

The OMRON logo is displayed in a bold, blue, sans-serif font. The letters are closely spaced and set against a light yellow rectangular background.

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OS32C Safety laser scanner

- Type 3 safety laser scanner complies with IEC61496-1/-3
- 70 sets of safety zone and warning zone combinations are available, supporting complicated changes in working environments
- A safety radius up to 4 m and warning zone(s) radius up to 10 m can be set
- 8 Individual sector indicators and various LED indications allow the user to determine scanner status at a glance
- Reference boundary monitoring function prevents unauthorized changes in the scanner position
- Configurable minimum object resolution of 30, 40, 50 or 70 mm, for hand and arm detection applications

Ordering information

Description	Max. operating range	Order code
OS32C with back location cable entry	3 m	OS32C-BP
	4 m	OS32C-BP-4M
OS32C with side location cable entry ^{*1}	3 m	OS32C-SP1
	4 m	OS32C-SP1-4M
OS32C with back location cable entry EtherNet/IP capable for status measurement data reporting	3 m	OS32C-BP-DM
	4 m	OS32C-BP-DM-4M
OS32C with side location cable entry ^{*1} EtherNet/IP capable for status measurement data reporting	3 m	OS32C-SP1-DM
	4 m	OS32C-SP1-DM-4M

^{*1} Each connector is located on the left as viewed from the back of the I/O block.

Description	Remarks	Order code
Configuration tool	CD-ROM OS supported: Windows 2000, XP, Vista, Windows 7	included

Specifications

Sensors

Sensor type	Type 3 safety laser scanner	
Safety category	Category 3, performance level d (ISO13849-1: 2006)	
Detection capability	Configurable; Non-transparent with a diameter of 30, 40, 50 or 70 mm (1.8% reflectivity or greater)	
Monitoring zone	Monitoring zone set count: (Safety zone + 2 warning zones) × 70 sets	
Operating range	Safety Zone: 4.0 m (min. obj. resolution of 70mm, only OS32C-_-4M types) 3.0 m (min. obj. resolution of 50 mm or 70 mm) 2.5 m (min. obj. resolution of 40 mm) 1.75 m (min. obj. resolution of 30 mm) Warning Zone: 10.0 m (15.0 m for OS32C-_-4M types)	
Detection angle	270°	
Response time	Response time from ON to OFF: From 80 ms (2 scans) to 680 ms (up to 17 scans) ^{*1} Response time from OFF to ON: Response time from ON to OFF + 100 ms to 60 s (configurable)	
Line voltage	24 VDC +25%/−30% (ripple p-p 2.5 V max.)	
Power consumption	Normal operation: 5 W max., 4 W typical (without output load) ^{*2} Standby mode: 3.75 W (without output load)	
Safety output (OSSD)	PNP transistor × 2, load current of 250mA max., residual voltage of 2 V max., load capacity of 2.2 μf max., leak current of 1 mA max. ^{*2,*3,*4}	
Auxiliary output (Non-safety)	NPN/PNP transistor × 1, load current of 100 mA max., residual voltage of 2 V max., leak current of 1 mA max. ^{*3,*4,*5}	
Warning output (Non-safety)	NPN/PNP transistor × 1, load current of 100 mA max., residual voltage of 2 V max., leak current of 1 mA max. ^{*3,*4,*5}	
Output operation mode	Auto start, start interlock, start/restart interlock	
Input	External Device Monitoring (EDM)	ON: 0 V short (input current of 50 mA), OFF: Open
	Start	ON: 0 V short (input current of 20 mA), OFF: Open
	Zone select	ON: 24 V short (input current of 5 mA), OFF: Open
	Stand-by	ON: 24 V short (input current of 5 mA), OFF: Open
Connection type	Power cable: 18-pin mini-connector (pigtail) Communication cable: M12, 4-pin connector	
Connection with PC	Communication: EtherNet/IP	
Indicators	RUN indicator: Green, STOP indicator: Red, Interlock indicator: Yellow, Warning output indicator: Orange, Status/diagnostic display: 2 × 7-segment LEDs, Intrusion indicators: Red LED × 8	
Enclosure rating	IP65 (IEC60529)	
Dimensions (W × H × D)	133.0 × 104.5 × 142.7 mm (except cable)	
Weight (Main Unit only)	1.3 kg	
Approvals	Certified by: TÜV Rheinland, UL Major standards: IEC61496-1/-3 (Type 3), IEC61508 (SIL2), ISO13849-1:2008 (Category 3, performance level d), UL508, UL1998	

^{*1} Pollution Tolerance will add 6 ms to each scan time.

^{*2} Rated current of OS32C is 1.025 A max. (OS32C 210 mA + OSSD A load + OSSD B load + auxiliary output load + warning output load + functional Inputs). Where functional inputs are: EDM input ... 50 mA, Start input ... 20 mA, Standby input ... 5 mA, Zone X input ... 5 mA × 8 (eight zone set select inputs).


^{*3} Output voltage is input voltage − 2.0 VDC.

^{*4} Total consumption current of 2 OSSDs, auxiliary output, and warning output must not exceed 700 mA.


^{*5} Output polarity (NPN/PNP) is configurable via the configuration tool.

Accessories (sold separately)

Power cable







Appearance	Description	Remarks	Order code
	Cable length: 3 m	One cable is required per sensor	OS32C-CBL-03M
	Cable length: 10 m		OS32C-CBL-10M
	Cable length: 20 m		OS32C-CBL-20M
	Cable length: 30 m		OS32C-CBL-30M

Ethernet cable

Appearance	Description	Remarks	Order code
	Cable length: 2 m	Required for configuration and monitoring	OS32C-ECBL-02M
	Cable length: 5 m		OS32C-ECBL-05M
	Cable length: 15 m		OS32C-ECBL-15M






Note: An ethernet cable with an M12, 4-pin connector is required.

Mounting brackets

Appearance	Description	Remarks	Order code
	Bottom/side mounting bracket	Bottom/side mounting bracket × 1, unit mounting screws × 4 sets	OS32C-BKT1
	XY axis rotation mounting bracket	XY axis rotation mounting bracket × 1, unit mounting screws × 6 sets, bracket mounting screws × 1 set (must be used with OS32C-BKT1)	OS32C-BKT2
	Simple mounting bracket	Simple mounting brackets × 2, unit mounting screws × 4 sets ^{*1}	OS32C-BKT3
	Protective cover for window		OS32C-BKT4
	Mounting stand	When using a mounting stand, use an OS32C with side location cable entry (OS32C-SP1). The OS32C with back location cable entry (OS32C-BP) cannot be mounted. Use with mounting brackets (OS32C-BKT1 and OS32C-BKT2).	OS32C-MT
	Hardware kit for mounting stand	Mounting screws × 3 sets Use this when mounting a bracket to the mounting stand.	OS32C-HDT

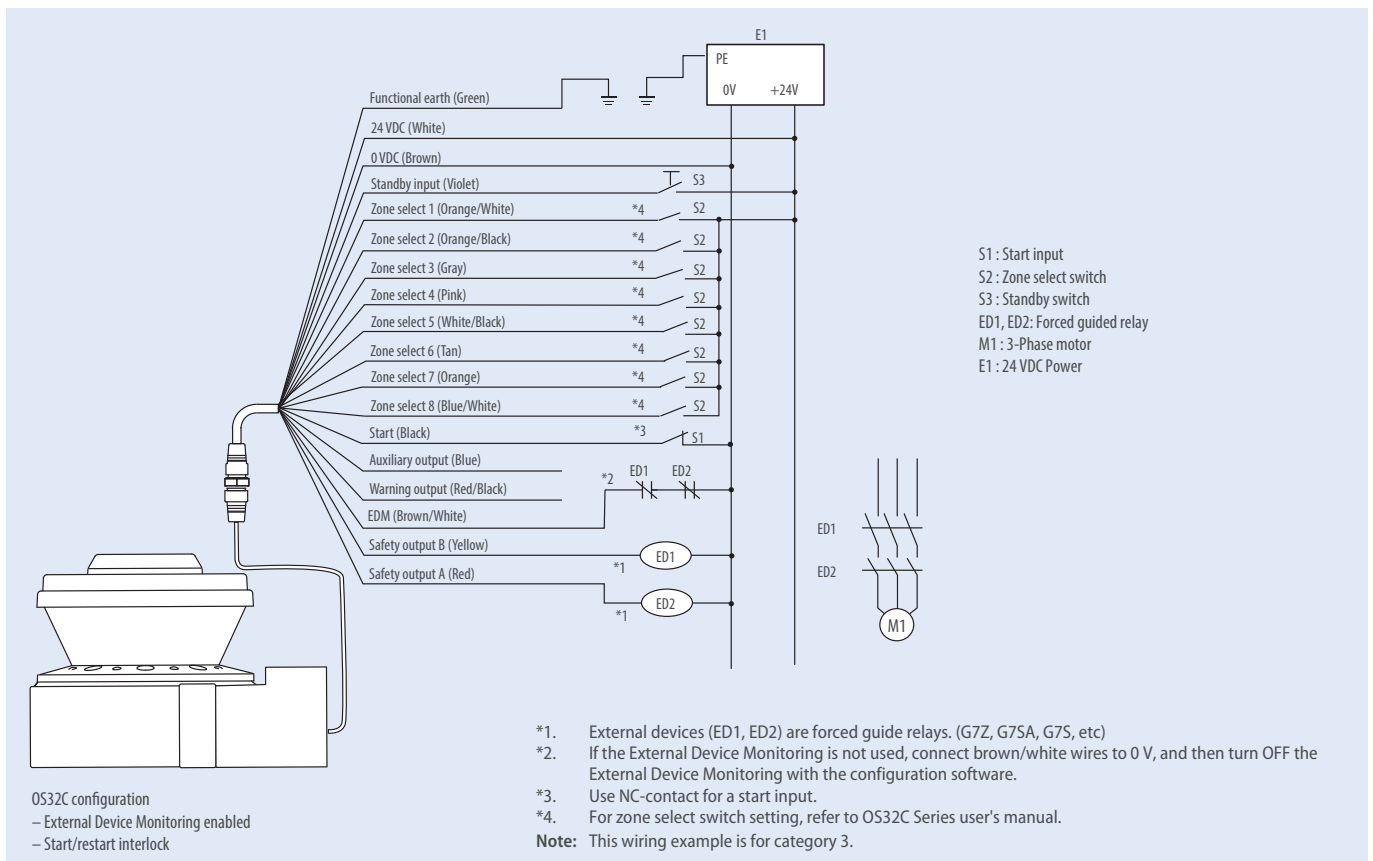
*1 There are eight OS32C mounting screws: four screws for singular use, and four screws for protective cover for window.

Miscellaneous

Appearance	Description	Remarks	Order code
	Scan window	Spare for replacement	OS32C-WIN-KT
	Sensor block without I/O block Max. operating range: 3 m	Spare for replacement	OS32C-SN
	Sensor block without I/O block Max. operating range: 4 m		OS32C-SN-4M
	Sensor block without I/O block for EtherNet/IP Max. operating range: 3 m	Spare replacement for EtherNet/IP	OS32C-SN-DM
	Sensor block without I/O block for EtherNet/IP Max. operating range: 4 m		OS32C-SN-DM-4M
	I/O block	With cable access from the back	OS32C-CBBP
		With cable access from the left side	OS32C-CBSP1
	Window cleaning kit, anti-static cleaner	Accessory	WIN-CLN-KT

Connection

Basic connection with single OS32C unit
Category 3, performance level d (ISO13849-1)



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Product	Code	Reference	Product link
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Security Product, Cable OS32C ES power supply 10m	349179	OS32C-CBL-10M	Buy on EAN
Security Product, Cable OS32C ES power supply 20m	349180	OS32C-CBL-20M	Buy on EAN
Security Product, Cable OS32C ES power supply 30m	349181	OS32C-CBL-30M	Buy on EAN
Security Product, OS32C configuration Cable 2m	349182	OS32C-ECBL-02M	Buy on EAN
Security Product, OS32C configuration Cable 5m	349183	OS32C-ECBL-05M	Buy on EAN
Safety laser scanner mounting kit, bottom/side mounting	349185	OS32C-BKT1	Buy on EAN
Security Product, OS32C angle mounting bracket XY	349186	OS32C-BKT2	Buy on EAN
Security Product, OS32C support simple assembly	349187	OS32C-BKT3	Buy on EAN
Security Product, OS32C Protector for sensor	349188	OS32C-BKT4	Buy on EAN
Security Product, OS32C scanner replacement window	349191	OS32C-WIN-KT	Buy on EAN
	393499	OS32C-BP-4M	Buy on EAN
Security Product, Cleaning Kit OS32C	359022	WIN-CLN-KT	Buy on EAN
	393502	OS32C-BP-DM-4M	Buy on EAN

Safety Products, Safety Laser Scanner 4m / 15m Cable sifor Ethernet / IP	393501	OS32C-SP1-DM-4M	Buy on EAN
Safety laser scanner, replacement I/O block, back location cable exit	349176	OS32C-CBBP	Buy on EAN
Safety Products, Safety Laser Scanner 4m / 15m lateral Cable	393498	OS32C-SP1-4M	Buy on EAN
	349173	OS32C-BP	Buy on EAN
	349174	OS32C-SP1	Buy on EAN
Security Product, Terminal Block OS32C left sifor access	349177	OS32C-CBSP1	Buy on EAN
	374954	OS32C-SN-DM	Buy on EAN
	374953	OS32C-SP1-DM	Buy on EAN
	374952	OS32C-BP-DM	Buy on EAN
Security Product, OS32C stand mounting bracket	349189	OS32C-MT	Buy on EAN
Security Product, OS32C configuration Cable 15m	349184	OS32C-ECBL-15M	Buy on EAN