

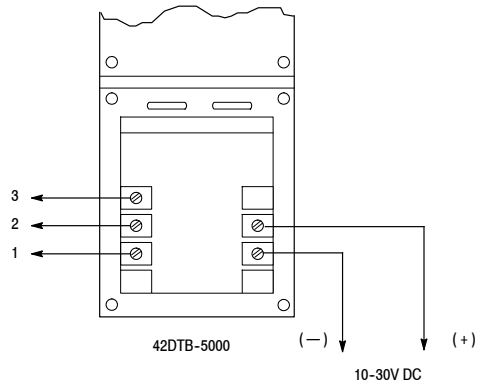
Installation Instructions—PHOTOSWITCH® Series 5000 Blue Line

All Sensors		Retroreflective	Polarized Retroreflective	Standard Diffuse	Fixed Focus Diffuse	Wide Angle Diffuse	Glass Fiber Optic	Plastic Fiber Optic
1	Sensing Distance	10m (33ft)	6m (20ft)	0.4m-2.1m (16in-7ft)	(IR) 127mm (5in) max peak @ 3in (VR) 101.6mm (4in) max peak @ 2in	(IR) 508mm (20in) (VR) 177.8mm (7in)	Depends on fiber optic cable	
2	Transmitting LED	Infrared 880nm	Visible red 660nm	Infrared 880nm	(42DRA) Infrared 880nm (42DRF) Visible Red 660nm		Infrared 880nm	Visible red 660nm
3	Indicators	Red: Output						
4	Field of View	2.5°		3.0°	—	—	Depends on fiber optic cable	
5	Sensitivity Adjustment	Yes						
6	Operating Temperature	-40°C to +65°C (-40°F to +150°F)						
7	Relative Humidity	90% maximum						
8	Housing/Lens Material	Valox®/Acrylic	Valox®/Glass	Valox®/Acrylic				
9	Cover Gasket Material	Nitrile						
10	Operating Environment	NEMA 3, 4, 12, 13, and IP66 (IEC 529), corrosion resistant, high-impact housing						
11	Approvals	UL listed, CSA certified (except cable style power base), and CE marked for all applicable directives						
12	Protections	Reverse Polarity/Power on False Pulse protection						
13	Vibration	10-55 Hz, 1 mm amplitude, Meets or exceeds IEC 947-5-2						
14	Shock	30G, Meets or exceeds IEC 947-5-2						
Photohead with NPN and PNP Output								
15	Catalog Number	42DRU-5000	42DRU-5200	42DRP-5000	42DRA-5000-FF	42DRA-5000-WA	42DRA-5000-FO	42DRF-5000-FO
					42DRF-5000-FF	42DRF-5000-WA		
16	Output Energized	LO/DO Selectable						
17	Load Current	100mA						
18	Leakage Current	1µA						
19	Response Time	1ms						
Base								
		Terminal Base	Cable Base					
15	Catalog Number	42DTB-5000	42DCB-5000					
20	Supply Voltage	10-30V DC						
21	Power Consumption	35mA						

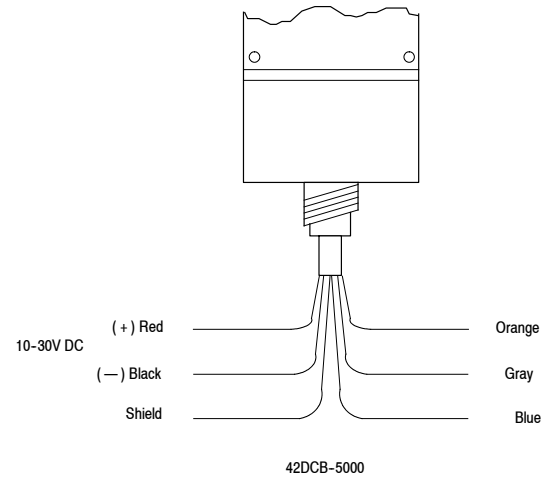
English	Français	Italiano	Deutsch	Español	Portuguêas	
Operating Distance Selection The maximum operating distance is based on installing the sensor in a relatively clean environment. Normal industrial environments actually range from moderately dusty to extremely dirty. Greater operating margin may be required which can be obtained by reducing the operating distance of the control.	Choix de la Distance de Fonctionnement La distance maximale de fonctionnement dépend de la propreté relative de l'environnement d'installation de la cellule. A vrai dire, les environnements industriels normaux vont de modérément poussiéreux à extrêmement sales. Une marge d'opération plus grande peut être nécessaire et s'obtient en réduisant la distance opérationnelle du contrôle.	Selezione Distanza Operative La massima distanza di funzionamento si basa sull'installazione del sensore in un ambiente relativamente pulito. Gli ambienti industriali normali vanno in verità da moderatamente polverosi a estremamente sporchi. Potrebbe essere necessario un margine di funzionamento superiore che si può ottenere riducendo la distanza operativa del controllo.	Wahl der Reichweite Die maximale Reichweite basiert auf einer Installation des Sensors in einer relativ sauberen Umgebung. Normale industrielle Umgebungen sind zumeist jedoch relativ staubig bis äußerst verschmutzt. In diesem Fall ist eine größere Betriebsmarge erforderlich, die durch einen geringeren Abstand erzielt werden kann.	Selección de Distancia de Operación La distancia máxima de operación se basa en la instalación del sensor en un ambiente relativamente limpio. Los ambientes industriales normales fluctúan entre moderadamente polvorosos a extremadamente sucios. Es posible que se requiera un margen de operación mayor, el cual puede obtenerse reduciendo la distancia operativa del control.	Seleção do Alcance O alcance máximo é baseado na instalação do detector em ambiente relativamente limpo. Os ambientes industriais normais efetivamente apresentam condições entre moderadamente empoeirados e extremamente sujos. Poderá ser exigida uma maior margem de operação, que pode ser obtida pela redução do alcance do controle.	
Retroreflective	Réflex	A Riflessione	Reflexions-Lichtschranke	Retrorreflexivo	Retro-reflexivo	
Polarized Retroreflective	Réflexe polarisé	Retroriflessivo polarizzato	Reflexionslichtschranke, polarisiert	Retrorreflexivo polarizado	Feixe Retro-Refletido, Luz Polarizada	
Standard Diffuse	Proximité standard	Taster standard	Lichttaster	Difusa Normal	Feixe Difuso-Refletido Padrão	
Fixed Focus Diffuse	Proximité à focale fixe	Taster focalizzato	Lichttaster mit fester Fokussierung	Difusa de Foco Fijo	Feixe Difuso-Reflexivo, com Foco Fixo	
Wide Angle Diffuse	Proximité grand angle	Taster a Grand'Angolo	Weitwinkel-Lichttaster	Difusa Gran Angular	Feixe difuso-reflexivo, com grande abertura	
Glass Fiber Optic	Fibre optique de verre	Fibre Ottiche in Vetro	Glas-Lichtleiter	Fibra de Vidrio Optica	Fibra óptica de vidro	
Plastic Fiber Optic	Fibres optiques plastique	Fibre Ottiche in Plastica	Kunststoff-Lichtleiter	Fibra de Plástico Optica	Fibra óptica de plástica	
Depends on fiber optic cable	Dépend de la fibre optique	Dipende dalla Fibra Ottica	Hängt vom Lichtleiter-Kabel ab	Depende del cable de Fibra Optica	Depende do cabo de fibra óptica escolhido	
Infrared	Infrarouge	Infrarosso	Infrarot	Infrarrojo	Infravermelho	
Visible Red	Rouge visible	Fibre ottiche ad emissione Rosso Visible	Sichtbares Rotlicht	Rojo Visible	Luz vermelha visível	
Red: Output	Rouge: Sortie	Rosso: Uscita	Rot: Schallausgang	Rojo: Salida	Vermelho: Saída	
UL listed, CSA certified, and CE marked for all applicable directives	Listés UL, Certifiés CSA, et marqués CE en conformité avec toutes les directives applicables	Elencato UL, certificato CSA, e marcato CE per tutte le direttive applicabili	UL-Eintragung, CSA-Zertifikat und CE-Kennzeichnung für alle anwendbaren Richtlinien	Certificado CSA, listado UL, y marca CE	Certificado por CSA, listado por UL, e marcado com CE segundo diretrizes aplicáveis	
10-55Hz, 1mm amplitude, meets or exceeds IEC 947-5-2	10-55Hz, 1mm amplitude, erfüllt oder übertrifft IEC 947-5-2	10-55Hz, amplitude 1mm, conforme ou supérieur à la norme CEI 947-5-2	10-55Hz, 1mm di ampiezza, soddisfa o supera le IEC 947-5-2	10-55Hz, 1mm de amplitud, satisfice o supera IEC 947-5-2	10-55Hz, 1mm de amplitude, atende ou excede a norma IEC 947-5-2	
Power on false pulse protection	Protection l'impulsion à la mise sous tension	Protezione falsi impulsi in accensione	Einschaltimpuls-Unterdrückung	Protecciones contra pulsos en falso en el encendido	Proteção contra pulso falso ao alimentar	
Wiring Diagrams	Schémas de câblage	Schema Collegamenti	Anschluss-Schema	Diagramas de Cableado	Diagramas de Conexão	
Typical Response Curve	Courbe de réponse	Curva di risposta	Diagramm. Relative Empfangs-Lichtstärke / Reich-/Tastweite	Curva de Respuesta Típica	Curva de resposta típica	
Dimensions	Encombremets	Dimensioni	Abmessungen	Dimensiones	Dimensões	
Accessories	Accessoires	Accessori	Zubehör	Accesorios	Acessórios	
1	Sensing Distance	Distance de Détection	Distanza di Rilevamento	Reichweite	Dispositivo Sensor	Alcance
2	Transmitting (LED)	LED de Transmission	LED di Trasmissione	Lichtquelle (LED)	LED de Transmisión	LED de Transmissão
3	Indicators	Indicateurs	Indicatori	Anzeigen	Indicadores	Indicadores
4	Field of View	Angle de Visée	Campo di Visione	Sichtbereich	Campo de Visión	Campo de Visão
5	Sensitivity Adjustment	Réglage de Sensibilité	Regolazione della Sensibilità	Empfindlichkeits-Einstellung	Ajuste de Sensibilidad	Ajuste de sensibilidade
6	Operating Temperature	Température de Fonctionnement	Temperatura di Funzionamento	Betriebstemperatur	Temperatura de Operación	Temperatura de Operação
7	Relative Humidity	Humidité Relative	Umidità Relativa	Relative Luftfeuchtigkeit	Humedad Relativa	Umidade Relativa
8	Housing/Lens Material	Matériaux du Boîtier/du Couvercle/des Lentilles	Materiale dell'Involucro/per la Copertura/delle Lenti	Gehäusematerial/Werkstoff der Abdeckung/Linsenmaterial	Material del Alojamiento/de la Cubierta/del Lente	Material da Caixa/Tampa/Lente
9	Cover Gasket Material	Matériau du joint de capot	Materiale Guarnizioni della Copertura	Dichtungsmaterial für Abdeckung	Material de la Junta de la Tapa	Material da tampa da junta
10	Operating Environment	Environnement Opérationnel	Ambiente Operativo	Betriebsumgebung	Ambiente de Operación	Ambiente de Operação
11	Approvals	Homologations	Approvazioni	Approbation	Aprobaciones	Aprovações
12	Protections	Protections	Protezioni	Schutzart	Protecciones	Proteções
13	Vibration	Vibration	Vibrazione	Vibration	Vibración	Vibração
14	Shock	Choc	Urto	Schock	Impacto	Choque
15	Catalog Number	Référence de Commande	Numero di Catalogo	Bestellnummer	Número de Catálogo	Número do Catálogo
16	Output Energized	Sortie activée	Uscita	Ausgang aktiviert	Salida Activada	Saída comutada
17	Load Current	Courant de charge	Corrente di Carico	Laststrom	Corriente de Carga	Corrente de carga
18	Leakage Current	Courant de Fuite	Corrente di Dispersione	Ruhestrom	Corriente de Fuga	Corrente de Fuga
19	Response Time	Temps de Réponse	Tempo di Risposta	Ansprechzeit	Tiempo de Respuesta	Tempo de Resposta
20	Supply Voltage	Tension d'Alimentation	Tensione di Alimentazione	Versorgungsspannung	Voltaje de Alimentación	Tensão de Alimentação
21	Power Consumption	Consommation	Consumo Potenza	Leistungsaufnahme	Consumo de Alimentación eléctrica	Consumo de Energia

Wiring Diagrams

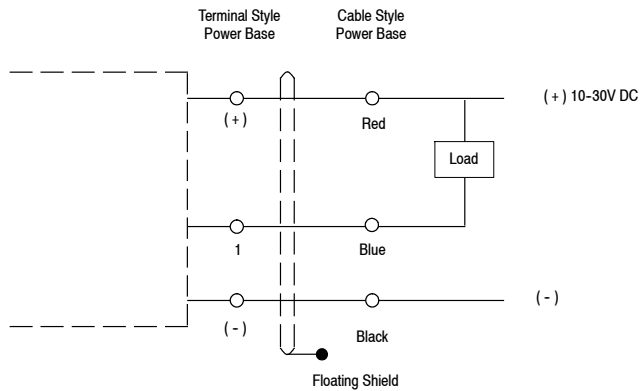
With Terminal Style Power Base



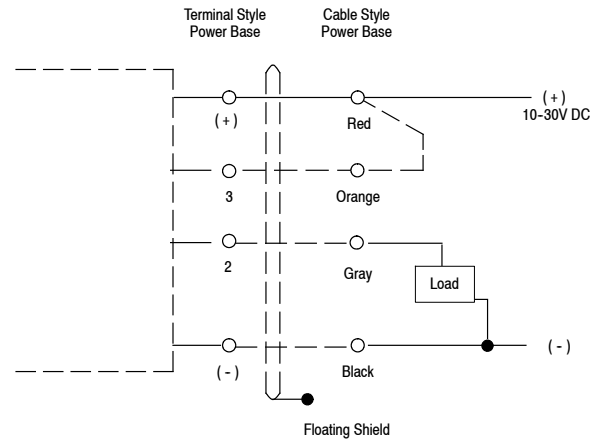
With Cable Style Power Base



NPN Output Connection (Sinking)



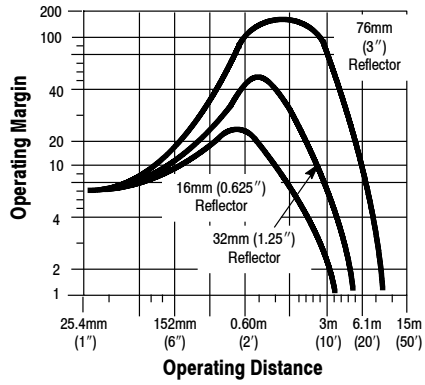
PNP Output Connection (Sourcing)



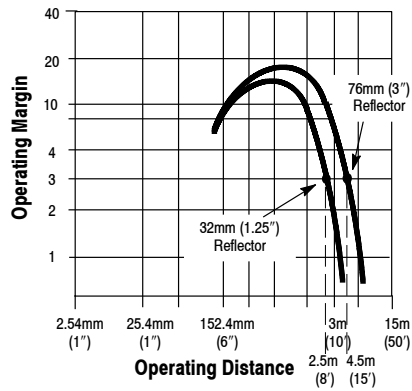
Note: Details of connection of Allen-Bradley Series 5000 photoelectric sensors to Allen-Bradley Programmable Controllers can be found in Publication 42MR-4.0.

Typical Response Curves

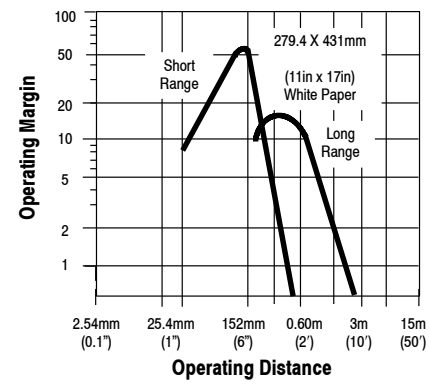
Retroreflective



Polarized Retroreflective

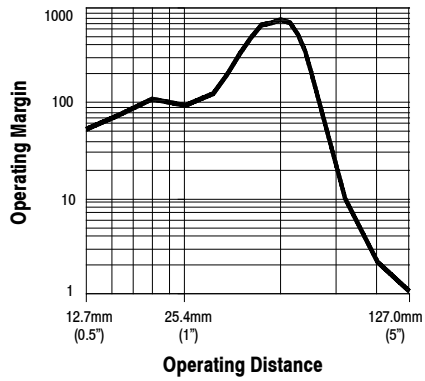


Standard Diffuse

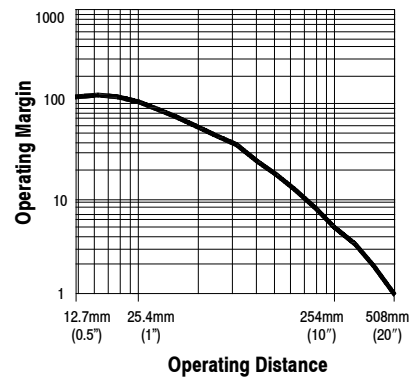


Infrared Glass Fiber Optic/Fixed Focus/Wide Angle Diffuse

Fixed Focus Lens

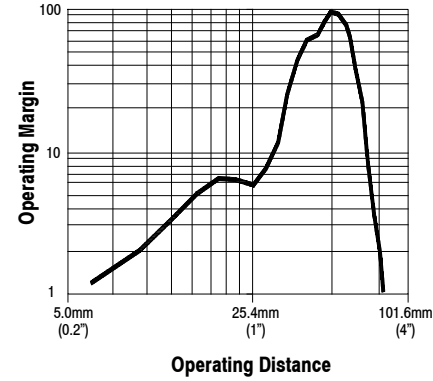


Wide Angle Lens

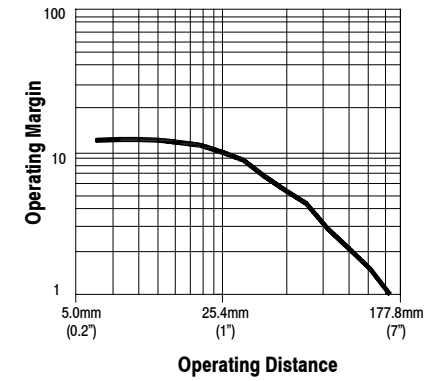


Visible Red Plastic Fiber Optic/Fixed Focus/Wide Angle Diffuse

Fixed Focus Lens

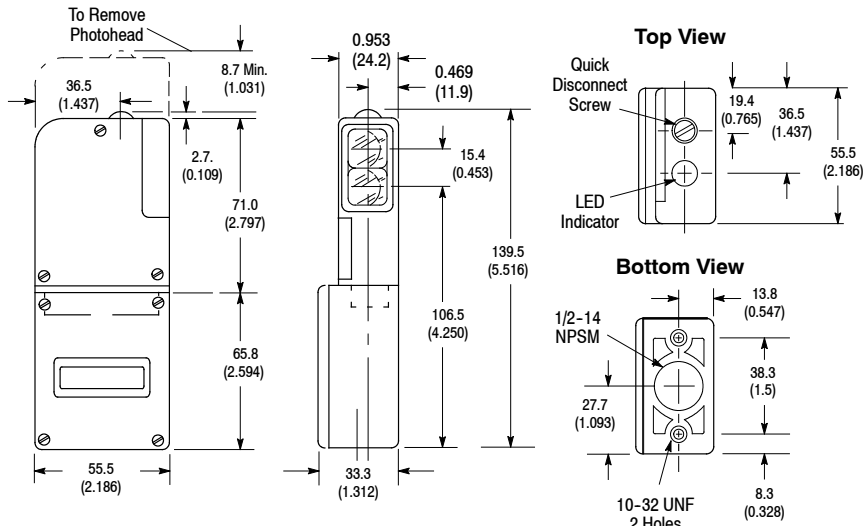


Wide Angle Lens

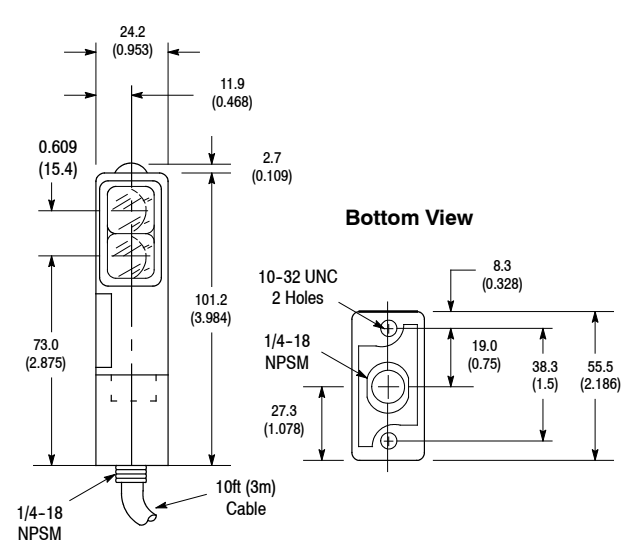


Dimensions—mm (inches)

Terminal Style Power Base



Cable Style Power Base



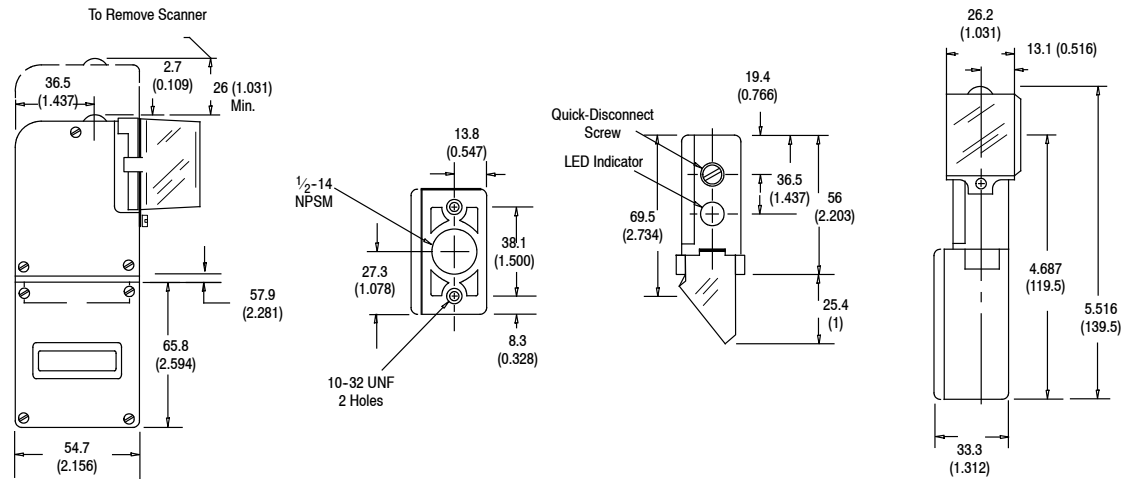
Note: Hardware included with sensor: two (2) nickel plated 10-32 mounting screws.

Accessories—mm (inches)

Lens Assembly

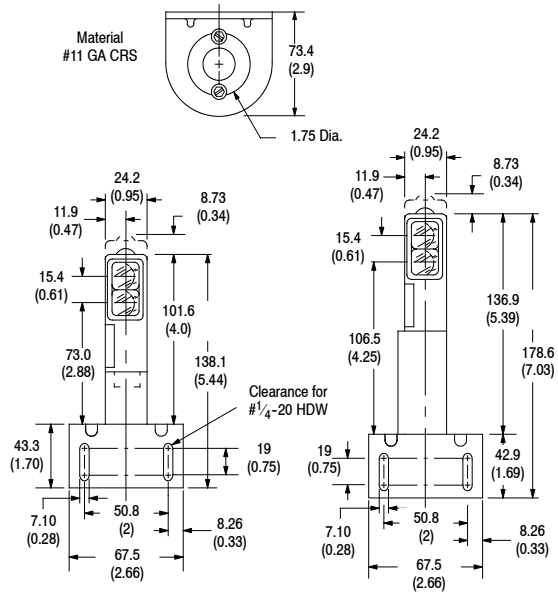
61-5550	Glass Fiber Optic
61-5551	Fixed Focus
61-5611	Wide Angle
61-6310	Plastic Fiber Optic

Right Angle Mirror Adaptor #60-1840



Accessories—mm (inches) (continued)

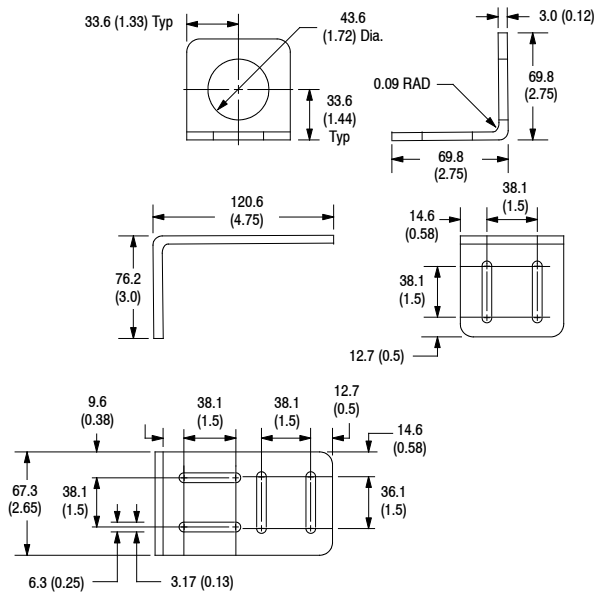
General Purpose Mounting Assembly #60-1785



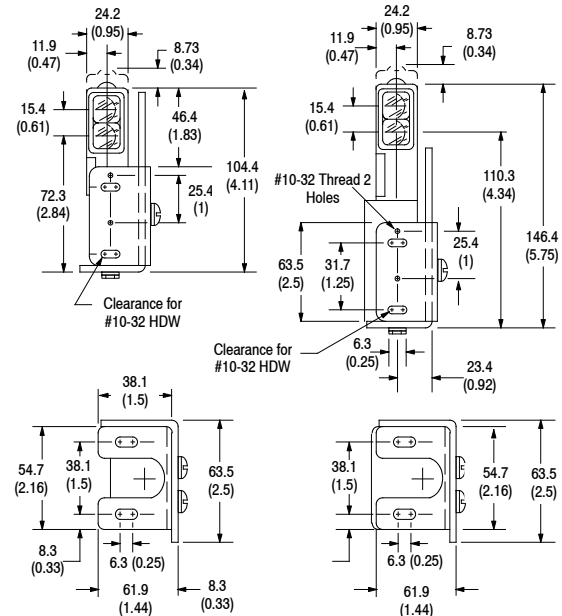
Control with Cable Style Power Base

Control with Terminal Style Power Base

General Purpose Mounting Assembly #60-1785



Heavy Duty Mounting Assembly #60-1748



Control with Cable Style Power Base

Control with Terminal Style Power Base

Heavy Duty Mounting Assembly #60-1748

