Pin 6: GND WHITE
FS40 Pin 6: COM_IN White/Violet (Microscan Pink)
FS40 Pin 8: GND Black (Microscan Red)
Strobe: Blue
DOAL: Blue
Photoeye: Blue

Rev 2023-01-09

Features

1. Have Reject Trigger and Reject Confirm inputs
2. Have Camera Cycle Power output
3. PLC can see and count independent inputs
    1. PASS_1, FAIL_1A, FAIL_1B
    2. PASS_2, FAIL_2A, FAIL_2B
4. Sentech cameras only output FAIL since they have only one spare output
    1. Not yet clear how we make these work with our 24V PLC inputs

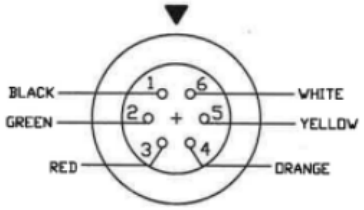
Appendix: Backup



OMRON Sentech STC-M Camera

Power and IO Cable

The HRS6-AV-6-2M can be used as the standard Power and IO Cable. The pinout and wire colors for t
cable are shown below.



GigE Camera Pinouts IO Table

The pin assignments for the GigE cameras are shown in the table below.

- Line0 – Opto Isolated Trigger Input. Pin2
- Line1 – Opto Isolated Strobe Output. Pin4
- Common – Opto Isolated Common used for Trigger and Strobe. Pin 5
- Power IN/GND – Pin 1 and Pin 6

Note: Power can also be supplied though PoE Ethernet cable.

Pin Assignment

Pin No.	Signal Name	IN / OUT	Voltage
1	POWER IN	IN	+10.8 to +26.4 Vdc
2	Opto-isolated in (Line0)	IN	Low: Smaller than +1.0 V High: +3.0 to +26.4 V * Potential difference between TRG_in and Opt. Isolated Common
3	Open Collector GPIO (Line2)	IN / OUT	+3.0 to +26.4 V / Open Collector
4	Opto-isolated out (Line1)	OUT	Open Collector
5	Opto-isolated Common	IN	
6	GND	IN	0 V

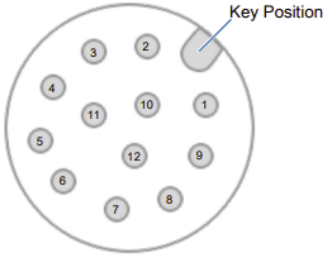
Zebra FS40

Cable Pin Outs

This section provides pin and cable color information for the power and I/O, Ethernet, and external lighting connectors.

Power and I/O Connector

Figure 8 Power and I/O Connector - 12 Pin Diagram

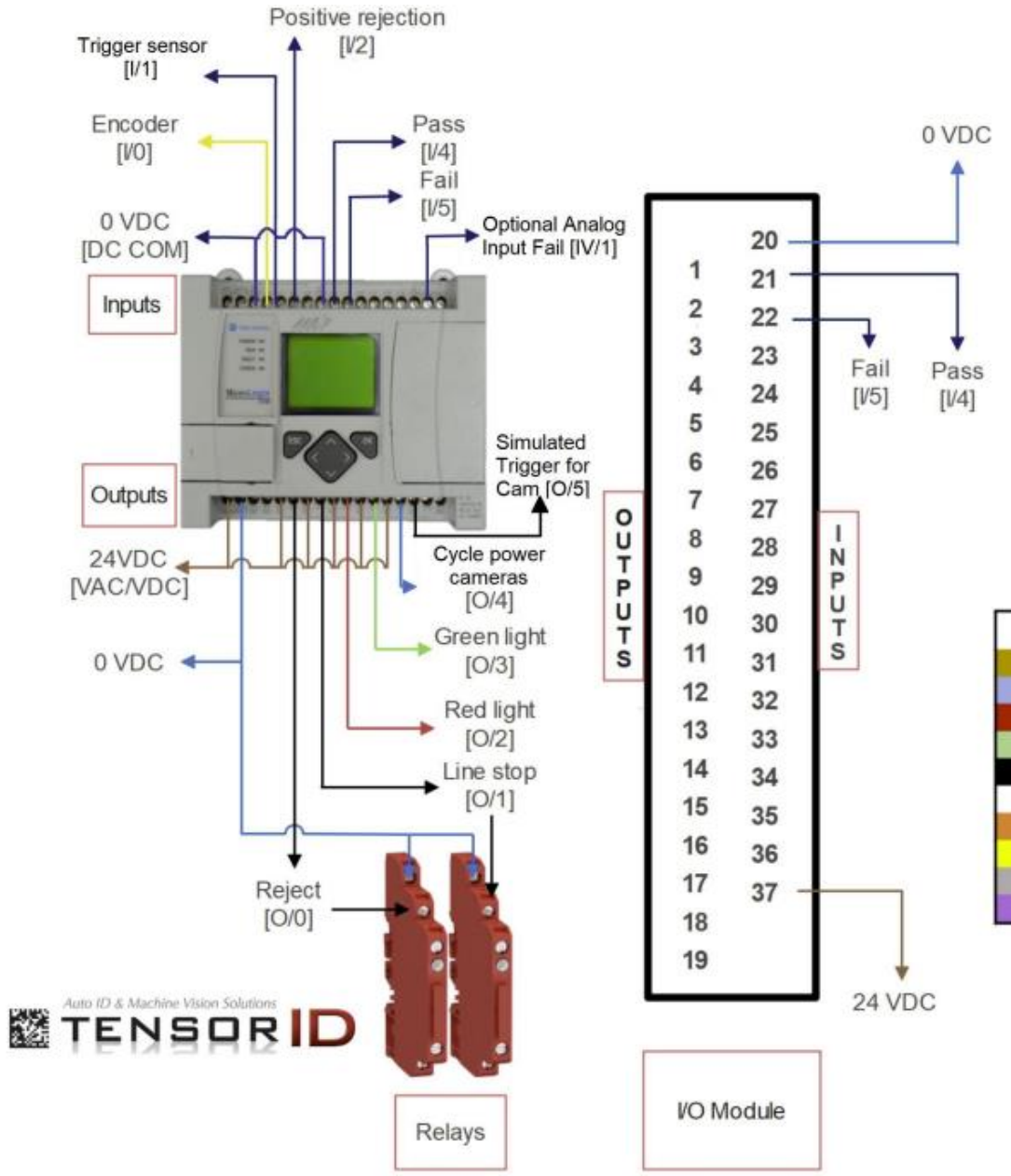


Pin	Color	Description
1	Yellow	GPIO2
2	White / Yellow	TXD
3	Brown	RXD
4	White / Brown	GPIO4
5	Violet	GPIO5
6	White / Violet	COMMON_IN
7	Red	DC_IN
8	Black	GND
9	Green	COMMON_OUT
10	Orange	GPIO0
11	Blue	GPIO1
12	Grey	GPIO3
SHELL	Bare	SHIELD

Microscan 61-000167-02 Cable
Zebra and Microscan cables have DIFFERENT colors

Pin	Usage	Zebra	Microscan
1	GPIO2	Yellow	White
2	TXD	White/Yellow	Brown
3	RXD	Brown	Green
4	GPIO4	White/Brown	Yellow
5	GPIO5	Violet	Gray
6	COM_IN	White/Violet	Pink
7	DC_IN	Red	Blue
8	GND	Black	Red
9	COM_OUT	Green	Black
10	GPIO0	Orange	Violet
11	GPIO1	Blue	Gray/Pink
12	GPIO3	Grey	Red/Blue

Appendix: Old Plan



Microscan:
4 Pin cable:
Black: 24 VDC
White: 0VDC
Brown: Trigger
Blue: Light stobe
3 Pin cable:
Blue: 0VDC
Brown: 24VDC

Sentech:
Black: 24VDC
White: 0VDC
Yellow: 0VDC
Green: Trigger
Orange: Light strobe

Trigger:
Brown: 24 VDC
Blue: 0VDC
Black: Signal

Strobe:
Brown: 24 VDC
Black: 24 VDC
Blue: 0 VDC
White: Signal

TID 10 Conductor Cable		
1	Brown	24VDC
2	Blue	0VDC
3	Red	Red Light
4	Green	Green Light
5	Black	Rejection
6	White	Line Stop
7	Orange	Encoder (Optional)
8	Yellow	Trigger/Encoder (OPT)
9	Gray	Spare
10	Purple	Spare

Note:

PNP trigger only