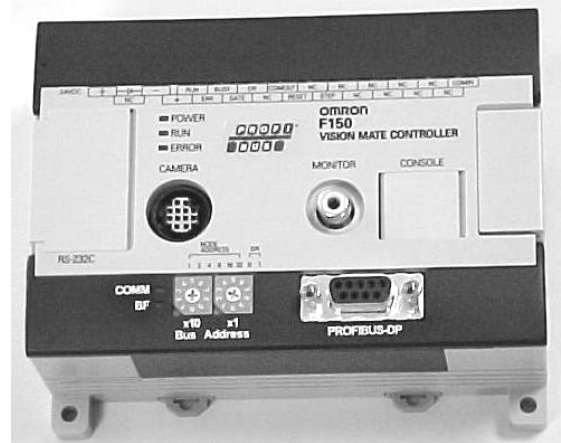


### F150 Vision Controller with integrated PROFIBUS-DP unit

#### Main features

- PROFIBUS setting fully integrated into F150 user menu
- Auto-detection of all PROFIBUS-DP baud rates from 9,6kbit/s to 12 Mbit/s.
- Slave address setting by hardware, selectable from 00 to 99
- Support of PROFIBUS-DP broadcast functions: Sync / Freeze / Clear
- F150 typical input and output words possible:
  - Input: 1 word (basic mode)
  - 5 words (expanded mode)
  - Output: 3 words / 8 words (data output off)
  - 27 words / 32 words (data output on)



#### Ordering Information

Product Code	Description
F150-C15E-3-PRT	F150 Vision Controller with integrated PROFIBUS-DP unit

#### Specifications

##### ■ Profibus Communication Specifications

<b>Application standard</b>	EN 50170 vol. 2
<b>Station type</b>	PROFIBUS-DP slave
<b>Data consistency</b>	over whole area
<b>Bus connector</b>	9-pin female sub-D connector (RS-485 ProfiBus)
<b>Bus termination</b>	external
<b>Baud rate (auto-detect)</b>	9.6 / 19.2 / 45.45 / 93.75 / 187.5 / 500 kbit/s, 1.5 / 3.6 / 12 Mbit/s
<b>ProfiBus address range</b>	00 to 99 (no remote setting)
<b>Communication cable</b>	type A (EN 50170 vol. 2)
<b>Minimum slave interval time</b>	0.5 ms
<b>Watchdog base</b>	1 ms / 10 ms
<b>Supported DP functions</b>	Data_Exchange, Slave_Diag, Set_PRM, Chk_Cfg, Global Control, Get_Cfg, RD_Inp, RD_Outp
<b>ProfiBus-DP GSD file</b>	OC_05EA

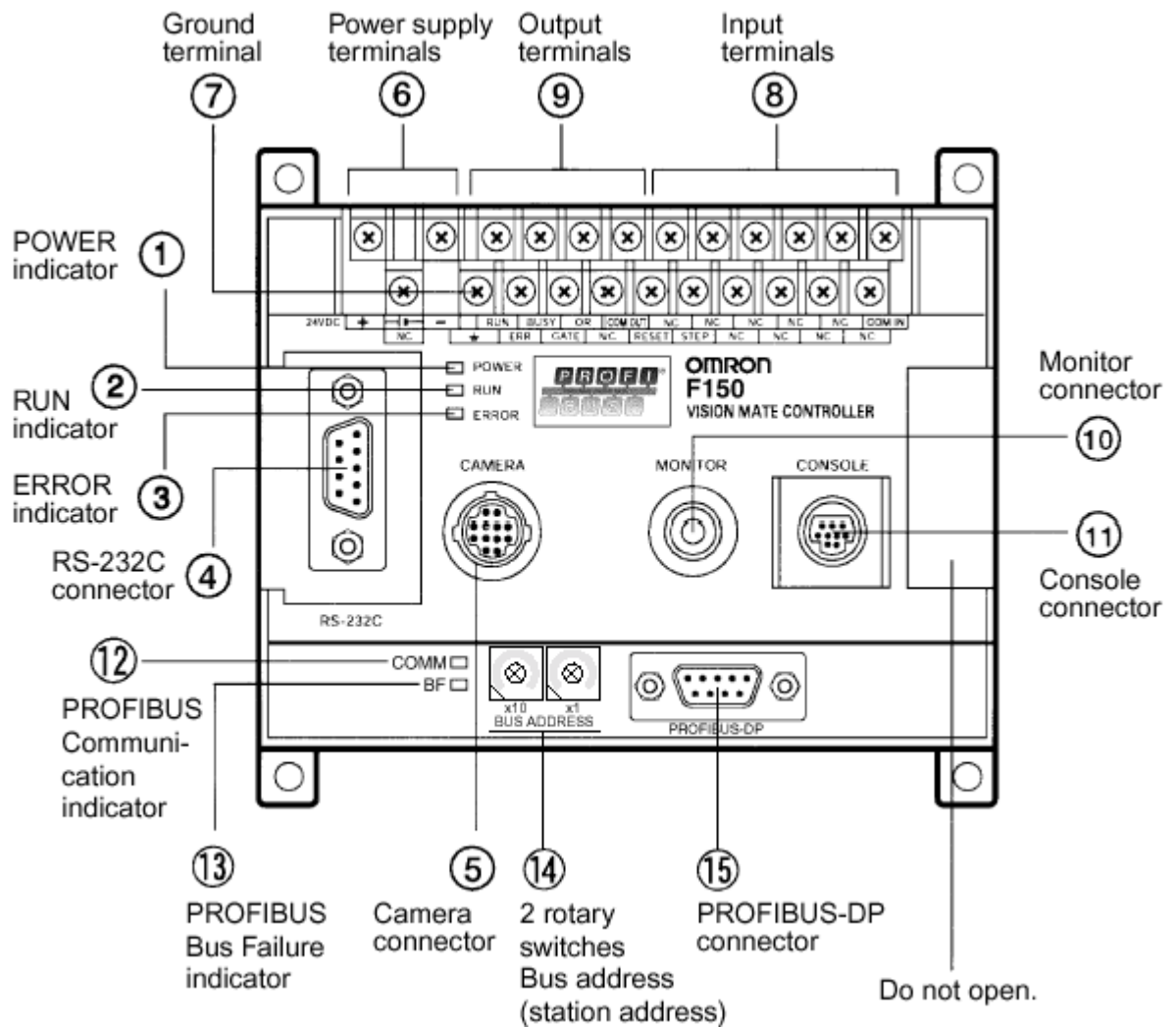
**■ General Specifications**

<b>Supply voltage</b>	20.4 to 26.4V DC (including ripple)
<b>Current consumption</b>	Approx. 0.5 A
<b>Insulation resistance</b>	20 M $\Omega$ min. between all DC external terminals and GROUND terminal
<b>Dielectric strength</b>	1000 V AC, 50/60Hz between all DC external terminals and GROUND terminal
<b>Leakage current</b>	10 mA max.
<b>Noise resistance</b>	1500 Vp-p ; pulse width:0.1 $\mu$ s / 1 $\mu$ s ;rising time;1 ns (pulse)
<b>Vibration resistance</b>	10 to 150Hz ; half –amplitude:0.5 mm; max. acceleration: 70m/s <sup>2</sup> , 4 times for 8 min each in 3 directions
<b>Shock resistance</b>	200m/s <sup>2</sup> , 3 times each in 6 directions
<b>Ambient temperature</b>	Operating : 0 to 50°C; storage :-25 to +65°C (with no icing or condensation)
<b>Ambient humidity</b>	Operating / storage : 35% to 85% (with no condensation)
<b>Ambient environment</b>	No corrosive gases
<b>Protection class</b>	Class I (with protective conductor terminal),
<b>Degree of protection</b>	IEC60529 IP20 (in-panel)
<b>Case material</b>	ABS/PC for wall and DIN rail mounting
<b>Weight</b>	Approx. 500g (without cable)

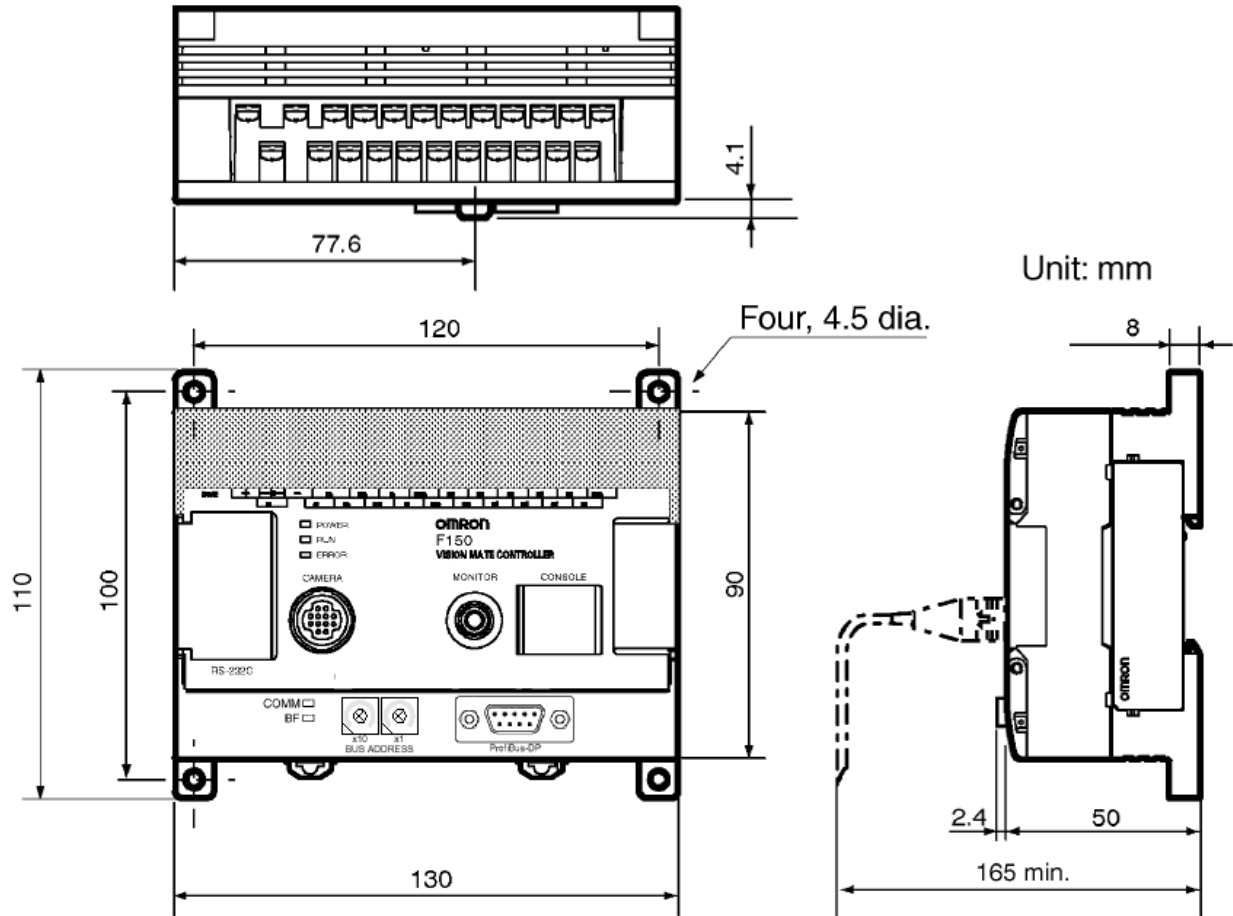
## ■ Vision Specifications

<b>Number of Cameras connectable</b>	1 or 2 (when using F150-A20)
<b>Number of pixels</b>	512(H)×484(V)
<b>Number of scenes</b>	16 (can be backed up to a personal computer via RS-232C)
<b>Image storage function</b>	Maximum of 23 images stored
<b>Processing method</b>	Gray / Binary
<b>Filtering</b>	Smoothing, edge enhancement, edge extraction, background suppression
<b>Number of binary levels</b>	256 levels per region
<b>Position displacement compensation</b>	Compensation directions : X,Y and $\theta$ directions: Detection methods: Binary center of gravity, axis angle, midpoint, gray search (1 model or 2 models), gray edge position
<b>Number of measurement regions</b>	16 regions / scene
<b>Measurement data</b>	Binary center of gravity and area, axis angle, correlation value, gray search position, defect, edge position, edge pitch , density averaging, relative search
<b>Data operation functions (expressions)</b>	Arithmetic calculation, distance, angle, maximum/minimum value, absolute value, etc.
<b>Result outputs</b>	Overall judgement judgements for measurement/expression results for each region, measurement/expression results (can be output via RS-232C in parallel)
<b>Monitor interface</b>	1 channel (pin jack, compatible with over-scan monitor)
<b>RS-232C interface</b>	1 channel (D-sub, 9-pin, female)
<b>Profibus interface</b>	1 channel (D-sub, 9-pin, female) DP V0
<b>Parallel I/O</b>	1 input and 5 outputs including control I/O points
<b>PROFIBUS control LED</b>	1 BF (Bus Failure Indication), 1 COMM (Data Transfer Indication)
<b>EMC compliance</b>	EN 61326
<b>Extent of delivery</b>	1 Vision mate controller F150-C15E-3-PRT 1 Manual F150-Profibus, 1 CD-ROM
<b>Accessories</b>	<ul style="list-style-type: none"> <li>• Camera: F150-SL20A, F150-SL50A, F150-SLC20, F150-SLC50, F150-S1A</li> <li>• Two-camera unit: F150-A20</li> <li>• Camera unit cable: F150-VA</li> <li>• Console: F150-KP</li> <li>• Camera cable: F150-VS</li> <li>• Monitor cable: F150-VM</li> <li>• Video Monitor: F300-M09, F150-M05L</li> </ul>

# Nomenclature



Dimensions



**ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.**  
 To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

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