# TOSHIBA
Leading Innovation >>>

OIS PLUS SERIES >>>
OPERATOR INTERFACE STATIONS

OIS PLUS
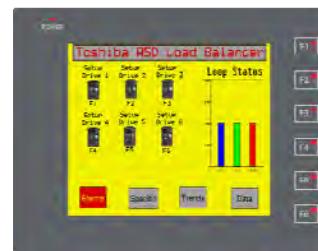
OIS PLUS = PLC + OIS + Clip-on I/O

The OIS PLUS Series touchscreens are updated versions of the operator interface stations OIS55 and OIS60. The PLUS versions contain PLC functionality and accommodate optional clip-on I/O modules (digital, analog & communication).

OIS60 PLUS
6" Color Touchscreen
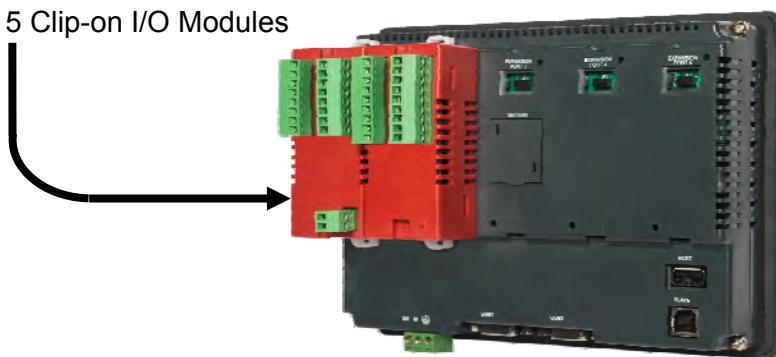
OIS55 PLUS
3 ½" Color Touchscreen

3 Clip-on I/O Modules

5 Clip-on I/O Modules

Clip-on I/O Module
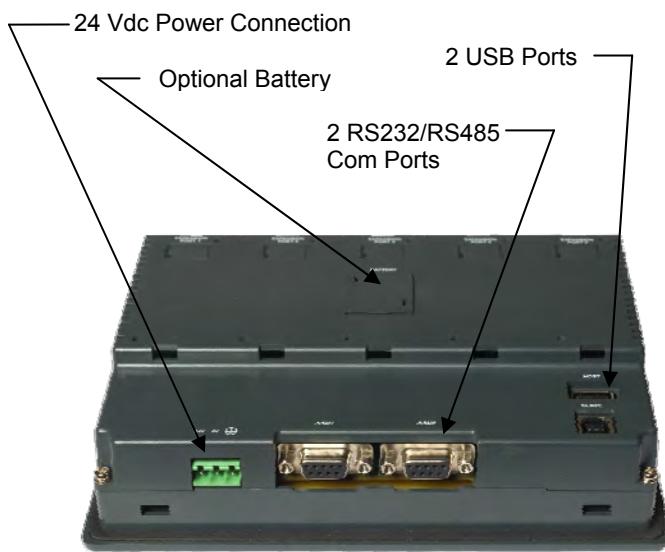
- ♦ Common Tags for Display & PLC
- ♦ Multi-Language with True Type Fonts
- ♦ Built-in PID
- ♦ Hi-Speed Inputs, PWM Outputs
- ♦ Save Tags in OIS PLUS
- ♦ Wide Variety of I/O & Com Modules
- ♦ Large Symbol Library
- ♦ Create up to 10 Template Screens

- ♦ Recipes & Data Logging
- ♦ Connection to Modbus Field Networks
- ♦ Connection to other Industrial Equipment
- ♦ View Ladder & Screen Simultaneously
- ♦ Multi-state Bitmaps & Objects
- ♦ USB port; Programming & Data Collection
- ♦ Floating Point Numbers
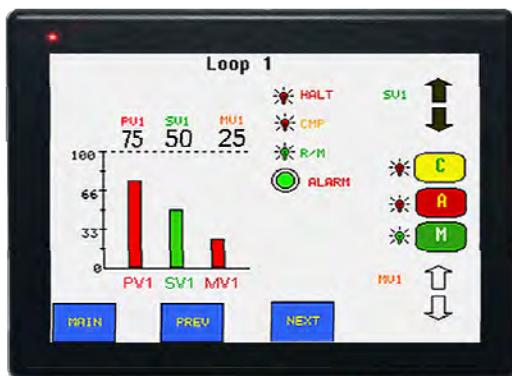
OIS MODELS

## Touchscreen--OIS PLUS

OIS55 PLUS
3 ½" Color Touchscreen

I/O Module Connection

Clip-on I/O Module

OIS45E PLUS
4.3" Color Touchscreen w/Ethernet

24 Vdc Power Connection

Optional Battery

2 USB Ports

2 RS232/RS485 Com Ports

OIS60 PLUSs
6" Color Touchscreen

OIS70E PLUS
7" Color Touchscreen w/Ethernet


Under Development

♦ OIS45 PLUS & OIS55 PLUS have same dimensional cutouts.

♦ OIS60 PLUS & OIS70 PLUS have same dimensional cutouts.
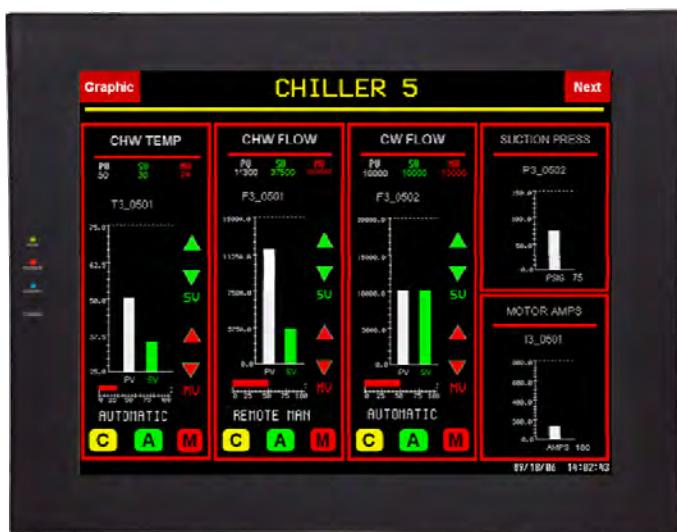
♦ Only OIS55 PLUS and OIS60 PLUS have function keys with indicator LEDs.

♦ I/O Modules are common to all OIS PLUS touchscreens. For a list of I/O modules see page 17.

Large Touchscreen—OIS120A
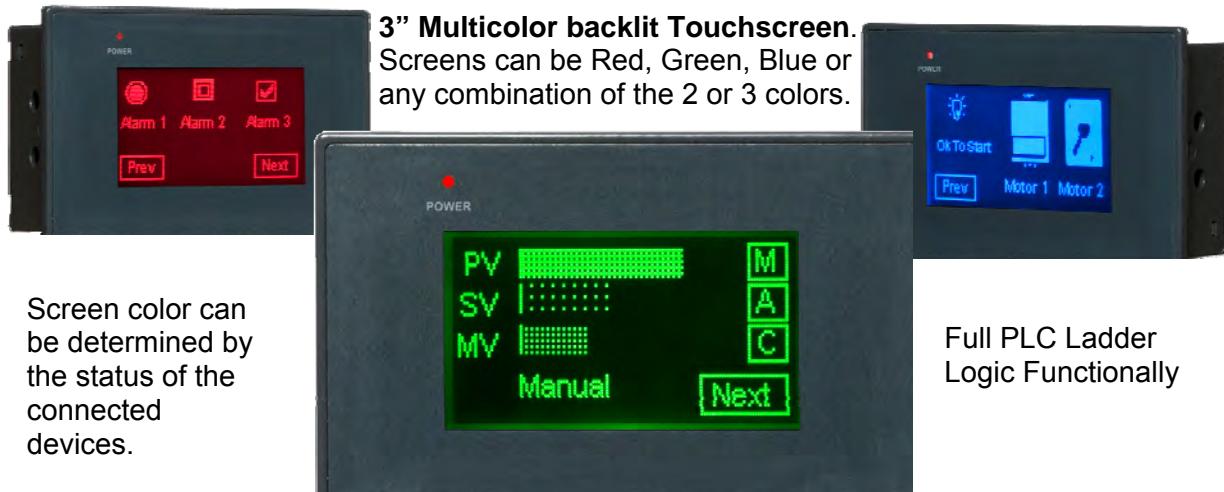
OIS120A
12" Color Touchscreen w/Ethernet

A Large Display for Monitoring & Changing Data in Toshiba Control Devices

♦ Alarms & Trending

♦ Large Number of Special Objects

♦ Unlimited Screens (based on memory)

♦ 3 Communications Ports (1 Ethernet).

♦ Multiple Language (Unicode) Support

♦ Compact Flash Memory

♦ No Clip-on I/O Modules.

LCD Touchscreens

OIS40/42 PLUS

3" Multicolor backlit Touchscreen. Screens can be Red, Green, Blue or any combination of the 2 or 3 colors.

Screen color can be determined by the status of the connected devices.

Full PLC Ladder Logic Functionally

OIS42 PLUS --With Built-in I/O
    8 24 Vdc Inputs, 4 HS Inputs, 25 Khz.
    6 Relay Outputs
    2 Transistor Outputs/2 HS Outputs, 25Khz
    2 Analog Inputs
        mA, Vdc, TC, and RTD.
    1 Analog Output
        mA, Vdc

KeyPad OIS

OIS10 PLUS--With Built-in I/O

8--24 Vdc Inputs

6--Relay Outputs
2--Transistor Outputs

24 Vdc Input
Power Supply
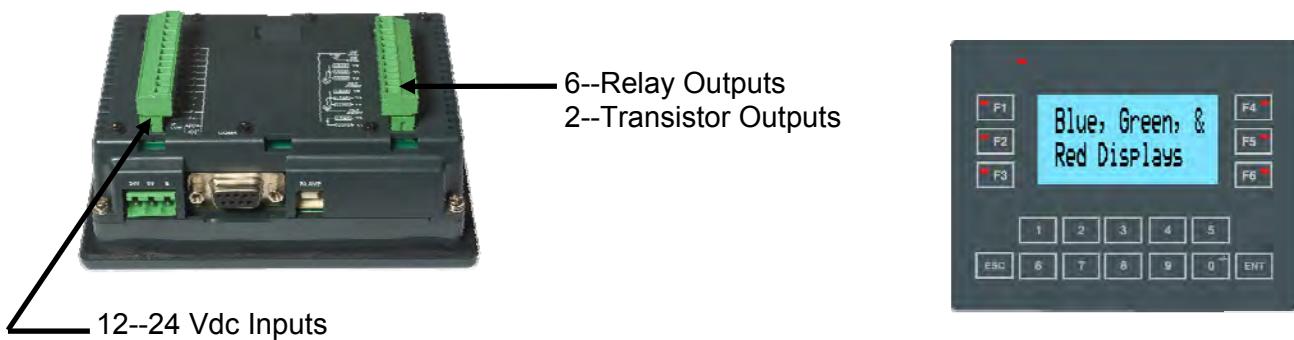
OIS12--No I/O

OIS12 is same as OIS10 PLUS but no built-in I/O. For connection to Toshiba PLCs, Integrated Controllers, ASDs, or any device with Modbus serial protocol.

OIS20 PLUS--With Built-in I/O

All the best features of past Toshiba PLCs are built into the OIS20 PLUS. Remember the EX20 (80s), M20 (90s) & T1-28 (00s), now there is the OIS20 PLUS (10s)

6--Relay Outputs
2--Transistor Outputs

12--24 Vdc Inputs
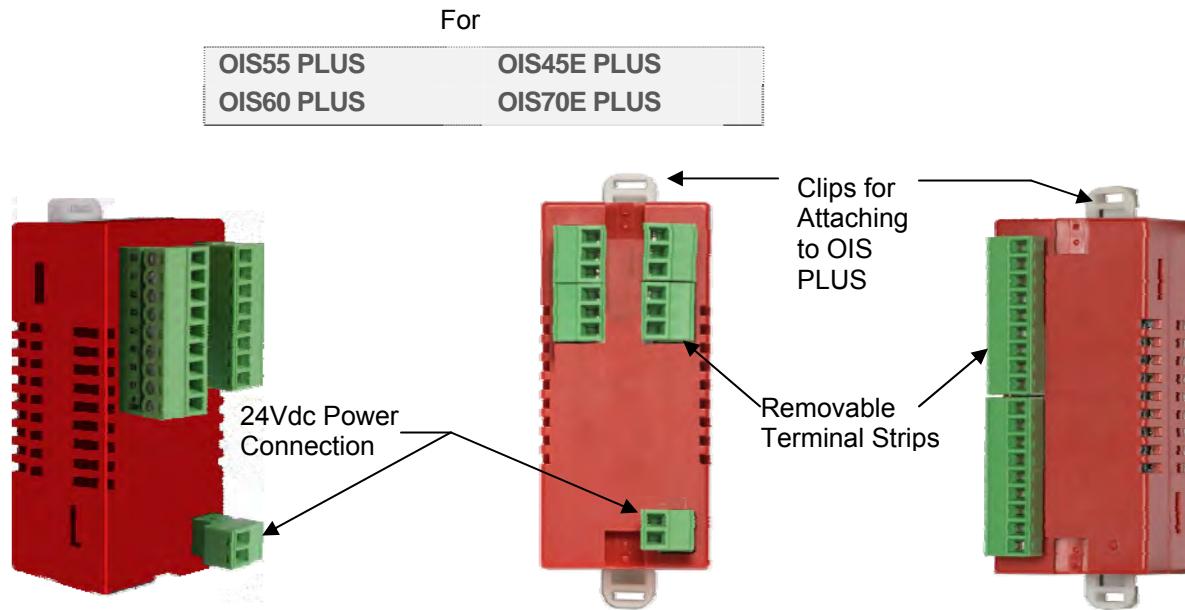
In addition, the OIS20 PLUS has:

  3.1" Graphical, Multicolor, Backlit LCD Display

  18 Function/Numerical Entry Keys

  1 Serial Communications Port

  Modbus, Toshiba ASD, or Serial Printer

OIS PLUS I/O Modules

These modules clip onto the back of the OIS PLUS. All terminal strips are removable.

For

| OIS55 PLUS | OIS45E PLUS |
| OIS60 PLUS | OIS70E PLUS |

24Vdc Power Connection

Clips for Attaching to OIS PLUS

Removable Terminal Strips

The following modules are available.

Digital I/O

|	
TRPDIX1600	16 Inputs, 24 Vdc (sink/source).
TRPDOX0016N	16 Outputs 24, Vdc, transistor NPN.
TRPDOX0016P	16 Outputs 24, Vdc, transistor PNP.
TRPROX0012	12 Outputs, Relay, 240/120 Vac, 2a per common.
TRPDIO0808N	8 Inputs, 24 Vdc (sink/source), 8 Outputs, Transistor, 24 Vdc, **NPN**.
TRPDIR0808P	8 Inputs, 24 Vdc (sink/source), 8 Outputs, Transistor, 24 Vdc, **PNP**.
TRPHIO0808N	8 Inputs (**4 HSC**), 24 Vdc (sink/source), 8 Outputs (**2 HS/1 PWM**), Transistor, 24 Vdc, **NPN**.
TRPHIO0808P	8 Inputs (**4 HSC**), 24 Vdc (sink/source), 8 Outputs (**2 HS/1 PWM**), Transistor, 24 Vdc, **PNP**.

Analog I/O
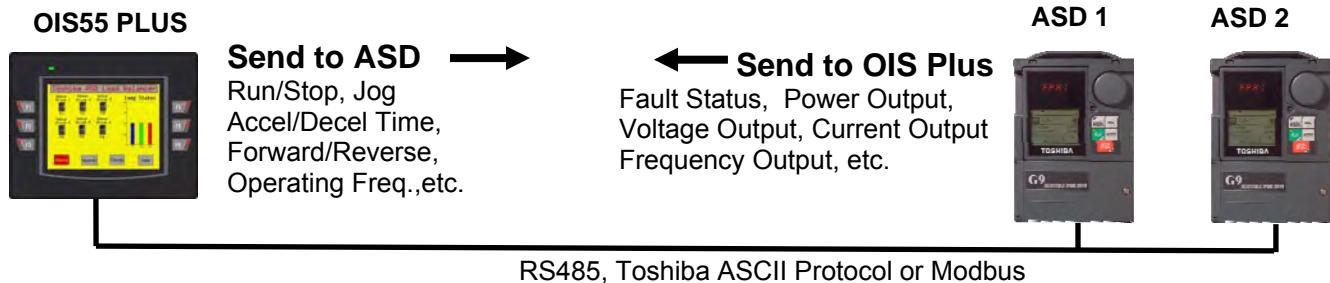
TRPADT0400	4 Inputs, 4-20 mA/0-10 Vdc, 12 bit.
TRPAIO0202L	2 Inputs, 0-20 mA/0-10 Vdc, & 2 Outputs, 0-20 mA/0-10 Vdc, 12 bits each.
TRPRTX0402	4 - Inputs, 0-10 V, 4-20 mA, RTD, TC, 2-Outputs, 0-10 V, 4-20 mA, 16 bits each.

KEY FEATURES

Connection to ASDs:

The OIS PLUS can receive multiple types of inputs (digital, analog, thermocouple, RTD, etc) and use these to control ASDs (adjustable speed drives). The OIS PLUS has the ASD parameters immediately available in the setup software, **no special programming is necessary**.

A.

OIS55 PLUS

Send to ASD →
Run/Stop, Jog
Accel/Decel Time,
Forward/Reverse,
Operating Freq.,etc.

← **Send to OIS Plus**
Fault Status, Power Output,
Voltage Output, Current Output
Frequency Output, etc.

ASD 1   ASD 2

RS485, Toshiba ASCII Protocol or Modbus
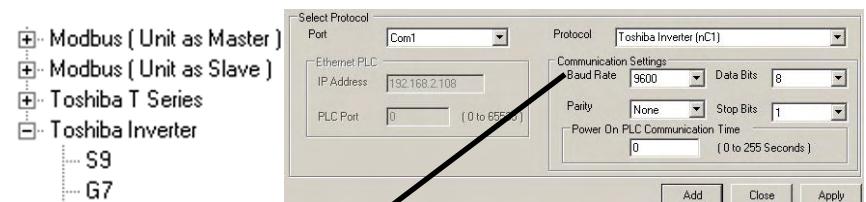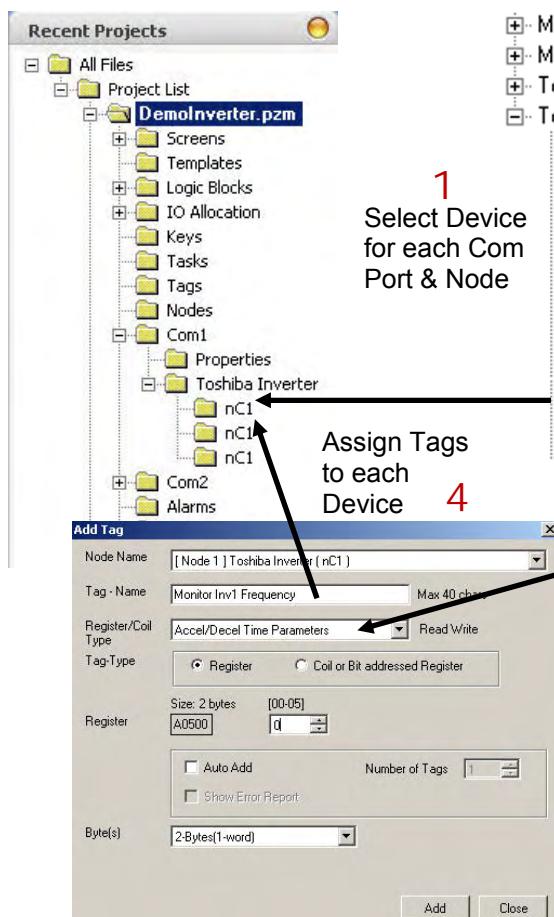
Ethernet connection is also available (requires Ethernet switch for more than 1 ASD)

Setup ASDs:

Simple setup software allows each type of equipment to be defined, mapped, and tagged.

Navigate with Project Navigator

1 Select Device for each Com Port & Node

2 Select Communication Parameters for Device

4 Assign Tags to each Device

3 Define Device Tags

Accel/Decel Time Parameters
Basic Parameters
Code Parameters
Command Parameters
Communication Parameters
Data registers
Drive Mode Parameters
Frequency Monitoring
Frequency Parameters
Fwd/Rev bit
I/O Parameters
Jog bit
Monitoring FC
Operating Freq
Panel Parameters
Protection Parameters
Reset Trip bit
Ret. Basic Parameters
Ret.Accel/Decel Time Parameters
Ret.Communication Parameters
Ret.Drive Mode Parameters
Ret.Frequency Parameters
Ret.I/O Parameters
Ret.Panel Parameters
Ret.Protection Parameters
Ret.Torque Performance
Run/Stop bit
State Monitoring
Torque Performance

Graphic Symbols:

The OIS PLUS (operator display) has a large selection of graphics for almost any industrial or process application. For the really special applications, user created bit maps can be imported into the OIS PLUS.
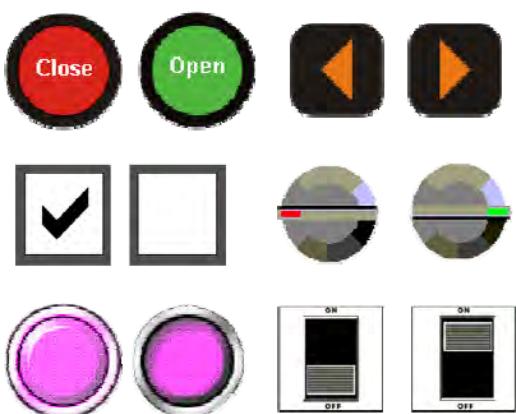
Multi-State Indicators

Normal   Warning   Alarm
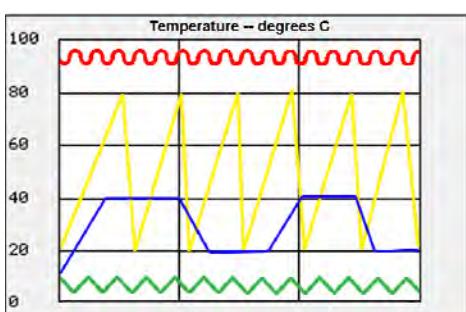
Colors and text can change based on the ON/OFF bit status or the value in a register.

Switch Pairs
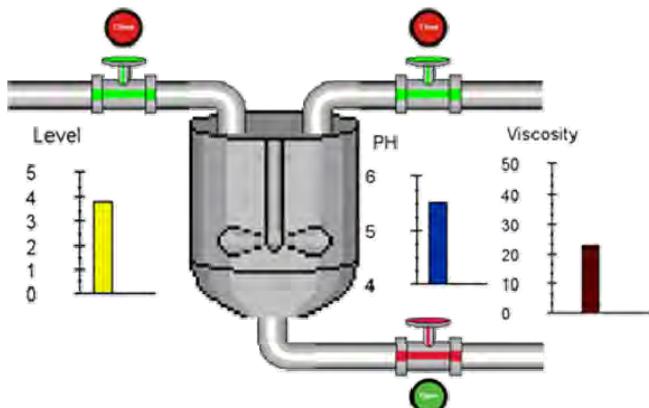
One or the other of the pair will be displayed depending on bit status (Inputs, Outputs, etc..

Trending

Displaying trends graphically provides easier interpretation of process/system change. Both simple trending and historical trending are available.

Tanks, Pipes, & Valves

Create a graphical representation for a designated process. Add process indicators as desired.

Multiple Languages
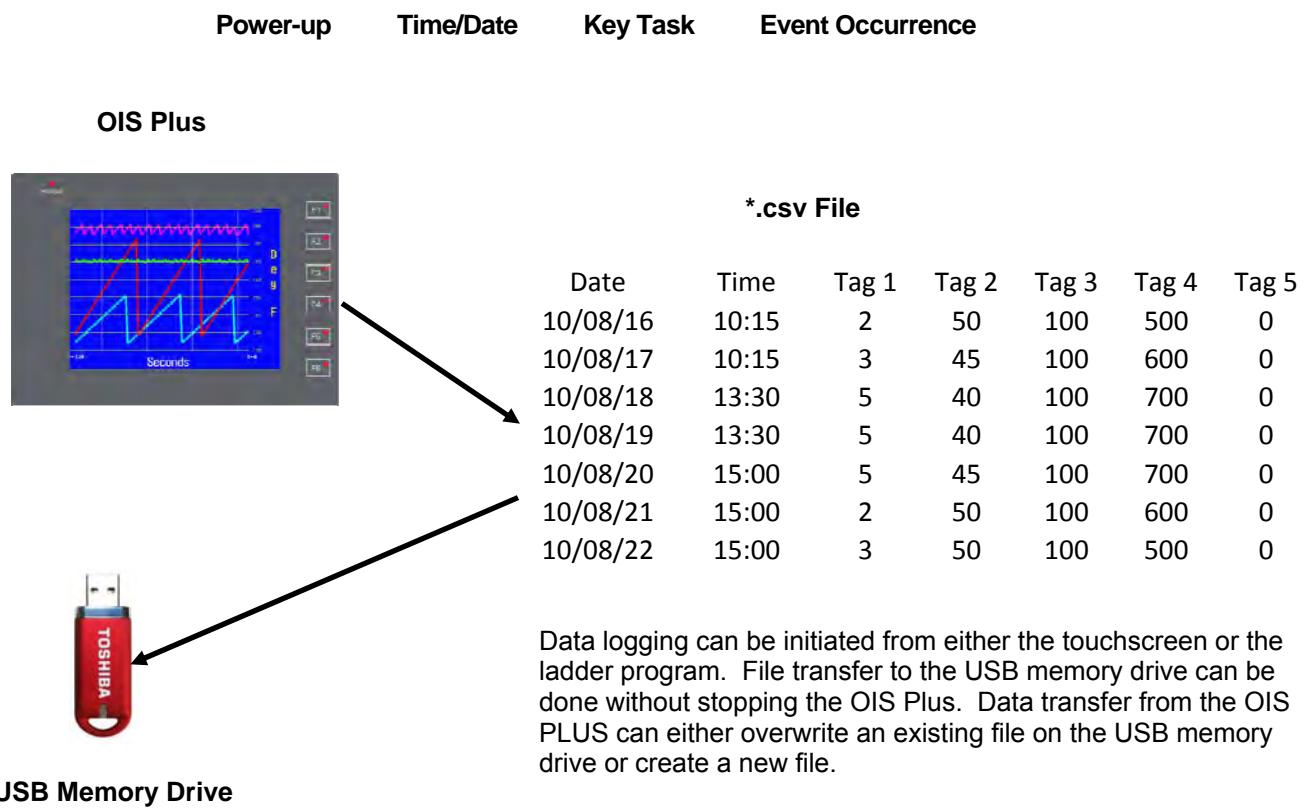
Tags can be created in any language supported by Microsoft. Selecting the language button will cause all tags to be displayed in the selected language.

Data Logging:

In many testing procedures, production runs, or process steps, it is as import to log system parameters as it is to control the sequences. The larger OIS PLUS have the capability to log user defined data. This data can be exported to a *.csv file and saved on a USB memory drive. From the memory drive, the data can be imported into MS Excel, MS Access, Lotus 1-2-3, etc. for further analysis. Logging can be specified by group and by when to start: Logging can start and stop on command.

Power-up	Time/Date	Key Task	Event Occurrence

OIS Plus

*.csv File

Date	Time	Tag 1	Tag 2	Tag 3	Tag 4	Tag 5
10/08/16	10:15	2	50	100	500	0
10/08/17	10:15	3	45	100	600	0
10/08/18	13:30	5	40	100	700	0
10/08/19	13:30	5	40	100	700	0
10/08/20	15:00	5	45	100	700	0
10/08/21	15:00	2	50	100	600	0
10/08/22	15:00	3	50	100	500	0

Data logging can be initiated from either the touchscreen or the ladder program. File transfer to the USB memory drive can be done without stopping the OIS Plus. Data transfer from the OIS PLUS can either overwrite an existing file on the USB memory drive or create a new file.

USB Memory Drive

Logged data can be very useful for many different purposes:

♦ QC verification that all parameters are within acceptable range.

♦ Confirmation that critical parameters meet regulatory agency compliance specifications.

♦ Substantiation of system status for use in incident analysis.

The OIL-DS (Operator Interface & Logic Development Software) runs on any Toshiba notebook computer or PC compatible computer running MS Windows 2000/XP/Win7 (32/64 bit). It is used for developing both the display screens and the control program (using ladder logic and function blocks).

Programming Environment:

Object Properties Screen

Navigation Screen

Display Screen Work Area

Ladder Logic Development Area

Ladder Properties Screen
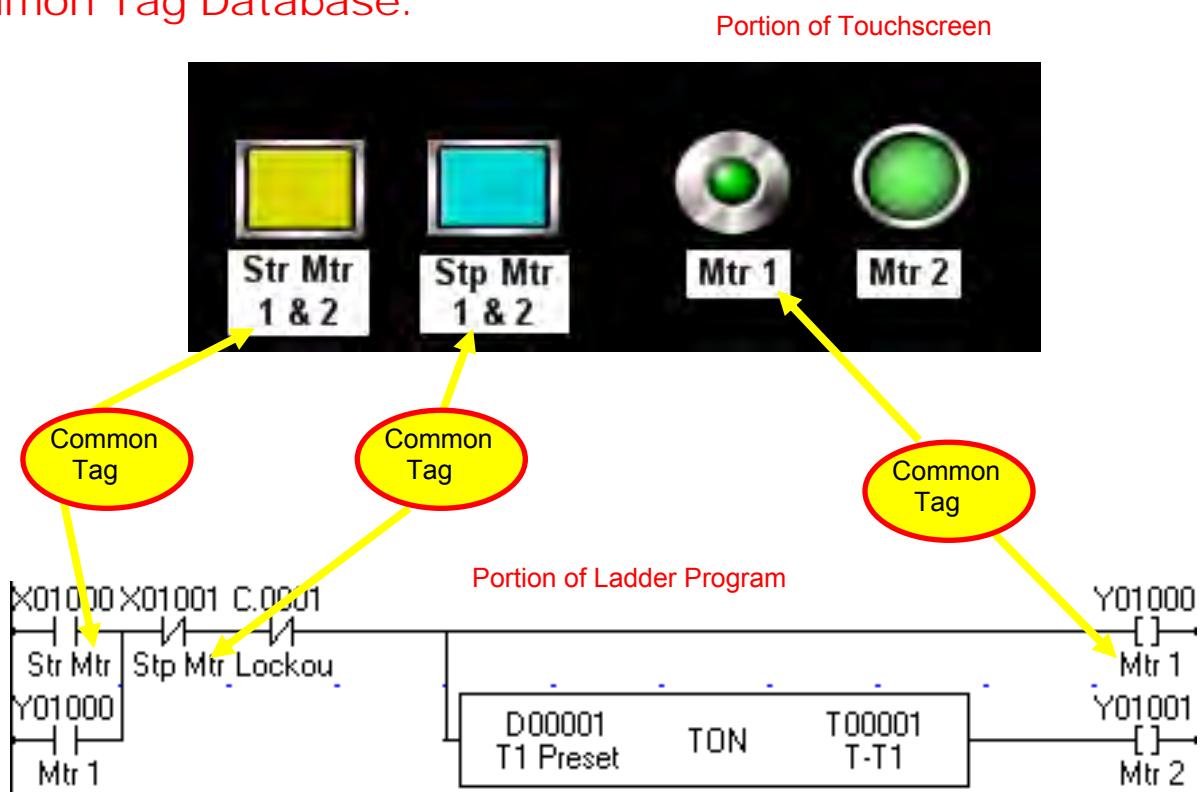
Programming Ladder Logic Blocks:

Several different types of programming blocks are available for organizing the ladder program and for making it efficient.

Logic Blocks
- Power Up
- Main
  - Main Logic
  - Alarms
  - ShutDown
- Subroutine
- Timer Interrupt
- I/O Interrupt1
- I/O Interrupt2

The Power Up block runs one time at startup. This block is used for variable initialization.

256 Main blocks are available for organizing the ladder program

256 Subroutine blocks are available for special calculations, updates, etc..

2 Interrupt blocks are available for immediate updates.

Common Tag Database:

Portion of Touchscreen

Str Mtr 1 & 2   Stp Mtr 1 & 2   Mtr 1   Mtr 2

Common Tag   Common Tag   Common Tag

Portion of Ladder Program

X01000 X01001 C.0001   Y01000
 Str Mtr Stp Mtr Lockou   Mtr 1
Y01000   D00001   TON   T00001   Y01001
 Mtr 1   T1 Preset   T-T1   Mtr 2

A common tag database simplifies programming the OIS (display) and the PLC (ladder logic). The OIS PLUS display uses the same tag data base as the OIS PLUS PLC.

Webpage Server:

These OIS PLUS displays have sufficient memory and an Ethernet port to support webpage servers:

OIS120A
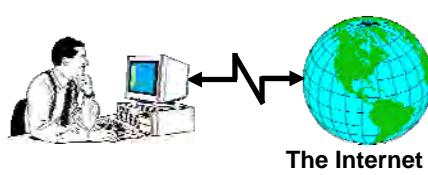
OIS70E PLUS

OIS45E PLUS

The webpage is created in the OIL-DS software, then downloaded into the OIS PLUS along with a static IP address. After this is done, connect the OIS PLUS to an internet access point thru its Ethernet port. A remote user will then be able to see the OIS PLUS's webserver page.

The Internet

Works with:
Microsoft Internet Explorer
Mozilla FireFox
Goggle Chrome
Most Android Smart Phones

The Internet
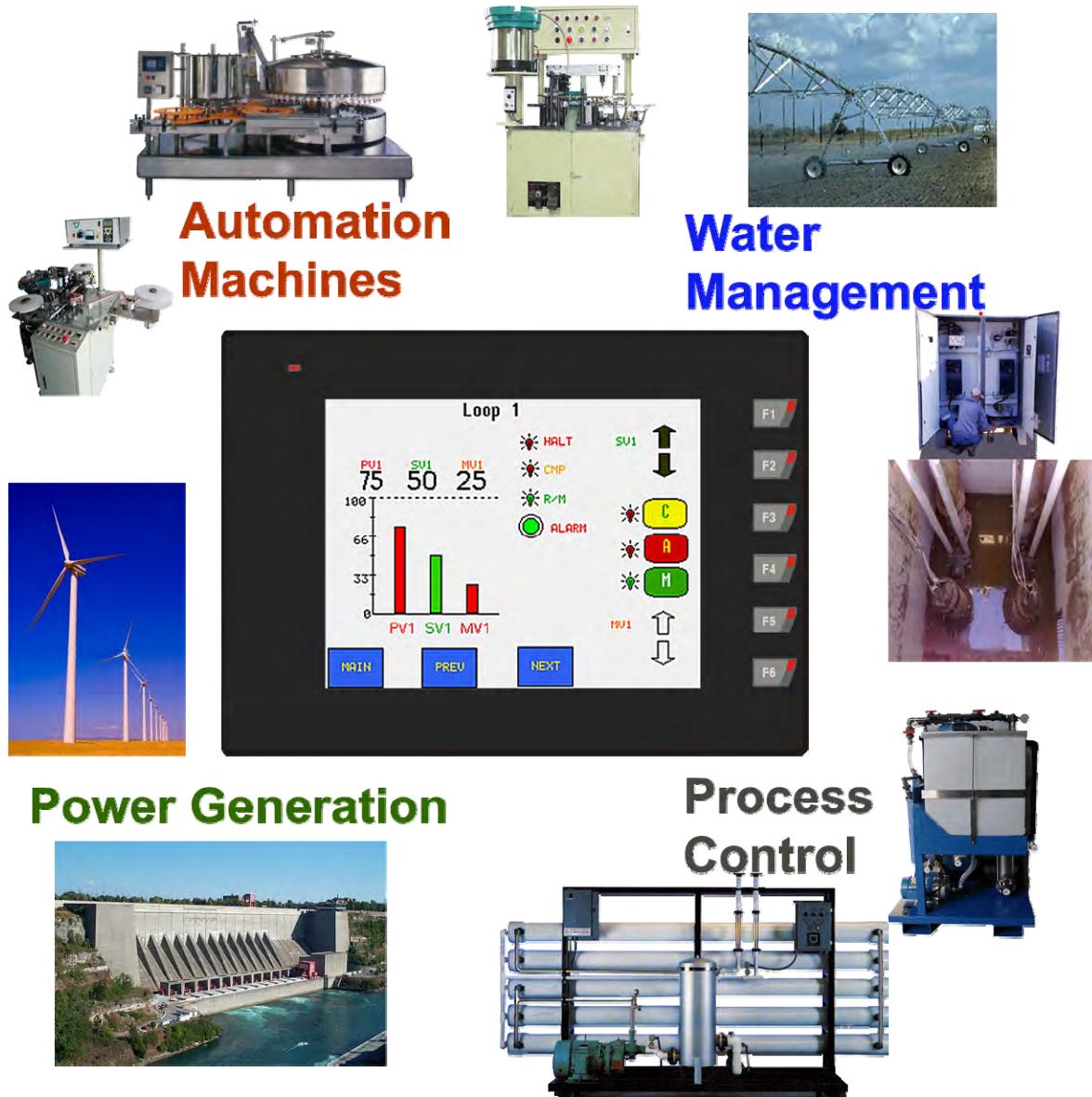
Supports

♦ Data Display   ♦ Bit Map Objects   ♦ Navigation Buttons

♦ Data Entry   ♦ Multilingual Text

Underdevelopment
Requires OIL-DS Ver. 2.2 or Higher

The OIS PLUS are small, general purpose controllers. The Operator Display, PLC & I/O are all in one compact block. This makes these ideally suited for a wide variety of control applications. Applications include:

Automation Machines

Water Management

Power Generation

Process Control

Other typical applications are:

♦ Packing Machinery	♦ Wash & Dry Control	♦ Compliance Monitoring
♦ Punch Press	♦ Pneumatic Control	♦ Alarm Systems
♦ Material Handling	♦ Conveyor Control	♦ Robotics

Call Toshiba to discuss Special Applications

SPECIFICATIONS

General Specifications:

Item	Specification
Power	24 Vdc, ±10%
Bezel	IP65
Operating Temperature:	0° to 50°C
Storage Temperature:	-20° to 80°C
LCD Life	50,000 hrs at 25° C
Humidity:	10% to 90% (Non-Condensing)
Atmosphere	No corrosive gas, No flammable gas
Cooling	Natural air cooling
Immunity to ESD:	IEC61000-4-2
Immunity to Transients:	IEC61000-4-4
Radiated Susceptibility:	IEC61000-4-3
Surge Withstand	IEC61000-4-5
Conducted Disturbances	IEC61000-4-6
Emissions:	EN55011
Grounding	100Ω or less (type D grounding)
Safety Certifications	CE, UL, cUL (Class 1 Div2), RoHS

Internal PLC Specifications

Item	Specification	Item	Specification
Control Method	Stored program, cyclic scan	User Data -/O Reg	X/XW, Y/YW 6400 pts/400 regs
Scan System	Floating scan	-Auxiliary Reg	B/BW 4096 pts/256 regs
I/O Update	Batch I/O refresh (direct I/O possible)	-Special Reg	S/SW 4096 pts/256 regs
Program memory	Program stored in flash memory	-Data Reg	D 4096 regs
Program capacity	8 K steps	-Counters	C./C 256 regs
Program Language	Ladder diagram	-Timers	T./T 61 @0.01 sec, 130 @ 0.1
Instructions	Basic: 20 Function: 96		sec 64 @ 1 sec.
Program Types	1 Main program	-Index Reg	I/J/K 3 regs total
	1 Initialize program	Execution Time	1.03μs/contact, 2μs/coil
	1 Timer interrupt program		2.32μs/16 bit transfer,
	2 I/O Interrupt programs		3 μs/16 bit addition
	256 Subroutine programs		

OIS10 PLUS/OIS12

Item	Specification	Item	Specification
Display:	3.1" Multicolor Backlit LCD, 16 x 2 Display	I/O	OIS10 PLUS: 8in & 8out OIS12: None
Keys	Six User-Defined Function Keys	Memory-Total	512 Kb
LEDs	1 Pwr, 6 User Defined, 12 Data Entry	-Screen	84 Kb
Com Ports-Serial:	1 RS232/RS485	-Data Log	None
-Ethernet	None	PLC Steps	10 K (OIS10 Plus only)
-USB	1 Device	Back-up Battery	3 Yrs at 25° C
Clock-Calendar	Yr/Mo/Day/Hr/Min/Sec	Power Consumption	85 mA OIS10+, 72 mA OIS12
Weight:	220 g OIS10+, 172 OIS12		

OIS20 PLUS

Item	Specification		Item	Specification
Display:	3.1" Multicolor Backlit LCD, 16 x4 Display		I/O	12 in & 8 out
Keys	Six User-Defined Function Keys		Memory-Total	512 Kb
LEDs	1 Pwr, 6 User Defined, 12 Data Entry		-Screen	84 Kb
Com Ports-Serial:	1 RS232/RS485		-Data Log	None
-Ethernet	None		PLC Steps	10 K
-USB	1 Device		Back-up Battery	3 Yrs at 25° C
Clock-Calendar	Yr/Mo/Day/Hr/Min/Sec		Power Consumption	125 mA
Weight:	320 g			

OIS40 PLUS

Item	Specification		Item	Specification
Display:	3" Graphical Monochrome Touchscreen w/Tri Color-Backlight		I/O	None
Keys	None		Memory-Total	1.5 Mb
LEDs	1 Power		-Screen	1 Mb
Com Ports-Serial:	1 RS232/RS485		-Data Log	None
-Ethernet	None		PLC Steps	10 K
-USB	1 Device		Back-up Battery	3 Yrs at 25° C
Clock-Calendar	Yr/Mo/Day/Hr/Min/Sec		Power Consumption	110 mA
Weight:	156 g			

OIS42 PLUS

Item	Specification		Item		Specification
Display:	3" Graphical Monochrome Touchscreen w/Tri Color-Backlight		I/O	Digital Inputs	8 24 Vdc, bidirectional
				Digital Outputs	6 Relay, 2 amp each
Keys	None				2 24 Vdc Trans., 300 mA each
LEDs	1 Power			Analog Inputs	2, 16 bit, 0-5 Vdc, 0-10 Vdc,
Com Ports-Serial:	1 RS232/RS485				0/4-20 mA, Thermocouple, J/K
-Ethernet	None				RTD PT100 α1 & α2
-USB	1 Device			Analog Outputs	1, 12 bit, 0-10 Vdc, 4 -20 mA
Clock-Calendar	Yr/Mo/Day/Hr/Min/Sec			Memory-Total	1.5 Mb
Back-up Battery	3 Yrs at 25° C			-Screen	1 Mb
Power Consumption	420 mA			-Data Log	None
Weight:	300 g			PLC Steps	10 K

OIS55 PLUS

Item	Specification	Item	Specification
Display:	3.5" TFT 320 x 240 Graphical Color Touchscreen	I/O	3 Clip-on Modules
Keys	Six User-Defined Function Keys	Memory-PLC	512 Kb
LEDs	1 Power, 6 User Defined	-Screen	6 Mb
Com Ports-Serial:	1 RS232/RS485	-Data Log	Yes
-Ethernet	None	PLC Steps	160 K
-USB	1 Device, 1 Host	Back-up Battery	3 Yrs at 25° C
Clock-Calendar	Yr/Mo/Day/Hr/Min/Sec	Power Consumption	210 mA
Weight:	285 g		

OIS60 PLUS

Item	Specification	Item	Specification
Display:	5.7" TFT 320 x 240 Graphical Color Touchscreen	I/O	5 Clip-on Modules
Keys	Six User-Defined Function Keys	Memory-	10 Mb
LEDs	1 Power, 6 User Defined	-Screen	6 Mb
Com Ports-Serial:	1 RS232/RS485	-Data Log	Yes
-Ethernet	None	PLC Steps	160 K
-USB	1 Device, 1 Host	Back-up Battery	3 Yrs at 25° C
Clock-Calendar	Yr/Mo/Day/Hr/Min/Sec	Power Consumption	420 mA
Weight:	710 g		

OIS45E PLUS

Item	Specification	Item	Specification
Display:	4.3" TFT 480 x 272 Graphical Color Touchscreen	I/O	3 Clip-on Modules
Keys	None	Memory-	128 Mb
LEDs	1 Power	-Screen	10
Com Ports-Serial:	1 RS232/RS485	-Data Log	Yes
-Ethernet	1 10/100 Mbps, Modbus TCP/IP	PLC Steps	160 K
-USB	1 Device, 1 Host	Back-up Battery	3 Yrs at 25° C
Clock-Calendar	Yr/Mo/Day/Hr/Min/Sec	Power Consumption	250 mA
Weight:	330 g		

OIS70E PLUS

Item	Specification		Item	Specification
Display:	7" TFT 800 x 480 Graphical Color Touchscreen		I/O	5 Clip-on Modules
Keys	None		Memory-PLC	128 Mb
LEDs	1 Power		-Screen	10 Mb
Com Ports-Serial:	2 RS232/RS485		-Data Log	Yes
-Ethernet	1 10/100 Mbps, Modbus TCP/IP		PLC Steps	160 K
-USB	1 Device, 1 Host		Back-up Battery	3 Yrs at 25° C
Clock-Calendar	Yr/Mo/Day/Hr/Min/Sec		Power Consumption	420mA
Weight:	690 g			

OIS120A

Item	Specification		Item	Specification
Display:	12.1" TFT 800 x 600 Graphical Color Touchscreen		I/O	None
Keys	None		Memory-PLC	512 Kb
LEDs	1 Power		-Screen	10 Mb
Com Ports-Serial:	2 RS232/RS485		-Data Log	Yes
-Ethernet	1 10/100 Mbps, Modbus TCP/IP		PLC Steps	160 K
-USB	1 Device, 1 Host		Back-up Battery	3 Yrs at 25° C
Clock-Calendar	Yr/Mo/Day/Hr/Min/Sec		Power Consumption	500 mA
Weight:	1680 g			

Discrete I/O Modules

	Specification	TRPDIX1600	TRPDOX0016N	TRPDOX0016P	TRPRO0012R
Inputs	Input Type	DC input,			
	Input Points	16 points (8p/com)			
	Rated Input Voltage	24Vdc, ±10%			
	Rated Input Current	5mA			
	Min. ON Voltage	15.0 Vdc			
	Max. OFF Voltage	5.0 Vdc			
	ON/OFF Delay Time	10ms or less			
	Isolation	Optical			
Outputs	Output Type		DC Output	DC Output	Relay Output
	Output Points		16points (8p/com)	16 points (8p/com)	12 points (3p/com)
	Outputs Type		**NPN** Transistor	**PNP** Transistor	Relay
	Rated Load Voltage		5-24Vdc, ±10%	5-24Vdc, ±10%	24 Vdc – 240 Vac
	Max. Load Current		0.5A/point	0.5A/point	2A/point
	Leak Current at OFF		0.1mA or less	0.1mA or less	None
	ON/OFF Delay Time		1ms/2ms or less	1ms/2ms or less	10ms/5ms or less
	Isolation		Optical	Optical	Optical
External Connection		Removable Term. Block	Removable Term. Block	Removable TB	Removable TB
Max Current @ 24 Vdc		80 mA	80 mA	80 mA	80 mA
Weight		65 g	65 g	75 g	90 g

Specification	TRPDIO0808N	TRPDIO0808P	TRPHIO0808N	TRPHIO0808P
Inputs Input Type	DC input,	DC input,	DC input	DC input
Input Points	8 points (8p/com)	8 points (8p/com)	8 pts. (**4 HSCs**)	8 pts. (**4 HSCs**)
Rated Input Voltage	24Vdc, ±10%	24Vdc, ±10%	24Vdc, ±10%	24Vdc, ±10%
Rated Input Current	5mA	5mA	5mA	5mA
Min. ON Voltage	15.0 Vdc	15.0 Vdc	15.0 Vdc	15.0 Vdc
Max. OFF Voltage	5.0 Vdc	5.0 Vdc	5.0 Vdc	5.0 Vdc
ON/OFF Delay Time	10ms or less	10ms or less	10ms or less	10ms or less
Isolation	Optical	Optical	Optical	Optical
Outputs Output Type	DC Output	DC Output	DC Output	DC Output
Output Points	8 points (8p/com)	8 points (8p/com)	8 pts (**2 HS/1PWM**)	8 pts (**2 HS/1PWM**)
Outputs Type	**NPN** Transistor	**PNP** Transistor	**NPN** Transistor	**PNP** Transistor
Rated Load Voltage	5-24Vdc , ±10%	5-24Vdc , ±10%	5-24Vdc , ±10%	5-24Vdc , ±10%
Max. Load Current	0.5A/point	0.5A/point	0.5A/point	0.5A/point
Leak Current at OFF	0.1mA or less	0.1mA or less	0.1mA or less	0.1mA or less
ON/OFF Delay Time	1ms/2ms or less	1ms/2ms or less	1ms/2ms or less	1ms/2ms or less
Isolation	Optical	Optical	Optical	Optical
External Connection	Removable Term. Block	Removable Term. Block	Removable Term.	Removable Term.
Max Current @ 24 Vdc	80 mA	80 mA	80 mA	80 mA
Weight	70 g	70 g	70 g	70 g
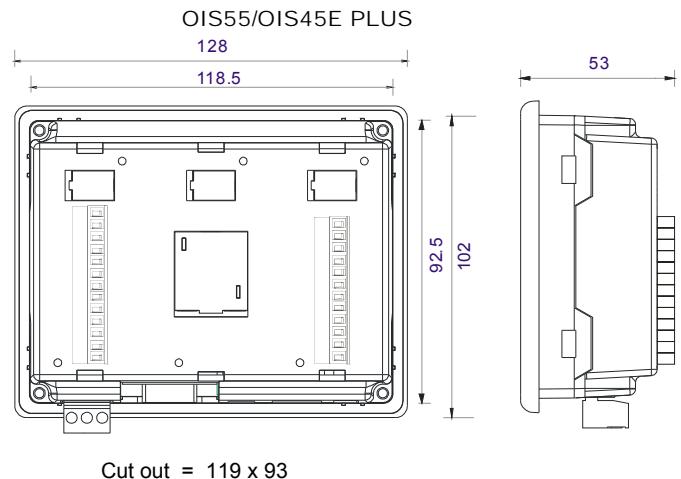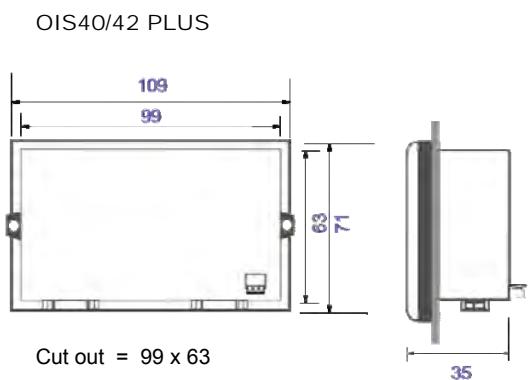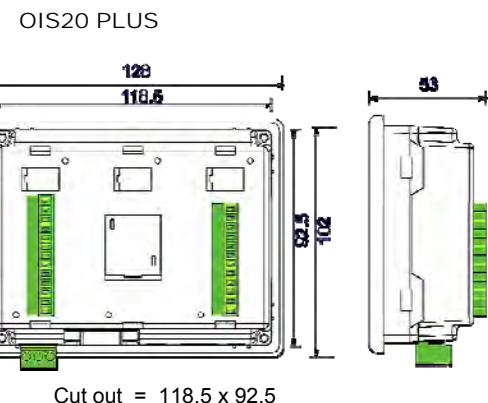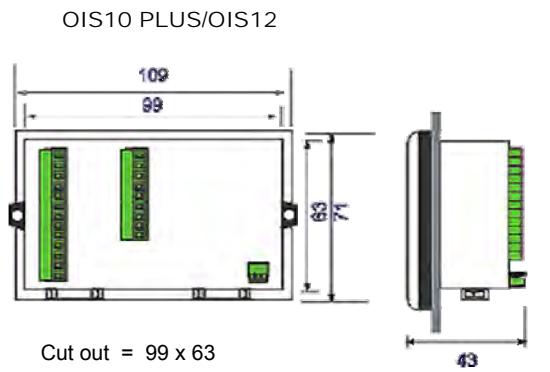
Analog I/O Modules

	Specification	TRPAIO0400L	TRPAIO0202L	TRPRTX0402		
Inputs	Input Type	Analog	Analog	Analog		
	Input Points	4 Channels	2 Channels	4 Channels		
	Input Signal	0-20 mA/±10 Vdc	0-20 mA/±10 Vdc	mA, Vdc, TC, RTD		
	Resolution	12 bit (1-4000)	12 bit (1-4000)	16 bit (1-65,000)		
	Accuracy	± 1% at 25° C	± 1% at 25° C	± 1% at 25° C		
	Conversion Cycle	0.6 s	0.75 s	≈ 1 s var by type		
Outputs	Output		Analog Output	Analog Output		
	Output Points		2 Channels	2 Channels		
	Output Signal		2-20 mA/0-10 Vdc	2-20 mA/0-10 Vdc		
	Resolution		12 bit (1-4000)	16 bit (1-65,000)		
	Accuracy		± 5% at 25° C	± 5% at 25° C		
	Conversion Cycle		0.7 s	≈ 1 s var by type		
External Connection		Removable TB	Removable TB	Removable TB		
Max Current @ 5 Vdc		80 mA	80 mA	80 mA		
Weight		80 g	85 g	90 g		
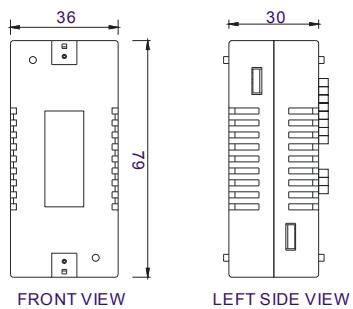
More modules in development.

DIMENSIONS

Dimensions:

OIS10 PLUS/OIS12

109
99
63
71
43

Cut out = 99 x 63

OIS20 PLUS

128
118.5
53
92.5
102

Cut out = 118.5 x 92.5

OIS40/42 PLUS

109
99
63
71
35

Cut out = 99 x 63

OIS55/OIS45E PLUS

128
118.5
53
92.5
102

Cut out = 119 x 93

**OIS PLUS I/O Modules**

36
30
79

FRONT VIEW   LEFT SIDE VIEW
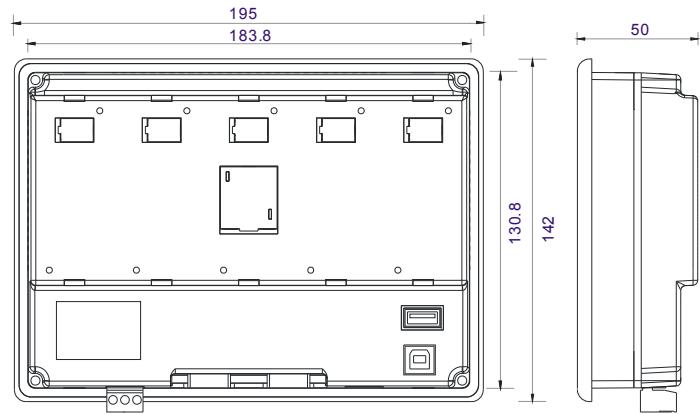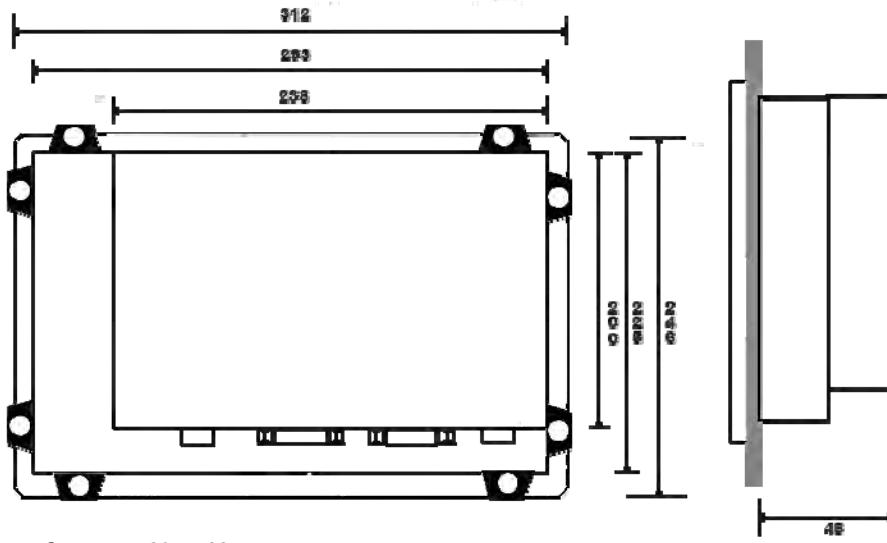
All Dimensions in mm

OIS60/OIS70E PLUS

Cut out = 184 x 131

OIS120A

Cut out = 295 x 227

All Dimensions in mm.

Part Number	Description

Displays

OIS10 PLUS	16 x 2 Text with Multicolor Backlit LCD, numeric Keypad, 6 Function Keys w/built-in LEDs, Has built-in 8 -24 Vdc inputs, 6 Relay outputs, 2 - 24 Vdc NPN transistor outputs, requires OIL-DS setup software.
OIS12	16 x 2 Text with Multicolor Backlit LCD, Same as OIS10 Plus but no I/O, used for T/C access, message display, data value change for all Toshiba PLCs, Integrated Controllers and ASDs, requires OIL-DS setup software.
OIS20 PLUS	3.1" Multicolor Backlit LCD, Numeric Keypad, 6 Function Keys, Has built-in 12 -24 Vdc inputs, 6 Relay outputs, 2 - 24 Vdc NPN transistor outputs, requires OIL-DS setup software.
OIS40 PLUS	3" Multicolor Touchscreen, 24 Vdc PS, Requires OIL-DS setup software.
OIS42N PLUS	3" Multicolor Touchscreen, 8 DI, 6 RO, 2 TRO **NPN**, 2 AI, 1 AO, 24 Vdc PS, Requires OIL-DS setup software.
OIS42P PLUS	3" Multicolor Touchscreen, 8 DI, 6 RO, 2 TRO **PNP**, 2 AI, 1 AO, 24 Vdc PS, Requires OIL-DS setup software.
OIS55 PLUS	3.5" TFT Color Touch Panel, 6 Function Keys 24 Vdc PS. requires OIL-DS setup software.
OIS45 PLUS	4.3" TFT 480 x 272 Color Touchscreen, Ethernet Port, Accepts 3 clip-on I/O modules, 24 Vdc PS, Requires OIL-DS setup software.
OIS60 PLUS	6" TFT Color Touch Panel, 24 Vdc PS, 6 Function Keys requires OIL-DS setup software.
OIS70 PLUS	7" TFT 800 x 480 Color Touchscreen, Ethernet Port, Accepts 5 clip-on I/O modules, Ethernet Port, 24 Vdc PS, Requires OIL-DS setup software.
OIS120A	12" TFT 800 x 600 Color Touchscreen, Ethernet Port, 24 Vdc PS, Requires OIL-DS setup software.

Digital I/O

TRPDIX1600	16 Inputs, 24 Vdc (sink/source).
TRPDOX0016N	16 Outputs 24, Vdc, transistor NPN.
TRPDOX0016P	16 Outputs 24, Vdc, transistor PNP.
TRPRO0012R	12 Outputs, Relay, 240/120 Vac, 2a per common.
TRPDIO0808N	8 Inputs, 24 Vdc (sink/source), 8 Outputs, Transistor, 24 Vdc, **NPN**.
TRPDIR0808P	8 Inputs, 24 Vdc (sink/source), 8 Outputs, Transistor, 24 Vdc, **PNP**.
TRPHIO0808N	8 Inputs (**4 HSC**), 24 Vdc (sink/source), 8 Outputs (**2 HS/1 PWM**), Transistor, 24 Vdc, **NPN**.
TRPHIO0808P	8 Inputs (**4 HSC**), 24 Vdc (sink/source), 8 Outputs (**2 HS/1 PWM**), Transistor, 24 Vdc, **PNP**.

Analog I/O

TRPAIO0400L	4 Inputs, 4-20 mA/0-10 Vdc, 12 bit.
TRPAIO0202L	2 Inputs, 0-20 mA/0-10 Vdc, & 2 Outputs, 0-20 mA/0-10 Vdc, 12 bits each.
TRPRTX0402	4 - Inputs, 0-10 V, 4-20 mA, RTD, TC, 2-Outputs, 0-10 V, 4-20 mA, 16 bits each.

Cables

EC-P-108-00	Connects OIS PLUS to S9/S11//VF-nC1/VF-nC3 TTL Port, smart cable, 2 m.
EC-P-108A-00	Connects OIS PLUS to Toshiba G9/AS1 ASDs RS485 port, 4 wire, 2m.
EC-P-019A-00	Connects OIS40R/OISPLUS/OIS120A/GWY to T1 Programming Port, 2 m.
EC-P-019B-00	Connects OIS40R/OISPLUS/OIS120A/GWY to T2/T3/S2E/S2T Programming Port, 2 m.
EC-P-108C-00	Connects OIS PLUS to Toshiba FS1/nC3 ASDs RS485 port, 2 wire, 2m.
EC-P-046A-00	Connects OIS40R/OIS PLUS/OIS120A/GWY to T1/T2E/T3/S2E/S2T RS485 Port, Pigtail on PLC end, 2 m.
EC-P-045B-00	Connects OIS PLUS/OIS120A to T2/T3/S2E/S2T Programming Port, 2 m.
RC-P-009H-00	Connects OIS PLUS/GWY to V200 Series PLC, RS232, 2 m.
RC-P-009I-00	Connects OIS PLUS/GWY to V200 Series PLC, RS485, 2 m.
IBM-0909-1-00[2]	Programming Cable, For Download from Computer to all OIS/OIS PLUS. Use with OISeup32 & OIL-DS setup software.

Notes: 1. Analog Inputs are Non Isolated (unless noted)

2. Standard USB printer cable can be used for programming/monitoring OIS PLUS Displays.

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