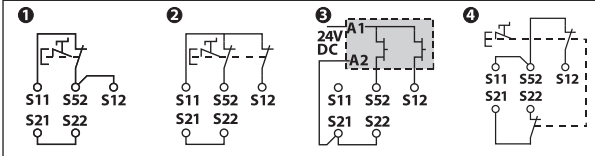


Diagnosics

The solid state status signal Y35 indicates the safety input state. The safety output state is signalized by solid state status output Y32 and the auxiliary (N.C.) output 41-42.

Safety Input

One safety device can be monitored per unit. According to the wiring inputs cross-loop monitoring of the inputs is enabled or disabled. Cross-Loop monitoring can be enabled for 2-channel safety inputs in 4-wire connection S11-S12, S21-S22. Cross-Loop monitoring is disabled for single channel inputs, dual channel input in 3-wire connection and 24V DC signals. In case of external 24V DC signals the negative pole has to be connected to S21.



1-CH = Single-channel / 1-kanalig / monocal / canale singolo / canal simple
2-CH = Dual-channel / 2-kanalig / bi-canal / doppio canale / bicanal
① max. Pl c: 1-CH; N.C.
② max. Pl d: 2-CH; 3-wire connection / 3-Draht Anschlussstechnik / 3-fils connectique / 3-fili connessione / 3-filamento conexão
③ max. Pl e: 2-CH; 24V DC signal / Signal / signal / segnale / señal
④ max. Pl e: 2-CH; 4-wire connection, cross faults require fault reset / 4-Draht Anschlussstechnik, Fehlerquittierung nach Querschluss erforderlich / 4-fils connectique, acquittement d'erreur nécessaire après un court-circuit / 4-fili connessione, dopo un loop trasversale occorre tacitare l'errore / 4-filamento conexão, confirmación del fallo necesaria después de cortocircuito transversal

Reset

The reset mode is configurable for automatic/manual start and manual monitored reset (MSRxxxRT).

A valid start/reset can only be operated if the feedback circuit is closed. Feedback contacts (N/C) of controlled actuators are connected to Y1-Y2.

T - Automatic/manual start

T = (Jumper X1-X2, X3-X4). In automatic/manual start mode the reset circuit S33-S34 is not monitored against signal changes (no edge detection). Unit is active once the safety inputs are closed and the reset circuit has been closed. If the safety inputs and reset circuit are concurrently closed during power-up, unit is activated immediately.

R - Manual monitored reset

R = (no Jumper). In manual monitored reset mode a signal change of the reset circuit (S33-S34) is required and monitored. A reset fault occurs if the safety inputs remain open while the reset circuit is closed.

R POSITIVE EDGE:

Unit is active once the safety inputs are closed and then the reset circuit is closed.

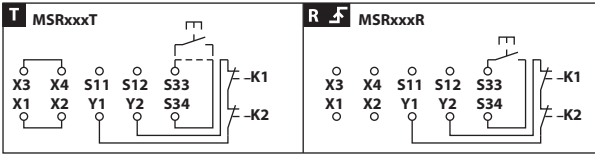
R NEGATIVE EDGE (440R-xxxxM):

Unit is active once the safety inputs are closed and then the reset circuit is closed and released again. Circuit resets upon release of the reset button.

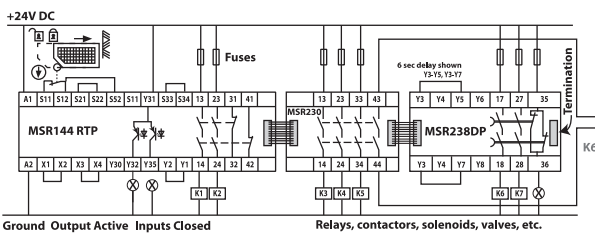
For both methods MSR144RTP is suitable for the safety requirements according to EN/ISO 13849-1.

Für beide Auswertungen erfüllt MSR144RTP die Sicherheitsanforderungen nach EN/ISO 13849-1.

Concernant les deux méthodes, MSR144RTP répond aux exigences en matière de sécurité de la norme EN/ISO 13849-1.



Wiring Example



Diagnosics

The signal Y35 of status des semi-conducteurs indique l'état des entrées de sécurité. L'état des sorties de sécurité est signalé par la sortie Y32 de statut des semi-conducteurs et par la sortie (N.C.) auxiliaire 41-42.

Sorties de sécurité

Un appareil de sécurité peut être surveillé par unité. En fonction des entrées du câblage, la surveillance Cross-Loop des entrées est activée ou désactivée. La surveillance Cross-Loop peut être activée pour les entrées de sécurité à deux canaux en connexion à 4 fils; S11-S12, S21-S22. La surveillance Cross-Loop est désactivée pour les entrées à canaux simples, les entrées à doubles canaux en connexion 3 fils et les signaux 24 V CC. En cas de signaux externes 24 V CC le pôle négatif doit être raccorder en S21.

Diagnostica

Il segnale di stato a stato solido Y35 indica la seguridad de la entrada. El estado de seguridad de la salida se indica por la salida de estado de estado sólido Y32 y la salida auxiliar (N.C.) 41-42.

Entrate di sicurezza

Un dispositivo di sicurezza può essere monitorato per unità. Secondo il cablaggio delle entrate il monitoraggio ad anello incrociato delle entrate è attivato o disattivato. Il monitoraggio ad anello incrociato può essere attivato per entrate di sicurezza a 2 canali in una connessione a 4 fili S11-S12, S21-S22. Il monitoraggio ad anello incrociato è disattivato per entrate a canale singolo, entrate a doppio canale in una connessione a 3 fili e segnali 24V c.c. In caso di segnali esterni 24V c.c. il polo negativo deve essere connesso a S21.

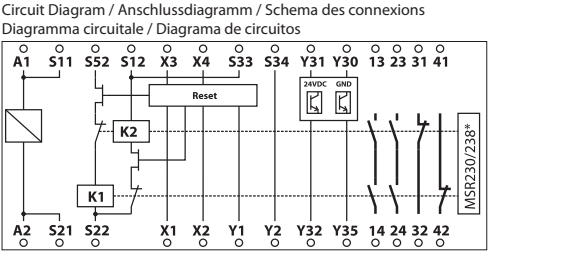
Diagnósticos

La señal de estado de estado sólido Y35 indica la seguridad de la entrada. El estado de seguridad de la salida se indica por la salida de estado de estado sólido Y32 y la salida auxiliar (N.C.) 41-42.

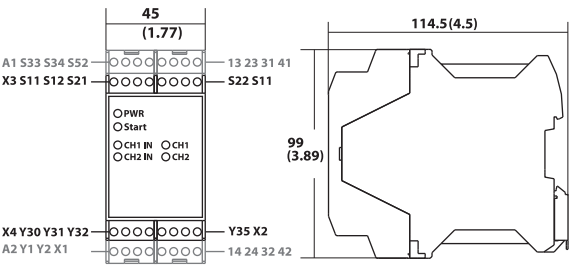
Entradas de seguridad

Se puede monitorizar un dispositivo de seguridad por unidad. La monitorización de lazo cruzado de las entradas se activa o desactiva en función de las entradas de hilos. La monitorización de lazo cruzado puede activarse para las salidas de seguridad bicanales de la conexión de cuatro hilos S11-S12, S21-S22. La monitorización de lazo cruzado se desactiva para las entradas monocanales, las entradas bicanales de la conexión de tres hilos y las señales de 24V CC. En el caso de las señales externas de 24V CC, el polo negativo debe conectarse a S21.

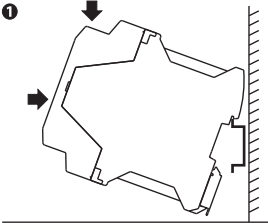
Drawings



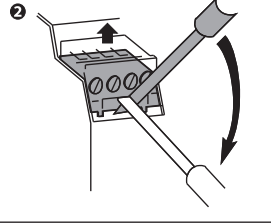
Dimensions / Abmessungen / Dimensions / Dimensioni / Dimensiones mm (in)



Installation



Installation

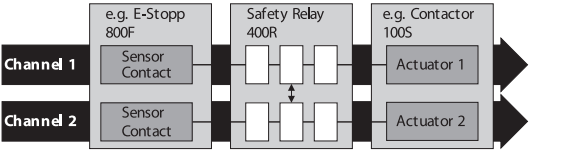


Safety Specification

The safety relay MSR144RTP can be used in safety circuits according to DIN EN 60204-1/VDE 0113 part 1. Based on the operation mode and wiring the below mentioned safety requirements are achievable in maximum.

Specifications are applicable only if the safety function is demanded at least once within 6 months. All diagnostic test are carried out at least before next demand. The mission time (TM) for the proof test interval (PTI) is adopted.

Components failure rates according to SN29500.



¹ Operation time (day, hour), Betriebszeit (Tag, Stunde) / Durée de service en (jours, heures) / Giorno/ora di durata dell'operazione / Tiempo operativo (día, hora)
² Cycle time (hour, sec), Anforderungsrate (Stunde, Sek) / Temps de cycle (heure, sec) / Ora/sec di tempo di ciclo / Tiempo de ciclo (hora, seg)

Technical Support / Technische Unterstützung / Assistance technique / Assistenza tecnica / Asistencia técnica

ENGLISH	Installation of this product must not take place until the installer has obtained a copy of the manufacturer's instructions in a language which he can understand. This instruction sheet is available in multiple languages at http://rockwellautomation.com/literature .
DEUTSCH	Dieses Produkt darf erst installiert werden, wenn der Installateur eine Kopie der Instruktionen des Herstellers in der Sprache eingeholt hat, die er versteht. Diese Instruktionen sind mehrsprachig erhältlich unter: http://rockwellautomation.com/literature .
FRANÇAIS	Ce produit ne peut être installé avant l'obtention d'un duplicata des instructions du fabricant dans une langue compréhensible. La fiche d'instructions est disponible en plusieurs langues depuis le lien http://rockwellautomation.com/literature .
ITALIANO	Non si deve procedere all'installazione di questo prodotto fin quando l'installatore non abbia ottenuto una copia delle istruzioni del produttore in una lingua che l'installatore possa capire. La presente scheda di istruzioni è disponibile in linguaggi multipli sul sito web http://rockwellautomation.com/literature .
ESPAÑOL	Abstenga de instalar este producto a menos que el instalador disponga de un ejemplar de las instrucciones del fabricante en un idioma que pueda comprender. En http://rockwellautomation.com/literature puede encontrar esta hoja de instrucciones en varios idiomas.
PORTUGUÉS	A instalação deste produto não pode ser efectuada até que o montador tenha obtido uma cópia das instruções do fabricante numa língua que ele compreenda. Essa folha de instruções está disponível em diversas línguas em http://rockwellautomation.com/literature .
POLSKI	Nie należy przeprowadzać instalacji tego produktu aż do otrzymania przez monter instrukcji producenta w języku, który on rozumie. Te karty z instrukcjami są dostępne w wielu językach na: http://rockwellautomation.com/literature .
ČESKY	Instalace tohoto výrobku nesmí proběhnout, dokud instalující osoba neobdrží pokyny výrobce v jazyce, kterému rozumí. Tyto pokyny jsou k dispozici v několika jazycích na http://rockwellautomation.com/literature .
SVENSKA	Denna produkt får inte installeras förrän installören har skaffat ett exemplar av tillverkarens instruktioner på ett språk som han/hon förstår. Detta instruktionsblad finns på flera språk på http://rockwellautomation.com/literature .
NEEDERLANDS	Het product mag pas worden geïnstalleerd wanneer de monteur beschikt over een exemplaar van de instructies van de fabrikant in een voor hem begrijpelijke taal. Dit instructieblad is in diverse talen verkrijgbaar op http://rockwellautomation.com/literature .
繁體中文	安裝者須取得其所通曉語言之產品說明書後方可進行本產品的安裝。各語言版本的產品說明書可透過以下連結獲取: http://rockwellautomation.com/literature 。
简体中文	安裝者須取得其所通曉語言之產品說明書後方可進行本產品的安裝。各語言版本的產品說明書可通過以下連結獲取: http://rockwellautomation.com/literature 。
日本語	この製品の取付けは取付け者が理解できる言語で書かれたメーカーの取扱説明書を入力するまで行わないで下さい。この説明書は http://rockwellautomation.com/literature で複数の言語で提供されています。
БЪЛГАРСКИ	Това устройство не трябва да се монтира, докато монтажника не разполага с инструкцията на производителя, на разбираем за него език. Инструкциите за монтаж ще намерите на различни езици в http://rockwellautomation.com/literature .
EESTI	Selle toote installatsioon ei tohi toimuda enne kui installaator on omandanud koopia tootja instruksioonidega keeles mida ta ise valdab. Instruktsioonid erinevates keeltes on saadaval siin: http://rockwellautomation.com/literature .
SUOMI	Tämä tuote voidaan asentaa vasta kun asentaja on hankkinut valmistajan ohjeet kielellä, jota hän ymmärtää. Erikieliset ohjeet ovat ladattavissa sivustolta http://rockwellautomation.com/literature .
ΕΛΛΗΝΙΚΑ	Εγκατάσταση του προϊόντος αυτού δεν πρέπει να γίνει πριν ο εγκαταστάτης προμηθευθεί αντίστοιχών οδηγιών του κατασκευαστή σε γλώσσα που ο ίδιος καταλαβαίνει. Το εγχειρίδιο αυτό διατίθεται σε διάφορες γλώσσες στη διεύθυνση http://rockwellautomation.com/literature .
MAGYAR	Ez a termék csak akkor helyezhető üzembe, ha az üzembehelyezés végző személy rendelkezősére áll a gyártó használati utasítása az általa ismert nyelven. Az utasítás több nyelven megtalálható itt: http://rockwellautomation.com/literature
ISLENSKA	Upsetning á þessari vöru má ekki eiga sér stað fyrr en sá sem annast upsetninguna hefur fengið álit af leiðbeingingum framleiðanda á því tungumáli sem hann þekkir. Leiðbeingingarsinn er tiltekur á mörgum tungumálum og er hægt að ná í hann hér: http://rockwellautomation.com/literature
LATVIŠŅU VALODA	Šī ražojuma uzstādīšanu nedrīkst veikt, pirms uzstādītājs nav saņēmis ražotāja instrukcijas tādā valodā ko viņš saprot. Šo instrukciju lapīnu var saņemt daudzās valodās no vietnes http://rockwellautomation.com/literature
LIETUVIŠKI VALODA	Šio produkto įrengimas negali būti vykdomas tol, kol įrengėjas neturės gamintojo instrukcijų kopijos ta kalba, kuria jis supranta. Instrukcija galima rasti įvairiomis kalbomis tinklapje http://rockwellautomation.com/literature
MALTI	L-installazzjoni ta' dan il-prodott mgħandux isir qabel ma l-installatur jakwista kopja tal-istruzzjonijiet tal-manifattur f'lingwa li tista' tiftiehem. Il-karta tal-istruzzjonijiet hija disponibbli f'fihna lingwi f' http://rockwellautomation.com/literature .
NORSK	Denne produktet må ikke installeres før installatøren har bruksanvisningen på et behersket språk. Dette instruksjonsarket kan fås i flere språk på http://rockwellautomation.com/literature .
ROMÂNĂ	Produsul nu trebuie să fie instalat până când cel care instalează produsul nu a obținut o copie a manualului de utilizare, în limba pe care o poate înțelege. Aceste instrucțiuni sunt disponibile în mai multe limbi la adresa http://rockwellautomation.com/literature .
SLOVENSKY	Instalácia tohto výrobku nesmie prebiehnuť, dokiaľ inštalujúca osoba nedostane pokyny výrobcu v jazyku ktorému rozumie. Tieto pokyny sú k dispozícii v niekoľkých jazykoch na http://rockwellautomation.com/literature .
SLOVENŠČINA	Tega izdelka se ne sme nameščati, če si oseba, ki ga namešča, ni priskrbela izvoda proizvajalčevih navodil v jeziku, ki ga razume. Ta list z navodili v številnih jezikih je na razpolago na http://rockwellautomation.com/literature .
TÜRKÇE	Bu ürünün kurulmasını, ürünü kuracak kişinin üreticinin hazırladığı talimatları bir kopyasını, ki bu talimatlar pek kıymetli bir dille olacaktır, elde edene kadar gerçekleştirmesi gerekir. Bu talimatlar pek çok dilde su web-sayfasında mevcuttur: http://rockwellautomation.com/literature